

# Doctors Beyond Borders

Physician during the Heroic Age of Antarctic Exploration

James L. Franklin, M.D.

Presented at The Chicago Literary Club on March 2, 2015

© 2015, James L. Franklin, M.D.

Jameslfrank@sbcglobal.net

## Doctors beyond Borders

James L. Franklin, M.D.

“The Heroic Age of Antarctic Exploration” refers to an era that began in 1897 with the Belgian Antarctic Expedition aboard the *Belgica* and ended in 1922 with the Shackelton-Rowett Expedition aboard the *Quest*. Ten countries launched a total of seventeen major expeditions to explore the regions beneath the Antarctic Circle. The moniker “heroic” acknowledges the romance of discovery that permeated the Antarctic landscape and the adversities confronting these pioneers; nineteen expedition members perished in the effort. Motivated by the spirit of exploration and a desire to escape the ordinary, these men were ambitious to link their names and that of their nations with the pride of place – to be “the first.” They were poets, artists, dreamers and men of science. To quote Apsley Cherry-Garrard, the youngest member of Robert Falcon Scott’s ill-fated *Terra Nova* Expedition of 1910 (a naturalist and protégé of William Adrian Wilson - Dr. Bill - of whom more will follow):

“For we are a nation of shopkeepers, and no shopkeeper will look at research which does not promise him a financial return within a year. And so you will sledge nearly alone, but those with whom you travel will not be shopkeepers: that is worth a good deal. If you march your Winter Journeys you will have your reward, so long as all you want is a penguin’s egg.”

At the end of the nineteenth century Sir Clements R. Markham was the driving force behind the British effort to explore the Antarctic. Markham first came under the spell of polar exploration at the age of 20 while he was posted as a midshipman aboard HMS *Assistance* bound for the Arctic in search of the missing expedition of Sir John Franklin and the 140 crew members of the HMS *Erubus* and HMS *Terror*. After wintering with six other ships in the Barrow Strait, Markham resigned from the Navy finding its humdrum duties and discipline intolerable. He then spent several years searching for the origin of the Incas in Peru and in 1855 was elected to fellowship in the Royal Geographical Society (RGS). In 1893 he was elected president of the society and his first act was invite the Scottish oceanographer John Murray to speak at a meeting held in November of that year. Murray advocated a party of observers to winter on the Antarctic mainland "because nothing was known of the physical characteristics of the ice sheet or the land it covered." Murray also believed onsite meteorological observations were key to understanding the world's climate. Earlier in the 19<sup>th</sup> century, British, American and French Expeditions made positive sightings of land below the Antarctic Circle in the quadrant south of Australia. The great question before Murray's audience was whether these simply scattered islands or portions of a long postulated seventh continent. Murray was a veteran of the

HMS *Challenger* Expedition - a four-year voyage (1872-76) devoted to the science of oceanography. Of the many discoveries emerging from that expedition were offshore granite specimens hinting at the presence of a continent toward the South Pole.

Markham envisioned an expedition led by members of Her Majesty's Royal Navy accompanied by a party of distinguished scientists who would overwinter beneath the Antarctic Circle and resolve this issue as well as characterize the climate, biota and geology of Antarctica. Markham's tireless lobbying over the next decade convinced the Royal Navy to lend men and ships to the National Antarctic Expedition of 1901 aboard the HMS *Discovery* and the British Antarctic Expedition of 1910 aboard HMS *Terra Nova*. A key selling point for the Admirals was the subject of terrestrial magnetism. Throughout the nineteenth century terrestrial magnetism and the precise location of the south magnetic pole was of interest to the British Navy offering benefits to navigation in the southern latitudes.

Many books have been devoted to the Heroic Age of Antarctic Exploration. The lives of Robert Falcon Scott, Roald Amundsen and Ernest Shackleton are well known through the notoriety they achieved in the popular

press and literature. It is the narrower purpose of this paper to discuss medical aspects of Antarctic exploration and the physicians who joined these expeditions.

