

OPUNTIA 485



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.

AROUND COWTOWN: SOUTH GLENMORE PARK 2020-10-04
photos by Dale Speirs

Continuing with my perambulations around the Glenmore Reservoir (see the two previous issues for the dam and the Weaselhead), here are some photos of the southeast bay of the reservoir. It being autumn, the photos herewith concentrate on the foliage. Not quite as spectacular as the New England states, but beautiful enough for me.

I didn't do all these walks in one day. It would be possible for an athletic person to jog around the entire perimeter of the reservoir in one day. Much better however, just to slowly walk a segment at a time and enjoy the views. This walk began at the boat docks and looped through the forested south shore. There was a brisk wind blowing and the weekend sailors were out in full force. Below is looking north; the downtown core can be seen in the far distance.



I walked west along the shoreline, then looped back through the forest.





A quandary suitable for Robert Frost. The road not taken was up the slope. Instead I turned left and went into the middle of the woods.





As I left the park, the fleet came sailing in to the docks.



ZUGZWANG: PART 2
by Dale Speirs

[Part 1 appeared in OPUNTIA #270. Other articles dealing with financial panics appeared in OPUNTIA's #68.1D, 70.1E, 70.1F, and 71.1D.]

Modern Monetary Theory.

A South African friend of mine gave me this banknote, the highest denomination currency ever issued in the world. He told me on the day it was issued it was worth 23 cents US in the morning and by the evening it was worthless. The hyperinflation of Zimbabwe ended in the 2010s when everyone switched to foreign currencies.

As with other hyperinflated currencies such as Germany in the 1920s and Hungary after the Communist takeover, the banknotes were only worth their value as toilet paper or fireplace kindling. However the \$100 trillion ZM dollar is now worth about \$10 as a collectible.



Financial Panics.

Reading the history of financial panics is an exercise in schadenfreude and disgust at the failure of humans to learn from past experience. I recently came across a history of the Crash of 1987. It wasn't a panic because it only lasted a few days, but it wrecked numerous financial firms and bankrupted countless

speculators. The book was A FIRST-CLASS CATASTROPHE (2017) by Diana B. Henriques.

Due to its brief duration the Crash of 1987 has been forgotten by the general public and for that matter by most stock brokers. The worst crash in stock market history wasn't in 1929 or 2008, it was on Monday, October 19, 1987, when the New York Stock Exchange index fell 22.6% in one day.

It was the dawn of computer-driven trading, using algorithms designed by young mathematicians who had never lived through a serious economic downturn as adults. They had no conception what hard times were like.

Consequently their software did not include instructions about how to trade if a major correction occurred. The software worked fine as markets rose, so the brokerage managers, who knew nothing of coding, let youth have its head.

The other game-changer was the homogenization of worldwide securities markets and investors. There had always been a herd mentality among investors but globalization meant that for the first time, all stocks and bonds were correlated.

Correlation, in financial terms, means that all types of investments rise and fall together. In previous normal circumstances, if stocks fell, then bonds and gold would rise. If a particular currency traded higher in exchanges than other currencies, then gold would fall against that one currency and rise against the others.

When everything rose and fell together, there was no safe refuge to place money and ride out the storm. Huge investment funds sloshed money around the world, jacking up local market indexes and currencies, then crashing them when they all decided simultaneously to bail out and go elsewhere. As a result, volatility skyrocketed.

The American financiers thought they would be okay because their markets were too big. The problem was that American investors and speculators were doing the same thing as everyone else. There was no place to hide.

It didn't help that regulatory agencies not only didn't talk to each other but were engaged in turf wars. The patchwork regulation of a homogenous international market was a recipe for failure.

Henriques provided a chronology of how the Crash of 1987 occurred. There was no single villain as the markets fell. Like snowflakes in an avalanche, each financial firm disclaimed responsibility. During the crash, brokers did 99% of their business (the actual statistic, not exaggeration) as sell orders. With no one buying, prices went into a freefall.

The next day, October 20, the markets froze up. Many big-name stocks such as IBM did not trade a single share. No one was buying anything. Everyone was trying to raise cash because brokers had to settle their accounts overnight at clearing houses. If they failed to do so, they couldn't trade the next day.

That same day though, bargain hunters began buying stocks in the afternoon. Not much, but enough for a tiny uptick on the charts. The markets bottomed and then slowly recovered. A few years later it was all a bad dream.

What were the lessons learned? None, as the Panic of 2008 demonstrated. Human nature does not change, even as we race into a cashless society controlled by computers. Buy some silver or gold coins, just in case. Make certain that you have a supply of preserved foods and toilet paper, and not just because of the pandemic.

STEAMPUNK REVIEWS: PART 5

by Dale Speirs

[Parts 1 to 4 appeared in OPUNTIA's #364, 393, 412, and 457.]

THE CLOCKWORK MAN (1923) by E.V. Odle was a humorous novel downloaded from www.gutenberg.org. The setting was England of yore in 1923, although it wasn't yore when first published. The story opened at a village cricket match, disrupted when a malfunctioning clockwork automaton arrived in the middle of the game, from where or when, no one knew.

The Clockwork Man tried his hand at cricket and was a sensation, but then started a fight that laid out the umpires and fielders after it refused to leave the wicket when called out. It did a runner but could not leave the county due to

constant malfunctions that crippled its motions. Nor could it understand the quaint customs of British civilization, which gave the author an opportunity to expostulate on society.

The villagers, or at least some of them, had their encounters with the Clockwork Man, hissing steam and ticking loudly on occasion. Their answers to his questions hardly made sense to it, and certainly not in the vice versa. The local doctor was the one who got the chance to help heal, or repair, the Clockwork Man. In doing so, he learned a fair bit about the multiform dimension the automaton came from.

The final part of the novel was a discussion by the Clockwork Man on the philosophy of its makers. This was mostly standard utopian philosophy but with a few twists. The origin of the automatons from humans was an effort by wise Makers to avert future wars.

Remember that at the time this novel was published, the world was still recovering from the War To End All Wars and the aftereffects of the 1918 influenza, which killed about the same number of people as the war. Once the author used up his philosophical musings, the Clockwork Man returned to his own time in the future. The book fizzled out.

An interesting read, especially if you read it as I did, during the time of the coronavirus pandemic.

SHERLOCK HOLMES: ADVENTURES IN THE REALMS OF STEAMPUNK (2019), edited by Derrick Belanger, was an anthology of seven original pastiches. It is a logical variation on a theme, for Doyle wrote the Holmes stories as contemporary fiction. Had the pace of technology been faster, Holmes would have accepted those advances just as steam trains were already part of his background.

“The Silver Swan” by Cara Fox was the first story, beginning with a swarm of mechanical swans disturbing the complacency of the good citizens of West Brompton. Dowager Lady Amelia Seymour soon called at 221B. She told Holmes she thought the mechanicals were aimed at her, trying to assassinate her.

The idea of armed drones would be an obvious one as soon as flying automatons were invented. The question was who was trying to kill her. She

was not in line for her late husband's estate, which went to their infant son. However, as Holmes belatedly informed Watson and thus the reader, Lady Amelia's family business, her father's estate not her husband's, was in a bad way.

Her sister Rosalind wanted control and hoped to frighten Amelia into selling out. The family business was the manufacture of clockwork automatons, including those that could fly. All very complicated, which required a lengthy J'accuse! meeting at 221B, with Inspector Gregson to do the final cleanup.

"The Adventure Of The Pneumatic Box" by Robert Perret began with Mycroft Holmes summoning his brother and Watson to deal with an elaborate device that might be a bomb. It contained tubes of various liquids, which might be explosive or poison gas.

The airship crew that had been freighting it were made to cooperate by placing metal collars around their necks. The collars were slowly contracting, so Sherlock was under pressure to solve the matter. The device was part of a family feud of the Wynthornes, brother and sister, who were vying for an inheritance.

The airship crew were pirates but with no letters of marque. They were intertwined with the Wynthornes, strangely as investors in the family business who resented the lack of dividends.

Sherlock successfully opened the device, which did not go bang but revealed a wax cylinder and photograph, evidence in the Wynthorne feud. The J'accuse! meeting in 221B resulted in shots fired but the surviving guilty Wynthorne got what she deserved.

"The Adventure Of The Portable Exo-Lung" by G.C. Rosenquist got off to a roaring start as a master criminal kept Scotland Yard and Holmes running from pillar to post. In quick succession there were three kidnappings at £20,000 ransom each, the theft of a Van Gogh from a museum, and a bank vault heist that netted £100,000 in bullion.

The criminal left a small card at each scene, with a different mathematical symbol each time on the cards. The next crime was arson in the Mathematics Dept of a university, designed to lead Holmes and Watson through a secret passageway. This brought them into the company of Professor Moriarty.

He was confined to a wheelchair equipped with steampunkish life support devices. The devices were made for him by an unnamed Croatian scientist, whose name the reader can easily surmise. They were designed to give him an extended lifespan, such as an exo-lung.

The ending was too pat; a cave-in killed Moriarty in his underground lair. Basically the author wrote Holmes and Watson into an unescapable certain death and had to pull a rabbit out of a hat. On the surface they might have escaped with a single bound but that wouldn't work in a tunnel.

"The Body At The Ritz" by Stephen Herczeg was considerably more steampunkish than its predecessors in this anthology. There were lots of airships ploughing through the skies of London, including small taxis that landed on rooftops. The mail was delivered through pneumatic tubes, as indeed it really once was in city cores in our timeline.

One such missive came from Lestrade for Holmes to attend to a murder at the Ritz Hotel. The hotel was owned by coal magnate Sir Rupert Linklatter, who did not appreciate such goings-on in his domain. The dead man had diesel stains on his hands, the up-and-coming fuel that was a threat to the coal barons.

Instead of a magnifying glass, Holmes used brass goggles with zoom lenses, and checked for bloodstains with an ultraviolet flashlight. Old-fashioned plodding and informants revealed the deceased was an employee of the British Diesel Company.

There were various alarums and the suicide of the assassin. With no proof to convict anyone, Holmes and Lestrade had to let the matter drop. The story didn't drop, however, and it was obviously the beginning of an intended series.

"The Hounds Of Anuket" by John Linwood Grant was set in the Anglo-Egyptian Empire. There were airships of course, but also Lovelace Thinking Engines for data retrieval.

Inspector St John Ahmed Faroukh had a case taken away from him, a young woman whose body was fished out of the Thames River. Her corpse and all the reports were classified by the Home Office. He decided to consult Holmes, who had more freedom of movement. He also visited Watson, living separately at his practice and who had back-door connections through the police surgeons.

The plot developed. Egyptian nationalists were planning to blow up an upstream dam on the Thames. The Lovelace engines began turning up names to investigate. There followed a race upstream to stop the conspirators, and so they did. Pausing only for infodumps, Holmes led his company to the final confrontation. The Thames River claimed one more body, the leader of the conspiracy.

This was an interesting alternative history, one in which the Empire focused on Egypt rather than India or the Dominions.

“Treasure Of The Dragon” by Thomas Fortenberry began with the incineration of banker Alastair Bergmann in his backyard. His wife Edythe and the household staff told the police that a flying dragon swooped down and carbonized him. The Bergmanns had previously met Holmes, so Edythe asked Lestrade to bring him along.

From the description of the dragon, Holmes (and the reader) quickly deduced it was a small steam-powered blimp painted to look like a dragon. Its cargo was Greek fire, which it dumped on the unfortunate banker.

Alastair had dabbled in Chinese and Indian investments, specifically the opium trade. His partner from India had accumulated a fortune in jewels which were stored in Alastair’s bank vault in London. A Chinese tong had sent a threatening letter and it seemed obvious what the second target would be.

The dragon attack on the bank was met with heavy fire from constabulary using hunting rifles and elephant guns. The tong members attacked on the ground but were defeated by masses of policemen. Strangely, the battle was off-stage in this story, taking place while Holmes and Watson ruminated in 221B. An awkward piece of writing to conclude the story.

The final pastiche was “Sherlock Holmes And The Clockwork Count” by Benjamin Langley. The lead character Clifford Kingsley, heir to a baronetcy, performed on stage as the escapologist The Clockwork Count. Slumming he was, but he was a trained engineer who designed his stage contraptions as well as faking being a clockwork man. He was in fear for his life, so he had called in Holmes.

Taking a Zeppelin to the manor, Holmes and Watson arrived at the Kingsley estate. The Baron was a cranky old coot, as well he might be, considering he

was confined to a steam-powered wheelchair. The water reservoir was small and limited his range, so he had to be followed by a servant girl constantly dashing back and forth with jugs of water.

Clifford was apparently killed by a booby trap in the manor sunroom. Holmes did a sham investigation designed to smoke out the killer, who was acting out a family feud. Clifford had substituted a clockwork imposter to be murdered in his place.

The J'accuse! meeting was held in the sunroom. Holmes spotted the culprit by noting where she looked, not around the room like everyone else, but up at the ceiling from which descended the devices.

A Scientific Method of Growing Hair



It is a known fact that the blood conveys nourishment to all parts of the body. It is likewise known that exercise makes the blood circulate, and that where the blood does *not* circulate no nourishment is supplied.

The lack of proper circulation of blood in the scalp, due mainly to congestion produced by artificial causes, results in the starvation of the hair roots, and produces falling hair and baldness. Therefore, the logical and only relief from baldness is in the restoration of the scalp to its normal condition, thus enabling the blood to resume its work of nourishing the hair roots. It was work along these logical lines that produced and perfected

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Method of Testing

You can tell by a few minutes' use of the Evans Vacuum Cap whether it is possible for you to cultivate a growth of hair on your head, and we will send you the apparatus to make the experiment *without expense on your part*. If the Evans Vacuum Cap gives the scalp a healthy glow, the normal condition of the scalp can be restored, and a three or four minutes' use of the Cap each day thereafter will, within a reasonable time, develop a natural and permanent growth of hair. If, however, the scalp remains white and lifeless after the Cap is removed, there would be no use to give the appliance a further trial. The hair cannot be made to grow in such cases.

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We will send you, by prepaid express, an Evans Vacuum Cap, and will allow you ample time to prove its virtue. All we ask of you is to deposit the price of the Cap in the Jefferson Bank of St. Louis, where it will remain during the trial period subject to your own order. If you do not cultivate a sufficient growth of hair to convince you that the method is effective, simply notify the bank and they will return your deposit in full. We have no agents, and no one is authorized to sell, offer for sale or receive money for an Evans Vacuum Cap. All Caps are sold under the bank's guarantee, and all money is sent direct to Jefferson Bank.

