

Middle September 2021

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

photos by Dale Speirs

On the cover and below is the MacDonald Avenue SE bridge over the Elbow River, just upstream from the Bow River junction. This is the last remaining camelback steel truss bridge in Calgary, built in 1911.

The City of Calgary has a vigorous public arts programme. They love to hang banners on anything standing still.



Garbage bins in parks are another favourite of the arts people. Below is a bin on 52 Street NW at the eastern end of Bowmont Park (see OPUNTIA #501 for views of the park).

At right are two views of a bin at Carburn Park on the east bank of the Bow River in southeast Calgary. See issue #487 for views of the park.







I took a drive up to Northmount Drive and 14 Street NW, where one of my favourite fast-food outlets is located, CB Hamburger Inn. Decades ago this was an A&W drive-in. They got out of the drive-in business in the 1980s. A pair of Irishmen bought the place and renamed it CB Drive-In, after their initials.

The Irishmen eventually sold out to a Korean family who have owned the place for about three decades and are now in the second generation, although the parents still help out. The Irishmen gave the family their recipe for French fries, of top quality. I always buy the chicken finger dinner, enough to keep me going for the full day.



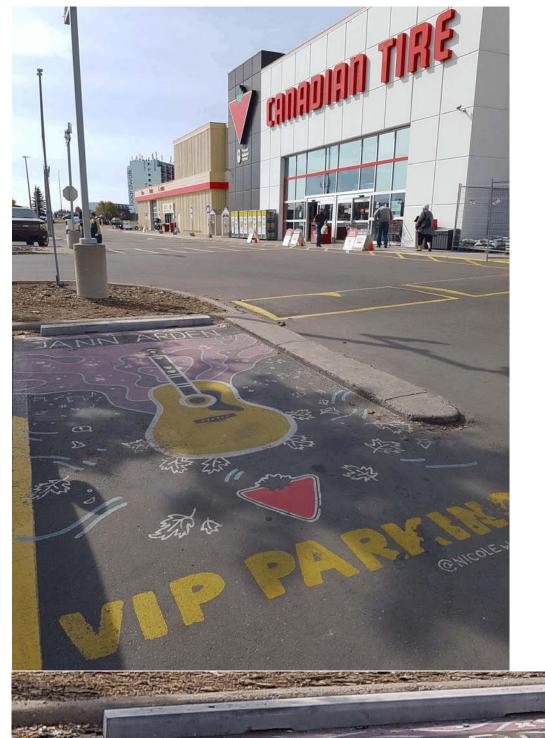
When I stopped there, a show-and-shine was in progress. I'm sure other cities have them, where antique and hot rod owners gather in a parking lot on a sunny day and show off their customized cars.

Most of the cars were the big land yachts of the 1960s but there was a nice 1949 black-and-red Pontiac with a cute licence plate (parked at far right in the top right photo). I talked to the owner, who said that most people had trouble guessing what it stood for, although I deciphered it at a glance.

The drive-in is adjacent to a high school, which explains why it has done good business for so long.







MAKING MUSIC IN CALGARY

photos by Dale Speirs

I seldom shop at Canadian Tire but the other day I needed some hardware supplies and went to their Westhills store just off Sarcee Trail SW. I was startled to see this parking stall.

A Google search revealed that Jann Arden was given this honour after she was inducted into the Canadian Music Hall of Fame, located here in Calgary at the National Music Centre on 9 Avenue SE in the East Village district downtown.

Jann Arden Anne Richards is a Calgarian by birth and was raised in rural Springbank, which was swallowed up by the city and is now a suburb adjacent to Westhills. She grew up on the opposite side of the hill from this store, so the honour was quite appropriate.

Arden had her first international hit song in 1994 and has done well ever since. We're all very proud of her. In OPUNTIA #349 were some photos of the National Music Centre, which looks like a giant boom box. I've never been inside, not being interested in paying admission just to look at a guitar once owned by Neil Young or other such items.

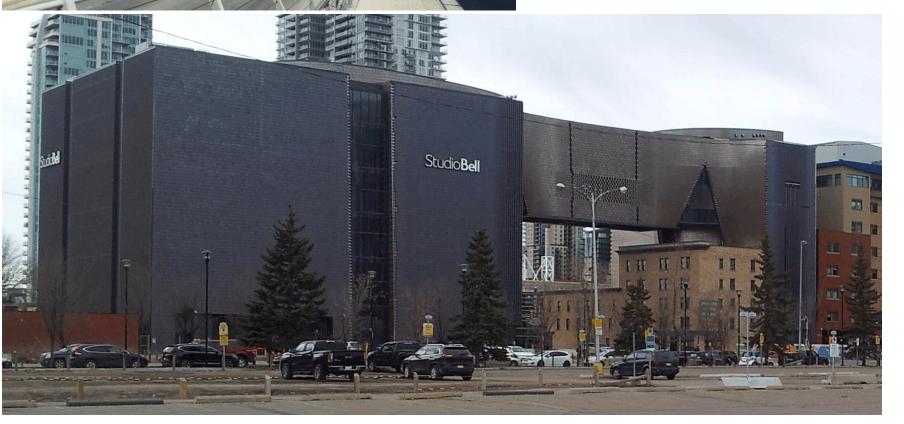
The photos on the next page were taken pre-pandemic and show various views of the NMC.



At left is the south side of the NMC, facing 9 Avenue SE. Its peculiar design was due to the sandy building it straddles, the King Edward Hotel, which is a listed historical site and cannot be disturbed.

The King Eddie, as it is popularly known, was for many decades a watering hole for jazz fans. All the famous jazz bands of the past 75 years have played gigs here. I took the photo below from the north side. You can see how the King Eddie shelters underneath the NMC.

The hotel is two blocks east of City Hall, and in its heyday was a second office for mayors. The present mayor Naheed Nenshi is a Muslim, so it declined as a power place during his tenure. He announced his retirement and will not contest the municipal elections this coming October. There are 27 candidates now vying for his job, so the King Eddie may revive as a place to see and be seen.



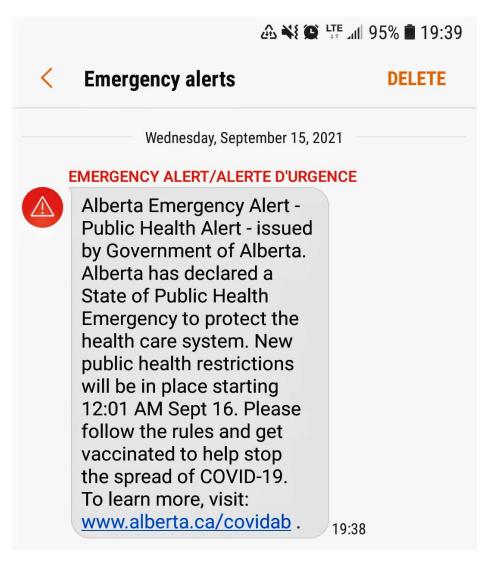
CURRENT EVENTS: PART 25

by Dale Speirs

[Parts 1 to 24 appeared in OPUNTIAs #474, 475, 479, 480, 483, 484, 488 to 503, and 507 to 508.]

Canadian politicians have failed miserably. Prime Minister Justin Trudeau and Alberta Premier Jason Kenney should have had vaccine passports (now being called vaxports) out months ago but dithered even though a strong majority of Canadians wanted vaxports.

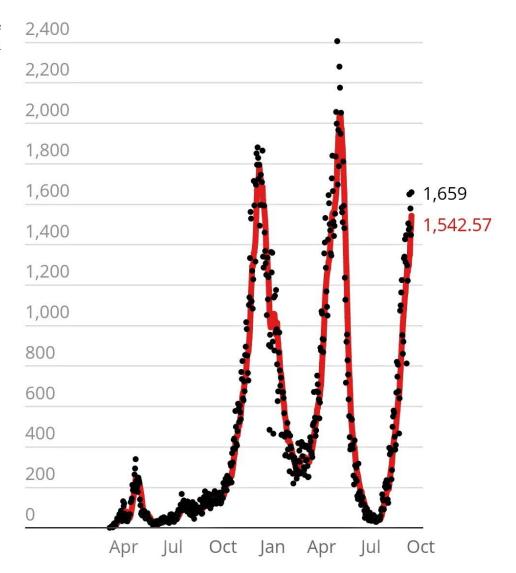
Here are the Alberta charts to middle September, which tell the story. On the evening of September 15, Kenney finally declared an emergency and allowed the Ministry of Health to blast a text message to all Albertans.



Almost all fourth-wave victims are unvaccinated. The problem is they are taking up the hospital beds that should be used for other patients.

New COVID-19 cases in Alberta

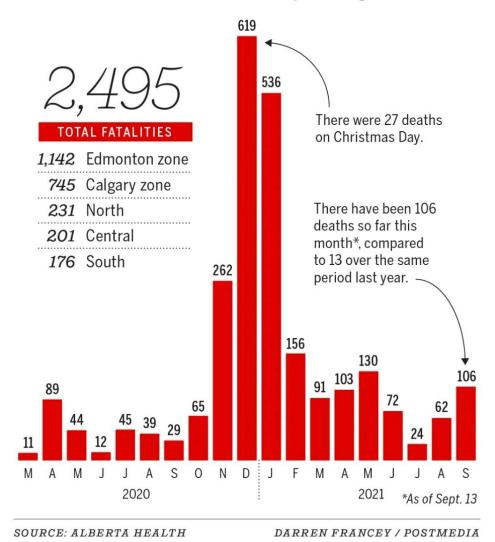
Each **black dot** is the number of **new cases** on a given day. The **red line** is the **average** over the previous 7 days.



CBC NEWS Chart: Robson Fletcher / CBC • Source: Alberta Health

ALBERTA'S DEADLIEST MONTHS

As ICU wards fill up with critically ill COVID-19 patients, deaths are also starting to mount. Two weeks into September, there have been more deaths than July and August combined.



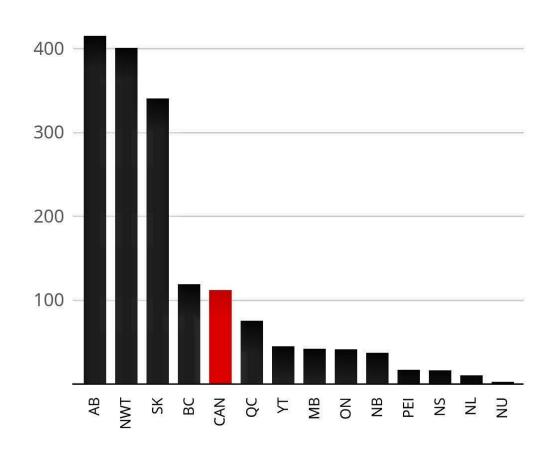
ALL, repeat, ALL, the political parties have failed. The Liberals, Conservatives, and NDP (labour-socialist), which form all the federal and

provincial governments, have leaders who pander instead of leading, who act on the fringes instead of striking to the core, and who dithered instead of making decisions as they were elected for.