Expedition Surgeons (as they were called) had the responsibility for the health of the members of the ship's company and expedition scientists on ship and shore. They were responsible for provisioning the expedition so as to address the nutritional needs of the Antarctic during the long months they would be without a means of resupply. It was during the Heroic Age of Antarctic Exploration that they performed the first surgical procedures under circumstances testing both their ingenuity and improvisatory skills. During Shackelton's Imperial Trans-Antarctic Expedition of 1914-1917, the first surgical procedure with general anesthesia was performed under the worst imaginable conditions. Marooned on Elephant Island near the tip of the Antarctic Peninsula, surgeons James McIlroy and Alexander Macklin were forced to amputate the gangrenous toes of a crewmember, Percy Blackboro. It was during a harrowing voyage in open waters aboard three lifeboats after their ship, *Endurance*, was crushed in the ice pack of the Waddell Sea that Blackboro suffered severe frostbite injury. He survived the surgery and every member of the *Endurance* returned home safely; a credit to the legendary leadership of Sir Ernest Shackleton.

The scourge of scurvy, known since the time of Hippocrates, remained a dreaded threat on long ocean voyages. Even into the first decade of the twentieth century its cause was poorly understood. In a work hailed as one of the first randomized studies in the medical literature, *A Treatise of the Scurvy* of 1753, Scottish surgeon James Lind of the Royal Navy documented the efficacy of citrus fruits in the treatment of the disease. Subsequent inconsistent results stemming from variable extracts of these fruits employed aboard Her Majesty's Ships left the matter in doubt. Theories relating to the quality and spoilage of tinned meats and "ptomaine poisoning" clouded the issue and the duties of expedition surgeons included the regular inspection of these products. The nutritional, caloric and fluid requirements of Arctic and Antarctic travel were poorly understood especially as it would apply to the men who ventured onto the 10,000-foot elevation of the vast Antarctic continental plateau. The problems of snow blindness, frostbite and hypothermia were poorly appreciated and prevention, requiring the proper design of equipment, a factor often neglected. The severe psychological effects of the darkness during the Antarctic winter - now categorized under the rubric of Seasonal Affective Disorder - were yet to be recognized.

Pulling the camera back before looking at them individually, the physicians who volunteered for the Antarctic expeditions all had interests beyond their duties as exhibition surgeons. While medicine was their “day job,” they all nurtured pet interests. Generally these were scientific and included geology and biology. Edward A. Wilson, a talented artist, was distinguished through the images of the Antarctic landscape he created. With the exception Wilson who perished along with Scott during their ill-fated dash to the South Pole, their biographies extend beyond their Antarctic adventures. By today’s standards, the marriages of the doctors we will survey would not be deemed as satisfactory and they left no direct descendants.

Frederick A. Cook legitimately may be placed as the first physician/explorer of the Heroic Age of Antarctic Exploration. Historically that may seem to be an anomaly as his name is famously and infamously linked to the annals of Arctic Exploration<sup>1</sup>. He is included in this survey by virtue of his participation in the Belgian Antarctic Expedition of 1897-98 led by Adrien de Gerlache; the first to overwinter below the Antarctic Circle. During this expedition when the *Belgica* was trapped in sea ice through the long Antarctic winter, Cook was credited by both de Gerlache and his shipmate, the not yet famous, Roald Amundsen with leading the struggle to free the ship and preserving the health and morale of the

entire crew. Notably, he applied earlier observations he had made of the Eskimos of Northern Greenland and treated an outbreak of scurvy with regular doses of partially cooked penguin and seal meat. He also documented and introduced a novel form of light therapy to combat the severe psychological consequences of the prolonged period of darkness of the Antarctic winter. For his achievements he received the Order of Leopold from the King of Belgium.

