Sgt. James 'Jim' Ralph Crockatt
Sgt. Robert J. F. Fidgeon RCAF 15/8/44
Sergeant J. S. Gow RCAF 1944
Sergeant J. S. Gow RCAF 1944
Sergeant J. S. Gow RCAF 1944

Opuntia is published by Dale Speirs, Calgary, Alberta. It is posted on www.efanzines.com and www.fanac.org. My e-mail address is: opuntia57@hotmail.com When sending me an emailed letter of comment, please include your name and town in the message.

REMEMBRANCE DAY 2017

photos by Dale Speirs

It used to be just the old men, every November 11th remembering comrades fallen in World War Two and now forever 19 years old, while the survivors dwindled away exponentially in recent years from feeble old age.

Then came the Balkan wars of the 1990s, and later casualties from Afghanistan added to the lists. It is the younger generation who now turn out to the November 11 ceremonies, the ones who knew or heard of a friend or relative dying on an Afghanistan mountainside, or someone who never came back from the Balkans.

I've been attending Remembrance Day ceremonies for decades, but since the turn of the Millennium I've noticed the crowds have become dramatically younger. Not just the Boomers such as myself who had grandparents in the last war, but Millennials bringing their young children along. The tone of the day has shifted to a serious duty that all should fulfill.

There are dozens of ceremonies throughout the city, so I attend a different ceremony each year. This year I went to the Field of Crosses, a park that stretches about a kilometre along Memorial Drive NW on the north bank of the Bow River across from the downtown core.

The park has thousands of crosses, one for each southern Albertan who died in uniform, from the Boer War to Afghanistan. It is not a cemetery; there are no bodies buried there. The crosses are memorials, not grave markers.

I took the photo below from a pedestrian bridge across the Bow River to the core, looking northeast at Memorial Drive on the far bank and the Field of Crosses beyond. The crosses are invisible in the snow but if you squint you can see visitors walking among them at the base of the slope.

At a guess, about 5,000 citizens attended this particular ceremony. Memorial Drive was closed to traffic, and many of us, myself included, watched from a high concrete median, while uniformed personnel mustered in front of us.

FIELD OF CROSSES
MEMORIAL
PROJECT
www.FieldofCrosses.com
Lest We Forget

FORGET

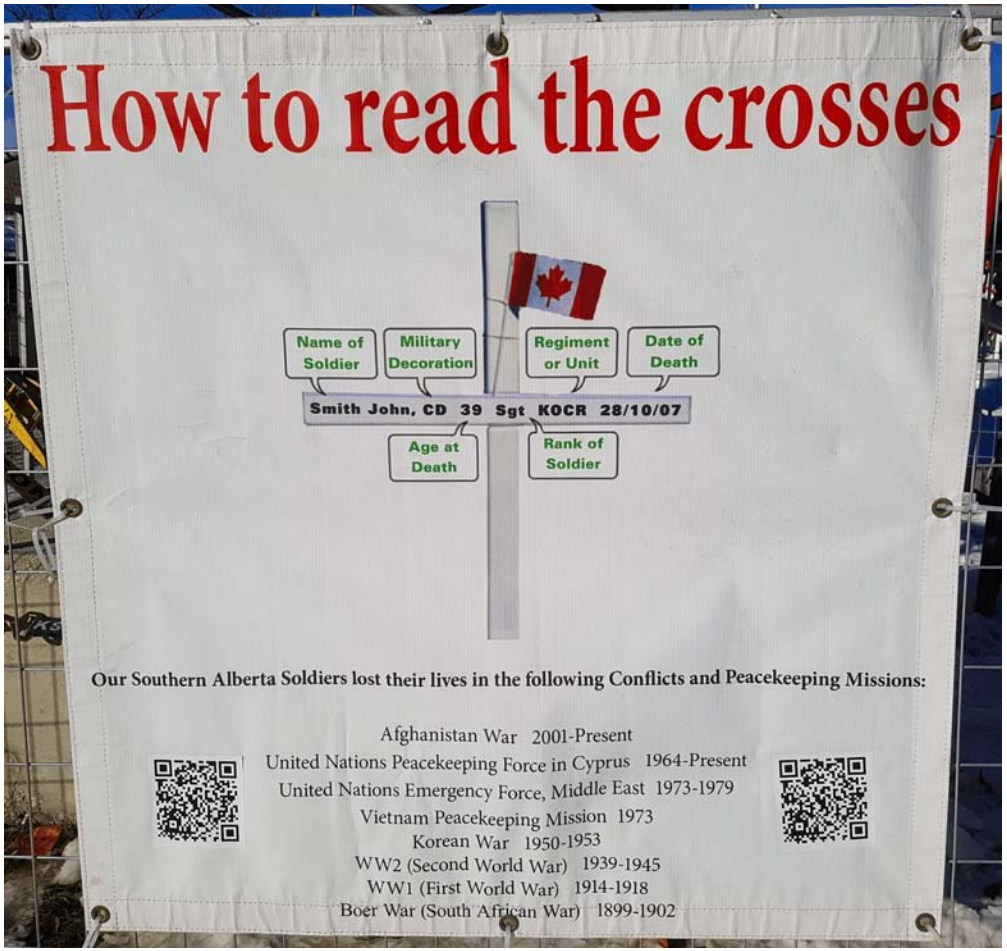
LEST WE FORGET

At left: The view behind me. Latecomers stood on the Bow River levee.