Active COVID-19 cases by province & territory

Click or tap on the buttons below to switch between rates (per population) and total active cases.

Active Cases per 100,000 people



CBC NEWS Chart: Robson Fletcher / CBC • Source: Provincial health authorities & Statistics Canada Table 17-10-0009-01

Seen In The COVID-19 Literature.

As of September 17, there were 1,569,221 cases of COVID-19 in Canada, with 27,370 deaths and 54,766,205 vaccinations. Canada's population is about 38,000,000.

Siniawer, E.M. (2021) "Toilet Paper Panic": Uncertainty and insecurity in early 1970s Japan. AMERICAN HISTORICAL REVIEW 126:doi.org/10.1093/ahr/rhab196

Author's abstract: When toilet paper disappeared from store shelves across Japan in November 1973, the housewives who searched their neighborhood markets and stood in long lines for the scarce packs were described as unwitting perpetrators of a "toilet paper panic." The word "panic" evoked well-established notions of a social frenzy, irrational and overwrought.

This article overturns a conception of panic laden with condescension and adopts, instead, a more empathetic approach to examining why a run on toilet paper and other daily necessities occurred in late 1973, and why it resonated so deeply across Japan as a "panic."

In the broader context of the early 1970s, the toilet paper scare and its characterization as a "panic" can be understood as responses to sweeping and multifaceted economic challenges that destabilized daily life and threatened to upend middle-class lifestyles.

After more than fifteen years of high economic growth, that sense of middle-class comfort and security was shaken by shortages and inflation as well as mounting evidence of government ineptitude and corporate profiteering. Buffeted by insecurity and uncertainty, Japanese "middle-classness" as both an experience and an ideal had never seemed as vulnerable as it did in the early 1970s.

Ioannidis, J.P.A., et al (2021) **The rapid, massive growth of COVID-19 authors in the scientific literature.** ROYAL SOCIETY OPEN SCIENCE 8:doi.org/10.1098/rsos.210389 (available as a free pdf)

Authors' abstract: We examined the extent to which the scientific workforce in different fields was engaged in publishing COVID-19-related papers.

According to Scopus (data cut, 1 August 2021), 210,183 COVID-19-related publications included 720,801 unique authors, of which 360,005 authors had published at least five full papers in their career and 23,520 authors were at the top 2% of their scientific subfield based on a career-long composite citation indicator.

The growth of COVID-19 authors was far more rapid and massive compared with cohorts of authors historically publishing on H1N1, Zika, Ebola, HIV/AIDS and tuberculosis.

All 174 scientific subfields had some specialists who had published on COVID-19. In 109 of the 174 subfields of science, at least one in 10 active, influential (top 2% composite citation indicator) authors in the subfield had authored something on COVID-19.

Fifty-three hyper-prolific authors had already at least 60 (and up to 227) COVID-19 publications each. Among the 300 authors with the highest composite citation indicator for their COVID-19 publications, most common countries were USA (n = 67), China (n = 52), UK (n = 32) and Italy (n = 18).

The rapid and massive involvement of the scientific workforce in COVID-19-related work is unprecedented and creates opportunities and challenges. There is evidence for hyper-prolific productivity.

Pegu, A., et al (2021) **Durability of mRNA-1273 vaccine-induced antibodies against SARS-CoV-2 variants.** SCIENCE 373:1372-1377 (available as a free pdf)

Authors' abstract: Here, we assess the effect of SARS-CoV-2 variants on binding, neutralizing, and angiotensin-converting enzyme 2 (ACE2), competing antibodies elicited by the messenger RNA (mRNA) vaccine mRNA-1273 over 7 months.

Cross-reactive neutralizing responses were rare after a single dose. At the peak of response to the second vaccine dose, all individuals had responses to all variants. Binding and functional antibodies against variants persisted in most subjects, albeit at low levels, for 6 months after the primary series of the mRNA-1273 vaccine. Across all assays, B.1.351 had the lowest antibody recognition.

Tateyama-Makino, R., et al. (2021) The inhibitory effects of toothpaste and mouthwash ingredients on the interaction between the SARS-CoV-2 spike protein and ACE2, and the protease activity of TMPRSS2 in vitro. PLOS ONE 16:doi.org/10.1371/journal.pone.0257705 (available as a free pdf)

Authors' abstract: SARS-CoV-2 enters host cells when the viral spike protein is cleaved by transmembrane protease serine 2 (TMPRSS2) after binding to the host angiotensin-converting enzyme 2 (ACE2). Since ACE2 and TMPRSS2 are expressed in the tongue and gingival mucosa, the oral cavity is a potential entry point for SARS-CoV-2.

This study evaluated the inhibitory effects of general ingredients of toothpastes and mouthwashes on the spike protein-ACE2 interaction and the TMPRSS2 protease activity using an in vitro assay. Both assays detected inhibitory effects of sodium tetradecene sulfonate, sodium N-lauroyl-N-methyltaurate, sodium N-lauroylsarcosinate, sodium dodecyl sulfate, and copper gluconate.

Molecular docking simulations suggested that these ingredients could bind to inhibitor-binding site of ACE2. Furthermore, tranexamic acid exerted inhibitory effects on TMPRSS2 protease activity. Our findings suggest that these toothpaste and mouthwash ingredients could help prevent SARS-CoV-2 infection.

Wilmers, C.C., et al (2021) **COVID-19 suppression of human mobility releases mountain lions from a landscape of fear.** CURRENT BIOLOGY 31:doi.org/10.1016/j.cub.2021.06.050 (available as a free pdf)

Authors' abstract: Humans have outsized effects on ecosystems, in part by initiating trophic cascades that impact all levels of the food chain. Theory suggests that disease outbreaks can reverse these impacts by modifying human behavior, but this has not yet been tested.

The COVID-19 pandemic provided a natural experiment to test whether a virus could subordinate humans to an intermediate link in the trophic chain, releasing a top carnivore from a landscape of fear.

Shelter-in-place orders in the Bay Area of California led to a 50% decline in human mobility, which resulted in a relaxation of mountain lion aversion to urban areas.

Rapid changes in human mobility thus appear to act quickly on food web functions, suggesting an important pathway by which emerging infectious diseases will impact not only human health but ecosystems as well.

Our results provide evidence that the drastic change in human behavior due to the COVID-19 pandemic had cascading effects on mountain lion habitat selection. Our results show that humans have been subordinated to the second rather than top level in a trophic cascade or set of behaviorally mediated indirect interactions.

Anecdotal evidence of wildlife appearing in cities globally during the COVID-19 pandemic, such as reports of mountain lions walking into downtown Santiago, Chile, or golden jackals foraging in broad daylight in urban Tel Aviv, Israel, provide support for the possible widespread nature of this phenomenon.

The indirect effects of COVID-19 on mountain lion habitat selection happened within a time period of days to weeks, indicating rapid behavioral plasticity in both humans and mountain lions.



STEAMPUNK REVIEWS: PART 6

by Dale Speirs

[Parts 1 to 5 appeared in OPUNTIAs #364, 393, 412, 457, and 485.]

Steam Fandom.

In my meanderings through www.archive.org, I came across a set of fanzines STEAMPUNK MAGAZINE, available as free pdfs. This was apparently a short-lived magazine from 2007-08. The issues were undated, so I had to guess from internal clues.

The contents were a mixture of fiction, author interviews, and fact articles on obscure technology that cannot be called obsolete because it never was current in the first instance. For example from issue #1, the pyrophone was powered by flames, and had an obvious reason why it never caught on. All you need is a metal tube and a propane torch to provide a stable flame.

Somewhat safer was Benjamin Franklin's glass armonica (no 'h') or crystallophone, spinning glass bowls on a lathe that could play tones when the fingertips were applied to the rims. Different sized bowls produced different tones, and the rest was obvious. If you've ever made a wine glass sing by running your finger around the edge, this was the same principle.

Issue #2 suggests approaches to steampunk costuming and illustrates them. The Tinkerer, the Explorer, and the Dandy were Victorian stereotypes that can be reworked to steampunk standards. For the more venturesome, try building a penny-farthing bicycle, guaranteed to upstage any yuppie on a \$5,000 mountain bike.

The third issue makes an interesting point. Steampunk is usually thought of as alternative history. It can, however be applied to post-apocalyptic futures. That makes sense, since technology salvaged from the ruins would definitely be a mixture of what ever works. Practical matters, such as water collection and purification after the waterworks system breaks down.

Issue #4 contains instructions on how to build a Jacob's ladder, that arcing device without which no mad scientist's laboratory is complete. They serve no useful purpose except to Hollywood B-movie producers and, in this case, steampunks.

These zines were enjoyable reading. I have only skimmed the contents in this review, so if you are a cosplayer or just like alternative history, here is some good reading for you.

Mechanical Fiction.

"The Mechanical Detective" by John Longenbaugh (2017 October, MYSTERY WEEKLY MAGAZINE, available from Amazon as a print-on-demand) was set in a steampunk England in 1889. Ponder Wright was a cyborg consulting detective, about half mechanical after severe war injuries. His roommate was Danvers, a mechanic who specialized in cyborgs and automatons.

There was reference to Holmes and Watson as competitors in the consulting detective business. Steam-powered vehicles had taken over from the horse. Servants were being replaced by automatons.

Prof. Thaddeus Quire was apparently murdered inside his locked laboratory, bludgeoned to death on a staircase. Three automatons were present, but when Wright interrogated them, he concluded they were innocent.

Inspection of the laboratory revealed that the stairs were in fact camouflaged escalators. Quire had accidently fallen backward, banging his head. His fallen body was then repeatedly battered by the escalator steps until the power shut off. A twist ending known in the editorial trade as a tomato surprise.

Steam Fiction.

The Reade family was extremely popular in dime novels and weekly fiction papers from the late 1800s to the early 1900s. The stories were written under house names, although in some cases the real author has been identified.

Frank Reade, and later his son Frank Jr, had all sorts of escapades with their steam men, steam horses, electric men, and electric helicopters. The Reade family were industrialists who owned factories and had the great wealth necessary to support their escapades.

There was a daughter Kate who also had her adventures until she disappeared over the Pacific Ocean in 1937 while flying an electric helicopter. Frank Sr and wife Mary went down with the Titanic in 1912, and Frank Jr died in 1932 at age 71. Quite the family.

FRANK READE, THE INVENTOR, CHASING THE JAMES BOYS WITH HIS STEAM TEAM (1890) is available as a free pdf from www.gutenberg.org This was an example of an dime novel action-adventure story. What separated this type of story from later science fiction was that the device was only used as a gimmick. There was no attempt to extrapolate trends from the invention, as was the habit of science fiction in the post-WW2 era.