Of the physicians associated with the Heroic Age of Antarctic Exploration, only the name of Edward Adrian Wilson might be recognized today. He was one of the four men of the *Terra Nova* Expedition to accompany Captain Robert Falcon Scott on his final dash to the South Pole. After man-hauling sledges 800 miles for over 10 weeks, they reached the South Pole on January 17, 1912 only to confront the disheartening sight of Roald Amundsen's flag markers and black tent testifying that the Norwegian expedition had bested them, having arrived a month earlier. All five perished from scurvy, infection, trauma, malnutrition, frostbite and physical exhaustion on their return journey. Scott, Wilson and "Birdie" Bowers were the last to die in a tent eleven miles from a major resupply depot. It was almost a year before the world would learn of their heroic struggle. For Englishmen following the disasters of the Boer War and, the ascendancy of



German might, their story provided a narrative of courage, self-sacrifice and patriotism that overshadowed Amundsen's accomplishment.

Wilson is recognized for his expertise in ornithology, as an artist and physician/explorer. He was deeply religious and his religious strength was a great comfort to the men with whom he served. In their letters home and in their personal diaries, Wilson was uniformly singled out for praise during both his first Antarctic expedition aboard the *Discovery* (1901-1904) and his final journey aboard the *Terra Nova* (1910-1912). He had a gift for defusing tensions and restoring confidence; for Captain Scott he was a trusted and loyal friend. During the *Discovery* Expedition, Scott chose Wilson and Ernest Shackleton to accompany him in an attempt to travel as far south as possible on the polar plateau. In no situation were Wilson's skills as a mediator more severely tested than on this journey. All three men suffered from scurvy; Shackleton more so, and as a result, Scott ordered him home on a relief ship as medically unfit for polar exploration. Shackleton was determined to redeem his reputation and began assembling the *Nimrod* Expedition of 1907. He sought Wilson's participation as co-expedition leader. Wilson declined as he was committed to solving the mystery of a disease that was decimating the Red Grouse population in Northern England and Scotland before English sportsmen had the opportunity to kill them.

Edward Wilson was born in Cheltenham, England on July 23, 1872. Like Frederick Cook, he was the son of a physician. At an early age Wilson manifested both a keen interest in natural history and a remarkable artistic talent. Though self-taught, it was a talent he cultivated throughout his life, using it professionally as a medical illustrator and expedition artist. Wilson was strongly influenced by John Ruskin (1819-1900) and his precepts on art expressed in Ruskin's 1853 volume *The Stones of Venice*. Like Ruskin he was a passionate admirer of J.W.M. Turner (1781-1851) whose influence can be seen in the artwork completed during the expedition. In November 1904 his Antarctica paintings were exhibited in the Burton galleries on Bond Street along with 200 photographs taken by the expedition photographer, Reginald Skelton. Wilson's contribution of 280 items included watercolors of birds, scenic watercolors, pencil drawings and topographical sketches. The exhibition was a success and was seen by approximately 10,000 visitors. The public was fascinated by the first ever drawings of Emperor Penguin chicks. Isobel Williams in her biography of Wilson notes that his water color, *Emperor Penguin Rookery, Cape Crozier* sold for more than 9000 pounds at Christies in London in 2003 and his *Last View of Mount Discovery* sold for 5000 pounds at the same auction.

Wilson began his medical studies in 1894 at the age of 22 at St. George Hospital in London. Three years later he moved his lodgings to Caius Mission, serving slum-dwellers of the Bittersea area where he met his wife, Oriana Souper who was staying with the warden of the mission. The two were instantly drawn to each other and shared very closely held spiritual values. They were married on July 16, 1901 two weeks before Wilson was due to depart England aboard *Discovery*. Returning to England in 1904, the couple spent six years together before he joined Scott's second expedition on the *Terra Nova*. Their household was modest and in keeping with current trends did not employ any servants. They had no children and Oriana never remarried. She survived her husband by 33 years dying at the age of 72.

Following the *Discovery* Expedition, Wilson occupied himself with preparing his expedition paintings, lecturing and completing reports from the voyage. The thought of returning to medicine was not appealing as he had been away from hospital work for too long a period of time. In March 1905 he was offered a post as Field Observer to investigate Grouse Disease that was decimating the Red Grouse population. It was a paid position scheduled to last 6 months but in the end required five years to complete. It entailed grueling fieldwork and over 2000 post-mortems on the Grouse, a task Oriana willingly shared with him. He eventually

found that the disease was caused by a parasitic threadworm, *Trichostrongylus pergracilis*, which dwelt in dewdrops on the heather. When ingested by the Grouse, it lodged and ulcerated the bird's cecum. His work, *The Grouse in Health and Disease*, appeared posthumously. Wilson had written one third of the report and prepared the beautifully illustrated colored plates. The report and its recommendations on the management of the disease eventually saved the sport and added over 2 million pounds to the British economy.