Below: Looking off to the northeast side where the crowds worked their way up the slope.

After the ceremony, the crowd dispersed among the crosses, row on row.

Some of the wreaths laid at the ceremony. I had to photograph directly into the sun, so the picture is a bit washed out.



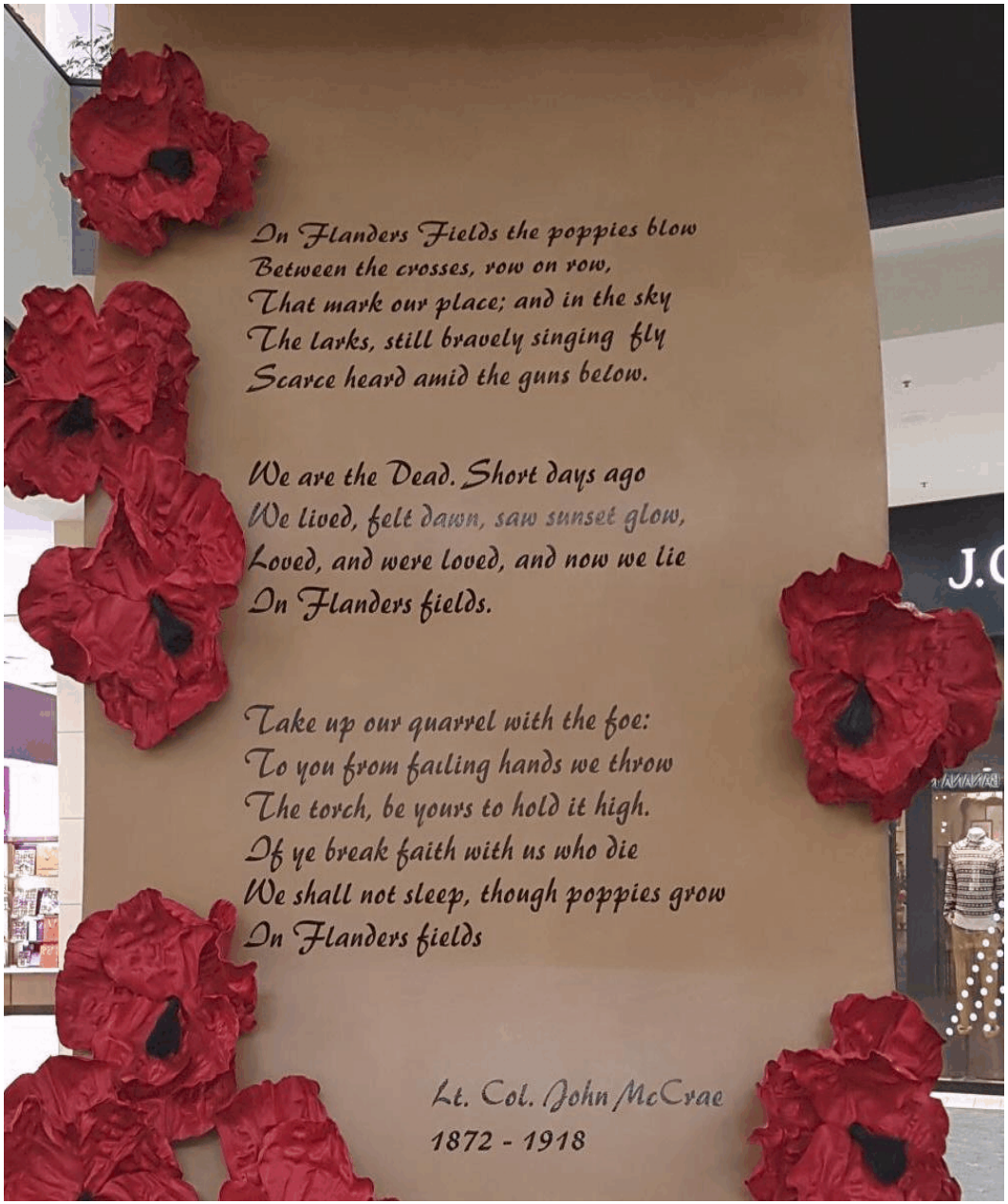
The Americans were late entrants in both World Wars, while Canada was in them from the very beginning. Many Americans came north and joined the Canadian Army. The soldier at right was in the 50th Battalion, Calgary's first home-grown military unit.

The Alpha and the Omega, the first and last crosses in the Field.

It was a ten-minute walk from one end of the field to the other.

Parks Dept. garbage bins at the Field of Crosses.

The shopping malls have begun to take Remembrance Day more seriously, and most now don't open until 11h15 on the day. This display is at Chinook Centre.



Below: Bow Valley Square

BWAH HA! HA!: PART 7
by Dale Speirs

[Parts 1 to 6 appeared in OPUNTIAs #371, 372, and 378, 388, 391, and 393.]

The Formula For Success.