The title of this story tells the basic plot. Jesse and Frank James were causing havoc in Missouri. Their horses could outrun anyone else's horses, so a group of railroad men engaged Reade to chase them down and stop the railroad holdups.

You can guess the alarums and excursions across the Old West, with many diversions along the way. The story ended with the abrupt appearance of a treasure, \$3 million in gold, in 1890s money. Reade got his share, of course, because keeping a team of steam horses wasn't cheap.



FRANK READE, JR., WITH HIS NEW STEAM MAN IN CENTRAL AMERICA (1892) by Luis Senarens is available as a free pdf from www.gutenberg.org This continued a series about the son, two volumes of which I reviewed in issue #393 of this zine.

The story got right into events. Reade Jr's friend Tony Buckden had disappeared in the jungles of Yucatan. He had been searching for a city of gold and other treasure, such as countless piles of gems. The ruins were guarded by giant anacondas which kept both natives and looters away.

Tony's father Thomas offered a reward of \$50,000 to anyone who rescued him. Call it \$5 million in today's depreciated currency, in the era before personal income tax. Not surprisingly, Junior was off like a shot, taking along his Steam Man. He had a wife and children, but what of them?

Junior was accompanied by his faithful servants Barney O'Shea and Pompei Du Sable, respectively Irish-American and a Negro. The former spoke in stage Irish that even then was becoming obsolete in vaudeville, and the latter was a yas-Massa, doo-dah man who would paralyze any Black Lives Matter supporter with conniptions.

Typical dialogue, which wasn't very readable anyway, was as follows.

"Be jabers I'd loike nothing betther than a go at some av them forty foot snakes. Shure it's a foine thrip that would be fer ther Stheam Man, Misther Frank." "Ki dar, Marse Frank!" cried Pomp, with eyes big as moons. "Kain't say dis chile likes snakes, but yo' kin jes' bet he'd like to go dar jes' de same."

For those who missed the earlier adventures, Reade Jr paused to explain the Steam Man to Thomas Buckden: "You can see that he is constructed of plates of iron," said Frank, explanatively. "The legs are reservoirs for water, the furnace is in his chest and the smoke-pipe is his high hat. The gauge and indicator and throttle as well as steam chest are upon his back. In his mouth you will see the whistle."

"Then you will observe the steel driving rods down his legs. Of course it required some clever mechanical skill, but it can be seen at a glance that the machine is a practicable and feasible one. Just as much so as a locomotive." "But ten times more wonderful," declared Mr. Buckden.

"Perhaps so. Now you can see that this is the wagon drawn by the Steam Man. In this wagon we carry a supply of coal, provisions and weapons. It is covered with a wire screen made of toughest steel and able to withstand a rifle ball.

"Through this opening in the front come the reins by which I drive the Man. The loopholes in the sides are to fire through. Indeed, sir, the wagon is a small fortress in itself."

"I should say so," agreed the millionaire, "and what an admirable thing for this trip to Yucatan. In that land of poisonous reptiles and insects you can travel with immunity for it would puzzle a fly to get through that screen."

Once in Yucatan, the adventures began happening at a steady pace. Giant pythons (not native to the Americas), pumas, a booby-trapped temple, tigers (in Mexico?), pygmies (again, in Mexico?), and none other than Tony Buckden, who had also run afoul of the unruly jungle. The anacondas came later.

There was an alarum in every chapter and never a dull moment in the Yucatan jungle. The wildlife had a tendency to attack the Steam Man and find out it was not only impregnable but had an extremely hot steam boiler on its back. All ended well, as the reader knew it would. A safe return to the wilds of New Orleans, just as dangerous as Yucatan if you think about it.



SERIES DETECTIVES: PART 13

by Dale Speirs

[Parts 1 to 12 appeared in OPUNTIAs #402, 406, 425, 448, 459, 467, 472, 477, 485, 491, 497, and 500.]

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, written by house authors.

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.

"Murder In The Crypt" aired on 1943-08-02, written by Walter Gibson. The episode opened with a soon-to-be-departed museum guard Shelby meeting a jackal man who announced himself as Anubis. The next morning, Shelby's body was found in the Crypt of Sneferu display.

Nick Carter and Patsy Bowen were called in to assist while the police bumbled around. Lieutenant Riley spoke in a stage Irish accent left over from vaudeville. Somewhere in Ireland a village was missing its idiot.

The crypt was elaborately locked. Nonetheless, Shelby's body was found inside in a sarcophagus. Riley immediately leaped to the conclusion that the curator Prof. Glidden did it, begorrah. He had the only key to the crypt.

Madame Daklar, the museum librarian, spread superstition and alarums about with a scoop shovel. She was sent off stage while Carter and Riley snooped about the crypt trying to find a secret entrance. They gave up and Carter began thinking about who had a motive to kill a night watchman.

The museum director Dr Waldemar had a jar of ancient Egyptian rose perfume on his desk when Carter and Bowen went to interview him. He rushed off on an errand, so they put the jar into the open vault of his office. Bowen asked Daklar for the building plans. Anubis showed up and snatched Daklar and the blueprints. Carter, Bowen, and Riley pursued. She was found unconscious in the vault. There was a scent of roses.

Riley decided to arrest Glidden and fit the evidence to him. Standard police procedure in those days. I'm glad it doesn't happen anymore. Carter convinced Riley to stake out the crypt that night. The sarcophagus began to rise up and revealed itself to be sitting on an elevator.

Riley babbled in a voice loud enough to be heard out on the front sidewalk. One wonders how such a blithering idiot made lieutenant. Bowen shushed him, but too late. Waldemar stepped into the crypt with his gun pointed at them.

He bwah-ha!-ha!-ed at Riley and Bowen but was stymied by Carter, who had been hiding elsewhere inside the crypt. Waldemar blabbed a confession about seeking hidden treasure in the crypt while disguised as Anubis. Shelby had been his partner in crime but they had a falling out. The rest was details, to be explained to Bowen in the epilogue.

"The Corpse In The Cab" was written by Bert Conway and aired on 1944-02-05. Mr Ramsay and a soon-to-be corpse took Shorty Bentano's taxicab across the park. One of the three was dead by the far side.

Ramsay got out at the exit and told Shorty the other man was going to a police precinct station. A moment passed before Shorty realized what had happened. He drove to Nick Carter's house, the body still in the back seat,. and appealed for help.

The body had no identification. Lieutenant Riley, whose stage Irish accent seemed to get thicker with each episode, wanted to arrest Shorty. Carter calmed him down and began investigating, with Shorty as chauffeur.

With some wild bounds, admittedly well explained and based on logic, Carter quickly identified Ivan Johnson as the defunct. He was a professor of ancient history at a high school, which seemed strange. The title of professor is associated with universities, not schools, nor do high schools have ancient history as a separate discipline.

The grieving widow couldn't tell Carter and Patsy Bowen much. They then went to the address where Shorty had picked up the two men. By now it was

late at night and the office building was deserted. On one floor they found someone in the premises of Gerald Ramsay.

They confronted Ramsay but nothing much happened. Over to the high school, where they let themselves in with a picklock. Johnson's room had been ransacked. One clue was a poster for a student's victory league to buy a destroyer. The second clue was someone firing gunshots at them. The gunman got away.

Back and forth, back and forth, finally to a confrontation with Ramsay and henchman Lefty, who had been the gunman. The victory league was phony, and the money never went further than Ramsay. The schoolteacher was silenced after discovering the fraud. Riley and the police arrived in the nick of time (pardon the pun).

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. He 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, and the series grows on the listener.

A regular character was Jake the elevator operator. He was off a Vermont farm and in each episode he gave Craig a different reason why he left the farm and moved to New York City. My favourite was "*Too close to New Hampshire*".

"Motive For Murder" was written by John Roeburt and aired on 1952-02-20. Floyd Spencer Jr inherited \$40 million, which certainly made him a target. His attorney Mr Talbot hired Barrie Craig to protect Spencer. The parents had divorced years ago and Junior's mother took him to her native Portugal, where he had spent the last decade.

Talbot didn't know him but went to Portugal to pick up him and fly him back home. Arriving at Idlewild Airport with Talbot and a friend Paul Shandor,

almost immediately Spencer came under fire from a sniper. After that contretemps, they left the airport.

Riding with Craig, they came to a road detour. It was, of course, a set-up, and they met with a deliberate trap. Spencer didn't survive a bullet to the head. A suspicious-looking man calling himself Marcel Surak soon arrived. Craig tried to beat him up but the man knew jujitsu. Meanwhile the sniper was murdered in turn.

Uncle Stanley was the heir, a feeble old man. At the manor house were also Talbot and Shandor. The Spencers were dealers in neochromite, a market now wide open. With no evidence whatsoever, Craig accused Talbot of the murders.

Talbot had looted the Spencer estate, and feared exposure. The twist was then inserted. Shandor had traded identities with Spencer and died in his place. Since Talbot had never seen Spencer, he didn't know. The heir was still in line for the money, what was left of it.

"Strange Vision" aired on 1954-01-19, written by John Roeburt. The soundtrack was a bit muddy. A factory owner Dexter Dean hired Barrie Craig to investigate sabotage at his facility. There had been four fires and Dean was in danger of losing his insurance coverage.

At first, the culprit appeared to be a disgruntled ex-employee, but there were still ten minutes left in the episode. The accused did have a reasonable alibi and explanations. There were several other suspects to take his place though.

Dean was shocked to learn that his employees didn't like him. Probably because he was verbally abusive, didn't keep his promises, little things like that. Craig discovered by chance that Dean kept a desk drawer full of matches, more than even a chain smoker would need.

A fifth fire gave Craig an idea when he saw who was watching the flames. The next day he chatted with Dean, who seemed to take delight in the idea of closing the factory and rendering all his staff unemployed.

Craig declared the culprit was a pyromaniac. None other than Dean, who was smoked out (pun intended) by Craig setting a waste basket on fire. Anyone else would have leapt out of his chair and tried to put the flames out, but Dean stared in fascination, just as he did when he set the factory fires.

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. The tag line in the opening credits was "Boston Blackie: Enemy to those who make him an enemy, friend to those who have no friend."

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.

"Bill Crane, Attorney" aired 1945-09-13. Jack King was sent up for forgery of a check. Bill Crane was the incompetent attorney who represented him. After the conviction, he appealed to Boston Blackie for help, saying that King was framed.

The witnesses had a high death rate. Those for the defence died before the trial. Those who perjured themselves for the prosecution began dying by lead poisoning after the trial. Mary Wesley did her part for the investigation, an unusual occurrence since she normally only screamed at bodies or was kidnapped.