A sixteen-page illustrated book will be sent you free, on request

EVANS VACUUM CAP CO., 945 Fullerton Bldg., ST. LOUIS

For balding steampunks, this advertisement was in the 1905 October issue of THE BLACK CAT magazine (available as free pdfs from www.archive.org)

SERIES DETECTIVES: PART 9

by Dale Speirs

[Parts 1 to 8 appeared in OPUNTIA's #402, 406, 425, 448, 459, 467, 472, and 477.]

The old-time radio series mentioned here are available as free mp3 downloads from the Old Time Radio Researchers at www.otrrlibrary.org

Nick Carter.

NICK CARTER, MASTER DETECTIVE aired on old-time radio from 1943 to 1955. The detective first appeared in print in 1886, predating Sherlock Holmes, and often appeared on stage and in movies. Nick Carter appeared in his own pulp magazines and dime novels.

The police seldom appeared in the series. Carter had boundless confidence in his ability and came across as arrogant to all, including his secretary/girlfriend Patsy Bowen. He had his own laboratory, a huge library, and kept better files than the FBI.

“The Slingshot Murders” was a 1944 episode written by Jock MacGregor. Nick Carter and Patsy Bowen were telephoned by a street urchin Kenny, who acted as one of Carter's irregulars. He had noticed suspicious characters lurking in vacant shop fronts adjacent to a bank and thought they might be planning a payroll job. Carter went out to join him and watch from a distance.

Kenny was right. A bloody gun battle broke out, so Carter joined in but unsuccessfully. The gang wounded him and Kenny. Carter had a gun and Kenny had a slingshot. The latter saw a gunman at a fourth floor window above the battle and fired a stone through the window. The police were nowhere.

Carter returned to the crime scene after the hospital bandaged him up. Kenny gave him his slingshot to be going on with. Carter went up to the fourth floor and talked the apartment occupant into letting him investigate inside. He found a freshly repaired window, which got him held up at gunpoint.

The robbers were hiding out adjacent to the bank with the idea the police would spread out across the city looking for them. Jake was the ringleader, with Pete and Slug as his somewhat loyal minions. They frisked Carter and found three handguns on him but let him keep the slingshot.

The robbers rendered Carter unconscious and tied him up. The gang squabbled a bit before preparing to run. They left Carter alone for a while. He muttered to himself as he explained to the radio audience how he was freeing himself from the ropes, then using the slingshot to break the window.

Slug came running in and was rendered unconscious in his turn. Carter continued muttering to the listeners in great detail, reading out stage directions in lieu of proper dialogue. He then held Jake and Pete at gunpoint. A waiting game began because Carter was too weak from blood loss to fight them. He managed to hold them off until Bowen arrived with the police in tow. Mercifully there was no more muttering.

“The Sick Statue” was a 1945 episode written by Alfred Bester. Yes, that one, the science fiction writer. Like Ray Bradbury and Harlan Ellison, he found out he could make more money from a single script than a hundred short story sales to pulp magazines.

Patsy Bowen was reading the incoming mail, one item of which was a letter from a housemaid Maizie Lee, enclosing a \$5 money order as a retainer. She feared mischief to the household, especially since, as she wrote, the statue got sick. That got Nick Carter’s attention, so off they went to the Park Avenue mansion of Horace Allen. The servant’s entrance, of course.

The house was empty save for the body of Maizie Lee. However a man identifying himself as Peter Craig, nephew of Allen, came down from the top floor after hearing Carter and Bowen moving around. He was shocked to learn of Lee’s death.

Craig was an amateur chemist whose odouriferous experiments made it difficult to keep servants. The murder wasn’t going help. Allen was an art collector. He had several bronzes, all of which showed a strange corrosion known in the art world as bronze disease. There really is such a thing; I Googled it.

Carter and Bowen went to see Mr Arrowfield, the art dealer who sold the pieces to Allen, then to the employment agency where Allen got his servants. Returning to the Allen residence, they discovered that Craig had become the second murder victim. As they discussed matters, the police arrived. Craig had called in the first murder before his turn at infinity.

Allen finally appeared and was perturbed to learn of the deaths. He wasn't emotional about them, just perturbed. He said he had an important guest Norman Hadley Lane coming to town to buy some of the bronze pieces. Carter went off to his laboratory to analyze the sick bronze. He found a clue that identified the murderer.

Since eight minutes remained in the episode, he refused to name the culprit. He led everyone around by the nose until it was time for the denouement. Shots were fired, Lane almost became victim #3, and Arrowfield was arrested as the culprit. The pieces he had sold to Allen were phony, and would be exposed as such when Lane saw them.

Arrowfield had previously snuck into the house and smeared some ammonium chloride on the bronzes, the cause of the bronze disease, in the hope that Allen would cancel the sale. No such luck, so Arrowfield had to resort to stronger means. Maizie Lee became suspicious, then Craig, so they had to be eliminated. Arrowfield had to weave a tangled web.

Barrie Craig.

BARRIE CRAIG, CONFIDENTIAL INVESTIGATOR was probably the only private detective series whose star had actually been a private detective in real life. William Gargan had worked in an investigator's office as a young man, and professed amusement at how script writers depicted private detectives at variance with the real ones.

This series aired from 1951 to 1955. Craig narrated most of each episode. The plots often tangled up, but there were several summations during each episode so the listener wouldn't get lost. The episodes are worth listening to once, and the series grows on the listener.

"A Very Odd Job" was a 1952 episode written by Louis Vittes. Craig was paid \$200 to deliver a puppet to Ann Kelly over at a clip joint called Easy's Open House where she was an, ahem, entertainer. She fainted when he presented it to her. Leaving her in the dressing room, Craig stepped down the hall to the owner's office to introduce himself to John Easy.

Kelly disappeared but the puppet remained. Easy was uncooperative. Craig went to the police. They had no record of Kelly but did have a flag on Easy's assistant Osborne. More to the point, they had been tracking a puppet show

believed to be distributing counterfeit currency. Since the show traveled across the country, they had a good method of disposing of the fake cash.

The U.S. Treasury believed Ann Keegan and her father were principal culprits with the show, working as puppeteers. Before they could be rounded up, the old man was murdered and she disappeared with \$200,000 in counterfeit currency. The show manager had been Easy, and it was obvious that she was now Kelly.

Osborne was the next casualty, freshly murdered in his apartment. Craig went off on his own trailing suspects, finding that Keegan had been kidnapped by the counterfeiter, named Dogger, who wanted the cash back. Craig bluffed his way hither and yon, with several excursions about town.

Dogger became more annoyed by the minute in the search for the cash. They wound up at Easy's apartment where he admitted he had the fake currency. By now there were only two minutes of air time left, so the episode hurriedly wrapped. Shots were fired, the police burst in, and Craig barely had time to tie off the loose ends before the end credits.

"Dead Bull In A China Shop" was a 1954 episode written by Louis Vittes. Barrie Craig picked up his client at Willy's Diner. She was sobbing at a table over the theft of her bull fiddle. Suzy would lose her job if she couldn't find the double bass, as they called it at Carnegie Hall. Craig was a softie and agreed to help investigate.

Willy was bored and the diner didn't have any other customers, so he closed shop early and made the group a trio. They went over to her nightclub in time to see a truck drive away with the fiddle's carrying case on the back. Craig got the licence plate number before the truck went out of sight.

Entering the nightclub, they found a man slugged unconscious and the bull fiddle sans carrying case. Events transpired as they so often do. Craig and Willy tracked down the fiddle case, seeing it used to move something, say perhaps a corpse.

Back at Suzy's apartment, she helpfully filled in a few details. The nightclub owner Gordon Bentley had been courting her but she was undecided about him because of his lifestyle. He had put the nightclub up for sale, payment in cash.

Craig said he suspected it was Bentley's corpse that was moved in the fiddle case. Suzy was all broke up because she would never be able to use the case again. The bloodstains would be difficult to remove.

Then came the twist. Suzy and another man Brinker had stolen the cash. They planted the story so that the police would find the case and corpse in a rival's place and run him in for the murder. That would leave them free and clear. Not meant to be.

The rival showed up, shots were fired, the police were on the trail, and the usual etcetera followed. The episode was good at misleading the listener while leaving a clue that Craig caught but which listeners would have ignored as trivial background.

Boston Blackie.

BOSTON BLACKIE aired on old-time radio from 1944 to 1950, and was also a series of 14 movies. His real name was Horatio Black but everyone, including his girlfriend Mary Wesley, called him Blackie. The radio shows are leavened with humour and quips. Writers were not credited, although the actors were.

Blackie had been a jewel thief in Boston and was supposedly reformed now that he lived in New York City. Supposedly, because he had no day job and took no fees as an amateur detective, yet lived well in a nice apartment and squired Wesley around to the fanciest nightclubs.

Blackie's nemesis was NYPD Homicide Inspector Farraday. The name was originally spelt in the usual way with one 'r' but after the series got going for some reason the extra letter was added.

In the early episodes of the series, Farraday would arrest Blackie on sight, then gather evidence to fit him. Over time their relationship moderated to being sparring partners. Blackie liked to barge into hot cases and race Farraday to the solution, while Farraday always had the snappiest lines.

One amusing aspect of the series was the berserk organist who provided all the music. Scenes were punctuated, and that is the correct word, by abrupt chords on the organ. Dramatic lines spoken by the cast were followed by crescendos, although the opening and closing themes were more sedate.

"The Skating Rink Murders" was a 1946 episode. Roller, that is, not ice. Boston Blackie and Mary Wesley were circulating at the rink when a young woman Jane Carter was found murdered.

She had a \$50,000 diamond ring on her finger, which in those days meant it must have been about the size of a golf ball. Carter's friend said the victim didn't have the ring on her when she came in. So not only was robbery not the motive, the killer had put the ring on her.

Farraday talked to the husband of the deceased, Jack Ellis, who said he had given her the ring when they were married just a week before. He had an alibi but when Farraday later telephoned his hotel room, the clerk said no one by that name was there. Ellis claimed the body and the ring, then vanished. He took the ring to an accomplice named Jansen, who shot him dead. Honour among thieves and all that.

Blackie did his own sleuthing. He got a tip from a woman named Hazel Stanley, who told him where to find Ellis' body but gave him a phony address for herself. Back to the skating rink with Wesley. As he surmised, he found Carter's friend, who gave him more information. Farraday arrived and told Blackie the ring had been stolen in a safe cracking.

Only then was it revealed that Carter and Stanley were red-haired women who looked similar to each other. The ring must have been intended for Stanley. There was an obvious and major plot hole there, but the episode hurried past it.

Blackie tracked down Stanley with some dubious logic and unlikely hunches. He threatened her with a murder rap unless she cooperated. She blabbed. Ellis had been her boyfriend, and Jansen was the ringleader. She told him Jansen was working another job as they spoke.

Jansen was busy cracking a safe at a nearby bank. Blackie, no stranger to opening safes without the consent of the owner, met Jansen at the site. It wasn't a social call. The ring was found in his possession and the case quickly wrapped up in time for the final commercial.

"Murder Aboard Ship" was a 1946 episode. The opening scene on board the freighter Swan telegraphed a foreboding when Capt Harlan told the First Mate Peterson that he felt a premonition of trouble, and it wasn't the fog they were traveling through.

He wasn't wrong. Peterson said the crew was mutinying to steal the cargo and if the captain wanted to make port alive he would have to go along with the scheme. So he did. Crandall, the shipping company agent, told the officers: "*If you steal it, it'll be over my dead body.*" There are no prizes for guessing what happened next.

Jump cut ashore, where Boston Blackie and Mary Wesley were canoodling. They were interrupted by an annoying telephone call from their friend Shorty. He had a friend Jimmie Adams coming in on the Swan. Shorty was tied up at work and asked a favour of Blackie to meet the ship.

So it was Blackie and Wesley charted a launch to meet the Swan. Clambering on board, they found Inspector Farraday, who was not pleased to see them. Like a bad penny, Blackie always turned up at a murder investigation, in this case Crandall.

The suspects were Capt Harlan, First Mate Peterson, and the Executive Officer Bill Kent. Harlan dared Farraday to prove anything. He outright lied to the inspector and said the voyage had been completely uneventful. Little did Harlan know Blackie was aboard.

Blackie and Wesley met Adams in his cabin and got the news about the failed mutiny and cargo. Farraday also learned of the plot from a different crew member. There followed a farcical incident of Farraday falling overboard after a rope ladder was sabotaged.

Farraday carried on, as usual arresting the wrong person and then spending the rest of the episode squabbling with Blackie. Trouble was, the main suspect, the First Mate, was the second victim.

Adams swam ashore, saying he was fearful he was next, and arrived at Blackie's apartment. After a change out of wet clothes, the two men chatted. Adams noticed a picture of Shorty and asked who he was. This immediately alerted the listener, not to mention Blackie.

Back on the ship, Farraday was interrogating the captain when Kent came into the cabin waving a gun. He was quickly disarmed. Meanwhile, Blackie got Shorty to finger Adams as an imposter. The real Adams was killed before the voyage even began.

In the epilogue, it was explained that the imposter was an escaped criminal who had been recognized by Crandall and Peterson. It was never explained what happened to the mutiny. That wasn't just a loose thread, it was a thick hawser dangling over the side and trailing in the water.

Bulldog Drummond.

BULLDOG DRUMMOND was based on the novels by H.C. McNeile and aired on old-time radio from 1941 to 1949, with a brief revival in 1954. Hugh Drummond was a British detective, but the radio series soon moved to America.

At that point he seemed to become a paladin, occasionally taking fees as a private detective but often working pro bono. In America he had an assistant named Denny, a blithering idiot Englishman. What they lived on, or why Drummond could act with police powers was never properly explained.

The episodes opened with the sound of footsteps on the waterfront, with the constant boom of fog horns. This was incongruous since most episodes were set inland. The series was generally B-level, worth listening to once. Writers generally were not credited.

"Counterfeit War Stamps" was a 1942 episode which began with Drummond and Denny retrieving a body floating in the water while they were out motorboating in a storm. Shortly after they spotted a large boat drifting and boarded it, to find a woman by herself.

She said she couldn't find the captain, to which Drummond replied they had, for that was whom the corpse was. She said she and her husband were in the securities business and had helped put away another man for fraud. He was out of prison seeking revenge.

There was a motley group on board fearful of what might happen, nevermind the storm. They squabbled as the killer sneaked about. The death toll rose steadily. Drummond and Denny were hard pressed to investigate while babysitting the survivors. Many alarums, although on a boat there could be no excursions.

The crowd made it back to land, whereupon followed multiple twists in the plot. The woman went to visit her lover, tailed by her husband, Drummond, and Denny. An extended conversation followed between her and her boyfriend

wherein they bwah-ha!-ha!-ed all their nasty plans and gloated over those they killed. They were unaware that three men were listening and prepared to testify in court as to what was said.