From the Mill Creek DVD pack of 50 Mystery Classics is BULLDOG DRUMMOND'S PERIL, a 1938 movie based on a series of novels by H.C. McNeile. Capt. Hugh Drummond, ex-RAF, is a wealthy young man about the manor house, always on the verge of marrying his fiancee Phyllis Claverling. Drummond was a masculine version of Miss Marple, unable to walk out of the house without becoming involved in a murder investigation. The running joke of the movie series was that the events took place just before the wedding, which then had to be postponed until the next movie.

The Scotland Yard official was Col. Nielson, who tolerated Drummond but resented him frequently bypassing police investigations. Drummond's pal is a bumbling fool named Algy Longworth, who could always be relied on to inadvertently trip up Drummond during the investigation.

In this movie, Drummond and Claverling are at her villa in Switzerland, where the marriage ceremony is about to take place. The movie opens with the happy couple oohing and aahing over their loot, pardon me, wedding gifts. One of them is an artificial diamond that would choke a horse. It was made by Prof. Bernard Goodman, Algy's father-in-law, and cannot be told from a natural diamond.

Among the guests at the villa is a member of the London Diamond Syndicate, who immediately recognizes the economic impact that artificial diamonds would have. He and his sidekick kill the security guard, steal the diamond, and grab the next boat train to London. Drummond sets off in pursuit, managing to get on the same train. Much to-ing and fro-ing aboard the train, with people dashing in and out of compartments. The villains can't take the heat, so they get off at a station and charter a private airplane, with Drummond following likewise but failing to catch them.

It doesn't really matter, because everyone eventually ends up at Goodman's laboratory. The villains arrive first and gain admittance by showing Goodman the stolen diamond. He takes them into his laboratory and naively shows them how it is done. It's just a matter of mixing some white powder, pouring it into a high-pressure retort, and turning on the electricity. Lots and lots of electricity, as the lab is filled with Jacob's ladders and spark gaps that light it up like a disco. The electricity bill must have cost a fortune, not to mention all the interference with the neighbourhood's radio receivers.

The syndicate men make Goodman an offer that he does refuse, oblivious as to what might happen to him. He tells them that he can make thumb-sized diamonds for a shilling. They correctly point out the economic devastation that Goodman would cause. It isn't just the jewelry trade, as big as that may be. Diamonds are used, then and now, as a store of value and a defense against central banks and governments inflating currency by money printing.

Goodman refuses to take any notice of the economic problems he would cause, and sends the diamond merchants away. From there the plot becomes increasingly convoluted as the bad guys, good guys, and police criss-cross each other's paths. Assorted car chases and the demolition of Goodman's house by a crate of dynamite liven up the movie, culminating in a sword fight between Drummond and the surviving bad guy.

The movie finishes up with more loose threads than a frayed shag carpet, but Drummond et al triumph. What became of the formula to synthesize diamonds is lost in the shuffle. Since the diamond trade seemed okay in later movies, evidently Goodman was persuaded to suppress his idea.

"The Color Blind Formula" was a 1944 episode of the old-time radio series INNER SANCTUM. (This and hundreds of other OTR shows are available as free mp3s at www.archive.org) No writer was credited, and the episode title was not mentioned.

Like all episodes of this series, the beginning is a creaking door slowly opening, one of the most famous intros of OTR. Raymond the host then introduced himself and invited the listener into the sanctum, cautioning us not to slip on the blood on the floor. He then threw out some macabre puns, of the nature about people being dead tired and so forth.

The episode at hand opens with a mad scientist's assistant Richard having just been acquitted of murder. His boss Ollie, and possibly future brother-in-law since Richard is dating his sister Anna, was working on a camouflage paint formula that would allow colour-blind people to see red and green just as

normal humans do. Richard is colour-blind and the guinea pig for the experiment. His first sight of the dried paint drives him mad and he strangles Ollie in a rage.

After the trial, the complications begin. Richard wants the formula, worth a fortune for some reason, but runs into all sorts of complications. Interlopers also appear, trying to get a piece of the action. The plot then takes a 180° turn when it is revealed that the murder was a hoax designed to flush out enemy spies wanting the formula. Worse yet, prolonged sight of the paint sends normal-vision humans into blindness.

DICK TRACY MEETS GRUESOME is a 1947 movie based on the comic strip by Chester Gould. The MacGuffin of this movie is a formula for a paralyzing gas, and its redeeming feature is Boris Karloff, who does a bit of slumming as Gruesome. He inadvertently discovers a scientist has produced a paralyzing gas that freezes people in their movements for several minutes.

Being a villain, Gruesome promptly puts it into use for bank robberies. The method is to have an advance man quietly enter the bank, drop the canister into a wastebasket, and leave. A timer releases the gas fifteen minutes later and paralyzes everyone. Enter the robbers, and exit the robbers with the loot. Tess Truehart, Tracy's girlfriend, is in the bank when the hit is made. She escapes the effects of the gas because she was in a telephone phone in the lobby, one that had a full seal when the door was closed. She saw what was happening, pretended to be paralyzed, and watched the robbery.

With her information, Tracy rushes to solve the case before the details are published by the newspapers. The fear he and the police have is that once citizens learn about the ease of robbing banks with the gas, a panic will set in and trigger a bank run. That seems overdone to our generation, but every adult who saw the movie when it first came out vividly remembered the bank runs of the Great Depression.