King had a prior record in Iowa City. Blackie deduced there was leftover business from a heist out there. Wesley was bait for the real forger, but the results were inconclusive.

Blackie established that King was innocent of forgery but killed the witnesses while out on bail because they might identify him with the Iowa job. The good news was that King was pardoned for the forgery. The bad news was that he was going up the river to sit in Old Sparky.

"\$50,000 For Blackie" aired on 1948-03-10. A friend named Joe Saunders did a business deal for \$50,000 in cash. Legitimate apparently, although I'm certain that these days the Feds would definitely be making enquiries.

Saunders asked Boston Blackie to store the cash in his apartment overnight until the bank opened the next morning. Greater love hath no man than the one who will casually store \$50,000 in cash for a friend.

The obvious question was why Saunders didn't take the money home to his place. However it was a question that never could be answered. Saunders didn't survive to the first commercial as two thieves intercepted him and stole the cash, leaving him dead on the ground.

Elsewhere, Roland Harvey was a specialist in helping fugitives escape the country. His Cleveland manager tried to put the bite on him and also didn't survive to the first commercial. His vacancy was soon filled. A hotel used as a safe house was busy handling Harvey's customers. It had no vacancies.

Blackie tried to infiltrate the hotel and managed to get a room as a supposed fugitive. He stupidly talked to Inspector Farraday over the hotel telephone, which enabled the switchboard operator to listen to the conversation.

That brought Harvey to the room, waving a gun at Blackie. Harvey didn't have a chance. With a single bound, Blackie was free and Harvey wasn't. Farraday rounded up the rest of the gang and the fugitives.

In the epilogue, Mary Wesley wanted to go out to a murder mystery movie. Blackie was reluctant to go, saying he always guessed wrong about who the murderer was. Not one of his movies obviously.

Casey.

CASEY, CRIME PHOTOGRAPHER aired on radio from 1943 to 1955. The title varied several times but is generally remembered by this variation. 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 Duke Of Skid Row" was written by Alonzo Deen Cole and aired on 1946-09-19. A gentleman of leisure named John Smith lived in a cheap hotel but had money to burn. The hotel clerk called him the Duke. One night, as the episode opened, two goons followed the Duke inside and kidnapped him. His body was soon discovered by police. He had been tortured before his murder.

Casey and Ann Williams were soon on the case. The police too, of course. Mustn't forget them, although we know who will actually solve the case. The investigation focused on finding out who Smith really was. The reporters and police also discovered there was a MacGuffin. A satchel had been hidden by Smith, but no one knew what it was. Eventually the police found it, an antique European crown.

The goons evidently had been looking for the crown. Ann Williams co-operated with the police in writing a story about the crown's location. The ploy succeeded in smoking out the murderers, but at the risk of the reporters' lives. Shots were fired, etcetera.

Once the usual alarums were over, the denouement at the Blue Note Café explained everything to Ethelbert the bartender. The Duke was actually a count. He came from one of those principalities that had disappeared after the just-concluded war.

The goons were counter-revolutionaries who wanted the crown back for that glorious day in the distant future when their monarchy would be re-established. Instead of sitting on a throne, they would be sitting in an electric chair.

"Wanted: A Gun" was written by Alonzo Deen Cole and aired 1950-01-29. A young man named Lou Mercer wanted a gun from the Paxton Pet Shop, whose proprietor dealt in illicit guns under the counter. Mercer was afraid of Jeff Robbins, who had been jailed for wife beating after he learned she was canoodling with Mercer. Robbins had just been released from prison.

Paxton said he couldn't deliver the gun until the next morning since he didn't keep them in the store for obvious reasons. He reassured Mercer that it would be at least another day before Robbins came looking for him, since he would have to care of his personal and business errands first. The gun was delivered to Mercer the next morning as promised.

Robbins never got a speaking part. The murder weapon was found on Mercer. He said the gun had already been fired when he bought it. Paxton denied ever selling it. That was the last thing he said, for someone poisoned him that evening.

Mrs Robbins was the main suspect, although her husband's business partner Carl Vantry was on the list as well. Casey and Ann Williams busily contaminated all the evidence, broached sealed crime scenes, and got witnesses to perjure themselves. They used entrapment to catch Vantry, who promptly confessed. They always do.

The open and close at the Blue Note Café was the usual chitchat with Ethelbert the bartender. The special of the day was pigs knuckles and sauerkraut, which Casey and Williams wisely declined.

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. Dick Powell, of Richard Diamond fame, was the best.

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.

Having written that, the episode "Blondes Prefer Gentlemen", which aired on 1945-10-18, didn't quite conform to the standard plot. A dear old lady named

Mrs Eccle consulted Richard Rogue about her granddaughter Detta. He went over to Detta's apartment and found a young woman freshly dead.

As he searched the apartment, Eugor talked to him, which was strange because Rogue was conscious. He found a note she had addressed to the police saying she had information. About what, the note didn't say, for she had been murdered before finishing her message.

The deceased was roommate Francine, not Detta, who arrived moments later, got all hysterical, and ran from the building. Naturally the police suspected Rogue. The usual clichés were enacted, with a taxicab chase and other excursions. At the height of the excitement, the plot broke for Fitch's Saponified Shampoo, spelled F-I-T-C-H by the helpful announcer.

Returning to the plot, Mrs Eccle tried to cancel the case after an illicit visit to her from Detta. The name Mooney came up, a gambler who was Detta's boyfriend at the nightclub where she sang. Rogue kept going, since the episode was only at the halfway point.

He visited the nightclub. There was a confab with Mooney offering Rogue \$5,000 cash to forget the whole matter. Rogue rendered Mooney unconscious, and Detta returned the compliment to him. No visit from Eugor though, which was odd.

The story wrapped up quickly when Detta was caught at the airport, where she confessed to the murder. She had killed a little girl in a hit-and-run car accident several months prior. Francine had been blackmailing her ever since. The rest was details.

"Murder With Muriel" aired on 1945-10-25 the following week. Richard Rogue was bird-dogged by an insurance company detective named Blackie. They hired Rogue for a job but didn't entirely trust his daily timesheets so they had Blackie staying close to him.

Blackie whiled away the time by writing doggerel to his girlfriend, who had been giving him a hard time. That wasn't so bad but he insisted on reading the stuff aloud to Rogue.

"Gee, Cupid's stupid. His dart in my heart I trusted. Now my heart's busted. He sent me an Aphrodite, who's awful flighty. Don't trust Cupid. He's stupid."

Another client burst in to the office, Joe Layton, who had a mutual friend with Richard Rogue named Duke Dickinson, currently hiding out in Kansas City. The latter wanted the two men to retrieve a box of \$25,000 cash from up yonder in the Hudson valley.

As both men were his creditors and hadn't been paid, they accepted the deal. Layton said Dickinson needed the cash urgently because he had additional creditors in Kansas City who weren't as patient. Dickinson mailed each of them half of a map that would show them where the box was hidden. Rogue hadn't received his half yet.

Just after Layton left, Rogue received a panicky telephone call from Muriel Scott, asking for a rendezvous at a theatre. Before Rogue and Blackie got out the door, NYPD Lieutenant Irvine arrived. Layton had been murdered a block away from the office. Scott telephoned Rogue later that evening, indignant that he hadn't kept their meeting. He told her something had come up.

They met at a motel in the valley. A gunman named Shep invited himself in, and demanded the other half of the map. He had killed Layton and got his half of the map, and Scott was his moll. Blackie followed and rescued Rogue, while Scott escaped out the back window. Rogue got Shep's half of the map.

Many alarums and excursions followed between the city and the valley. Scott showed up, waving a gun and demanding the map. The narrative then paused for a commercial about Fitch's Saponified Shampoo, that glamourous women the country over were using. Bess Myerson, Miss America 1945, testified the shampoo did not dry her hair. Nothing was said about Scott's hair. Since she was a villain, she probably used a competitor's product.

Meanwhile, back at the gunpoint, Scott said she expected to wait until the morning mail arrived with Rogue's half of the map. He romanced her until sunrise, then took her to the office. From there to the valley, where they dug for dollars. They found the box but were interrupted by Blackie, who grabbed the cash and ran.

Scott and Shep were turned over to Irvine for the murder of Layton. Rogue and Blackie met up later, deducted what was due to them, and sent the rest of the

cash to Dickinson. Hopefully that quieted the Kansas City creditors. In the epilogue, Dick Powell said he hoped the audience noticed he hadn't been hit on the head in this episode. No sign of Eugor.

Richard Diamond.

RICHARD DIAMOND, PRIVATE DETECTIVE aired on radio from 1949 to 1953 as a star vehicle for singer Dick Powell, who was making 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. Diamond was played as a happy-go-lucky detective who got on well with the police. Noir, it wasn't, but the episodes were enjoyable listening.

"The Leland Gibson Murder" aired on 1949-10-08, and was written by Blake Edwards, better remembered for his Pink Panther movies in later years. This was a locked room mystery, although some of the suspense was ruined by the cold teaser, which showed how the defunct became deceased.

Leland Gibson was a 60-year-old executive who had a fling with a young woman named Virginia. She and her boyfriend Carthy tried to blackmail him but he refused to be intimidated. In the confrontation, Gibson was inadvertently killed.

Gibson's body next appeared in the apartment of Esther Blodget. She had been away, and the suite was locked. She didn't trust police, so picked Richard Diamond out of the phone book. He called the police because they liked to know about such things.

Eventually it was learned that Esther had sublet her apartment from Virginia and Carthy. They still had a key, and the rest was so obvious that Diamond left for Helen Asher's place to serenade her.

"Red Rose" was written by Blake Edwards and aired on 1951-03-02. The client John Alistair had embezzled big money and choose to end his life. If he committed suicide, his life insurance policy wouldn't pay his widow.

He decided to hire a hit man through a small-time hoodlum named Gimpy. The killer was to wear a small red rose in his lapel. Alistair changed his mind and wanted to cancel the contract. Before he could do so, Gimpy was shot dead after being seen arguing with two men over a bad debt. One of them, named Tommy Drago, was wearing a red rose.

Diamond put Alistair into hiding in a cheap hotel. He then interviewed a few possible witnesses. All of them departed this world shortly after he talked to them. Drago was conscientious about tying off loose ends.

One possible investigation to find Drago's whereabouts was to check every florist in the city for a man who bought a rose every day. That paid off after a flower seller knew where Drago lived, just down the street.

Unfortunately Drago was not at home. It became obvious that he had discovered where Alistair was stashed. A mad rush to the hotel, for the standard in-the-nick-of-time rescue. Diamond shot Drago through his red rose, thereby saving the state the cost of a trial.

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 the series 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 adjustor 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 Flight Six Matter" aired in 1956 over five nights from January 30 to February 3. It was written by Les Crutchfield.