The great mystery of this episode was the complete absence of anything to do with counterfeit war stamps. I'm guessing the recording of this episode was mislabeled and has been floating about ever since under an incorrect title.

"Murder In The Ring" was a 1946 episode, no writer credited. Drummond became involved in a boxing match when strange betting patterns appeared which suggested that one of the boxers might be taking a dive. Carson was the underdog but it was his opponent who died on the canvas.

It wasn't a physical blow. Cyanide powder was found on the dead man's nose and lips, and also on Carson's gloves. The initial thought was that Carson dusted his gloves to give himself a real advantage. He denied it and raised the idea that the powder was on the other man's face and his gloves had picked it up from there.

That proved to be the truth. The dead man's own trainer had dusted a towel, then wiped the boxer's face with it just as he stepped back into the ring. A second murder was done, this time a bullet to the trainer's head in an apparent suicide.

Drummond noted that the handgun had clear fingerprints on it, which does not happen in real life, since fingerprints are smudged on grips. The killer had shot the trainer, wiped the gun, and then put it into the dead man's hand and carefully imprinted it in a way that would never actually happen. A bit more detecting and the culprit was caught. Justice was served and Drummond roamed off to his next case.

Casey.

CASEY, CRIME PHOTOGRAPHER aired on radio from 1943 to 1955. The series title varied several times but is generally remembered by this one. The series was based on novels by George Harmon Coxe. The hero was Casey, first name never given, who was a newspaper photographer for the MORNING EXPRESS. He was accompanied by reporter and girlfriend Ann Williams.

"The Red Raincoat" was a 1946 episode written by Alonzo Deen Cole. Three shots were fired on a street, and a woman in a red raincoat died. Casey and Ann Williams were quickly on the scene. He photographed the body as it lay face down.

A bystander Mrs Patch thought the victim was Nora Gellhorn because she was the only person in the neighbourhood who wore such a bright coat. Patch said Gellhorn's husband was a womanizer who couldn't get a divorce from Nora, so he may have taken the hard way. Continuing the gossip, she said the other woman was Emma Randall, who lived with her husband James in the same apartment building as the Gellhorns.

By this time the crime scene boys had finished their initial examination. The body was then rolled over. To everyone's surprise including her own, Patch said the body was Emma Randall. Patch said she had seen James just as the shots were heard, so it couldn't have been him.

That immediately raised the possibility of mistaken identity. The killer knew about Nora's raincoat and fired the shots not knowing that a different woman had borrowed the coat. Casey barged into the Randall apartment while the police were questioning James, snooped around, and took photos without so much as a by-your-leave.

Nora and Emma both worked at the same restaurant. Nora said she had loaned Emma the raincoat. The police suspected Nora's husband (his first name was never mentioned) but Casey thought they had the wrong man.

Casey and Williams went to their favourite hangout, the Blue Note nightclub, where they chatted with the bartender about the case. He said it reminded him about a story in a recent detective pulp magazine about a similar case. In that story, it was a sable coat, not a red raincoat. The husband of the dead woman had used the coat as a gimmick to shift suspicion to her lover.

Thinking Randall was copying the pulp story, Casey and Williams went over to his apartment. They surprised him with Nora, plus a pile of pulp magazines. She pulled a gun but to no avail since Casey was the star of the series and she was only a guest actor.

While Mr Gellhorn had been diddling Emma, James and Nora had been having their own affair. They used the pulp plot to clear the way for themselves. Nora

made sure Emma would use the raincoat, James shot her, and the blame was shifted to Mr Gellhorn. The loose ends were tied off over a final chat at the Blue Note as Casey and Williams had a beer.

“The Surprising Corpse” was a 1946 episode written by Alonzo Deen Cole. Henrietta Zaybell financed gigolos to marry wealthy young heiresses and then embezzle their fortunes. She currently had a grubstake of \$43,000 invested in Leon De Gastone, posing as a count in pursuit of Paula Durton, a stupid young thing who would inherit a fortune in a year when she turned 21. Her uncle Clement held the purse strings. Paula’s older brother was Arthur, who had inherited his share of the wealth five years earlier.

De Gastone got drunk one night as he often did, and blabbed out loud in a tavern what he really thought of Paula. Zaybell decided to cut her losses and via De Gastone get a \$100,000 settlement from Clement. Unfortunately the only thing De Gastone got was two bullets in the head. Paula was implicated and arrested.

Her alibi was so unbelievable that Casey decided she was innocent. The rest of it was the usual snooping by Casey and Ann Williams, plus the usual bumbling by the police. Casey bluffed Zaybell by trying to blackmail her.

The police were tailing her. Immediately after Casey left, Zaybell went outside to a public telephone booth and called Clement. The police traced the call but had no wiretap, so they didn’t know what the conversation was about.

The plan backfired. Zaybell then telephoned the police to file a complaint against Casey for attempted blackmail. Yet another twist occurred when police visited her for a statement. She vouched for Paula and gave her an alibi. She then volunteered to have a radio listening device installed in her car to record her conversations with Arthur. She was going to meet him and take him for a ride in more ways than one.

The police followed the car, with Casey and Williams riding along. Arthur admitted to Zaybell that he had blown through his inheritance. He had plotted to send Paula to the electric chair to get her share of the estate.

Brotherly love indeed. He then tried to kill Zaybell but the police were close behind and stopped him in time. The most surprising twist was that Zaybell came away as a heroine despite her evil ways.

Richard Rogue.

ROGUE’S GALLERY aired on radio from 1945 to 1947, with a brief revival for the 1950-51 season. The episodes were written by Ray Buffum. Several actors portrayed private detective Richard Rogue to different effect.

The gimmick of the series was that once each episode Rogue would be rendered unconscious, during which time he would have a conversation with his alter-ego Eugor (spell it backward). Sometimes Eugor would offer valuable advice, most times he would just restate the plot for listeners who had tuned in late, and occasionally he was just padding to make up the time for the episode.

Slugging a detective unconscious was an old cliché even back then. By all rights, those detectives should have been drooling idiots by the end of the first season because of their weekly concussions.

“Little Old Lady” was a 1945 episode. Conchita Morales was the client but not the little old lady. She told Richard Rogue she felt threatened. After first hitting on her with lines that wouldn’t work on a last-call cougar in a roadhouse, he elucidated the details of the case.

She was being blackmailed with foolish letters she had written to an ex-lover Frank Maxim, who owned a nightclub. The man had subsequently done time on a tax evasion charge and was now out on parole. Morales wanted to marry someone else, the implausibly named Tippy Tyler, preparatory to which she had to get back those letters.

Maxim was uncooperative and had the staff throw Rogue out, not just figuratively. Thereafter Rogue tried unsuccessfully to find Morales. Returning to his office after a fruitless day, he found a little old lady Mrs Zamp waiting for him. Her son had gone astray with bad company and that day had returned with a bullet wound, about which he refused to explain.

She took Rogue to her house but her son had disappeared, leaving behind bloodstains. Once she got over the shock, she sat down with Rogue for some tea. For some reason she doped his tea. As he lapsed into unconsciousness, Eugor arrived. The conversation merely restated the obvious before Rogue woke up.

He woke up in his car. His gun was gone. Arriving back at his office, he found Maxim's body with the gun nearby. The police showed up on a telephone tip but it was obviously a frameup. Back to the little old lady's house for proof of alibi but the place was stripped clean.

The next excursion was to Morales' apartment, which turned out to be that of the little old lady, real name Helen Shay and mother of Morales, real name Ellen. Rogue was ambushed by Tyler, who turned out to have been Maxim's henchman. They had all framed Rogue as part of a plot to take over Maxim's underworld operations.

The denouement then began, with all parties protesting their innocence like snowflakes in an avalanche and accusing each other of murder. The deadlock was broken when dear mama fired a shot through Tyler's forehead. He never knew what happened.

The rest was tying up loose threads. After dear old mama was hauled away by the police, Rogue put the moves on Ellen qua Conchita and guilted her into doing things his way. The wrap-up was a little too neat and rushed. Ellen certainly got over Tyler in a hurry.

"Where There's A Will, There's A Murder" was a 1946 episode which opened with an infodump, all about Angela Mullens. She was the elderly wealthy client, with an avaricious niece Claire Mullens and nephew Paul Warner as her only heirs.

Mullens was no angel despite her first name. She had doubled her millions back when a million was real money, and hadn't hesitated to use sharp practice. Her favourite hobbies were foreclosing on mortgages and calling in promissory notes.

She wanted Richard Rogue to discover who stole her will. It had been in a strongbox under her bed which was stolen. If she died intestate (without a will), her estate would go to the niece and nephew. Before Rogue could ask the obvious question, she said she would visit her lawyer tomorrow to have a new will made. The old will left all of her estate to charity, excepting only \$5,000 each to her two relatives.

Her dentist Dr Samuel Hall walked in. His office was in the same building as Rogue's, and Mullens had combined two errands into one trip. Hall lectured her

about her health. Ignoring his advice, she asked both men to dinner that evening at the manor, then imperiously marched out. Rogue arrived on time but was too late. Mullens had died two hours earlier from an apparent heart attack.

Pausing only for a shampoo commercial, Rogue began investigating. Claire and Paul were not in deep mourning. Also present in the big house was the attending physician Dr Stevens. Rogue asked for an autopsy, which made Stevens huffy since he had declared the death a heart attack.

Both men left for their respective homes. On stepping into his place, Rogue received his smack on the head that sent him to visit Eugor. Their conversation revealed nothing. After reviving, he found a threatening note and his place ransacked.

Meanwhile the autopsy had been done at lightning speed and revealed Mullens had been poisoned with cyanide. In today's world it takes the medical examiner a week or two to get back toxicology tests, but in the 1940s they only took an hour.

Rogue returned to the Mullens mansion and found a clue that identified the suspect, which he withheld from the listener since there were still four minutes of air time left in the episode. He headed out to another house. No one was home so he let himself in through a window. Searching the place, he found the strongbox and a moment later Hall with a gun in his hand.

Hall had defaulted on a \$50,000 promissory note owed to Mullens, who had been pressing him for payment. He informed Rogue that he had destroyed both the note and the will. He didn't get away with it. He blabbed a confession instead of keeping his mouth shut, and as a result was sent up the river to sit in Old Sparky.

What was interesting was the murder method. When Mullens had been at Hall's clinic that afternoon, he placed a cyanide-filled gelatin capsule inside a tooth crown. It took a few hours for saliva to melt the gelatin and kill Mullens. The moral of the story was to never loan money to your dentist.

Richard Diamond.

RICHARD DIAMOND, PRIVATE DETECTIVE aired on radio from 1949 to 1952 as a star vehicle for singer Dick Powell, who was trying to make a

transition from crooner to actor. Private detective Richard Diamond, supported by his rich girlfriend Helen Asher, was an average investigator.

His gimmick was that at the end of each episode he would serenade Asher with a romantic ballad in his rich voice. If they were in his apartment, the next-door neighbour would complain in loud counterpoint to Diamond's singing, a very funny running gag through the series. Diamond and Asher were night people, so they constantly woke up the neighbour out of his sleep.

The dialogue attempted to be snappy and witty but generally came off as smarmy. Diamond was played as a happy-go-lucky detective who got on well with the police. Noir, it wasn't.

"William Logan And The Ivory Statue" was a 1950 episode, no writer credited. It opened with Richard Diamond answering a telephone call from Helen Asher. She asked what he had been doing, to which he replied he had been cleaning out the office. When she asked if he found anything interesting, he replied: "*Sam Spade. Guess he hadn't paid his rent.*"

Then a customer walked in carrying a package, handed it to Diamond, and fell dead from a gunshot wound. As Diamond telephoned to the police, an intruder arrived but he tackled him.

It was a busy office, for Diamond only had a few moments to slap him around before the police showed. While Diamond answered the door to admit the police, the intruder dived out a window without opening it first, managed to survive the fall, and fled.

With that rousing start to the episode, attention turned to the package. Unwrapped, it proved to be the MacGuffin, a six-armed figurine carved out of ivory. The deceased was later identified as William Logan, a merchant marine sailor.

Once the hoorah was sorted out, Diamond took the statuette back to his apartment, hid it inside the piano, and began to freshen up for a date with Asher. No rest for the wicked, as another man Leopold Titus pounded on the door. He offered Diamond \$10,000 for the statuette, now identified as Kali.

After Diamond refused, Titus called in his henchman Charles from the hallway. It was the intruder, who had good reason to dislike Diamond and was obviously

happy to return the favour. To cover up the noise as Charlie pounded Diamond, Titus began playing the piano. He was appalled to hear the piano out of tune, with certain keys clunking instead of sounding.

When Diamond regained consciousness, Titus and Charles had departed, but yet another goon, Ahmed Benec, arrived, also seeking Kali. His method of conversation was by garrote, but the police returned in time to rescue Diamond. Titus had made off with the statuette, having figured out why the piano was off kilter.

Diamond was tired of being beaten up, as indeed would anyone. He looked up Titus's address and went out there. If he was going to be beaten up, it might as well be in someone else's place. Upon arrival he discovered Charles was dead and Titus was dying, for Benec had been there and gone with Kali.

Titus lived long enough to explain that Benec was a thug who had taken the statue back after it had been stolen from him. Benec was still on the premises. Before departing, he wanted to finish the job with Diamond, being a tidy man. However Titus had strength enough to pull out a gun from Charlie's body and shoot Benec dead before he himself died.

It all ended well for Diamond. Back to his apartment for a dinner date with Asher. He began to serenade her, with accompaniment from his angry neighbour protesting the noise. She calmed the man down long enough for Diamond to finish the song.

Johnny Dollar.

YOURS TRULY, JOHNNY DOLLAR was the last of the old-time radio series, airing from 1949 to 1962. Almost all the OTR shows had died off by 1955. The episodes were standard half-hour weekly shows except for a year starting in 1955 October, when it aired as daily 15-minute installments comprising one complete episode each week, or in other words, 75-minute episodes.

Johnny Dollar was an insurance investigator based in Hartford, Connecticut. Each episode began with a claims adjuster from an insurance company ringing him up and asking him to take on a case. The running joke of this series was that Dollar shamelessly padded his expense account. Each scene was introduced by Dollar reciting a line item from his expense report, followed by a segue to the action.

“The Cui Bono Matter” was a 1956 five-part episode written by Les Crutchfield. Luanne Parker shot her stepfather dead in the middle of the night. Dan Parker was the County Attorney. He had been out of town and without calling ahead, came home unexpectedly in the early hours of the morning.

He let himself in without turning on the lights, not wanting to disturb Luanne. Nonetheless she was woken, got her handgun, and fired two shots in the dark through his heart. She thought he was a burglar. Her father was a marksman who had taught her well.