Tracy visits the laboratory of Dr A. Tomic (pause for groan about the pun) and on learning of the gas experiments there, wants to take samples. No search warrants and his idea of chemical analysis is to dip his finger in and taste the sample. Gruesome and his henchmen are feuding with Dr Tomic and his henchmen, while Tracy dogs their steps. Assorted car chases and gunplay keep the viewer from nodding off. Tracy sets an elaborate trap for Gruesome which almost backfires.

Not just figuratively, as Gruesome tries to dispose of Tracy into an industrial incinerator. One loose thread is nicely tied up. Gruesome, in disposing of Tomic in the incinerator, also unknowingly burns up Tomic's notebook on how to make the gas. The surviving canisters are used up one way or another, so there is nothing left to analyze to recreate the gas. The formula is lost forever. It all ends in tears for the surviving bad guys, and Tracy triumphs. The movie is a reasonably good action-adventure story. Karloff and his unmistakable voice dominate what would have otherwise been a dull plot.

Sometimes mad scientists aren't paranoid, but really do have enemies out to get them. "The Mad Scientist Caper" was a 1948 episode of the OTR series SAM SPADE, written by Gil Doud. It is about a crazy inventor Raymond Fox whose formula for Penatron was stolen by Alfred Grierson and patented by him, freezing out Fox. Roscoe Manning, a patent lawyer, is on the case for Fox but needs evidence to prove the theft, so private detective Sam Spade is hired.

Penatron is a plastic that blocks radiation better than lead but is as light as aluminum. Spade begins the investigation and quickly discovers that Grierson Enterprises is a front. The case leads him to a private mental institution where Spade is trussed up in a straitjacket as a patient by Dr Birdwell. Getting himself out, he finds that Fox was once a guest there, and that Birdwell had paid $50,000 to Grierson, who in turn secretly transferred the money to Manning.

Everything and everyone seems interconnected and clues abound, but there still is no solution to the case. The plethora of suspects is thinned out by a bomber, starting with Manning, who departs this world suddenly when he unlocks the door to his office and is blown into messy splatters. Another bomb just barely misses Spade, who survives however, because he is the star of the series and could hardly be killed off in mid-season.

Birdwell is exposed as Grierson. Manning found that out earlier and shook down Birdwell for the $50,000 as blackmail. Birdwell had used truth serum on Fox to extract the formula for Penatron, and then patented it. All ends well except for the dead, and Birdwell, who will be off to sit in the electric chair.

The SAM SPADE series was done in a light-hearted manner, unlike the movie or novel. Spade narrates the action with plenty of wisecracks, and his secretary Effie is a bubble-headed dear girl. Worth downloading a few mp3s, free from www.archive.org.

SHERLOCKIANA: PART 26
by Dale Speirs

[Parts 1 to 25 appeared in OPUNTIAs #63.1B, 63.1C, 63.1D, 67.1D, 68.1C, 69.1E, 70.1A, 71.1B, 251, 253, 256, 261, 269, 270, 276, 288, 309, 333, 340, 348, 356, 359, 365, 370, and 383.]

The original Sherlock Holmes stories written by Sir Arthur Conan Doyle are referred to as the canon. Stories written by others are called pastiches. Multimedia characters weren't invented during the last few decades. They go back to the 1800s, when popular series such as Sherlock Holmes appeared in magazines, books, stage plays, and, in the fullness of time, movies, radio, and television.

Most pastiches are made up from whole cloth, but there is a subset based on throwaway lines in the canon stories. When introducing a story, Watson would often mention other cases by title, remarking either that someday he would get around to writing them up or that they could never be written up because they might shake the Empire to its foundations. They never were written up, as they were Doyle's little jokes.

Pastiches: Radio.

Sherlock Holmes was on and off the radio waves in several different series on just about every radio network. Many of the episodes were canon stories which I won't bother reviewing, but there were many pastiche episodes.

Basil Rathbone and Nigel Bruce appeared in 220 episodes of THE NEW ADVENTURES OF SHERLOCK HOLMES, after which other men took those roles. (These and hundreds of other OTR shows are available as free mp3s at www.archive.org)

The episodes followed a standard format. The announcer would ask Watson about this week's story. He would dip into his box of manuscripts and begin narrating. There would be a segue to the stage dialogue. The plot was never noir or bloodthirsty. Each episode always wrapped up with a lecture by Holmes on the vital clues that broke the case.

Unusually for radio dramas, many of the episodes were performed before a live audience, and during the war years at military training camps. The audience was silent through the show but then burst into noisy applause at the end. Episodes are available as free mp3s at www.archive.org. There were hundreds of episodes, but rest easy as I will only mention a few.

From 1946, written by Denis Green and Anthony Boucher, is "The Disappearing Scientists", alleged to be Holmes's final case. Watson sets the case in 1903, when radium was the rage, and Holmes was preparing to retire to Sussex Downs to keep bees.

They take time out from packing for the move to visit the laboratory of Dr Jean Boulant, a francophone scientist who has a tiny but very expensive sample of pure radium for his research. The scientist has three assistants, Parker, Taylor, and Hughes. Boulant complains about the university trustees, who won't let him use the radium sample for medical research but only for physics.