In 1909 Scott asked Wilson to join him as Chief of the Scientific Staff on his second expedition to the Antarctic. Wilson felt it important that he return to the Antarctic to further study the Emperor Penguins whose lifecycle remained a mystery. Prior to the *Discovery* Expedition it had been assumed that all penguins left the Antarctic to breed. The finding of eggs at the Cape Crozier rookery had proved that the species had evolved to reproduce in the subzero temperatures of Antarctica. At the time, birds were thought to have evolved from dinosaurs sharing many unique skeletal features. Wilson wrongly believed that Penguins were very primitive birds and that their embryology would provide useful information on their avian origins. The *Discovery* Expedition had failed to recover eggs suitable for study and for Wilson this was an important objective in his returning to the Antarctic. In the darkness of the Antarctic winter of 1911, Wilson,

Harry R. Bowers and Apsley Cherry-Garrard made an extremely hazardous sledging journey of 67 miles in blinding blizzards to a penguin rockery hoping to collect eggs at a precise stage of development. They braved winds of 80 miles per hour and temperatures of minus 65 degrees Fahrenheit. In the words of Cherry-Garrard: "It was . . . the worst journey in the world . . . the weirdest bird's nesting expedition that has ever been or will be . . . no words can express the horror." Barely escaping with their lives, they returned to the base camp at Hut Point with three precious eggs. Quoting Cherry-Garrard further: "And now the reader will ask what became of the three penguins' eggs for which three human lives had been risked three hundred times a day, and three human frames strained to the utmost extremity of human endurance." Garrard humorously describes the indifferent reception he received in 1913 when he presented the eggs to the Natural History Museum in South Kensington. Ultimately, the eggs were examined by Professor Cossar Ewart of Edinburgh University and the report included as an appendix in Cherry-Garrard's book. The embryos Wilson collected were too developed to test Haeckel's Theory - ontogeny recapitulates phylogeny. There were no teeth or scales to connect the birds with reptiles. What Wilson could not know was that Penguins were further down the evolutionary tree and had evolved from birds with flight rather than the reverse.

When Wilson first went to the Antarctic aboard the *Discovery* he was officially the assistant surgeon to Dr. Reginald Koettlitz, the Expedition Senior Surgeon, Botanist and Bacteriologist. Wilson's official title was that of Assistant Surgeon, Zoologist and Artist. On the *Terra Nova* Expedition, Wilson served as the Chief Scientist and not in the capacity of a surgeon. The senior surgeon aboard the *Terra Nova* was Edward Leicester Atkinson. It is to doctors Koettlitz and Atkinson that we now turn.

Aubrey A. Jones's recent biography of Reginald Koettlitz bears the title, "*Scott's Forgotten Surgeon.*" This seems quite justified since books devoted to Scott and the *Discovery* Expedition as well as the biographies and writings of Edward Wilson contain only scant references to Koettlitz. In 1901, the year he was appointed Senior Surgeon to Scott's *Discovery* Expedition, Koettlitz was 41 years of age, four years older than Robert Falcon Scott and twelve years senior to his assistant surgeon, Edward A. Wilson. At forty-one, he was one of the oldest men in the expedition and had the most experience in Polar exploration. In a letter written in 1900 to the famous Norwegian explorer Fridtof Nansen, he anticipated the tragic events on the Ross Ice Shelf in 1912: "How much better it would have been if someone had been placed in command who had former polar experience.