Aztec Airlines Flight 6 crashed in the mountains of Mexico. Seven passengers plus three flight crew died when the aircraft blew up in midair. There were several eyewitnesses on the ground and all agreed the back half of the plane was blown apart while it was in normal flight. That was where the freight compartments were. One clue was a suspicious baggage handler who probably loaded the bomb. Unfortunately he got his throat slashed in the first chapter.

Three of the passengers had bought insurance from the same company for a total of \$75,000. (Call it \$750,000 in today's depreciated currency.) Although the sabotage might have been for a cargo claim, the obvious cause seemed to be murder.

Johnny Dollar was sent to investigate. The recovery crew found evidence of dynamite in the wreckage. Of the three dead insured, one was a Cuban woman Maria DeLago and the other two were American men who had both named woman-about-town Marvel Terrence as beneficiary.

At the scene, deep in the mountains, Dollar spotted Terrence watching nearby. He talked to her. She had been canoodling with the DeLago's husband and was currently involved with Bill Blakely. He had been partners with the two dead men and now owned the business.

Terrence said she had booked a seat on Flight 6 but cancelled at the last moment at Blakely's insistence. Others told Dollar that she was wealthy and the two dead men had been courting her. Dollar talked with DeLago's husband Ramon, who was all broke up, and her brother Don Serrano, who wanted revenge. Both men would inherit from her personal fortune.

After suspicion had been spread around to all the supporting characters, Dollar went back and forth on various excursions. Most of the suspects left town separately, but all went to Acapulco, so Dollar followed.

He romanced Terrence, but she became the 12th victim. The hunt was on for the killer. Alarums were everywhere. It wasn't just Dollar doing the hunting. Blakely and Don Serrano were independently hunting Ramon for different reasons.

A gunfight in the harbour settled the matter. Ramon did it all. He didn't live to stand trial. Total expense account was \$608.10

"The Alder Matter" was a five-part episode written by Jack Johnstone, which aired in early August 1956. An insurance company hired Johnny Dollar to find out why Venezuelian oil promoter William Alder had changed his policy beneficiaries five times in one month. Alder had a \$250,000 life insurance policy. In short order, his wife Constance, daughter Peggy, brother (name never mentioned), wife, and daughter again were named as his beneficiaries.

Dollar flew out to Caracas. William was uncooperative, although more annoyed by Paul Kincaid, an oil rig foreman who was Peggy's boyfriend. William did not approve. Someone else didn't approve of William, taking a shot at him and just missing him.

Kincaid likewise, as he and Dollar got into a fistfight. Constance's boyfriend, a matador, was added to the mix. Doris Cole was a house guest for no particular reason, although William seemed to tolerate her. She had a friend Arthur Singer who was up to no good.

Suspicion and alarums were strewn about like rock salt on an icy road, or whatever it is they strew on Caracas roads since they never have ice. Dollar ran about collecting clues that didn't add up to much. He got good help from the police chief Valesquez.

Dollar threatened to cancel the policy and leave town. He faked his departure but sneaked back into town. His thinking was that the cast of characters were afraid to move while he was around.

The plan worked. The whole crowd went into action and took William hostage. He had cheated them out of \$400,000. Shots were fired and said cast were suddenly at loose ends. Surprisingly no one died. Total expense account \$800.33.

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 or Bulldog Drummond 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.

Each episode opened with Michael Waring answering the telephone as The Falcon. It was a different woman each time, to whom he would explain that he couldn't keep their date because he just received a case. He would give a one or two sentence blurb about the episode, and so to the opening credits.

"The Case Of The Carved Ham" aired on 1951-04-08. Michael Waring once more answered the telephone "Yes, this is The Falcon speaking". The woman calling was supposedly intimate with him since she was verifying their date that night. Strange therefore, that she didn't call him Michael.

Alice was told by Waring that he had an appointment. He was meeting a man who had signed a temperance pledge but with the people the guy knew, he was in danger of winding up half-Scotched.

The opening scene began with Doris Webster confronting a man who had been following her. She later called her boyfriend Stuart Vandyne, a wannabe actor, about the man.

The matter was rendered moot when the man barged in and identified himself as Brian King, working for Webster's other boyfriend Joe Santos. King rendered Vandyne unconscious and hauled him to Santos' lair. Their victim got the worst of it. They mutilated his face and turned him into a carved ham.

Webster went to Waring for help because she didn't want police involved. They didn't see eye to eye so she left without hiring The Falcon. Meanwhile King was shot dead in his hotel suite by a gunman, who hadn't known his wife Emily was in another room. She hired Waring for help.

Santos was wounded by the same gunman but didn't hire Waring. The Falcon located Webster and began stitching together who did what to whom. Vandyne was out for revenge. His next target was Webster, who had rejected him after seeing his mutilated face.

Before he got there, Santos did, who told her he had killed King. She mouthed off at him, saying he was ugly, she was sorry she had taken up with him, and she would find another man. She ought not to have said that. Her body was found hanging from the chandelier. And to think that creationists don't believe in natural selection.

Santos was arrogant and confident he wasn't going to hang for her murder. He ought not to have said that either, because both Waring and the police noted a vital clue. There had been nothing in the room for Webster to climb upon and reach the chandelier.

One wonders though, if that would be enough to convict him. Unlike most mystery stories, he did not break down and confess. No blubbering "Yes! I did it, and I'd gladly do it again!"

From the counter-espionage phase of The Falcon's life came the episode "The Case Of The Babbling Brooks", written by Eugene Wang and aired on 1952-07-06. Yvette was the disappointed woman on the telephone at the opening, when Michael Waring told her that he was off to London, England.

Christina Draper was the femme fatale, who met Robert Vaughn in a London hotel room. She was a traitor helping the cause of world peace (his words) and he was a Comintern big shot (her words). He romanced her into photographing the plans of a new tank in the possession of her boss Col. Logan.

She bought off the night porter Alfie Brooks for £10 to forget he saw her carrying a camera into Logan's office. Waring was put on to him by Logan but Brooks denied all. Vaughn heard about The Falcon from Brooks, who then asked for £500 to improve his memory loss and forget about Draper completely.

Vaughn wasn't going to be blackmailed, so he arranged with Brooks to visit him at his house the next day to deliver the money. Instead, Vaughn was going to be meeting with Logan at the appointed time as an alibi. He ordered Draper to do the hit on Brooks and then drop on the floor a cufflink with the initials MW.

It being the halfway mark, the orchestra went into a crescendo and then cut to an announcer. He immediately asked the audience "*Are you in a hurry?*" Don't be, he warned, because speeding in traffic can get you killed. Nothing worse than that, is there?

Back at the spying, Logan met Waring just before the appointment with Vaughn. The colonel came over sick from something he ate. English food, you know. Nonetheless he went to meet Vaughn, while Draper met Brooks and made certain the next person he would meet was an undertaker.

Waring showed up at Brooks' flat and found the police there, Inspector Heathcliff in charge. Waring couldn't stop himself and immediately said "Heathcliff?". That triggered a diatribe from the Inspector, who said he didn't care to hear any Wuthering Heights jokes.

The inspector was the blithering idiot type, obviously modeled on such great police detectives as Farraday and Lestrade. The MW cufflink found next to the body was proof beyond any doubt to the inspector that Waring committed the murder.

Vaughn had his own problems. Logan's indigestion proved to be a fatal heart attack, so Vaughn no longer had an alibi. He tried to throw Draper to the MI5 wolves but she had a gun. A woman scorned and all that. Vaughn's services to the Comintern were abruptly terminated by lead poisoning.

In the epilogue, Waring told Heathcliff he was returning to the USA. He spoke too soon, as a messenger handed him a cable from Leon Brill, Waring's controller. He was to proceed immediately to Rome for his next assignment.

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.

"Daring Young Dame On The Flying Trapeze" was written by Milton Geiger and aired on 1947-07-01. The circus was in town. One of the owners, an acrobat named Ralph Pasonari, asked Philip Marlowe to help them. They had to deal with one of their partners, a trapeze performer known as The Swede, who was running up large gambling debts and threatening the financial stability of the circus.

The Swede's wife Glorianne was also on the trapeze. That night Marlowe and the audience got their admission's worth when The Swede plunged to his death.

Glorianne vowed revenge against Pasonari for deliberately missing The Swede on the swing.

At a later performance, Glorianne went up with Pasonari. Marlowe thought he might drop her as well, but then noticed the two acrobats smiling warmly at each other at the top of the poles. The act went without problems.

Afterwards, Marlowe went backstage and found the two acrobats squabbling. Pasonari accused Glorianne of conspiring with the circus doctor, Richard Stowe. As that contretemps resolved itself, the police arrived for something completely different.

Stowe had been found shot dead in his dressing room. Pasonari was the prime suspect. Marlowe's interest shifted to pharmacology, as he discovered that the circus medicine chest contained sedatives. A small portion of a pill must have been mixed into The Swede's food or drink, just enough to slightly slow his reaction time.

Marlowe found evidence that Glorianne was the culprit, trying to get out of a loveless marriage. Stowe was on to her, so she eliminated him. Her act was called and she went up again. Marlowe let her go up for her last performance with Pasonari.

The ending was deliberately left ambiguous. Would she come down by the ladder into the waiting arms of the police? Or would she take the fast way down?

"The Deep Shadow" aired on 1950-03-21 and was written by Robert Mitchell and Eugene Levitt. Roderick Kettering phoned Marlowe, frantic because his bride-to-be Shirley Doyle had gone missing two days before the ceremony. They had been to the Blue Chip nightclub when she suddenly went off on her own.

Her maid told Kettering that she had changed her behaviour suddenly after getting an anonymous note. Marlowe and Kettering found the note, which told her to meet Frances Virgato. Marlowe visited the Blue Chip, where he learned that the owner Eddie never got a speaking part, having been stabbed to death that morning. An unknown woman was suspected. Eddie had taken home \$50,000 in cash from the nightclub.

From there, Marlowe went to-ing and fro-ing across the city. He found both Doyle and the cash at another apartment. Both got away after Marlowe was intercepted by Virgato. The plot became convoluted as several characters chased after the cash.

Matters were simplified after a gunfight cleared away some of the characters. Doyle did walk down the aisle. The story was unnecessarily complicated and could have used tighter editing. The ending was rushed, trying to get everything done in the last few minutes.

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 apartment 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 several episodes the bad guys were motivated to try and kill him just to shut up all those jests. Well worth listening to. There is a problem with episodes circulating under multiple titles.

"The Terrible Tintype" aired on 1950-11-26 and was written by Louis Vittes. A young woman Sally Blair barged into The Saint's apartment. Waving a gun, she mistook Louie the cab driver for Simon Templar, which caused several uncomfortable moments.