Not long after, 221B Baker Street is visited separately and successively in turn by relatives of the three assistants, saying that they had gone missing one by one. Holmes refuses to make enquiries as he is packing for his move and is officially retired. When the head scientist himself goes missing, along with the radium, Holmes reluctantly agrees to investigate after his brother Mycroft requests it.

Having taken the case, Holmes first wants a list of London doctors who treat patients for free, which immediately gives a clue to the listener as to what might be transpiring. Holmes and Watson go about questioning physicians about any patients they have with skin eruptions or lumps, and who have not kept their appointments recently.

They follow one patient who is going to a treatment, but to her horror she finds the dead body of Boulant, with fresh blood pooling everywhere. Amusingly, the mp3 recording, which has the original commercials, then immediately cuts to an advertisement for red wine. Some radio technician either wasn't paying attention to the show or else had a macabre sense of humour.

The radium is missing. It was the obvious motive for the murder since it would be worth a great deal on the black market. As Holmes investigates, the missing assistants re-appear one by one. They assuage their families' fears with plausible explanations. Holmes has little to go on. Nonetheless he solves the case without talking to the three suspects.

The solution is based on a bilingual English-French pun Boulant made at the beginning of the episode. The murderer, one of the assistants, is identified and brought to justice, and Holmes retires to the countryside in triumph. In a way, the ending is a bit of a cheat because it requires the listener to know some French, which I doubt the average American listener of this series had.

True Detective Mysteries 67

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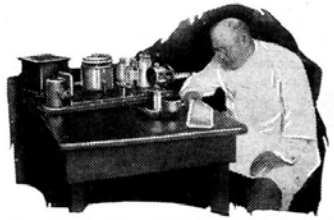

How It Is Possible for a Moderately Priced Appliance to Contain Actual RADIUM

While Radium is the rarest and highest priced substance in the world, it is also the most powerful, consequently a little goes a long way. It is difficult to form a conception of the vast amount of energy stored in even the most minute quantity of Radium.

A one-hundredth-millionth milligram will throw out one hundred thousand combined rays in twenty-four hours at a velocity of 12,000 to 180,000 miles per second. Radium will give out light, heat and other forms of energy for an estimated period of 2500 years before total disintegration takes place.

Radium is usually produced from Carnotite ore by a very expensive process. From two hundred to four hundred tons of ore have to be treated to produce one gram of Radium. The Laboratory of the Radium Appliance Company has succeeded in working out a scientific process whereby Carnotite ore of the highest grade in Radium content is stimulated and fortified by the addition of actual Radium. Several coats of this very expensive mixture are then applied on the surface of a light, comfortable pad, 4½ by 11 inches in size.

These pads are thoroughly tested as to Radio-Activity before being sold, and being covered with the same Radio-Active compound, there can be no variation in the Radio-Activity which they emanate continuously through a period of years.

This process, combined with the almost inconceivable power of an atom of Radium explains why these pads can be manufactured and sold at a price within the reach of practically everyone.

Will Radium at Last Open the Door of the Great Unknown?

ARTHUR BRISBANE says: "Radium is the one hope of unhappy thousands. Radium is destined to open many closed doors to science."

MADAME CURIE, the discoverer of Radium, says: "The most important property of the rays is the production of physiological effects on the cells of the human organism."

DR. HENRI LETILLION, of the Institute of France, says: "The body of man can be transformed by Radium into a machine of perfect health, vitality and beauty."

PROF. LAZARUS BARLOW, of London, says: "I was never more confident that Radium is one of the greatest agencies in the treatment of disease ever discovered."

DR. E. STILLMAN BAILEY says: "The rays seem to work miracles. One of the principal causes of old age is hardening of the arteries due to increased blood pressure. The radium prevents this. Acute pains disappear as if by magic. Jaded appetites become alive again. Red blood corpuscles have increased by 250,000 within 48 hours."

DR. C. EVERETT FIELD, of New York, says: "That is what the radio-active treatment will do—stimulate the glandular secretions, the chemical composition of the body, eliminate the danger of the accumulations of poisons and carry us on in health and vigor over many more years than are now considered the normal span of life."

Radium has a distinct physiological effect upon the human system. Clinical and laboratory tests have absolutely proven this. There is a decided beneficial effect upon the circulation. The Radium rays carry energy into the depths of the body, vitalizing every organ and tending to make every cell in the body full of health and vitality.

The natural result of this condition is not only to overcome and banish existing diseases but to increase the resistance of the body to disease attacks to such an extent that one is almost immune. Considering the basic effects of Radium upon the very life cells of the body, it is apparent that the nature of the disease is not material, because Radium puts the body in condition to overcome any disease.

Therefore the makers of Degnen's Radio-Active Solar Pad offer it to the sick upon the unqualified agreement that you can try it in your own case and if it does not produce an improvement in your condition during the trial period to your entire satisfaction, it will not cost you anything for the test.

REMEMBER, no matter what your ailment may be you can try this Pad without expense.

Thousands Have Proven the Marvelous Effects of Degnen's Radio-Active Solar Pad Without Risking a Penny

Tens of thousands of people have tried out these pads, with the privilege of returning them if not satisfied. Read what people are saying—these are extracts from just a few of the many thousands of letters we are receiving all the time:

RHEUMATISM
Whitmans, W. Va.
"Some time ago I ordered a Radio-Active Solar Pad for my right side. I had been suffering from Rheumatism and could not work. About two weeks after I began wearing the pad I began to feel better and can now say I am a healthy man. I am working every day and do not have any pain."