The final result will, I fear, be much blundering and it will be muddled through à *l'Anglais.*”

Koettlitz was born on December 23, 1860 in Ostend, Belgium to a Lutheran Minister who moved his family shortly thereafter to Dover, England. He attended Guy's Hospital in Medicine and first took a position as a general practitioner in Butterknowle, a coal-mining village in County Durham in the North of England. In Butterknowle he cultivated an interest in geology and also made a collection of fossils from the coal-bearing strata of the region. In 1894, a posting in the *British Medical Journal* seeking the services of a physician for what would become the Jackson-Harmsworth Expedition to Franz Joseph Land served as his introduction to Polar exploration. Franz Joseph Land, newly discovered, was an uninhabited archipelago north of Russia in the Arctic Sea. During three years in the arctic, 1894-1897, he had ample opportunity to learn to work around the idiosyncrasies of an erratic expedition leader, Frederick Jackson (1860-1938), gleaning valuable lessons in Arctic survival and also making important geological observations that ultimately earned him membership in the Royal Geological Society. He cultivated the friendship of the Scottish explorer William Speirs Bruce and Albert Armitage; the latter would sail with him on the *Discovery* Expedition. While in Franz Joseph Land, he first met Fridtjof Nansen who was returning from an unsuccessful

attempt to reach the North Pole. Discussing his geologic findings with Nansen, the two formed a bond that lasted until Koettlitz's death in 1916. His appetite for adventure whetted, he joined an overland expedition to Somaliland and Abyssinia in 1898 as physician, geologist and anthropologist. In 1900 he travelled up the Amazon allowing him to study the peoples along the river and the emerging rubber industry.

Koettlitz, like Wilson, chose marriage the year he departed for the Antarctic. He had been courting Marie Louise Butez and they were married on March 2, 1901 four months before the *Discovery* departed England.

There were problems for Koettlitz even before *Discovery* sailed. Though geology was his special area of expertise, he was given the responsibility of botany and the study of the phytoplankton. Disappointed and skeptical about the value of this endeavor, he nevertheless took his assignment seriously and though recently married, he spent the majority of his time prior to departure working with George Murray in the bacteriology department at Guy's Hospital.

Robert Falcon Scott adhered strictly to the traditions of the Royal Navy both aboard ship and on shore. Officers and Seamen dined and were quartered separately. In this environment, Koettlitz, though he had greater polar



experience, did not feel at liberty to offer unsolicited opinions. He sensed an aura of class discrimination among the officers and as he wrote to his brother: “they were men who held very different world views.” He took polar exploration very seriously and found the attitude of the expedition leaders superficial. He had little sense of humor and refused to participate in hijinks associated with shipboard life. Refusing ‘to suffer fools gladly,’ he soon became the recipient of mirth and the butt of many pranks. In the course of his medical duties, he successfully treated a dental abscess with a tooth extraction and somewhat theatrically performed the first elective surgery in the Antarctic, excising a large cyst from the cheek of seaman Royds in the Hut Point Ward room. He was usually found at his laboratory bench and even had taught himself the new technique of color photography, successfully taking the first color images of the Antarctic landscape. But it was all for naught.

When *Discovery* returned to Portsmouth Harbor, a series of ceremonial engagements included an invitation to Balmoral Castle for Captain Scott to appraise King Edward VII on the results of the expedition. Scott presented Wilson’s superb sketches and Engineer-Lieutenant Skelton’s photographs but the historic color photographs taken by Koettlitz were not included. Koettlitz felt keenly snubbed when in 1905, Wilson, his medical assistant, published an article

in the *British Medical Journal*, “The Medical Aspects of the *Discovery’s* Voyage” and was also not invited to participate in preparing the multivolume scientific report of the expedition. However, he was not forgotten in his hometown of Dover. He gave a lecture titled “Furthest South” to a packed audience in the Dover Town Hall and as reported by the local press, held the audience spellbound for two and a half hours with many interruptions for hearty applause. “To add realism, a local man was dressed in Koettlitz’s polar clothing and withstood the two and a half hours without complaint.<sup>2</sup>” His lecture included his first ever color slides. It was perhaps the only time they were seen in public and have subsequently disappeared.