Dollar was called in because Dan Parker had a \$100,000 life insurance policy. Call it \$1,000,000 in today’s depreciated currency. It would be difficult to prove anything, but with 75 minutes of airtime to fill, the listeners knew in advance there would be more to it. Bit by bit, Dollar collected information.

Luanne was not a dutiful daughter. She wanted to be an actress, which her stepfather forbade, and her choice in men was regrettable. The Assistant County Attorney was an ambitious man looking for a job promotion. The sheriff spent most of his time in a poolroom. Dan Parker lived above his means, in a bigger house than a County Attorney could afford, with a fancy car and a lifestyle to match.

Interviews with everybody proved nothing one way or another, but that was to be expected. Also as was to be expected, Dollar had an epiphany in the last five minutes that suddenly overturned everything and solved the case. Luanne had given her father a novelty tie that glowed in the dark. The rest was obvious. Final expense account was \$148.30. Claim denied.

“The Paperback Mystery Matter” was a 1961 episode, no writer credited. Johnny Dollar was called to Boston for a client Henry Gerson, who was a cantankerous sharp-practice man and miser. His only heirs were no-account nephews Jerry and Paul Gerson and niece Nancy Trimmer, who was no better. A nice family who obviously didn’t pray together.

Henry was worried, not without reason, that his heirs wanted to speed his passage to the grave. He had a double-indemnity life insurance policy as additional incentive for the three kinfolk, over and above his millions. Dollar suggested that Henry leave his estate to charity. The old man was aghast, never having approved of them. He didn’t like to leave his estate to his three heirs but felt he had no alternative. He wanted protection.

Unusual threatening letters had been sent to him which cited Biblical verses: Philippians 2:12 (*Work out your salvation*), Isaiah 38:1 (*Set your house in order for you will die*), Revelation 2:10 (*Be faithful unto death*, which Henry interpreted as a warning not to change his will), and Romans 6:23 (*The wages of sin is death*).

Dollar visited the heirs. Nancy was on parole and hopeful that her uncle was not long for this world. Dollar noticed she had an extensive paperback collection. She yapped incessantly and he had trouble getting a word in edgewise. Next he headed to see the nephews. Paul said he and Jerry didn’t want the inheritance. They were studying for the ministry and didn’t want tainted money.

As that happened, Henry was found dead, apparently a suicide from gas, which would negate the life insurance policy. Dollar suspected Nancy because he had noticed she had a paperback mystery with a plot about murdering a man by gas. He and the police went to have a chat with her. She inadvertently gave herself away as the murderer because she yapped one sentence too many.

The nephews changed their mind and decided to take the inheritance. Since murderers cannot inherit, Nancy got nothing, not that she could spend it in a prison cell. Expense account total was \$70. First Timothy 6:10

The Shadow.

The Shadow, as the opening blurb put it, was in reality Lamont Cranston, wealthy young man about town. He had traveled to Tibet where he learned how to cloud minds so that people could not see him, only hear him. His voice also changed when he became invisible, courtesy of switching to a crystal microphone. He always announced himself as The Shadow with maniacal laughter.

The lovely Margo Lane was the only one who knew his real identity. Her main functions were to scream every time she saw a corpse, be frequently kidnapped or trapped with a killer, and to have the loose threads explained to her in the denouement. What was interesting for those days was that she and Cranston were supposedly single and living in different apartments, but they commonly had scenes where they ate breakfast or stayed in hotels together. The network executives and sponsors of those times weren’t as prudish as often thought.

The Shadow began as a narrator on a radio show. He then became a character in his own right and spawned a monthly magazine, followed by books and movies. There was no continuity between his appearances in different media. In the movies, for example, he was a middle-aged radio reporter who used The Shadow name as the title of his show but was known to his coworkers by his real name.

The radio series had a complicated genealogy that began in 1930 and didn't evolve the familiar version of The Shadow until 1933. The series lasted until 1954. Like the print stories, no real-name credit was given to writers. Sometimes a house name was credited, but usually nothing was said in the closing credits about who the writer was. Never expect logical plots.

“Prelude To Terror” aired on 1939-01-29, a title that would prove to be accurate a few months later. A gangster named Braden bumped off Professor Baker, a mad scientist who had invented a new explosive gas. The gang missed killing his lab assistant Cooper.

The gang stole the entire supply of gas. Braden had a diabolical plan worth bwah-ha!-ha!-ing over. He had the gas injected into hundreds of light bulbs. During the daytime, the gang members went about the city installing them in carefully selected places. At dusk, innocent civilians switched them on and BANG! they went.

The terror plunged the city into complete darkness as the populace feared to turn on any light. The criminal element, led by Braden, ran amok. Panic in the streets as might be expected.

Cranston was on the case. He had heard of Baker's death and guessed the reason. Instead of police telling the citizens not to turn on light bulbs in public places, the city shivered in darkness. A moment's thought would have revealed that the exploding light bulbs could not have been installed inside apartments or other non-public areas.

However that would have left the episode without a plot. The Shadow tracked down Cooper and tried to force the information out of him. Unfortunately a gang member terminated Cooper before he could name the guilty. The authorities shut off the city's electricity. Braden gloated from his lair, lit up by a generator. The Shadow was drawn to the light like a moth. The gloating ended when the police arrived. Braden didn't survive but The Shadow did.

“The Comic Strip Killer” aired on 1947-11-23. Three people died in the opening scene, a jaywalker hit by a car, an elderly lady who fell down the front steps of a library, and a football fan who fell out of the bleachers. Those were apparently unrelated accidents until the autopsies revealed the victims were already dead from toxin, not the accidents.

Lamont Cranston and Margo Lane were on the case. His idea was to check old newspapers for a comic strip that had been running a serial about the villain Hypo, who killed with a hypodermic needle, not a gun. The storyline matched the real murders. The problem was that the medical examiner couldn't find any needle marks on the victims.

The cartoonist was Jack Prescott, who might have been the killer. Alternatively, it could have been a reader who was a fanatic, not just a fan. Prescott's valet/chauffeur Harry Borden modelled as Hypo. Prescott was depressed to learn his comics had become reality. In response to Cranston's question, he said Hypo was based on a friend named Dr Murray Schumacher, a biochemist who specialized in toxins.

The next victim, later that night, was Prescott. He had been injected while looking at the window display of a newspaper. He didn't die, but lay babbling deliriously on a hospital bed. The medics figured for some reason he hadn't gotten the full dose, hence his survival. What baffled them, as with the previous victims, was that they couldn't find any hypodermic marks.

So on to the doctor's laboratory, out in a country mansion. Lane went by herself, posing as a news reporter. She was accompanied by The Shadow. Schumacher seemed one ha! short of a bwah-ha!-ha! The interview was abruptly concluded.

Cranston decided on a quick return to the Prescott residence. Borden was not thrilled to see Lane. While Cranston went around to a side door as The Shadow, Lane stalled for time out front by accusing Borden of being Hypo.

Prescott suddenly arrived, having checked himself out of the hospital. He knew how to bwah-ha!-ha! and gloated how he had been the Hypo. Borden was injected and almost died. Prescott went after Lane but she survived because she was booked for the series.

The Shadow arrived. His trademark laughter as he prepared to stop Prescott was a genuine bwah-ha!-ha! In the epilogue, the explanation was that Borden tried to stop his schizophrenic boss with a dilute dose. Prescott had been using a hypospray, which injected the toxin via high-pressure air. Prescott (and Hypo) was shipped off to an institution.

The Falcon.

THE ADVENTURES OF THE FALCON aired on radio from 1943 to 1954. It was based on a popular series of movies which in turn were based on a story by Michael Arlen. As with The Shadow series, there was no continuity between the different media appearances.

The Falcon was Gay Lawrence in the movies, then later Lawrence's brother, and for radio he became Michael Waring. Why he was called The Falcon was one of the mysteries, since he never operated in disguise and was otherwise just a regular private investigator. In the later part of the series he suddenly turned into a counterspy for the U.S. Army Intelligence overseas.

"The Double Exposure" was a 1950 episode, no writer credited. The plot began when Jimmy Arcaro was taken for a ride out in the Bronx by a hitman named Ford. The hit was supposedly ordered by Marvin Draper.

Arcaro lived long enough to identify Ford to the police. Eileen Chambers hired Michael Waring in respect of Arcaro's will. He had left everything to his partner Eddie Hutton but in the event of his predecease the estate, worth millions, would go to Chambers.

Hutton had been rubbed out sometime before and was supposedly at the bottom of the Hudson River. One wonders how that river manages to keep flowing instead of backing up from all the bodies dumped into it.

The lawyer who was executor gave Chambers a difficult time and she wanted Waring to expedite the case to prove she hadn't ordered the hit. Jump cut to Waring being accosted by Hutton, back from the dead. He had faked his death to avoid a hit from Draper, but upon learning that Arcaro was dead, came back to claim the fortune.

The estate changed hands again when Hutton died a second time from poisoning. Waring visited Draper to beard the lion in his den, but the man was

complacent and unworried that any river mud would stick to him. Upon returning to his apartment Waring discovered Hutton's body was gone, rather embarrassing since he had called the police.

Alex Hutton, brother of the once and future deceased, came looking for Eddie, which at least vindicated Waring to the police. By now everyone was looking for everyone else.

The grand finale took place in Chambers' apartment. The revived Eddie Hutton had been an imposter and the real one was still at the bottom of the river. Alex had hired Ford to activate the will. The imposter was to establish the inheritance, then quickly be killed. That meant the estate would go sideways to Alex, not to Chambers. Didn't work; she got the money.

"The Case Of The Careless Corpse" was a 1952 episode, set in a period when Michael Waring was working for U.S. Army Intelligence in Europe. His latest assignment sent him to Berlin.

Maxwell Oppenheimer was a Communist spy, directed by his controller Vincent Christopher to prevent Waring from meeting with a rocket scientist named Heinrich Schiller left over from the war. Oppenheimer, who spoke with a Peter Lorre accent, was to kidnap Schiller and run him into East Berlin.

At the Schiller residence, Oppenheimer posed as an envoy of Waring, come to drive him over to Army Intelligence. He ran into formidable resistance from Frau Margo, who did not want her husband involved in covert operations. She didn't succeed and the snatch did.

Waring got on the trail. Oppenheimer accidentally killed Heinrich, making Christopher furious. The body was dumped in the River Spree and Waring had to break the news to Margo. The widow refused to cooperate by giving a description of Oppenheimer. She vowed to avenge her husband's death in her own way.

She got an assist from an unnamed woman who telephoned her and gave her the names of Christopher and Oppenheimer. The former was soon assassinated, and Waring suspected Margo. Oppenheimer paid a social call on Christopher's widow Gabrielle, whom he knew was the woman who tipped off Margo. He tried blackmail of 50,000 marks which she refused and sent him away with a slapped face.

Oppenheimer telephoned Waring to betray Gabrielle. Waring made more excursions back and forth across Berlin. With many suppositions and no evidence, Waring nailed Margo for the murder of Christopher. Presumably the spy agencies didn't need admissible evidence. Court trial? What court trial?

Philip Marlowe.

THE ADVENTURES OF PHILIP MARLOWE was based on the character created by Raymond Chandler. It aired on radio from 1947 to 1951, changing networks in midstream. The series was slightly darker than most mystery shows, although never as dark as the noir novels upon which it was based.

“The Sea Horse Jockey” was a 1950 episode written by Robert Mitchell and Gene Levitt. The Sea Horse was a \$50,000 jeweled brooch for which Philip Marlowe was hired by an elderly woman Lola Demerest to guard it during its proposed sale.

He arrived at his client's home in time to find her dead and the brooch stolen. After notifying police, Marlowe found a clue and investigated. The list of suspects included a lawyer fired by the defunct that same day and her stepdaughter Jillian, who lived large on the dwindling family fortune.

Since Marlowe wasn't going to be paid by Lola, he hired on with Jillian. He followed up a clue that unexpectedly led to another murder, a merchant seaman Paul Crater who had been shot dead when he answered the door at his sister's house where he lived when ashore.

That led to a local shipyard, run by Jug Nolan, described by Marlowe as looking like someone who had hunted Moby Dick. He was a grumpy old coot who reacted badly when told Crater was dead.

The denouement brought in a fresh cast of characters. The killer was Lola's servant Birdie Lochfield, who had resented her employer's stinginess and rude behaviour. She murdered her and stole the Sea Horse brooch. Lochfield had killed Crater by mistake, thinking he was someone else.

She blabbed all in the presence of Crater's sister Helen, who then shot her dead in anger. Afterwards, Helen calmly told Marlowe that the female of the species is always deadlier than the male. Indeed.

“The Gold Cobra” was a 1950 episode written by Robert Mitchell and Gene Levitt. The client was Rolf Winkum and the MacGuffin was a pure gold cobra. Philip Marlowe's job was to help transport the statuette from Los Angeles to a Chicago museum. The owner was Mordecai Ziff, an elderly man who designated Winkum as his agent.

Winkum warned Marlowe that on the trail of the gold cobra was someone identified only as Akbar. He was one of those unruly natives who resented the white men who had stolen the figurine from a temple back in India.

The plan was that Winkum would act as a decoy, carrying a suitcase as if it held the cobra. Marlowe was given a claim check from a hotel for a bag that actually contained the cobra. The idea was that Akbar would hare after Winkum, leaving Marlowe an undisturbed flight to Chicago.

It didn't work. Akbar followed Marlowe to the hotel, but he didn't get the cobra. It transpired there was another claimant for the cobra, a redheaded woman. She pulled a gun on Marlowe and got the bag, then fled.

Various excursions followed as characters chased each other across Los Angeles. Ziff was the first casualty, by gunshot. Marlowe almost became the second fatality, by a real live cobra. Winkum made a surprise appearance, a traitor who wanted to go into business for himself. The final confrontation was won by the live cobra, which killed Winkum. Justice was served when Akbar got the gold cobra back. Marlowe got the redhead and all was well.

The Saint.

Simon Templar, aka The Saint, began as a series of novels by Leslie Charteris and became successful as a multimedia amateur detective in movies, radio, and television.

Templar had no visible means of support, yet lived elegantly. He was not a professional private detective but either stumbled into situations or had people coming to him for help. The latter never had any difficulty in finding his home address or telephone number. Presumably he was listed in the directory, and was not averse to newspaper publicity.

Various radio series of THE SAINT aired between 1945 and 1951. The general consensus was that the seasons featuring Vincent Price were the best. He fit the

mould of The Saint perfectly, being cultured and urbane in private life. The dialogue was witty, with so many quips that in a number of episodes the bad guys were motivated to try and kill him just to shut him up with all those jests. Well worth listening to.