INDIGESTION
Philadelphia, Pa.
"I tell you I was near death's door. I did not know what it was to go to bed and sleep, and in the daytime I would almost walk like a drunken person for the want of sleep. Now I get a good night's sleep again and am not bothered with indigestion."

STOMACH TROUBLE
Chicago, Ill.
"After suffering from stomach trouble for 11 years, I wore your pad for a week. I have gained my health back. I am never tired any more like I used to be and I am full of pep. Never in my life did I feel as good as I am now feeling."

ASTHMA
Rock Island, Ill.
"He had had asthma since he was a young man and he is now past 75 years old. He bought one of your Pads. He began to get better right along—has no more cough and sleeps right along."

BLOOD PRESSURE
Pittsburgh, Pa.
"I have been wearing your Radio-Active Solar Pad for 45 days. It has done me a world of good. I am a woman 44 years old and had a blood pressure of 245. My blood pressure could be brought down to very near normal, but would not stay down. The reason it would not stay down, was because it was brought down too fast. Then I got the Pad, knowing that the wearing of this pad continuously would bring it down slow but sure, which it is doing."

CONSTIPATION
Madison Wis.
"I am feeling a whole lot better and have more ambition and my bowels move more natural every day now, that is something they have not done for several years."

NEURITIS
Athens, Ga., June 10, 1925.
"I suffered from neuritis of the spine, shoulders, hips, chest and arms for twenty years, and I spent a fortune trying to get relief. At the end of twenty years I was worse. I ordered one of your Radio-Active Solar Pads; after wearing it five days I had no pain to amount to anything. I have been wearing it night and day since January 15, 1925, and I have never felt better in my life."

PARALYSIS
San Francisco, Calif.
"When I received the Pad I had been paralyzed all on one side of my face—couldn't close my eye. When I would laugh only one side of my face would laugh, and I looked terrible. I saw your ad in the paper and thought I would try it. I had been that way for five weeks. In two weeks my face began to move. Now when I laugh I can laugh on both sides. And I love to laugh and when I couldn't laugh it was a terrible feeling. Thank you over and over for what you have done for me."

It is conceded by recognized medical authorities that sluggishness or poor circulation is the cause of nearly all human ailments, and that where there is a perfect circulation, disease in any form cannot long exist.

When you stop to consider that the one underlying cause of nearly every known malady is CONGESTION — the one remedy CIRCULATION—all claims made for the Radio-Active Solar Pad are not only reasonable, but in strict accord with modern medical science.

GUARANTEE
We Positively Guarantee
First, that Degnen's Radio-Active Solar Pad contains actual RADIUM in sufficient quantities to be highly radio-active.
Second, that you may try the Pad for a liberal trial period.
Third, that if it fails to give you satisfactory relief from your trouble, whatever it may be, it will not cost you one cent for the trial.
Send COUPON Today

DEGNEN'S RADIO-ACTIVE SOLAR PAD
RADIUM APPLIANCE CO.
Established 1916
1434 Bradbury Bldg., Los Angeles, Calif.

COUPON
RADIUM APPLIANCE CO.,
1434 Bradbury Bldg., Los Angeles, Cal.
Please send me without charge full information how Degnen's Radio-Active Solar Pad is helping sick people, and how I can try it in my own case without expense.
Name .....
Address .....

REFERENCES: *Your own bank, or our bank, The Citizens National Trust & Savings Bank, 308 S. Broadway, Los Angeles, Cal.*

"Dr Winthrop's Notorious Carriage" is a 1949 episode written by Denis Green and Anthony Boucher, who seemed to like the word 'notorious'. The doctor is a brute. The episode opens with him talking to his mistress Margaret. He dumps her, telling her that he doesn't love his wife Elizabeth but needs her for respectability.

Not long after, Margaret dies when run over by a carriage. Eyewitnesses said the driver deliberately aimed at her. That makes the newspapers, which forces Winthrop to confess his affair to Elizabeth. He denies that he killed Margaret, but Elizabeth goes to Holmes for an investigation.

She conveniently supplies evidence that her husband did it, but Holmes deduces she committed the crime wearing her husband's clothes. At the J'accuse! meeting, she immediately blabs all and confesses. A clichéd plot, but the audience would have expected nothing else.

The OTR shows often had elaborate methods of death, usually involving booby-trapped devices. The 1934 episode "Hebraic Breastplate" takes place in a museum's Ancient Rome display room, where a night watchman has been found dead. It is determined that he had picked up a breastplate worn by Jewish priests in the Temple. The watchman lifted it from the display in such a way as to prick his finger on a poisoned needle that had waited thousands of years to be activated. "*It's the Curse of Solomon!*", some people shout, but Holmes determines the death has more natural origins.

Another gimmick was used in the 1946 OTR episode "Genuine Guarnarius". The murderer tried to use it on Holmes after succeeding with the first victim. The method was to hide a thin-walled vial of cyanide gas inside the sound chamber of a violin. When the violinist played a high note sufficient to shatter the glass, the cyanide was released and killed him.