After returning to England, Koettlitz also was invited by Shackelton to join the *Nimrod* expedition. Having no means of independent support and a new wife he had been away from for three years, Koettlitz urgently had to find a medical appointment. Disillusioned by English class-consciousness, he immigrated to South Africa, first settling in Darlington, Cape Colony where most of his patients were Afrikaans. Though he continued to correspond with Nansen, he ceased to participate in any further scientific endeavors. An attempt to rear ostriches for their feathers failed when drought and the market for ostrich feathers slumped. In 1915 he moved to a larger community, Sommerset East, where he bought a

practice from a doctor who was on active military service. Within 6 months his wife died of heart disease and two days later Koettlitz, who was ill at the time, died of dysentery.

News of the death of Dr. Reginald Koettlitz spread around the world and obituaries appeared in *The Lancet* as well as local newspapers in London, New York and Australia. He and his wife were buried in a Freemasons Cemetery in Cradock in an unmarked grave. In 1922 Rev. C.W. Wallace, the Rural Dean of the Cradock Anglican Church and Captain Charles Royds, a colleague from the *Discovery* Expedition, remedied this by raising money for a memorial marker. Notably, Professor Fridtjof Nansen was also a contributor to this effort.

In obvious ways, Koettlitz through lack of humor and collegiality was his own worst enemy. A recent article in the *Journal of Medical Biography* by Henry Guly mentions several geographic points in Antarctica, as well as species of cuttlefish, algae and cyanobacteria that bear his name. Guly summed up his accomplishments: “Koettlitz was a doctor and explorer with a wide range of general scientific knowledge and as an amateur scientist he contributed to zoology, bacteriology, botany, geology and anthropology and he corresponded with leading scientists of the day in a way that, with scientific specialization,

would never happen today. He seems to have been a difficult person which perhaps explains why his scientific contributions to the *Discovery* Expedition were not recognized.”

A contrary view is that expressed by William Speirs Bruce, the foremost Scottish polar explorer, who worked with Koettlitz on the Jackson-Harnsworth Expedition. Bruce described Koettlitz as “a man of great charm of character and an explorer of the best type, scientific, painstaking, and indifferent to notoriety or reward.”

Our final physician profile is that of Edward Leicester Atkinson - known to the members of the *Terra Nova* expedition as “Atch” - the Senior Expedition Surgeon of the British Antarctic Expedition, 1910 -1913. Atkinson was born in the West Indies to European Parents and studied medicine at St. Thomas Hospital in London. Shortly after joining the Royal Navy, he applied for a place on Scott’s Antarctic Expedition. Both he and Wilson had studied with the eminent parasitologist Robert Leiper of the London School of Tropical Medicine. Atkinson was appointed to serve as both a physician and research parasitologist on the *Terra Nova* Expedition. He was a short stocky man and powerfully built; in 1905 he won the lightweight boxing championship of the United Hospitals. Atkinson made a number of sledging journeys during the *Terra Nova* Expedition under

perilous conditions; there is no doubt that his physical training as an amateur prizefighter aided him in accomplishing these feats.

For the members of the *Terra Nova* expedition the early months of 1912 were grim indeed. By March 1912, Scott's polar party (last seen on December 21, 1911) was clearly overdue and there was a mounting fear that they had perished. In addition, a party of six men under the command of Lieutenant Victor Campbell was stranded on the other side of McMurdo Sound. This left Atkinson as senior Naval officer in command of thirteen men facing four months during which the sun would not reappear. In March he made a six-day journey in a futile effort to locate Scott and in April, he took five men in an attempt to rescue Campbell's party. It was unsuccessful and perhaps foolhardy to venture out on the treacherous ice of the Ross Sea. As noted by one of his companions: "Atch altered tremendously in the second year from the carefree naval surgeon of the first year . . . I think we all grew to have great respect and affection for him . . . there was not the least discord that winter." In late October, with the sun just starting to reappear over the horizon, he led the search that discovered the missing polar party. On November 12, they found Scott's tent partially buried in snow. Atkinson was the first to enter and view the bodies of Scott, Wilson and Bowers and read the records of their final days.