She insisted The Saint had a picture of her sister Valerie Marsh in incriminating circumstances with a young man named Pete Bryan. She wanted it back or else. Templar came in late, disarmed her, and elucidated the facts. Valerie's husband Theodore had told her Templar had the photo, which he didn't and about which he knew nothing.

All and sundry hopped into Louie's cab and went to see Theodore. He was a wealthy man and wanted a divorce but not the alimony obligations. Valerie was there but Theodore was only present in body, his spirit having departed after someone stuck a knife into him. The butler Graves was summoned and asked to notify the police.

After the subsequent fuss and bother, Temple and Louie went to visit Bryan. His dialogue was as snappy as Templar's. When both men ran out of quips, The Saint departed. He and Louie went back to Templar's apartment, where they found a letter waiting for them. It contained the photo and had apparently been mailed by Theodore just before he was murdered.

Louie racked up more mileage as they went back to see Bryan, who, alas, had become victim #2 by gunshot. Leaving the body as is, they moved on to the Marsh manor, where Templar set up a theatrical J'accuse! meeting.

Graves did it. Yes, the butler did it. Templar almost wept with remorse at having enacted that cliché. In the epilogue, Valerie served supper to him and Louie.

"The Chiseling Chimpanzee", written by Louis Vittes, aired on 1950-12-10. An actor friend named Riley was visiting town. He telephoned The Saint for help. His movie studio had put him up in a mansion for publicizing his next film, a jungle action-adventure. Also staying there was his co-star Wenceslaus, variously referred to as a gorilla or monkey, and the handler Mr Preevo.

Preevo was nervous and ran off without saying why. Templar told Preevo he was in the telephone directory, in case he wanted to talk later. This explained why strangers had no difficulty finding The Saint in all the other episodes. A moment later there was a scream and gunshots. Preevo wouldn't be nervous anymore after a drive-by shooter permanently calmed him.

Riley didn't want the monkey around and dumped it on Templar. Everyone kept referring to it as a monkey. It made chittering noises instead of ook-ook sounds, so it didn't seem to be a chimpanzee, chiseling or otherwise.

Upon returning home, Templar found a woman waiting for him. Lola held him at gunpoint and took Wenceslaus. She didn't get one step before a mobster named Max appeared, as if by magic. He didn't have a sense of humour despite all the quips from The Saint.

The room lights suddenly went off and shots rang out. When Templar turned the lights back on, Max had disappeared. Wenceslaus would chitter no more, the second casualty of the evening. "What could he have known that a monkey had to die?", mused Templar. That question prompted Lola and Templar to visit Max's boss, Mr Hertz.

Hertz was urbane and cultured, a mirror of Templar. Max was there and denied shooting Wenceslaus. Several infodumps were unloaded, and improbable ones they were indeed. Hertz et al had used Wenceslaus to heist some jewels from an inaccessible place. The monkey then ad-libbed and stashed the jewels in an unknown hiding place. Preevo was silenced because he had to be.

The four were in a standoff. They decided to buy another monkey, replicate the original caper, and then follow the second monkey in the hopes it would repeat Wenceslaus' behaviour. "Perhaps our substitute will find them, which would be very nice for the survivors." said Templar.

They, and the monkey, searched Lola's apartment, then Max's place. Hertz's place was the locale for Templar's J'accuse! meeting. The denouement was some fancy handwaving which proved Hertz had the jewels. Nothing more was said about the monkey, and certainly there never was a chimpanzee.

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.



At right: Display ad from ASTOUNDING, 1935 December

What was interesting for those days was that Lane and Cranston were supposedly single and living in different apartments, but they commonly had scenes where they are 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. Several dozen episodes are available as free mp3s from www.otrrlibrary.org 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.

The opening musical theme for the episodes was "Le Rouet d'Omphale" ("Omphale's Spinning Wheel"), composed in 1871 by Camille Saint-Saens. It was beautifully played on the organ and provided an ominous note, in both senses of that word, to introduce the show.

"The Shadow Returns" aired on 1939-11-19. Something was causing the crews of ships docking in the city port to suffer arm or leg infections resulting in amputations. Lamont Cranston and Margo Lane were passengers on one such ship. They made enquiries and learned the afflicted crewmen had been vaccinated in another port.

Before any anti-vaxxers leap into the fray, the sailors were victims of a smuggling plot. Cranston and Lane, instructed by a doctor over the shortwave radio, performed an emergency surgery on one such sailor. The ship's doctor, part of the conspiracy, burst into the operation, waving a gun. He chased out Cranston and Lane, but The Shadow returned.

Shots were fired, alarums were sounded, and justice was served. The plot was to embed stolen jewels into sailors' arms and infect them. The ring had their

own hospital at the home port. The infected sailors were rushed past Customs officers to the hospital, the jewels retrieved, and to hell with whether or not the patients survived.

"Death Keeps A Deadline" aired on 1942-11-01. Lamont Cranston and Margot Lane had just celebrated her birthday and were standing outside her apartment building at 03h00. As they were about to part, a mugger came up and threatened them with a gun.

Cranston recognized the mugger and greeted him by name Eddie Burke, or nickname rather, as Rabbit. Cranston easily overcame Rabbit with a quick punch. He told Margo that Rabbit was a hanger-on with Tony Morello the gangster. A hanger-on, not a made man.

Rabbit's problem was that he could wave a gun about but never had the nerve to pull the trigger. As a result, all other gangsters laughed at him and called him Rabbit.

Jumping forward a year, Rabbit was released from prison after serving his time for the attempt on Cranston. Morello thought he looked peaked and sent him to a physician. The diagnosis wasn't good; Dr Bryan gave him six months to live because of a heart aneurysm. Morello suggested that with only six months to live, Rabbit should override his inhibitions.

Specifically, he should become a killer and go out in a blaze of glory. Out of the goodness of his own heart, Morello offered Rabbit a job as triggerman at \$1,000 per week. "The first one is the hardest", said Morello. He spotted a policeman who had been giving them trouble and suggested Rabbit shoot him for practice. He did.

Four murders later, Commissioner Weston and Cranston hauled in Morello for questioning. Since he wasn't doing the shooting, he was relaxed, even jovial, about the whole matter.

News about Rabbit's condition spread to Cranston via a cab driver. The hack apparently had an eidetic memory since he was able to recall verbatim a conversation he heard from a backseat passenger about Rabbit, including the doctor's name.

Morello hadn't realized he had created a monster. He found out the hard way after getting into an argument with Rabbit, who resolved the difficulty by shooting Morello dead. The Shadow visited Bryan to verify Rabbit's diagnosis.

The doctor had been paid by Morello to give bad news to Rabbit, whose heart was actually healthy. Pouring it on further, Bryan was not licenced to practice medicine. He blabbed all.

Margo Lane fulfilled one of her regular duties by being kidnapped and threatened with death. Rabbit held her hostage in a waterworks, but was foiled in the usual nick of time by The Shadow. The outcome was predictable.

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.

"The Newton Murder Case" was written by Richard de Graffe and aired on 1945-04-02. The episode was set in San Francisco. Michael Shayne and Phillis Knight were at the train station to meet Frank Newton at his request. He had also telegraphed he was sending Shayne a package by air express.

At the station, Newton looked right through Shayne and was escorted away by strangers. The package arrived, immediately followed by a diversion so someone could steal it. Fortunately SFPD Inspector Faraday was in the office at the time and pocketed it, suspecting the diversion.

The trio tracked Newton to his hotel room where his body was found. They found a man who was bound and gagged nearby, name of Carl Stanton, who was Newton's business partner. He said the two strangers were robbers after the package, which contained a diamond necklace.

A lawyer named Wilson arrived at the hotel room, saying he had been called to meet Frank and his wife Edna to discuss a divorce. Assorted alarums and excursions followed. Shayne and Knight visited Edna, who inadvertently gave herself away by mentioning a detail of the murder that only the killer would have known.

Since there were still 10 minutes left in the episode, more excursions filled up the time. Suspicion was traded back and forth but finally the culprit was settled. Stanton did it, having had a falling out with Newton. The jewel thieves had barged into the situation, unaware of what was happening elsewhere. Shayne and Knight had a big sloppy goodnight kiss. Pretty racy for those days.

"The Case Of The Corresponding Corpse" was written by Robert Ryf and aired on 1948-12-25. This episode was from the New Orleans series, with Jeff Chandler playing Michael Shayne at the height of hysteria. The client was Senor Lima, who had just flown in from Cuba. He had extensive holdings in and around Havana. A friend named Julian had written him from New Orleans, wanting help.

When Lima arrived, he was told Julian had been dead for two years. Lima knew Julian's handwriting or thought he did, and believed the letter was authentic. Shayne was hired to verify whether Julian was dead or alive.

The last known address was above a tropical fish store and a notary public. The shopkeepers on the ground floor said Julian had died two years ago, presumed drowned in the gulf after a sudden storm. His body had never been found, only his overturned boat.

Shayne got a few leads. Julian had a girlfriend named Celeste, and a drifter who lived on Exchange Street. Both hung out at Maxie's Bar, so Shayne went there

next. She confirmed Julian's death. The drifter remembered Julian for talents in blackmail, forgery, fraud, and other unethical methods of earning a living.

That got Shayne nowhere. To prevent the plot from coming to a dead stop, an informant named Joey came on-stage from out of the blue and told Shayne he had seen Julian alive a couple of days prior. Proceeding to the address, Shayne found Celeste but no answers. After some more running about, Shayne encountered one of the shopkeepers in Julian's old room.

Lima arrived, shot the shopkeeper dead, but was then stymied by the aquarist's wife. It was the shopkeeper who had mimicked Julian, in the hopes of bringing Lima back from Cuba for revenge over a bad business deal. Lima wasn't a fool, and was hunting the hunter, using Shayne as a bird dog to flush out his enemies.

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.

Spade's secretary was Effie Perrine, a scatterbrained young woman who took down his narration in the form of a report. Unlike the movie, where Spade was a serious man, the radio series played him as a happy-go-lucky fellow, sometimes swerving into slapstick.

"The Quarter Eagle Caper" aired on 1948-11-28, no writer credited. The client was Julius Eagle, the gumball king of San Francisco and proprietor of the Eagle Vending Machine Company. Their new avocado flavour was doing well but competitors were vandalizing their machines and stealing the gumballs. There was a shortage of raw chewing gum at the time.

Eagle wanted Spade to catch the hooligans in the act and identify who was their boss. The B-story was Effie Perrine's latest hobby, collecting Indian Head pennies. She had a fill-the-slots album, and explained the numismatics to him.

Her first thought was that Eagle might help her fill in the blanks from the takings of his machines. Spade noticed the damaged machines had all been freshly serviced on the day they were hit. He got a schedule from Maintenance and lurked near a likely candidate. Fortune favoured him and he caught a woman in the act of smashing a machine.