Pastiches: Throwaway Lines.

"The Notorious Canary Trainer" is a 1945 OTR episode written by Denis Green and Anthony Boucher. This pastiche is based on a throwaway line in a canon story in which Watson mentions in passing the case of Wilson, the notorious canary trainer.

The episode opens with Holmes and Watson vacationing at the Kentish seaside. Their neighbours at the inn, a married couple, annoy them with the constant

twittering of two canaries. Eventually they meet the couple at the end of a pier and discover that the man is none other than Wilson, who had served his time and was now going straight. He changed his name to Wainwright, and didn't like Holmes and Watson calling him Wilson.

So much so, that he declared himself suicidal because he had just committed a murder back at the inn, pulled out a gun, shot himself, and disappeared into the water. This flummoxes Holmes, to say the least. After further investigation, Holmes determines that it was planned as an insurance fraud. There was no other murder. That was Wilson's revenge on Holmes, to make him and the police waste time trying to find a nonexistent murder.

There is another twist. Wilson had loaded the gun with blanks, and had intended to swim away underwater, making everyone think his body had washed out to sea. What he didn't count on was that his wife hated canaries and their constant twittering. She saw no reason to share the insurance money or a bed with him, so she replaced the blanks with live ammunition.

Once Holmes figured out the plan, he had to find a way to get Mrs Wainwright (as she legally was, not a Wilson) to confess. He bluffs her by saying that the recovered gun, despite being handled by several people and being immersed in seawater, had her fingerprints on it and the unfired bullets. It works and she blabs all.

Pastiches: Short Stories.

"The Shocking Affair Of The Dutch Steamship Friesland" by Mary Robinette Kowal (2004 Fall, THE FIRST LINE) is a pastiche based on a throwaway remark by Watson. The narrator is Rosa Grisanti, a young woman on board the Friesland, bound from Venice to Africa, where she is to meet her betrothed in an arranged marriage to a man she has never met. Her brother Orazio chaperones her. He and their father are active in radical Italian politics. Holmes and Watson are passengers as well.

The Grisantis' father is a glassblower. For her dowry he created a box full of glass art and drinking utensils. On board the ship is the Italian Prime Minister and his new bride. As a gift, Orazio gives them a pair of fluted glasses that had arsenic embedded into the glass.

Pastiches: Anthologies.

ASSOCIATES OF SHERLOCK HOLMES is a 2016 anthology edited by George Mann. The pastiches are narrated by characters other than Watson. I won't review them all but beginning the anthology is "The River Of Silence" by Lyndsay Faye, who uses Stanley Hopkins, an obscure police inspector briefly mentioned in the canon.

A wooden box is found in the river, and contains a freshly amputated female arm. Hopkins is assigned the case. After it stalls, Lestrade brings in Holmes and Watson to help out. Using the box as the prime clue, Holmes traces it to its maker. The culprit was insane and the victim had died a natural death prior to dismemberment. Not for the first time, Holmes points out that justice and the courts are two different things, and Hopkins learns that not every case needs to be prosecuted.

Some of the characters brought in as principal narrators are obscure indeed. Few except the most fanatical Sherlockians will recall that Holmes had a rival consulting detective named Barker, who appeared in "The Adventure Of The Retired Colourman". Using it for the starting point, James Lovegrove wrote "Pure Swank", in which Barker tells his side of that adventure.

Barker was one of the Baker Street Irregulars, who later joined the Army when he came of age. After demob, he set up as a private detective, using Holmes as a model. This was during the interregnum when Holmes was believed dead after his encounter with Moriarty at the Reichenbach Falls.

In the Colourman investigation, Barker gets there ahead of Holmes when the criminal is caught. He used the opportunity to steal the stolen money for himself, since the original thief was going to hang for the crime. The police were happy to close the case as it looked as if they knew what they were doing. Barker spent the rest of his life wondering if Holmes knew where the money went, and had let the matter drop because he expected that sort of thing from an Irregular. Lovegrove did a good job on Barker's biography, connecting his days as a street urchin to his evolution into a private detective.

Other secondary characters from the canon used in this anthology as narrators fall into two categories, the obvious and the obscure. The obvious ones have already been used in many stories and novels, even in series of novels, such as Irene Adler, Inspector Lestrade, and Mycroft Holmes.

Col. Sebastian Moran, at one time Moriarty's assistant, was forever branded by Holmes as "*the second most dangerous man in Europe*", which, if I were Moran, I would take as an insult. Violet Hunter, one of Holmes's clients, is followed in her later life as headmistress of a girls boarding school. More obscure narrators are Helen Stoner, Billy the pageboy, Inspector Barnes of the Surrey Constabulary, Professor Presbury, and Shinwell "Porky" Johnson.

Overall, this was a good anthology, with a high percentage of readable stories. Well recommended.

SEEN IN THE LITERATURE

Mansfield, D.F., and N.J.Wildberger (2017) **Plimpton 322 is Babylonian exact sexagesimal trigonometry.** HISTORIA MATHEMATICA 44:395-419

Authors' abstract: *Plimpton 322 (P322) is one of the most sophisticated scientific artifacts of the ancient world, containing 15 rows of arithmetically complicated Pythagorean triples. But the purpose of this table has mostly eluded scholars, despite intense investigation.*

We argue that the numerical complexity of P322 proves that it is not a scribal school text, as many authors have claimed. Instead, P322 is a trigonometric table of a completely unfamiliar kind and was ahead of its time by thousands of years. To see how, we must adopt two ideas that are unique to the mathematical culture of the Old Babylonian (OB) period, between the 19th and 16th centuries B.C.E.