On January 17, 1913 that the *Terra Nova* returned to Cape Evans to pickup Scott and the members of the expedition with the expectation of a celebration. It was not to be and celebratory bunting was quickly removed. With flags lowered to half-mast, the *Terra Nova* returned to New Zealand with the remaining members of the expedition. It was on February 10<sup>th</sup> that the world learned the fate of the polar party. Mrs. Scott and Mrs. Wilson had travelled to New Zealand to greet their husbands and the *Terra Nova* only to learn that they had been dead for almost a year. Atkinson had the grim task of handing over their husband's diaries plus their letters of farewell and escorting the two widows back to England

Atkinson was thirty-one when he returned to England. He completed his parasitology studies from the expedition publishing them in the *Proceedings of the Zoological Society*. He had discovered many new helminthes naming them in honor of members of the expedition.

He was stationed in China to investigate the life cycle of the trematodes infecting men of the Navy on the Yangtze River and causing schistosomiasis. By August 1914 he was working in Japan when he learned of the war erupting in Europe. He immediately departed for England arriving that same month and was assigned to the HMS *St. Vincent*.

Atkinson married Jessie Fergusson of Scotland just before joining the Allied Campaign in Gallipoli in the summer of 1915. Landing at Cape Hellas he faced a major outbreak of dysentery and typhoid. Sanitation was abominable and Atkinson's major efforts were aimed at sanitation and killing the swarms of flies that were spreading disease. A classified disinfectant, Liquid C, was a major subject of investigation and its use met with some success. The allied withdrawal from Gallipoli at the end of 1915 coincided with Atkinson's own evacuation suffering from typhus, pleurisy and pneumonia.

Back in England, he arranged to be posted in France with a howitzer brigade of the Royal Marine Artillery. He sustained shrapnel wounds to his face and eyes but two weeks following surgical extraction he was back on duty as a field doctor. He sustained a second wound and by October 1915 and was evacuated back to naval duty in England. His wounds required further surgery and he received the Distinguished Service Order for his heroism at the front.

The closest he came to returning to Antarctica was in May 1916 when he was asked to lead a rescue party to locate Shackleton's Imperial Trans-Antarctic Expedition and the *Endurance* that had not been heard from since leaving South Georgia in December 1914. Preferring to serve the war effort, Atkinson

reluctantly agreed but when news broke that Shackelton had returned to South Georgia, he was able to remain in France.

In August 1918 he was appointed to the HMS *Glatton*, a ship laden with ammunition. An explosion and fire occurred while the ship was still in dock. Atkinson made three attempts to go below deck and twice rescued men who had lost consciousness. On the third attempt there was another explosion in which he was knocked unconscious, badly burned and blinded. One eye subsequently had to be removed but he lived to receive the Albert Medal for gallantry.

After the war he served the Navy another decade, but the accumulated trauma from his multiple injuries led to his discharge. In July 1928 his wife died after a long battle with cancer (one wonders how much of their married life was spent together). He remarried in that same year and sailed for India as a doctor on a civilian ship. Death came some three months later from heart failure.

Today his name only surfaces in the numerous books documenting the *Terra Nova* Expedition and the story of Scott and Amundsen's race to the Pole. Quoting from William C. Campbell in his excellent article on Atkinson published in the *Journal of the History of Medicine and the Allied Sciences* in 1991: " Atkinson



made a modest but lasting contribution to the science of parasitology, he was a dedicated and caring physician and a natural leader and heroic adventurer.”

It would be nice to conclude this paper by stating that the doctors who were part of the Heroic Age of Antarctic Exploration made important medical contributions to our understanding of human survival under the extreme conditions of the polar climes. While incrementally the experience they gained contributed to the success of expeditions that would follow, there were no stunning achievements. Knowledge of human physiology would have to advance before the nutritional and caloric demands of the polar environment could be quantitatively studied. The discovery of the cause of scurvy as a result of vitamin C deficiency was just around the corner<sup>3</sup>. Frederick Cook’s observations on the psychological effects of prolonged darkness on the members of his expedition are of note. Edward A. Wilson contributed to the science of ornithology through his observations on the life cycle of the Emperor Penguins. Reginald Koetlitz contributed to the science of geology and the understanding of our seventh continent. Both he and Edward Liecester Atkinson helped demonstrate that the Antarctic was not a sterile environment as had been thought. While it was an era when nationalistic aspirations still prevailed in Antarctic exploration, they were doctors beyond borders and willing to practice their profession far from the

amenities of home. Today there are no borders in Antarctica. The Antarctic Treaty Systems of 1959 signed by twelve nations designates the continent politically neutral. The Antarctic has been set aside as an environmental refuge for scientific study protected from military and economic exploitation.