Her name was Thelma Darling. Spade talked to her and got the details. She had thought for a moment that he was Merle, who worked for a Mr Chiselhurst. The latter was her agent in the sale of a large black pearl. Her brother had brought it home from the Pacific war, but he was now doing hard time. She needed the money to finance his appeal.

Chiselhurst took the pearl to Eagle as a prospective client. Eagle palmed the pearl and substituted a black gumball, which Chiselhurst didn't discover until after he had left. Darling left after finishing her story and Spade went to Eagle's house.

The client had a hatchet wound in his neck and was sprawled across a floor strewn with hundreds of pennies collected from gumball machines. The deceased had made a note, not a dying message, on a piece of paper with the words Spade, quarter, and eagle. Spade decided to run a newspaper ad to flush out potential buyers of quarter eagle coins.

Pause for explanation. Many Americans are unaware that the USA originally had a three-part currency: cents, dollars, and eagles. One eagle was \$10 in gold. There was also a half-eagle (\$5 in gold), and a quarter-eagle (\$2.50 in gold). When Roosevelt confiscated private gold in 1933, the eagle coin went out of circulation.

A response to Spade's ad came from a shopkeeper Zacharias. As Spade went to see him, Darling warned him away. She admitted there was no pearl and the MacGuffin was a gold quarter-eagle coin. Spade ignored her and went inside the shop, where he was greeted by a knife-wielding Merle, who finally got a speaking part.

Chiselhurst was there, wanting the quarter-eagle coin. He went into excruciating detail about the coin, but Spade got him back to the business at hand. Previously Chiselhurst had been there to sell the coin to Zacharias but the two couldn't agree on terms. Chiselhurst then left in a huff but quickly became aware he was being stalked by Zacharias' henchmen, who meant to rob him.

Thinking quickly, he entered a bowling alley and used the quarter-eagle in a gumball machine, hoping to retrieve it later. The complications that followed hardly need explaining.

Chiselhurst betrayed Merle as Eagle's murderer. After the police hauled away the culprits and bodies, the question still remained as to where the missing quarter-eagle coin was. Spade had picked it up from near Eagle's body. He gave it to Effie for her coin collection.

"The Cheesecake Caper" aired on 1949-11-06, no writer credited. Sam Spade was in tavern waiting to meet a client when he met a known felon named Freddy Malloy, just in from Cleveland. They chatted a moment and Spade remarked that Cleveland's gain was San Francisco's loss.

As Spade munched on his sandwich, he saw Malloy hustling a waiter named Benny Wesson outside to a limousine. The limo belonged to ward-heeler Mike Sheldon. Spade's attention was distracted when he bit into a small envelope containing a \$50 banknote and a photo of a blonde woman.

There was a note from Wesson, who turned out to be the client, asking Spade to find the woman. Another waiter said Wesson was the brother of torch singer Monica Gillespie, recently in the news for her suicide. The photo wasn't her.

Spade began his investigation by visiting the photographers whose stamp was on the back of the photo. He found them busy photographing a plate of Nussbaum's New England pork and beans. They were arguing how to make it look exciting.

They identified the woman but didn't have her name because she had walked through an outdoor shoot they had been doing. Spade had better luck when he bought a newspaper and discovered the blonde's photo splashed above the fold. Police wanted to know her name. They knew her whereabouts, which was a slab in the morgue.

Spade collected plot coupons around the city. He did identify the blonde as Helen McKelvey, a reformer who had been investigating Sheldon's corruption. Spade soon enough had the pleasure of meeting Sheldon and his goons in person. The climactic fight happened in the photographers' studio, where the first casualty was the plate of pork and beans.

George Valentine.

LET GEORGE DO IT aired on radio from 1946 to 1954, sponsored by Standard Oil for its Chevron stations. 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 bound for Valentine and have the plot explained to her at intervals.

"Am I My Brother's Keeper?" was written by David Victor and Herbert Little Jr, and aired on 1948-04-12. George Valentine and Claire Brooks were hired by Martin Ventner to find his estranged brother Philip.

Martin had run an all-is-forgiven personal ad which brought a reply from René Clemens. She wanted \$500 for Philip's address but Valentine bargained her down to \$250. The address was good. They found \$25,000 in markers owed to gambler Lou Henning. They also found Henning in the closet, with a knife in him. Many alarums followed as the police and Valentine chased about town.

Clemens scarpered, gangsters were interrogated, and excursions were made about town. Philip made an excursion to the morgue without a speaking part. Martin and Clemens both identified the body. She said she had been Philip's girlfriend.

Valentine created a scene in the morgue and roughed up Ventner. Martin was really Philip and vice versa. Philip killed his brother, switched identities, and had his girlfriend Clemens vouch for him. He cleared off his debts by clearing off Henning, then staged the investigation to establish himself as the legitimate Martin.

"Island In The Lake" aired on 1948-05-31, written by David Victor and Herbert Little Jr. The letter writer was Edith Wilder, who was worried about her missing sister Angela. She didn't want a scandal by going to the police and hadn't told her husband Richard.

Andrew Philiston was Angela's third husband. She was fooling around with another man and wanted an expensive divorce. She had gotten all her husbands from a matrimonial agency called the Friendship Club, so that was George Valentine's first stop.

Claire Brooks noticed that Angela had not taken her clothes. Her grown son Bud Kramer, from her first husband, showed up. He had mommy problems and tended to blubber. Valentine actually told him to go to his room, and he did.

Assorted alarums followed, and there were repeated excursions across and once into the lake. Valentine and Brooksie also visited the Friendship Club several times, run by a Mr Selby, just to spread suspicion around. Blood was found in the Philiston house. The police took it as the murder of Angela, and immediately suspected her husband Andrew.

Information then suddenly appeared from the Friendship Club that Andrew's first wife had drowned in the lake. Valentine just as suddenly accused Selby of murdering Angela in a giant jump to a conclusion.

The logic was shakier than a boat out on the lake. Angela and Selby worked a divorce racket, where she would briefly marry men, then demand an expensive divorce. The two co-conspirators split the money until Angela decided she wanted a bigger cut and Selby decided he had enough money.

Philo Vance.

The PHILO VANCE series aired on old-time radio from 1945 to 1950, based on the novels by S.S. Van Dine. Script writers were not credited. 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. Markham narrated the second half of each episode, after the commercial break.

Henry Sylvern was the berserk organist who supplied incidental and segue music. He continually outdid himself with staccato outbursts and crescendos for each scene change. Some of the episodes are worth listening to just for him.

"The Golden Murder Case" aired on 1949-02-01. A gullible young woman named Kay Stone was told by a spiritualist Razah Ramoi that her guardian Peter Golden was cheating her out of her estate.

Ramoi was being briefed by Golden's assistant Dick Novus, who knew that Stone would never believe a direct accusation. Golden was blackmailing Novus, who was engaged to Stone but was hiding a dark secret, that he had served hard time up the river. They had an argument which set up an ominous foreboding.

As that was happening, Stone was visiting Philo Vance to bring his expertise to the case. Vance refused the case. Just as he did so, Novus telephoned from his office, having been left a note by Stone about her visit to Vance. The two men talked a moment but the conversation was interrupted by the sound of a distant gunshot. Novus ran down the hallway to learn that Golden was dead.

Anyone else would have called the police, but Vance told Novus to take Stone home, then wait there for him and D.A. John Markham. At her residence, she received a telephone call from Ramoi who said he would drop by with something to her advantage.

After the call, Novus confessed he had been feeding Ramoi with information about Golden. Vance and Markham arrived, all primed for a J'accuse! meeting. Assorted conversations took place to drag out the suspense, powder everyone with suspicion, and allow Vance to smirk about information withheld from the listener.

"And the name of the murderer is ...", Vance actually said, pausing for theatrical effect, "Kay Stone". She ran for it but the police were waiting outside. In the epilogue, she sobbed out a confession.

Vance then tied up assorted loose threads. One was ridiculous, but the other was a logical deduction based on the fact that she had left a note for Novus to call Vance and therefore must have been at Golden's office next door at the time of his death.

The victim had died long before the gunshot that Novus heard. The gunshot was staged by Ramoi, who visited Golden without Novus seeing him and found the body.

He heard Novus talking on the telephone and decided to mix things up in the hopes of raising some blackmail money from Novus. As per usual, had Stone kept quiet, like every lawyer in the world would tell her, she probably would have avoided conviction.

"The Flying Murder Case" aired on 1949-02-08. Gregory Allen was an airline pilot, the murder victim, although he didn't know it in the opening sequence. Allen was one of those people about whom the real mystery wasn't who murdered him but how it was he managed to live as long as he did.

Allen was putting moves on the flight attendant Sue Gordon, whose boyfriend, co-pilot Johnny Taylor didn't appreciate it. Another suspect was Millard Crane, who didn't like Allen sniffing around his wife Sylvia. Taylor knew about the latter and threatened to tell Millard if Allen didn't stay away from Sue.

With all that set up, Millard boarded the flight crewed by the trio. The aircraft had engine trouble on startup, so the flight was delayed while passengers and crew transferred to another plane. Allen went into the green room while waiting for the new plane but never came out under his own power. Someone stuck a knife into him. He was not mourned.

Philo Vance and D.A. John Markham attended to the airport. Vance interrogated the suspects. He violated one of the basic rules of police procedure by interviewing all of them together instead of separately. Not that it mattered, since he had no authority to be interviewing them in the first place.

The suspects squabbled with each other and had the opportunity to adjust their stories. Vance let them go, the flight began anew, and he was a passenger on board. After all four returned home, he interviewed Sue. When he said he knew who the murderer was, she fled.

Jump cut to the Crane residence, where Millard took delight in telling Sylvia about Allen's murder. She had denied knowing any pilots, so her hysterical reaction after he told her gave her secret away. Vance chose that moment to appear, where he stirred the plot further. Markham also got into the questioning.

Vance then called a J'accuse! meeting at the airport. Showboating in his usual manner, he tricked Millard with what he said was proof but which would be laughed out of court. Millard confessed, of course he did, and admitted he had bribed a mechanic to hobble an engine on the plane. That allowed him an opportunity to get at Allen.

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 and Anne 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 an ordinary mystery series.

"The Case Of Murder And The Revengeful Ghost" was a 1955 episode, almost near the end of the series and for that matter the end of old-time radio. The title didn't seem correct but that was indeed how the announcer declared it several times, 'revengeful' not 'vengeful'.

In any event, the story began in New York City where a man named Ivor Stacey was stabbed to death by either a revengeful ghost or a vengeful human. His fiancée Lorna Reed asked Mr Keen to investigate. She was emphatic she had seen the ghost. Stacey had been a widower, whose first wife Teresa had sworn on her deathbed that he would not remarry.