“The Corpse Said Ouch” was a 1950 episode written by Louis Vittes. Francis Blake came to Simon Templar because she had seen a newspaper obituary that she was dead. They went to the Restwell Chapel funeral parlour. “*I’m the kind of man a girl wouldn’t mind being seen dead with*”, said The Saint to the cab driver Louie.

The body did resemble Blake. It had been brought in by the police, who identified her from a name tag in the coat. There were two bullet holes in the coat, which raised the question of who the intended target was. Templar took Blake back to her apartment. Waiting in the bedroom was a strange woman named Olga with a bad accent that fluctuated between French and Russian.

She quickly departed, and it became obvious she had been searching the apartment for something. Blake said her coat had been at the cleaners, so that was the next stop. No satisfaction at the front counter, which prompted Templar, Blake, and Louie, to stake out the back alley behind the cleaners. They saw the owner sneak away and followed him to a nightclub.

They eavesdropped a conversation between nefarious creatures about stolen jewels. There followed numerous alarms, including the sudden death of Olga in Blake’s apartment. There was more traffic in that apartment than out on the street, including a goon who kidnapped Blake. The thieves thought she had the jewels.

The action moved back to the cleaners, where everyone converged in search of the jewels. They succeeded and the gems were found. In short order, shots were fired as the combatants disputed who had title to the gems. The surviving bad guys were brought to justice.

The tying up of loose threads in the denouement was complicated, although the explanations did make sense. For any other detective this would have been an average episode, but The Saint kept a steady flow of witticisms that elevated the story above the ordinary.

“Tuba Or Not Tuba”, written by Louis Vittes, aired on 1951-01-21. Simon Templar was plagued by his friend Theodore Coogan’s enthusiasm for the tuba. Coogan was the first to admit he was not a virtuoso player. For that reason he was suspicious when Mr Stanley, of Stanley’s Casino, hired him. Coogan asked The Saint to investigate.

The casino was a roadhouse in upstate New York. Granted that the clientele weren’t there as music lovers, but a tuba in a jazz band seemed anomalous. Said The Saint upon hearing the news, “*You know it doesn’t happen very often but words have failed me*”.

The two men agreed that Stanley had an ulterior motive in hiring a tuba player. He agreed to attend Theodore’s debut so the poor man would have at least one friend in the audience.

The drive out to the roadhouse gave Templar the opportunity to quote to Louie the cab driver from Hamlet’s famous line “*Tuba or not tuba, that is the question*”. We knew the joke was coming, so it was merciful that the inevitable pun was gotten out of the way early in the episode.

Upon arrival, Coogan was not seen on the bandstand. Templar and Louie went looking for him backstage. They met Stanley, who denied all knowledge of Coogan. They continued snooping around the roadhouse, setting off several alarms. Shots were fired but they escaped.

From there Templar and Louie went to Coogan’s place and were greeted at gunpoint by a sultry woman. She refused to give her name, sarcastically remarking that she was the Queen of Transylvania. At that moment, the gang from the roadhouse arrived, causing her to flee. The duo weren’t inclined to stay either. As they blundered out of the building, they saw a corpse, which Templar identified as Max Carter.

Templar phoned a friend in the police force, who was not surprised to hear of Carter’s demise. The deceased was, as the saying goes, known to police. The lieutenant said the list of suspects could be narrowed down to several thousand people but Coogan would be at the top of the list. His girlfriend Wendy Breen had committed suicide because of Carter.

Back in Louie’s cab, the two men were hijacked by the Queen, still carrying a gun. The trio didn’t get far, as Stanley had two cars box them in. Templar and

Stanley traded quips, but the latter had the advantage of numbers. All and sundry adjourned to the casino for a chat at the behest of Stanley and his gunmen.

Templar prevailed on Stanley to explain the plot. Carter was a blackmailer. Mona, as the Queen was and her name finally revealed, killed him. Or did she? Or was it Coogan?

Stanley had kidnapped Coogan so the body could be placed in his apartment, then kept him captive off stage for the rest of the episode. The plan by Stanley was convoluted, stymied by an equally convoluted scheme by The Saint to plant sufficient evidence to lead the police to the casino.

Templar was a forgiving man and Mona was more than willing to help him forgive. Coogan never had a speaking part beyond the opening scene and fortunately never played the tuba.

Michael Shayne.

Michael Shayne began as a series of novels by Davis Dresser, writing under the pseudonym of Brett Halliday. As a fictional detective, Shayne appeared not only in print but as an old-time radio series, movies, television, and a mystery fiction digest. Dresser quit writing Shayne stories after 1958 but farmed out the Halliday pseudonym as a house name to other writers, so the stories continued to appear for decades afterwards.

THE NEW ADVENTURES OF MICHAEL SHAYNE aired on old-time radio from 1944 to 1953. The series was based on the novels by Brett Halliday, although the episodes were pastiches.

From 1944 to 1948, Shayne was located in San Francisco and had a pretty secretary named Phyllis Knight. Wally Maher voiced Shayne as a relatively sedate and average detective.

From 1948 to 1950, Shayne lived in New Orleans without a secretary. He was voiced by Jeff Chandler, who narrated the show in tones of rising hysteria, even if he was just crossing the street. That period could best be described as frenetic. Thereafter a variety of forgettable actors portrayed him.

“Body By The Piano” was a 1945 episode, written by Richard de Graffe. Set in San Francisco, Michael Shayne and Phyllis Knight were asked by a client to help protect a virtuoso pianist who had been getting threatening letters. The police weren’t much help.

The three went to visit the maestro in his apartment but he was most uncooperative. They gave up and went out to dinner. About 90 minutes later a police detective tracked them down and asked them to return to the studio. They advised him it was useless because he refused to talk to anyone. The Inspector replied he knew that because the maestro was dead.

Someone used poison gas on the defunct. This was a locked room mystery, with no sign of any gas container. Shayne found the bundle of threatening letters in the room.

Other tenants on the floor were suspicious as all get out. A professor and a doctor both had the scientific knowledge to synthesize a variety of gases. A woman had stirred up romantic trouble among several male tenants.

Shayne barged into apartments without so much as a by-your-leave or search warrant. There were several alarms and a near-poisoning. Shayne held a J’accuse! meeting, complete with re-enactment.

The killer had used a thin glass globe filled with poison gas. It was hidden in the room such that when the pianist hit the noisy part of his concerto, the vibrations shook apart the glass and killed him.

An elaborate plot. The case would have been thrown out of court because Shayne had contaminated all the evidence. None of it was collected with even a modicum of standard forensic techniques, even by 1945 standards.

“Missing Body” was a 1945 episode written and directed by David Taylor. The opening was a philosophical conversation between Michael Shayne, Phyllis Knight, and a SFPD Homicide detective on the differences between private and police detective investigations. A private eye had more latitude because he didn’t have to prove anything in court. Police had to have admissible evidence collected in specific ways according to law.

The conversation was interrupted by a telephone call summoning the Inspector to a murder. Shane and Knight naturally tagged along. The defunct was a J.J.

Beattie, stabbed in his apartment. The bleat was called in by Mr Porter, who had come to visit. After telephoning police, Porter went outside to wait for their arrival.

Re-entering the house, they found the body had disappeared. Porter was much vexed. There was only one door to the house, yet Porter had seen nothing. The detectives, private and public, searched the house but found nothing except a few bloodstains, so they knew there was a body.

They checked Beattie's unopened mail lying on an end table. Opening one letter, the Inspector found a dunning letter from a man named Reynolds, telling Beattie to settle up or else.

Porter mentioned that Reynolds' partner was named Weaver, and both had been cheated out of money by Beattie. Knight opened another threatening letter, typed anonymously, which mentioned Porter en passant.

The three detectives went to visit Reynolds and found him with Weaver. The two men said the failed business Porter induced them to invest in was a warehouse, now empty. The three went out there and snooped around. They found the missing body up in the eaves.

Knight tracked down the estranged Mrs Beattie, who admitted she had sent the anonymous note. She never trusted Porter. The Inspector had his own resources and found out that years ago Beattie had testified against Porter in a robbery trial. However that Porter died in a penitentiary a decade prior.

Shayne summoned all the suspects for a J'accuse! meeting. They caught out the current Porter in a tissue of lies. Since it was impossible for anyone to have removed the body from the apartment without being seen, it stood to reason that Porter had committed the murder. Porter confessed all. He was the brother of the original Porter. He also should have kept his mouth shut.

Sam Spade.

THE ADVENTURES OF SAM SPADE, based on the character created by Dashiell Hammett, aired from 1946 to 1951. It went off the air shortly after both Hammett and Howard Duff, the actor who played Sam Spade, were named as Communist sympathizers during the Red Scare.

The series struggled on for a few more episodes as a sustained show with no advertisers. No corporation dared to be associated with it. The replacement actor couldn't live up to Duff's characterization.

"The Flopsy And Mopsy Cottontail Caper" was a 1949 episode, written by Robert Tallman and Gil Doud. The story began with an intruder barging in wanting to be Sam Spade's partner. (Evidently unaware of what happened to Spade's previous partner in THE MALTESE FALCON.) Chris Crockett had lost his private investigator's licence in Chicago and wanted to try his luck in San Francisco. He only tried Spade's patience.

Crockett did, however, have a job lined up. A rich matron named Mrs Montague wanted two men to guard jewels on display at a fancy dress party. She paid well but the catch was that the two men had to wear rabbit costumes.

Upon arrival they learned the details. The party would conclude with a parade, with the Queen of it wearing a diamond crown that once belonged to Empress Josephine of France. The detectives circulated through the party until the parade began.

Horace Montague, the pickle king (his business) was dressed as a, well, go ahead and guess. He chatted with Spade. The excitement began when a third bunny got the jewels. Mrs Montague blamed the two men but a third costume was found abandoned after the theft.

The pursuit began and led to a woman with Hollywood's idea of a French accent. She was a nationalist who wanted the crown returned to France but denied have stolen it. From there to a French restaurant with more bad accents and, surprise!, Horace.

Horace didn't want the crown found. He had an indiscreet affair with the French woman, for which she wanted the crown as blackmail. Crockett arrived in disguise as a Frenchman and the worse accent yet. The crown was returned, to France, not Montague.

"The 25-1235679 Caper" was a 1950 episode written by William Spier, which aired a couple of weeks before Christmas. Sam Spade was dining in an Italian restaurant on the San Francisco waterfront when the matriarch of the family asked him for help.

Her cousin Tony had been on a ferry over the San Francisco Bay when he was accosted by an unknown assailant. It was foggy and he couldn't see who slugged him. A doctor Dr Oskar Ames came by and after examining Tony, said he was going out to another patient in Oakland.

Investigating at the ferry, Spade noticed an unusual number of plainclothes detectives loitering about and on the boat. It was still foggy and cold. He also met up with Ames. The doctor and Spade decided to do their own sleuthing. They went in separate directions on the ferry.

Spade noticed a lifeboat with a slashed tarpaulin. Upon closer investigation, he found the body of a dead man inside, his throat slashed. On the body was a piece of paper. While reading it, Spade was attacked and thrown overboard.

Since he was the star of the series, he survived the cold waters. The paper was still in his pocket. Drying it out, he read an address for the International Postcard Shop and a note about a greeting card for Boris. With no other clue, Spade visited the store and asked for the card.

The proprietor was taken aback but obliged. He handed Spade a postcard, which had the number mentioned in the title. Stepping outside, he was cornered by the plainclothes men. They took him to a warm place for interrogation and identified themselves as FBI agents. They were seeking Boris, who led a Soviet spy ring in San Francisco.

The postcard number was a coded message identifying Ames as a spy. The dead man was a turncoat murdered by Ames just before Spade found him. Tony had been mugged by mistake by spies who couldn't see him well in the fog and thought he was the turncoat.

By itself, this episode was a standard spy story. In the context of what happened to Hammett and Duff, there was a lot of irony.

George Valentine.

LET GEORGE DO IT aired on radio from 1946 to 1954, sponsored by Standard Oil. The series was about George Valentine, a private investigator. He solicited clients with a running newspaper classified advertisement in the Personals column that he cited in the opening credits: *Danger's my stock in trade. If the job's too tough for you to handle, you've got a job for me. Write full details.*

Valentine's secretary/girlfriend was Claire Brooks, whom everyone called Brooksie. Her main function was to act as a sounding board for Valentine and have the plot explained to her at intervals.

"The Perfect Specimen" was a 1948 episode written by David Victor and Herbert Little Jr. The client was Dr Norman Penford, having received a note threatening his life. He said he was a widower with a college-age son Eric. His first wife Jane was still getting alimony.

George Valentine and Claire Brooks talked with Norman and Eric, then visited Jane. She told them Eric was a second son and that she had a son Leslie by Norman whom he had failed to mention. Brooksie took Eric out on a date, who put the moves on her big time.

Valentine traveled to Norman's hometown where he collected a mass of strange facts and contradictory gossip about the Penfords. Amongst the information was that Norman had never married a second time and there was no birth certificate for Eric.

It was a complicated family. Leslie was a cripple and Norman hadn't spoken to him in twenty years. Eric was the stolen child of a patient who died in childbirth, and was now blackmailing his putative father. Nonetheless Norman was proud of Eric, a varsity athlete who was a perfect physical specimen.

Brooksie did some investigating and discovered the threatening letter was typed on Norman's machine. Every typewriter has a distinctive fingerprint in its individual letters, some with nicks, others slightly mis-aligned. That meant the potential murderer was inside the house.

Valentine et al rushed inside to find Norman shot but not fatally so. It was a failed suicide, as he told the police and Valentine. Norman wanted it to look like murder since his life insurance policy wouldn't pay off for suicide. He wanted to leave something for Leslie.

There was a touching reconciliation between the two. In the epilogue, Jane and Leslie moved back in with Norman. Eric dropped out of the story with no explanation. Presumably he went back to college.

"Serenade To A Southern Star" was a 1949 episode written by David Victor and Jackson Gillis. The opening letter was from a musician who worked on the ship

Southern Star. He was in what had been a quartet, had become a trio, and, he feared, would soon be a duet. Paul, who wrote the letter, Stewart, and Fabio were the musicians. Jose was the defunct member of the group.

George Valentine and Claire Brooks met the musicians on board. The two posed as ship employees. He had trouble boarding because an imposter had messed with his reservation but managed to get on the ship.

Paul told the two detectives that Mrs Devereau was a repeat traveler on the cruise ship, a woman of a certain age and great wealth from the accumulation of past husbands. She seemed to go through husbands and lovers at a high rate. Fabio was smitten with her.