---

<sup>1</sup> The life of Frederick A. Cook and the controversy between Cook and Robert E. Peary over who first reached the North Pole and the efforts of Peary's wealthy backers to discredit Cook are well worth a separate presentation. Members of the Chicago Literary Club may be interested to know that Max Thorek, the founder of Chicago's Thorek Hospital, in his memoir *A Surgeon's World* devotes a chapter, "Arctic Enigma," to his experience treating Dr. Cook. Thorek was largely impressed with the dignity of his patient in relating his experiences in the arctic and his account of journeying to the North Pole. Thorek was certain that Cook's name and reputation would eventually be sustained.

<sup>2</sup> Audrey A. Jones, "Scotts Forgotten Surgeon," p. 181

<sup>3</sup> In 1910, Alex Holst and Theodor Frolich, two Norwegian physicians developed an animal model for producing scurvy in guinea pigs fed a diet of grain and flour that could be cured with fresh foods. In 1927, the Hungarian biochemist Szent-Györgi isolated hexuronic acid subsequently named ascorbic acid (vitamin C). Experimental human scurvy was produced in volunteers fed a diet deficient in vitamin C, carefully described and cured with ascorbic acid by investigators at Harvard in 1940. It would subsequently be proven that almost all plant and animal species synthesize including Seals and Penguins, synthesize vitamin C in their tissues. Notable exceptions include bats and primates of the suborder *Anthrodoidea*.

---

## **Selected Bibliography – Medicine and Antarctic Exploration**

### **Book**

### **Bibliography - Medicine and Antarctic Exploration**

#### **Books**

Abramson, Howard S. *Hero in Disgrace: The Life of Artic Explorer Frederick A. Cook*, New York, Paragon Press, 1991

Cherry-Garrard, Apsley *The Worst Journey in the World: Antarctic 1910-1913*, Published in two volumes, Constable and Company Limited, Great Britain, 1922

Huntford, Roland, *The Last Place on Earth*, Atheneum, New York, 1983

Jones, Audrey A. *Scott's Forgotten Surgeon*, Scotland UK: Whittles Publishing Ltd., 2011

Williams, Isobel *Edward Wilson: Explorer, Naturalist, Artist*, Gloucestershire, UK: The History Press, 2008

Yelverton, David E. *Antarctica Unveiled: Scott's First Expedition and the Quest for the Unknown Continent*, Boulder Colorado, University press of Colorado, 2000

#### **Articles**

Campbell, William C. "Edward Leicester Atkinson: Physician, Parasitologist and Adventurer" *The Journal of the History of Medicine and Allied Sciences* 46: 219-240, 1991

Guly, Henry, "Dr. Reginald Koettlitz (1860 – 1916): Arctic and Antarctic Explorer," *The Journal of Medical Biography* 20: 141-147, 2012

---

Guly, Henry R, "Surgery and anesthesia during the heroic age of Antarctic exploration (1895-1922)" *British Medical Journal* 347, 2013

Guly Henry R, "Psychology during the expeditions of the heroic age of Antarctic exploration," *History of Psychiatry*, 23: 194-205, 2012

Harald, Fodstad et. Al. "Arctic and Antarctic Exploration Including the Contributions of Physicians and Effects of Disease in the Polar Regions," *Neurosurgery*, 44 (5): 925-939, 1999

Williams, Isobel, "Dr. Edward Wilson (1872-1912): Antarctic Hero," *Journal of Medical Biography*, 17:1111-115, 2009