First we abandon the notion of angle, and instead describe a right triangle in terms of the short side, long side and diagonal of a rectangle. Second we must adopt the OB number system and its emphasis on precision. The OB scribes used a richer sexagesimal (base 60) system which is more suitable for exact computation than our decimal system, and while they were not shy of approximation they had a preference for exact calculation.

If this interpretation is correct, then P322 replaces Hipparchus' 'table of chords' as the world's oldest trigonometric table, but it is additionally unique because of its exact nature, which would make it the world's only completely accurate trigonometric table.

Speirs: The Babylonians not only beat Pythagoras to the $c^2 = a^2 + b^2$ theorem, but because they used base 60 for their numeric calculations instead of base 10, they were more accurate. The image of the tablet is from this paper, and shows the table of values used for ready reckoning by land surveyors.

DuBay, S.G., and C.C. Fuldner (2017) **Bird specimens track 135 years of atmospheric black carbon and environmental policy.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:11321-11326

Authors' abstract: *Atmospheric black carbon has long been recognized as a public health and environmental concern. More recently, black carbon has been identified as a major, ongoing contributor to anthropogenic climate change, thus making historical emission inventories of black carbon an essential tool for assessing past climate sensitivity and modeling future climate scenarios.*

Current estimates of black carbon emissions for the early industrial era have high uncertainty, however, because direct environmental sampling is sparse before the mid-1950s.

Using photometric reflectance data of >1,300 bird specimens drawn from natural history collections, we track relative ambient concentrations of atmospheric black carbon between 1880 and 2015 within the US Manufacturing Belt, a region historically reliant on coal and dense with industry. Our data show that black carbon levels within the region peaked during the first decade of the 20th century. Following this peak, black carbon levels were positively correlated with coal consumption through mid-century, after which they decoupled, with black carbon concentrations declining as consumption continued to rise.

The precipitous drop in atmospheric black carbon at mid-century reflects policies promoting burning efficiency and fuel transitions rather than regulating emissions alone. Our findings suggest that current emission inventories based on predictive modeling underestimate levels of atmospheric black carbon for the early industrial era, suggesting that the contribution of black carbon to past climate forcing may also be underestimated.

Johnson, M.T.J., and J. Munshi-South (2017) **Evolution of life in urban environments**. SCIENCE doi:10.1126/science.aam8327

Authors' abstract: *The extent of urban areas is increasing around the world, and most humans now live in cities. Urbanization results in dramatic environmental change, including increased temperatures, more impervious surface cover, altered hydrology, and elevated pollution. Urban areas also host more non-native species and reduced abundance and diversity of many native species. These environmental changes brought by global urbanization are creating novel ecosystems with unknown consequences for the evolution of life. Here, we consider how early human settlements led to the evolution of human commensals, including some of the most notorious pests and disease vectors.*

Some of the clearest results of urban evolution show that cities elevate the strength of random genetic drift (stochastic changes in allele frequencies) and restrict gene flow (the movement of alleles between populations due to dispersal and mating). Populations of native species in cities often represent either relicts that predate urbanization or populations that established after a city formed. Both scenarios frequently result in a loss of genetic diversity within populations and increased differentiation between populations. Fragmentation and urban infrastructure also create barriers to dispersal, and consequently, gene flow is often reduced among city populations, which further contributes to genetic differentiation between populations.

The influence of urbanization on mutation and adaptive evolution are less clear. A small number of studies suggest that industrial pollution can elevate mutation rates, but the pervasiveness of this effect is unknown. A better studied phenomenon are the effects of urbanization on evolution by natural selection. A growing number of studies show that plant and animal populations experience divergent selection between urban and nonurban environments. This divergent selection has led to adaptive evolution in life history, morphology, physiology, behavior, and reproductive traits. These adaptations typically evolve in response to pesticide use, pollution, local climate, or the physical structure of cities.

Newberry, M.G., et al (2017) **Detecting evolutionary forces in language change.** NATURE 551:223-226

Authors' abstract: *Both language and genes evolve by transmission over generations with opportunity for differential replication of forms. The understanding that gene frequencies change at random by genetic drift, even in the absence of natural selection, was a seminal advance in evolutionary biology. Stochastic drift must also occur in language as a result of randomness in how linguistic forms are copied between speakers.*

Here we quantify the strength of selection relative to stochastic drift in language evolution. We use time series derived from large corpora of annotated texts dating from the 12th to 21st centuries to analyse three well-known grammatical changes in English: the regularization of past-tense verbs , the introduction of the periphrastic 'do' , and variation in verbal negation.

We reject stochastic drift in favour of selection in some cases but not in others. In particular, we infer selection towards the irregular forms of some past-tense verbs, which is likely driven by changing frequencies of rhyming patterns over time. We show that stochastic drift is stronger for rare words, which may explain why rare forms are more prone to replacement than common ones.