After the ship sailed, the story was exposed as a fake. The musicians admitted to Valentine and Brooksie that they were small-time smugglers on the side. They had been threatened by an unknown big-time smuggler who wanted to usurp them for his operation.

The detective duo poked around. Valentine went through the small stuff the musicians were smuggling. As per tradition, he was slugged unconscious. Nothing personal, since every private detective of every radio series was rendered unconscious at least once per episode. By the end of the first season they should have been drooling idiots from all the concussions. End digression.

Meanwhile, Stewart romanced Brooksie, to no avail since she was set on her boss. The ship docked in Mexico. It occurred to Valentine that smuggling went both ways. The smuggler was shipping stolen jewels into Mexico via the musicians' illicit cigarette lighters, using them as patsies.

Valentine figured out it was the ship's purser, who had access to any point on the ship, plus control of the passenger list. The man resented Valentine's accusation and pulled a gun. He didn't get far.

The musicians promised to reform. Mrs Devereau, who had only made a couple of appearances, disappeared completely. Valentine and Brooksie snuggled up at the railing under the tropical moonlight. All was well.

Philo Vance.

The PHILO VANCE series aired on old-time radio from 1945 to 1950, based on the novels by S.S. Van Dine. The detective was also found in a series of movies. Philo Vance was a know-it-all amateur sleuth, a wealthy man who moved in high society.

In the radio series he was usually asked by District Attorney John Markham to investigate, as apparently the local police could not be trusted to find the killer. Markham frequently came out and did field investigations, something a real D.A. would not do. The police occasionally appeared but usually just the two men brought in the culprit.

"The Curtain Call Murder Case" was a 1949 episode, no writer credited. Richard West was a movie star on the way down. He grabbed at a Broadway play in the hopes of a comeback. Ill-tempered and rude to those around him, there was no surprise when he was assisted into the grave by high-velocity lead poisoning.

Actress Jean Carey, jilted by West, had previously tried unsuccessfully to throw acid in his face, a way to destroy his career without facing a murder rap. Her current boyfriend Bob Davis was to have been the leading man in the play and was usurped by West.

The producer B.J. Adams was unhappy that West wasn't the box office draw he thought he was going to be, which would cost Adams the big money he had sunk into the show.

After West was shot dead in his apartment, District Attorney John Markham called in Philo Vance to investigate. Found in the apartment were champagne glasses, one of which had lipstick on it. Too blatant to be a clue but the police took Carey in as a suspect anyway. She said it wasn't her shade, and Vance believed her.

Davis showed up at Adams' office to argue about taking over West's part in the play. That dispute was interrupted by the arrival of Vance. Adams cheerfully admitted he was going to save money by West's death. Vance set up a J'accuse! meeting. He told Davis he knew he had set the lipstick to incriminate Carey after finding West already dead. Such was their love. Without bringing forth evidence, Vance accused Adams of the murder.

Adams confessed everything. It wasn't because of the money. He revealed that Carey was his daughter, whom he had abandoned when she was a girl. She didn't know.

Had Adams kept his mouth shut, there would have been no evidence to convict him or her or anyone. It was easier for the script writer to do it this way than to think up proper evidence. A common failing in most mystery stories.

"The Checkered Murder Case" was a 1949 episode commonly mislabeled as "The Checkerboard Murder Case". At the end of the episode, it was specifically called by the former name. No writer was credited. Masked men in checkered suits and grey hats robbed three different businesses simultaneously at midnight, then instantly vanished into night.

As John Markham and Philo Vance began their investigation (the police? what about them?), the story jumped to the gang's hideout. They were reporting to a female boss Alys Walker, rather unusual then and now. She bwah-ha!-ha!-ed a bit. Walker was a mean boss. She shot dead one of her gang because he was a half hour late coming back from a job.

Vance quickly figured out there were multiple robbers in checkered suits. While contemplating that, Walker visited him, although he didn't know who she was. She wanted a million dollars from the city treasury for betraying the gang. If not, she would unleash a crime wave that would cripple the city, bwah-etcetera.

There was some padding but finally the story began moving again. Vance tried to warn the gang their boss was going to betray them but his plan backfired. The consequences were messy, shots were fired, and Walker soon lay dying. She gasped out her dying words.

In the epilogue, Vance explained the disappearing act. The suits were checkered only in front, and likewise the grey hats. The back sides were black, such that when the robbers turned and ran, they disappeared against the darkness.

Mr Keen.

MR KEEN, TRACER OF LOST PERSONS aired on old-time radio from 1937 to 1955. It was a soap opera style mystery show, produced by Frank and Anne Hummert, who at one time owned 40% of all radio series being aired during the Golden Age of radio.

They were all soap operas except for MR KEEN. The series was credited as written by Frank Hummert but actually done by a stable of house writers. The series was so over the top that for years afterwards Bob Elliott and Ray Goulding on their comedy show did a parody titled "Mr Trace, Keener Than Most Persons".

As the series progressed, Keen did fewer missing persons cases and more just plain murders. Mike Clancy was added as his assistant, with a phony stage Irish accent straight out of vaudeville. By the series demise in 1955, it was a straightforward mystery series.

"The Case Of Murder And The Bloodstained Necklace" was a 1949 episode that opened in a hotel room where Grace Bradley, late of Louisville, Kentucky, was found dead. It was murder, a gunshot through the throat.

John Austin, a jewelry appraiser, found the body. He got a bellhop to let him in to her room with a passkey. She had made an appointment with him to examine some jewels but the only ones found were an inexpensive strand of cultured pearls in her cold hand.

Mrs Thornton, a friend of the deceased, asked Mr Keen and Mike Clancy to investigate. She knew Bradley from way back when, as a woman who never wore jewels and who had been widowed the week before.

The first stop in the investigation was Austin's jewelry shop. Keen interrogated him but there wasn't much new. Standing nearby was a customer named Harlow Albright who overheard the conversation and introduced himself. Bradley had sold him a man's ring which he had brought in for appraisal. Albright said her brother-in-law Ralph Bradley had witnessed the transaction.

Ralph was supposed to be staying at the hotel but his name was not on the register. Keen learned the hotel room next to Grace was rented by Miss Lola Smith. The door was answered by Ralph, who was belligerent and uncooperative to the point of pulling a gun. He really resented Keen and Clancy, and would have profited from an anger management course.

Ralph stormed out with gun in hand but didn't get far. Lola was really Miss Cook. She and Ralph, never having heard of the Prisoner's Dilemma, blabbed about each other. He thought Grace didn't deserve his brother's estate.

Albright and the bellhop re-appeared at the Smith/Cook hotel room, the better to spread suspicion around. At this point it was revealed, surprise!, that Ralph sold costume jewelry for a living. A further twist was that Grace's husband had died in debt and the estate was worthless.

Keen thereupon, without any legal authority, arrested Ralph and Lola, although he was big enough to turn them over to the police. It was a headfake though, to allow a search of Albright's room. He had stolen the genuine pearls and substituted the cultivated ones, then shot Grace.

Keen's reasoning was doubtful but Albright gave himself away. Had he kept his mouth shut, none of the evidence would have been admissible and the case would not have gone to trial. In fact, he could have had Keen and Clancy prosecuted for break-and-enter and menacing with intent.

"The Case Of Murder With A Thousand Witnesses" was a 1949 episode that opened at a county fair where the local squire William Brooks was judging the cakes and pastry contest. He sampled the first cake and gave it 80 marks. He sampled the second cake and gave up the ghost, for it had been poisoned. A thousand people watched him die.

The cake had been baked by his young wife Anne, who was conspicuously and suddenly absent. Their housekeeper Miss Wilkins wanted Mr Keen and Mike Clancy to track her down for justice since he was so good as a tracer of lost persons. She never liked Anne or her layabout brother John Ainsley, who had moved in with them and sponged off his wealthy brother-in-law.

After Wilkins left, Clancy said that to him, she was the murderer, jealous of the younger woman. The men headed out to the Brooks mansion to talk to John but instead found Lawrence Hilton, a past friend of Anne. Ainsley arrived and was convinced to betray her location, at a hotel.

Keen and Clancy arrived at the hotel. She was despondent and they convinced her to cooperate. Anne mentioned that she had baked the cake while feuding with Wilkins, and noticed a small box of rat poison in the kitchen.

Back to the Brooks mansion where Keen had Anne brew a pot of coffee for the J'accuse! meeting. Everyone had sugar but Hilton, who tried to run for it when Keen insisted he have a cup of sweetened coffee. Hilton had spiked the sugar with rat poison while Anne was baking.

He blabbed all, as they generally do. He had feelings for Anne. If he couldn't have her, nobody could. Mind you, if he had kept his mouth shut, he could not have been convicted because people were coming and going through the kitchen. Anyone could have spiked the sugar.

"The Case Of The Melody Of Murder" was a 1950 episode which began with Imogene Harper being strangled in her apartment by an unnamed insane piano player. She had just returned from Europe where she had been studying music, and was about to make her debut as a concert pianist.

Her brother Alan hired Mr Keen and Mike Clancy to investigate. Alan mentioned her manager Lawrence Drisco, who had met her in Paris and came back with her to New York City. He was the Svengali type.

Keen and Clancy barged about as if they were police. In particular they antagonized Prof. John Graz, who had briefly been Imogene's instructor. Returning to their office, Keen and Clancy had a steady stream of visitors bearing plot coupons. Alan informed them that just before Imogene's death, she had cashed out her life savings for an unknown reason. Then Graz's wife Louella arrived and pointed suspicion at her husband.

Drisco was attacked by Prof. Graz, who tried to strangle him. Tying up his assailant, he called in Keen and Clancy. Drisco accused the Professor of being the Antwerp Strangler, who killed two young women in Belgium. Graz denied it all.

Keen instead went after Drisco, catching him out in several contradictions and accusing him of murder. Drisco sat down to play the piano but nobody laughed. He blabbed all, that he had killed the women after bleeding them dry of money, and Imogene for the additional reason that she refused his marriage proposal.

Once the bwah-ha!-ha!-ing was over, Drisco tried to strangle Keen. Clancy had a handgun and stopped Drisco by shooting him dead. To paraphrase an old saying, never bring a pair of hands to a gunfight.

LETTERS TO THE EDITOR

[Editor's remarks in square brackets. Please include your name and town when sending a comment. Email to opuntia57@hotmail.com]

FROM: Lloyd Penney
Etobicoke, Ontario

2020-10-07

OPUNTIA #483: The more pictures of Calgary you print, the more I'd like to come for a visit, instead of just passing through on a train as I did many years ago.

[That must have been in antediluvian times, because cross-county passenger trains haven't come through Calgary in years. The city expanded tremendously since the middle 1970s, and the politicians had the good sense to require land developers to preserve natural areas along rivers and creeks.]

[I worked 31 years for the Parks Dept. as a foreman and then a supervisor before retiring in 2010. A bonus of the job was that whenever things got too stressful, I could do an "inspection tour" of the natural areas and decompress while admiring the scenery.]

It's good to see Little Libraries and Pantries succeeding out west, and they are succeeding here, too. I did see a photo online about a Little Library that was either bombed or shot up. I guess it was a convenient target.

[I keep my eyes open for more LFLs and LFPs as I walk about the city, but most are mundane boxes not worth photographing. Some homeowners, however, put effort into them.]

THE ZERO HOUR sounds really good. We might try the download onto a USB drive, put it in the side of our TV, and let them play that way. Worth a shot.

[I download the free mp3s from the Old Time Radio Researchers at www.otrrlibrary.org and put them on my smartphone.]

I admit I have always liked time travel stories, which may be science fantasy, but hey, that's okay. That's where I first started reading SF, in the time travel section.

My previous letter: Once again, getting people to wear a mask in public areas of our building, and in most stores, as required by a city bylaw, is proving to be nearly impossible. The main reason is they couldn't care less. Well, I won't be coming to their funerals.

[I'm surprised at how lawless those Toronto folk are. Compliance has been very good around Calgary, yet Alberta is supposed to be the hotbed of redneck know-nothings. I suspect one reason is that we had beautiful weather through summer and autumn, so most people stayed outside where masks are not required.]

OPUNTIA #484: The painted garbage bins there look great. I suspect they'd become more of a target than they already are if they were installed here. Public washrooms here are open, but maximum of one person in there at any time, and the air exhaust is set to constant. The Etobicoke Civic Centre, formerly Etobicoke City Hall, is usually a busy public building, but it has been closed to the public since the pandemic started.

However Thanksgiving was started, we are ready for it. Yvonne and I are a bubble of two, so we should be safe. Also, we have found just enough of everything for two people, with a minimum of leftovers. We'll have a mini-feast one evening, with a bit of pumpkin pie for dessert, and will probably have enough for lunch the next day.

Next after that is Hallowe'en, and I suspect it will be just another evening, as it usually is. We haven't been to a good party in over a decade, and we certainly don't expect anything will happen like that this year.

[There are so few children in my neighbourhood that I turn out all the lights on the ground floor and stay in my basement den. It isn't worth sitting by the front door for hours waiting for occasional trick-or-treaters. Part of the problem is that my neighbourhood uses grid streets. Almost all the houses face the streets, so children go up and down them. My house faces the avenue and is screened by large trees, so they just walk on by.]

SEEN IN THE LITERATURE

Van Raamsdonk, M. (2020) **Spacetime from bits**. SCIENCE 370:198-202

Author’s abstract: *In the anti-de Sitter/conformal field theory approach to quantum gravity, the spacetime geometry and gravitational physics of states in some quantum theory of gravity are encoded in the quantum states of an ordinary nongravitational system.*

Here, I demonstrate that this nongravitational system can be replaced with an arbitrarily large collection of noninteracting systems (“bits”) placed in a highly entangled state.

This construction makes manifest the idea that spacetime geometry emerges from entanglement between the fundamental degrees of freedom of quantum gravity and that removing this entanglement is tantamount to disintegrating spacetime.

This setup also reveals that the entangled states encoding spacetimes may be well represented by a certain type of tensor network in which the individual tensors are associated with states of small numbers of bits.

Theories of holographic duality feature a correspondence between a gravitational system and a strongly interacting conformal field theory (CFT) living on the system’s boundary. Through this correspondence, the CFT encodes the geometry of spacetime in the gravitational system.

The spacetime that these bits collectively encode was then shown to be arbitrarily close to the one encoded by the original CFT, suggesting that entanglement plays a crucial role in the emergence of spacetime.

Pacetti, E., et al (2020) **The impact of tidal disruption events on galactic habitability**. MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 498:3153-3157 (available as a free pdf)

Authors’ abstract: *Tidal disruption events (TDEs) are characterized by the emission of a short burst of high-energy radiation. We analyse the cumulative impact of TDEs on galactic habitability using the Milky Way as a proxy. We show that X-rays and extreme ultraviolet radiation emitted during TDEs can*

cause hydrodynamic escape and instigate biological damage. By taking the appropriate variables into consideration, such as the efficiency of atmospheric escape and distance from the Galactic centre, we demonstrate that the impact of TDEs on galactic habitability is comparable to that of active galactic nuclei.

In particular, we show that planets within distances of ~0.1 to 1 kiloparsecs could lose Earth-like atmospheres over the age of the Earth, and that some of them might be subject to biological damage once every ~104 yr.

Over the past few years, the impact of active galactic nuclei (AGNs) has attracted greater attention, building on earlier studies. In particular, recent studies indicate that AGNs could drive the complete depletion of Earth-like atmospheres across a significant fraction of planets in galaxies, promote disruption of biospheres due to elevated radiation fluxes, and permit the synthesis of prebiotic compounds and carbon fixation.

A crucial property of AGNs should, however, be borne in mind: they are relatively short lived, and only a small fraction of all galaxies are ‘active’ at any given moment in time.

Aside from AGNs, another crucial high-energy process intrinsically associated with supermassive black holes (SMBHs) is tidal disruption events. The existence of TDEs was predicted and modelled in the 1970s and 1980s.

These phenomena arise when stars traverse too close to SMBHs, and are consequently disrupted by the latter’s tidal field. Despite the fact that TDEs are expected to recur in a wide range of galaxies, primarily those which host SMBHs of masses ~ 10⁶ to 10⁸ solar masses, there have been no studies devoted to assessing their impact on galactic habitability.

Segura-Cox, D.M., et al (2020) **Four annular structures in a protostellar disk less than 500,000 years old**. NATURE 586:228-231

Authors’ abstract: *Annular structures (rings and gaps) in disks around pre-main-sequence stars have been detected in abundance towards class II protostellar objects that are approximately 1,000,000 years old. These structures are often interpreted as evidence of planet formation, with planetary-mass bodies carving rings and gaps in the disk.*

This implies that planet formation may already be underway in even younger disks in the class I phase, when the protostar is still embedded in a larger-scale dense envelope of gas and dust. Only within the past decade have detailed properties of disks in the earliest star-forming phases been observed.

Here we report 1.3-millimetre dust emission observations with a resolution of five astronomical units that show four annular substructures in the disk of the young (less than 500,000 years old) protostar IRS 63. IRS 63 is a single class I source located in the nearby Ophiuchus molecular cloud at a distance of 144 parsecs, and is one of the brightest class I protostars at millimetre wavelengths.

IRS 63 also has a relatively large disk compared to other young disks (greater than 50 astronomical units). Multiple annular substructures observed towards disks at young ages can act as an early foothold for dust-grain growth, which is a prerequisite of planet formation.

Whether or not planets already exist in the disk of IRS 63, it is clear that the planet-formation process begins in the initial protostellar phases, earlier than predicted by current planet-formation theories.

de Jong, T., and H. Hunger (2020) **Babylonian observations of a unique planetary configuration.** ARCHIVE FOR HISTORY OF EXACT SCIENCES (2020) 74:587-603 (available as a free pdf)

Authors' abstract: *In this paper, we discuss Babylonian observations of a "massing of the planets" reported in two Astronomical Diaries, BM 32562 and BM 46051. This extremely rare astronomical phenomenon was observed in Babylon between 20 and 30 March 185 BC shortly before sunrise when all five planets were simultaneously visible for about 10 to 15 min close to the horizon in the eastern morning sky.*

These two observational texts are not only interesting as records of an extremely rare planetary configuration, but also because (1) the observers appear to be confused by the presence of all planets simultaneously and mix them up in their reports, and (2) the two reports of the same observations are so different that we are forced to conclude that they were carried out by two different observers.

There is an additional astronomical event which makes this planetary configuration even more unique: the exact conjunction of the planets Mars and

Jupiter in the afternoon of 25 March 185 BC. An exact conjunction, where two planets are so close together that they appear as one object in the sky, is also extremely rare.

Although this exact conjunction between Mars and Jupiter occurred during the day so that it was not observable, it was correctly predicted by the Babylonian scholars: a remarkable achievement and a nice illustration of their astronomical craftsmanship.

Finally, our study clearly exposes one of the limitations of Babylonian naked-eye astronomy. When first appearances of the planets Mercury, Mars and Saturn are expected around the same date, it is nearly impossible to correctly identify them because their expected positions are only approximately known while they have about the same visual magnitude so that they become visible at about the same altitude above the horizon.

McMahon, S., et al (2020) **Mars-analog calcium sulfate veins record evidence of ancient subsurface life.** ASTROBIOLOGY 20:doi.org/10.1089/ast.2019.2172

Authors' abstract: *Ancient veins of calcium sulfate minerals (anhydrite, bassanite, and gypsum) deposited by subsurface aqueous fluids crosscut fluviolacustrine sedimentary rocks at multiple localities on Mars. Although these veins have been considered an attractive target for astrobiological investigation, their potential to preserve biosignatures is poorly understood.*

Here, we report the presence of biogenic authigenic pyrite in a fibrous gypsum vein of probable Cenozoic emplacement age from Permian lacustrine rocks in Northwest England. Pyrite occurs at the vein margins and displays a complex interfingering boundary with the surrounding gypsum suggestive of replacive authigenic growth. Gypsum-entombed carbonaceous material of probable organic origin was also identified by Raman spectroscopic microscopy in close proximity to the pyrite.

Spatially resolved ion microprobe (SIMS) measurements reveal that the pyrite sulfur isotope composition is consistently very light ($\delta^{34}S_{VCDT} = -30.7\text{‰}$). Comparison with the sulfate in the vein gypsum ($\delta^{34}S_{VCDT} = +8.5\text{‰}$) indicates a fractionation too large to be explained by nonbiological (thermochemical) sulfate reduction.

We infer that the pyrite was precipitated by microorganisms coupling the reduction of vein-derived sulfate with the oxidation of wall-derived organic matter. This is the first evidence that such veins can incorporate biosignatures that remain stable over geological time, which could be detected in samples returned from Mars.

Wang, X., et al (2020) **The Ediacaran frondose fossil *Arborea* from the Shibantan limestone of South China.** JOURNAL OF PALEONTOLOGY 94:1034-1050 (available as a free pdf, many good illustrations)

[The Ediacaran was the dawn of multicellular life 600 to 542 megayears ago.]

Authors’ abstract: *Bituminous limestone of the Ediacaran Shibantan Member of the Dengying Formation (551 to 539 megayears ago) in the Yangtze Gorges area contains a rare carbonate-hosted Ediacara-type macrofossil assemblage.*

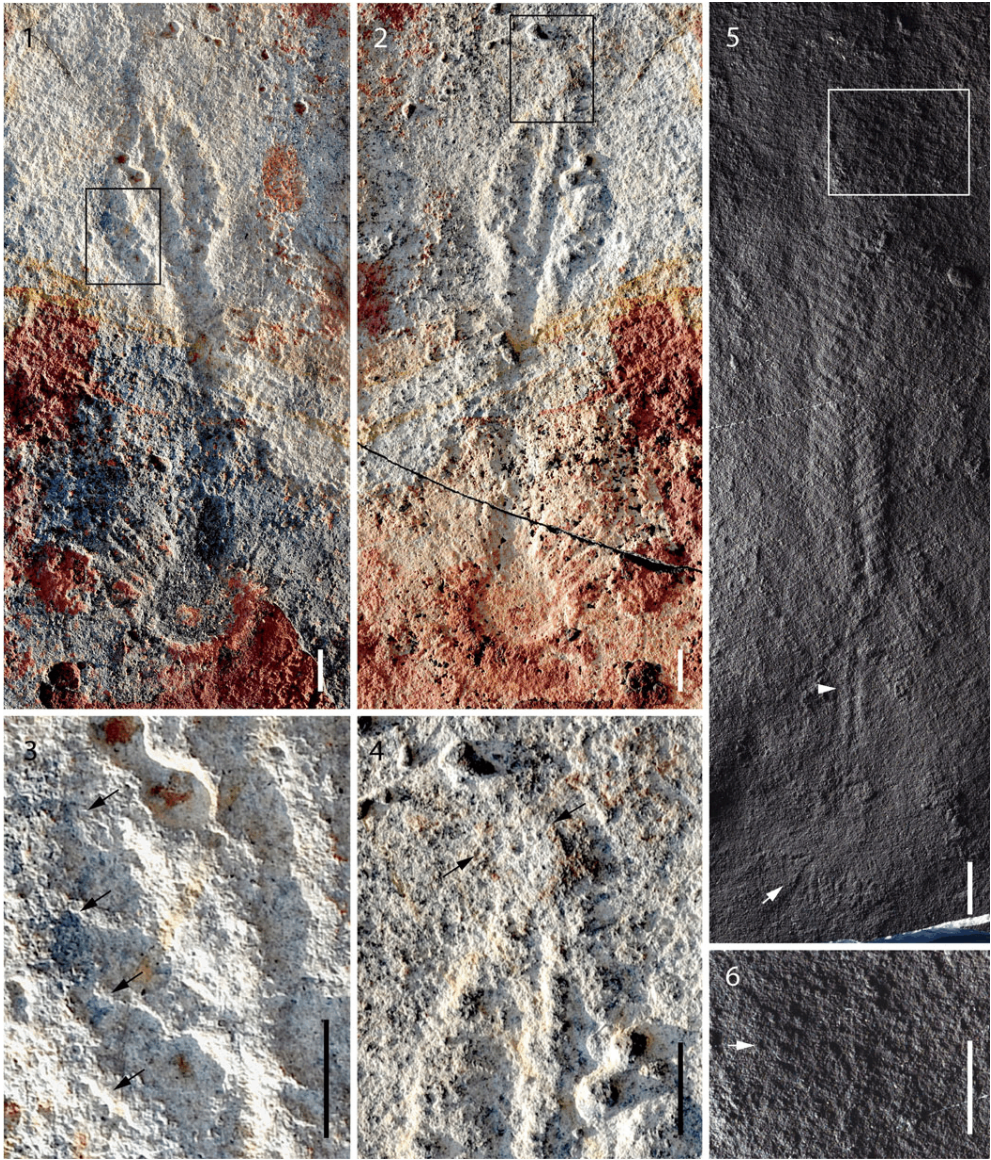
*This assemblage is dominated by the tubular fossil *Wutubus* and discoidal fossils, e.g., *Hiemalora* and *Aspidella* but frondose organisms such as *Charnia*, *Rangia*, and *Arborea* are also present.*

*Herein, we report four species of *Arborea* from the Shibantan assemblage, including the type species *Arborea arborea*, *Arborea denticulata* new species, and two unnamed species, *Arborea* sp. A and *Arborea* sp. B. *Arborea arborea* is the most abundant frond in the Shibantan assemblage.*

**Arborea denticulata* n. sp. resembles *Arborea arborea* in general morphology but differs in its fewer primary branches and lower length/width ratio of primary branches. *Arborea* sp. A and *Arborea* sp. B are fronds with a *Hiemalora*-type basal attachment.*

*Sealing by microbial mats and authigenic cementation may have played an important role in the preservation of *Arborea* in the Shibantan assemblage. The Shibantan material of *Arborea* extends the stratigraphic, ecological, and taphonomic ranges of this genus.*

[Images of *Arborea* species are from this paper. Scale bar is 1 cm]



Ivantsov, A., et al (2020) **Intravital damage to the body of *Dickinsonia* (Metazoa of the late Ediacaran).** JOURNAL OF PALEONTOLOGY 94:1019-1033

Authors’ abstract: *Several specimens of *Dickinsonia* cf. *D. menneri*, originating from a single burial event at the Lyamtsa locality of the late Ediacaran (Vendian) in the southeastern White Sea area, Russia, represent deviations from*

normal morphology: a reduction in the total length of the body; the loss of portions of the body; various deformations of the transverse elements, called isomers; and splitting of the longitudinal axis with the formation of two posterior ends.

It is assumed that these deformations were formed as a result of non-lethal damage, which occurred long before the burial event, and the response of *Dickinsonia* to them. The progress of the regeneration process at the damaged areas, and especially its deviations, indicates that the growth zone was located at the posterior end of the *Dickinsonia* body.

The cause of non-lethal damage to *Dickinsonia* could not be established, but the local distribution of deformed specimens preserved in the same burial event alongside cyanobacterial colonies, and the presence of weak deformations, expressed only in shortening of the length of some isomers, lead to the conclusion that damage resulted from short episodes of physicochemical impact, rather than occasional attacks by a hypothetical macrophage.

Harper, C.J., et al (2020) **Archaeosporites rhyniensis gen. et sp. nov. (Glomeromycota, Archaeosporaceae) from the Lower Devonian Rhynie chert: a fungal lineage morphologically unchanged for more than 400 million years.** ANNALS OF BOTANY 126:915-928

[The first land plants, among them the genus *Rhynie*, appeared during the Devonian era 416.0 to 358.9 megayears ago.]

Authors' abstract: *Structurally preserved arbuscular mycorrhizas from the Lower Devonian Rhynie chert represent core fossil evidence of the evolutionary history of mycorrhizal systems.*

Moreover, Rhynie chert fossils of glomeromycotan propagules suggest that this lineage of arbuscular fungi was morphologically diverse by the Early Devonian; however, only a small fraction of this diversity has been formally described and critically evaluated.

Thin sections, previously prepared by grinding wafers of chert from the Rhynie beds, were studied by transmitted light microscopy. Fossils corresponding to the description of *Archaeospora* spp. occurred in 29 slides, and were measured, photographed and compared with modern-day species in that genus.

Sessile propagules <85 µm in diameter, some still attached to a sporiferous saccule, were found in early land plant axes and the chert matrix; they developed, in a similar manner to extant *Archaeospora*, laterally or centrally within the saccule neck.

Microscopic examination and comparison with extant fungi showed that, morphologically, the fossils share the characters used to circumscribe the genus *Archaeospora* (Glomeromycota; Archaeosporales; Archaeosporaceae).

The fossils can be assigned with confidence to the extant family Archaeosporaceae, but because molecular analysis is necessary to place organisms in these taxa to present-day genera and species, they are placed in a newly proposed fossil taxon, *Archaeosporites rhyniensis*.

Speirs: This means that decay fungi have not changed in 400 megayears.

Kiat, Y., et al (2020) **Sequential molt in a feathered dinosaur and implications for early paravian ecology and locomotion.** CURRENT BIOLOGY 30:doi.org/10.1016/j.cub.2020.06.046

[Aves are the birds and the bird-like dinosaurs they evolved from. Technically, dinosaurs never became extinct; they evolved into birds.]

Authors' abstract: *Among Aves, molt strategy is correlated with habitat selection and flight ability. An ancestral feather molt strategy for Aves is probably sequential. Microraptor is the earliest known feathered vertebrate with a sequential wing molt. Microraptor likely maintained its flight ability throughout the entire year.*

Feather molt is an important life-history process in birds, but little is known about its evolutionary history. Here, we report on the first fossilized evidence of sequential wing feather molt, a common strategy among extant birds, identified in the Early Cretaceous four-winged dromaeosaurid *Microraptor*.

Analysis of wing feather molt patterns and ecological properties in extant birds imply that *Microraptor* maintained its flight ability throughout the entire annual cycle, including the molt period. Therefore, we conclude that flight was essential for either its daily foraging or escaping from predators.

Our findings propose that the development of sequential molt is the outcome of evolutionary forces to maintain flight capability throughout the entire annual cycle in both extant birds and non-avian paravian dinosaurs from 120 megayears ago.

Spicer, R., et al (2020) **New insights into the thermal regime and hydrodynamics of the early Late Cretaceous Arctic.** GEOLOGICAL MAGAZINE 157:1729-1746

Authors' abstract: *The Arctic is warming faster than anywhere else of comparable size on Earth, impacting global climate feedbacks and the Arctic biota. However, a warm Arctic is not novel. The Late Cretaceous fossil record of the region enables a detailed reconstruction of polar environmental conditions, and a thriving extinct ecosystem, during a previous 'hothouse' global climate.*

Using leaf form (physiognomy) and tree ring characteristics we reconstruct Cenomanian to Coniacian polar thermal and hydrological regimes over an average annual cycle at eight locations in NE Russia and northern Alaska. A new high spatial resolution (~1 km) WorldClim2 calibration of the Climate Leaf Analysis Multivariate Program (CLAMP) yields results similar to, but often slightly warmer than, previous analyses.

It also provides more detailed insights into the hydrological regime through the return of annual and seasonal vapour pressure deficit (VPD), potential evapotranspiration (PET) estimates and soil moisture, as well as new thermal overviews through measures of thermicity and growing degree days.

The new results confirm the overall warmth of the region, particularly close to the Arctic Ocean, but reveal strong local differences that may be related to palaeoelevation in the Okhotsk-Chukotka Volcanogenic Belt in NE Russia. While rainfall estimates have large uncertainties due to year-round wet soils in most locations, new measures of VPD and PET show persistent high humidity, but with notably drier summers at all the Arctic sites.

Speirs: Yes, there were dinosaurs in the Arctic, when it was tropical. They did alright.

Lyons, S.L., et al (2020) **Organic matter from the Chicxulub crater exacerbated the K–Pg impact winter.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:25327-25334

Authors' abstract: *Burn markers are observed in many records of the Cretaceous-Paleogene asteroid impact and mass extinction event. These materials could be derived from wildfires on land or from sedimentary rocks hit by the asteroid.*

We present a detailed record of molecular burn markers (polycyclic aromatic hydrocarbons [PAHs]) from the Chicxulub crater and in ocean sediments distant from the impact site. PAH features indicate rapid heating and a fossil carbon source and are consistent with sedimentary carbon ejected from the impact crater and dispersed by the atmosphere.

Target rock-derived soot immediately contributed to global cooling and darkening that curtailed photosynthesis and caused widespread extinction. PAH evidence indicates wildfires were present but less influential on global climate and extinction.

An asteroid impact in the Yucatán Peninsula set off a sequence of events that led to the Cretaceous-Paleogene (K-Pg) mass extinction of 76% species, including the nonavian dinosaurs.

The impact hit a carbonate platform and released sulfate aerosols and dust into Earth's upper atmosphere, which cooled and darkened the planet, a scenario known as an impact winter.

Organic burn markers are observed in K-Pg boundary records globally, but their source is debated. If some were derived from sedimentary carbon, and not solely wildfires, it implies soot from the target rock also contributed to the impact winter.

Characteristics of polycyclic aromatic hydrocarbons (PAHs) in the Chicxulub crater sediments and at two deep ocean sites indicate a fossil carbon source that experienced rapid heating, consistent with organic matter ejected during the formation of the crater.

Furthermore, PAH size distributions proximal and distal to the crater indicate the ejected carbon was dispersed globally by atmospheric processes.

Molecular and charcoal evidence indicates wildfires were also present but more delayed and protracted and likely played a less acute role in biotic extinctions than previously suggested.

Based on stratigraphy near the crater, between 7.5×10^{14} and 2.5×10^{15} g of black carbon was released from the target and ejected into the atmosphere, where it circulated the globe within a few hours. This carbon, together with sulfate aerosols and dust, initiated an impact winter and global darkening that curtailed photosynthesis and is widely considered to have caused the K-Pg mass extinction.

Lord, E., et al (2020) **Pre-extinction demographic stability and genomic signatures of adaptation in the woolly rhinoceros.** CURRENT BIOLOGY 30:3871-3879 (available as a free pdf)

Authors' abstract: *Ancient DNA has significantly improved our understanding of the evolution and population history of extinct megafauna. However, few studies have used complete ancient genomes to examine species responses to climate change prior to extinction.*

The woolly rhinoceros (Coelodonta antiquitatis) was a cold-adapted megaherbivore widely distributed across northern Eurasia during the Late Pleistocene and became extinct approximately 14 thousand years before present (ka BP).

While humans and climate change have been proposed as potential causes of extinction, knowledge is limited on how the woolly rhinoceros was impacted by human arrival and climatic fluctuations. Here, we use one complete nuclear genome and 14 mitogenomes to investigate the demographic history of woolly rhinoceros leading up to its extinction.

Unlike other northern megafauna, the effective population size of woolly rhinoceros likely increased at 29.7 kiloyears ago BP and subsequently remained stable until close to the species' extinction.

Analysis of the nuclear genome from a 18.5-ka-old specimen did not indicate any increased inbreeding or reduced genetic diversity, suggesting that the population size remained steady for more than 13 ka following the arrival of humans. The population contraction leading to extinction of the woolly

rhinoceros may have thus been sudden and mostly driven by rapid warming in the Bølling-Allerød interstadial.

Furthermore, we identify woolly rhinoceros-specific adaptations to arctic climate, similar to those of the woolly mammoth. This study highlights how species respond differently to climatic fluctuations and further illustrates the potential of palaeogenomics to study the evolutionary history of extinct species.

Zhu, G., et al (2020) **Assessing the ecological niche and invasion potential of the Asian giant hornet.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:24646-24648 (available as a free pdf)

Authors' abstract: *The Asian giant hornet (Vespa mandarinia) was recently detected in western British Columbia, Canada and Washington State, United States. V. mandarinia are an invasion concern due to their ability to kill honey bees and affect humans.*

Here, we used habitat suitability models and dispersal simulations to assess potential invasive spread of V. mandarinia. We show V. mandarinia are most likely to establish in areas with warm to cool annual mean temperature, high precipitation, and high human activity.

The realized niche of introduced populations is small compared to native populations, suggesting introduced populations could spread into habitats across a broader range of environmental conditions.

Dispersal simulations also show that V. mandarinia could rapidly spread throughout western North America without containment. Given its potential negative impacts and capacity for spread, extensive monitoring and eradication efforts throughout western North America are warranted.

Long, E., and J. Zhang (2020) **The coupon collection behavior in human reproduction.** CURRENT BIOLOGY 30:doi.org/10.1016/j.cub.2020.07.040

Authors' abstract: *Sex ratio variation among families in the UK is smaller than the random expectation. This phenomenon is explained by the coupon collection behavior in reproduction. The popularity of the behavior rose during the 3 decades examined (1940s to 1960s).*

Over the past 400 years in the Netherlands, this phenomenon is seen only after 1940. There is evidence in humans for genetic influences on the probability (P boy) that a birth yields a boy instead of a girl, suggesting a potential variation of P boy among families.

To quantify this variation, we analyze the survey data from over 300,000 UK Biobank participants primarily born between 1940 and 1970. Surprisingly, the proportion of male children in a family, or sex ratio (SR), has a significantly smaller among-family variation than expected under a uniform P boy.

We propose that this phenomenon results from reproductive behaviors reflecting a preference for having children of both sexes, much like the coupon collector's problem in probability theory where collecting a complete set of distinct coupons is considered a win.

We find that the observed deficit in SR variation is explainable by 3.3% of "coupon-collecting" families. Consistently, significantly more families than expected have all children of the same sex except for the child born last. This trend is more pronounced in the late than the early half of the families in the data, suggesting an increasing popularity of this behavior.

Analysis of a Dutch genealogical dataset spanning the past 4 centuries reveals higher-than-expected SR variations over much of the history; only after 1940 did the SR variation drop below the expectation.

We conclude that a significant fraction of couples now exhibit the coupon collection behavior in reproduction such that SR is more homogeneous among families than expected by chance.

Ferrari, G, et al (2020) Variola virus genome sequenced from an Eighteenth-Century museum specimen supports the recent origin of smallpox. PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON 375B:doi.org/10.1098/rstb.2019.0572 (available as a free pdf)

Authors' abstract: Smallpox was a highly contagious and lethal disease. Before its eradication, declared in 1980 AD, smallpox caused several large-scale epidemics that spanned centuries with remarkably high death rates. For instance, between 1900 and 1980 AD, smallpox was responsible for an estimated 300 to 500 million deaths, or one in ten global deaths.

The causative agent of smallpox was the variola virus (VARV), a member of the genus Orthopoxvirus. The variola virus is thought to have emerged fairly recently, around 3,000 to 4,000 years ago.

Historically, possible accounts of smallpox-like diseases have been recorded in 1122 BC China and 1500 BC India, and rashes consistent with a smallpox infection have been observed in ancient Egyptian mummies dating to 1580 to 1100 BC.

The earliest unmistakable descriptions of smallpox, however, can first be found in the fourth century AD China, seventh century AD India and the Mediterranean, and tenth century AD southwestern Asia.

Smallpox, caused by the variola virus (VARV), was a highly virulent disease with high mortality rates causing a major threat for global human health until its successful eradication in 1980. To understand the evolutionary history of VARV with respect to historic and modern VARV genetic variation in Europe, we sequenced a VARV genome from a well-described eighteenth-century case from England (specimen P328).

In our phylogenetic analysis, the new genome falls between the modern strains and another historic strain from Lithuania, supporting previous claims of larger diversity in early modern Europe compared to the twentieth century. Our analyses also resolve a previous controversy regarding the common ancestor between modern and historic strains by confirming a later date around the seventeenth century.

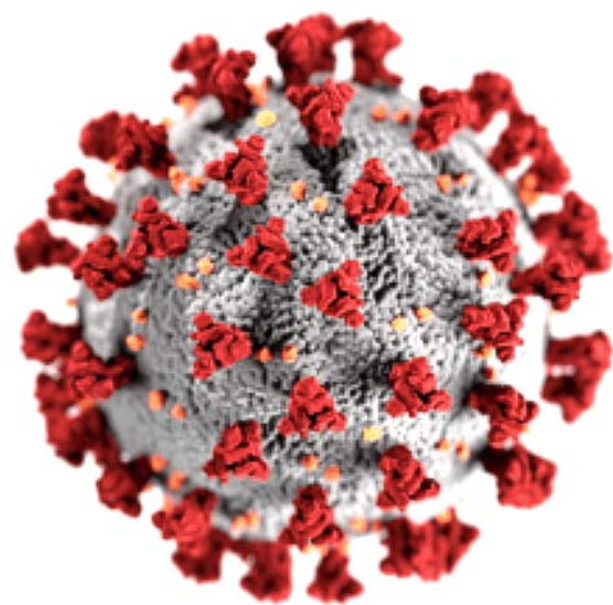
Turonnová, B., et al (2020) In situ structural analysis of SARS-CoV-2 spike reveals flexibility mediated by three hinges. SCIENCE 570:203-208 (available as a free pdf)

Authors' abstract: The spike protein (S) of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is required for cell entry and is the primary focus for vaccine development. In this study, we combined cryo-electron tomography, subtomogram averaging, and molecular dynamics simulations to structurally analyze S in situ.

Compared with the recombinant S, the viral S was more heavily glycosylated and occurred mostly in the closed prefusion conformation. We show that the

stalk domain of *S* contains three hinges, giving the head unexpected orientational freedom.

We propose that the hinges allow *S* to scan the host cell surface, shielded from antibodies by an extensive glycan coat. The structure of native *S* contributes to our understanding of SARS-CoV-2 infection and potentially to the development of safe vaccines.



Speirs: In other words, the famous spikes of the virus allow it to check the cell membrane before invading, in the same way you might test a surface by poking it with a fingertip to see if it was hot.

Many good illustrations in this article to show this phenomenon. Well worth downloading.

Abkarian, M., et al (2020) **Speech can produce jet-like transport relevant to asymptomatic spreading of virus.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:25237-25245

Authors’ abstract: *Medical reports and news sources raise the possibility that flows created during breathing, speaking, laughing, singing, or exercise could be the means by which asymptomatic individuals contribute to spread of the SARS-CoV-2 virus. We use experiments and simulations to quantify how exhaled air is transported in speech.*

Phonetic characteristics introduce complexity to the airflow dynamics and plosive sounds, such as “P”, produce intense vortical structures that behave like puffs and rapidly reach 1 metre. However, speech, corresponding to a train of

such puffs, creates a conical, turbulent, jetlike flow and easily produces directed transport over 2 metres in 30 seconds of conversation.

Many scientific reports document that asymptomatic and presymptomatic individuals contribute to the spread of COVID-19, probably during conversations in social interactions.

Droplet emission occurs during speech, yet few studies document the flow to provide the transport mechanism. This lack of understanding prevents informed public health guidance for risk reduction and mitigation strategies, e.g., the “6-foot rule.”

Here we analyze flows during breathing and speaking, including phonetic features, using orders-of-magnitude estimates, numerical simulations, and laboratory experiments.

We document the spatiotemporal structure of the expelled airflow. Phonetic characteristics of plosive sounds like “P” lead to enhanced directed transport, including jet-like flows that entrain the surrounding air.

We highlight three distinct temporal scaling laws for the transport distance of exhaled material including

- 1) transport over a short distance (<0.5 m) in a fraction of a second, with large angular variations due to the complexity of speech;*
- 2) a longer distance, ~1 metre, where directed transport is driven by individual vortical puffs corresponding to plosive sounds; and*
- 3) a distance out to about 2 metres, or even farther, where sequential plosives in a sentence, corresponding effectively to a train of puffs, create conical, jet-like flows. The latter dictates the long-time transport in a conversation.*

Speirs: Proof providing pandemic propagation prevention presumes proscribing p-words. Please prevent p-words proliferating in personal parleys.