Keen and his assistant Mike Clancy poked around the house and discovered a man gagged and bound in a closet. Alec Barnes had been the business partner of Stacey. He said he came to suss out the scene of the crime after an unknown woman telephoned him. Upon arrival, he was assaulted by a man.

As Keen talked with Barnes, a man named Charles Harper appeared, waving a gun for attention. He had been the assailant, had been searching the house for something. Harper was the brother-in-law of the dead man through his sister Teresa.

There was a sudden giant leap in the plot when the next scene had Keen following a woman dressed in green. Harper said he had seen her about, and that was good enough for Keen. He tracked her to an apartment.

She was recently released from a mental institution where Stacey had committed her. She pinned the blame for the murder on Barnes, and admitted she had telephoned him to bring him to the house. Stacey had cheated Barnes in the business, so there was another motive.

Back at the Stacey house, Keen staged a J'accuse! meeting. Barnes was searched and found to be carrying a switchblade with blood still on the knife. Reed suddenly came forward and said Barnes had been forcing his attentions on her. He was jealous that Stacey would have her and not him. Barnes then blabbed all in the cliched "Yes! I did it! And I'd gladly do it again!" manner.

Jack Webb.

Before he vaulted to national fame as Sgt Joe Friday in DRAGNET, Jack Webb served an apprenticeship in several private detective radio series, most of them originating from San Francisco. He generally played a harsh man among harsh people, crime noir relieved only by a constant flow of exaggerated similes and sarcastic remarks.

The first of these was PAT NOVAK, FOR HIRE, which aired from 1946 to 1947 and a brief revival in 1949. This series was mostly written by Richard Breen. Pat Novak worked in San Francisco along the waterfront.

Webb's second series was JOHNNY MODERO, PIER 23, which aired for four months in the spring and summer of 1947. The man rented boats in San Francisco and did anything else along the waterfront that would make him money. "The sign outside looks honest but down here the only sign people pay any attention to is rigor mortis."

Because PAT NOVAK was still running on another network with a different leading man, there was a flurry of legal briefs back and forth. Webb had to

make some cosmetic changes, but since both series were not long for this world, the dispute was a tempest in a teapot. The name was also frequently spelled Madero.

JEFF REGAN, INVESTIGATOR aired in the last half of 1948. The name was always pronounced 'ree-gun'. The episodes were very harsh, too noir. The grimness was unrelieved. Webb later toned down his performance for DRAGNET and played Joe Friday as a polite man. After Webb left, the series continued on in a milder tone with other actors.

PETE KELLY'S BLUES aired in the summer of 1951 and was a brief sideline for Webb. In private life, he and his first wife, jazz singer Julie London (better remembered as the ER nurse in the Webb-produced television series EMERGENCY!), were both jazz afficionados.

Pete Kelly was a jazz musician in Kansas City during the Roaring Twenties. Each episode was not only a noir mystery, but Webb and his band played one or two jazz instrumentals. One can safely say that Webb wasn't doing the series for money. He really loved the music and was an accomplished player.

DRAGNET began in June 1949 and on radio went until early 1957. Webb never looked back, and from radio his franchise extended into television and movies. He never said "Just the facts, ma'am." but it became a catch phrase because of his use of similar remarks.

From PAT NOVAK, FOR HIRE was "The Mysterious Set Of Books" aired on 1947-08-10, no writer credited. Ben Morris was playing the part of Pat Novak, although Jack Webb returned briefly in 1949.

Novak's client was a woman who telephoned him and asked to meet at a boarding house. Upon arrival, he was greeted by SFPD Inspector Hellman, who told him no fish today and come back some other time. The landlady murdered a tenant named Burke, a freelance bookkeeper who used the rooms as an office. She had evicted him because the noise of his machines kept her awake at night but there was subsequent trouble.

Novak riposted to Hellman that if she had been arrested, then the murder was done by four other people. Hellman pointed out that the police department had managed to get along quite well before Novak came to town.

After exchanging a few more insults, they went their separate ways. As he left, Novak was accosted by a race track tout named Pinky, a midget who spoke in falsetto. He brushed him off. Another tenant Jack Lamson approached Novak and said he had been Burke's assistant. Lamson offered \$1,000 if Novak would extract some papers out of Burke's safe, not wanting the police to peruse them.

The safe was elsewhere at Burke's Nob Hill apartment. Lamson gave Novak the keys. Upon entering, Novak found a femme fatale named Blanche. She wasn't perturbed to see him and said she was waiting for Burke. Pinky, a persistent little fellow, arrived but Novak threw him out.

Blanche said Denver Red sent her. He owned the Knife and Fork nightclub and had sent her to retrieve an envelope. She rendered Novak semi-conscious with a full bottle of Scotch across the back of the head, then departed.

Various alarums and excursions followed, not to mention constant appearances by Pinky. Many others were after that envelope, such as gangsters Don Reynolds and another simply known as Murphy.

Lamson told Novak that Burke used the papers to blackmail gangsters around town. They were worth big money to whomever had them. There was an unscheduled meeting at the nightclub where Novak and Hellman met over the bodies of Denver Red and Blanche.

The denouement was a complicated mess set up by Lamson to flush out blackmail victims. But who killed Burke in the first instance? The landlady. Lamson just took advantage of an unexpected opportunity.

"Rueben Calloway's Pictures" aired on 1949-03-13, with Jack Webb back in the role. Everyone was credited except the writer. Pat Novak was out on his boat when he fished a dying man out of San Francisco Bay. Calloway was his name. He gasped out a request for Novak to contact Alma Biggs and give her a key for a bus station locker.

She paid Novak \$200 to get the package. He did, and was promptly jumped by goons who wanted the photographs in it. They rendered him unconscious. Strangely, when he woke up the photos were still with him.

The death toll continued to rise, various alarums took place, and Novak tangled with SFPD Inspector Hellman. The photos were the MacGuffin. Novak went

looking for Biggs. He said "It was like trying to get a peanut shell out of a back tooth." That almost made sense.

He found her. Hellman found out Joe Biggs, supposedly dead husband of Alma, was the killer. Much dashing about by just about everyone on both sides. The grand finale was in Calloway's photography laboratory where all converged. The final battle wasn't by gunfire but with acid thrown about. Alma won.

From JOHNNY MODERO, PIER 23 was "Find Pete Sutro", written by Herb Margolis and Lou Markheim, and aired on 1947-06-09. Matt Finley came down to the shop from Nob Hill and hired Johnny Modero to find a man named Pete Sutro. Finley didn't want his wife to know about the search but refused to say why.

Modero soon learned that others were looking for Sutro, including Marty Cain and Evelyn Day, a torch singer who was Sutro's ex-girlfriend. His first stop was Cain, but they didn't get along from the start. Modero lost that discussion.

He stumbled back to his shop and found Finley's wife Sheila waiting for him. She wanted him to drop the case and offered him \$500 cash as inducement. He accepted and went bowling.

SFPD Inspector Warchek spoiled Modero's game. Cain had taken a couple of bullets in the forehead shortly after Modero left him. Warchek told Modero he was the prime suspect. "I felt as safe as an alligator walking through a handbag factory" commented Modero in his narration.

An old friend of Modero was a waterfront priest Father Leahy, who helped him out from time to time with information. He was selling raffle tickets for an orphanage, so that cost Modero a few dollars.

The next stop was the nightclub where Evelyn Day worked. She was evasive and he was abrupt. However she did tell him that Sutro and Cain had worked rackets in Chicago until Sutro skipped town with all their money.

Matt Finley suddenly arrived and interrupted the conversation. He dragged Modero back to the shop and unloaded his woes. Sheila had a past with Sutro and wanted a future with Sutro.

Matt found a handgun in her closet with two bullets missing. "Send it to Homicide. They'll let you know who did it by return mail", said Modero. Their conversation was interrupted by an intruder who sapped Modero unconscious and took Matt away. The former woke up to find Warchek standing over him and the Cain murder weapon lying next to him on the floor.

Cain had been blackmailing Sheila, and Warchek said Sutro was wanted for a payroll robbery. Pause for digression. This is an obsolete crime. Companies stopped paying their employees in cash by the 1960s. The modern version would be some sort of computer hack to divert electronic funds, done safely from a distance and with no need to wave a gun at people.

Warchek left and Father Leahy telephoned. He repeated all the facts to date for the benefit of listeners who tuned in late, then mentioned Evelyn was heading to the Finleys to have it out over Sutro. Everyone congregated there for the grand finale. Sheila told Evelyn that Sutro had died two years ago in Detroit. Evelyn insisted that Matt was Sutro in disguise.

He said he couldn't remember anything after the accident. Accident? What accident? This was the first mention of it, at the 25m mark. Evidently the script writers had gotten into a corner and were trying to get out by tossing a tomato surprise at the listeners.

Sheila explained the matter with gunfire, killing Evelyn. Sutro qua Matt grabbed the gun from Sheila and killed her with it. Modero rushed through the last minute explaining away all the loose ends.

From JEFF REGAN, INVESTIGATOR was the episode "The Too Many Mrs Rogers", which aired on 1948-10-09 and was written by Larry Roman and E. Jack Neuman.

Hinkle and Hinkle, morticians, were the clients, Jason and his son Gerald. Mrs Helen Rogers, a blond, wanted her husband Victor escorted to his cemetery plot in La Jolla. His will specified that he was to be buried wearing a star sapphire ring. She didn't want the ring stolen.

Regan's job was to guard the corpse and the ring. A funny thing happened on the way to the cemetery. Two other women, one a brunette named Katherine, and a redhead Rita, claimed to be Mrs Rogers.

Helen didn't survive to the middle commercial. The police blamed Regan. "You couldn't see a frame in a picture gallery", he told them. The corpse, Victor that is, went missing, although Helen's body stayed where it was.

"I was getting nowhere, like a pickpocket in a nudist colony." Regan went back to the Hinkles for a conversation that ended in fisticuffs. Katherine interrupted them, waving a handgun to get their attention. She succeeded.

Rita was the second victim. However, Victor reversed his status and showed up alive, shooting Katherine dead. He had wanted to clean house and avoid bigamy charges. That was one way to do it.

"The Little Man's Lament" was written by William Fifield and aired on 1949-11-09. Jack Webb had left for better things in Los Angeles and was replaced by Frank Graham in the role of Jeff Regan.

Mrs Margate was the client who wanted protection. She lived in a decaying mansion in the older part of San Francisco. She was rich, her nephew Hillary was an expert in poisons and a marksman, and the rest was obvious.

Another member of the household was Hillary's sister Gwendolyn, a redhead played by Marilyn Monroe. Yes, her. Her dialogue was way too breathless and made clear why she only succeeded in movies, and not because of her acting abilities.

Hillary was the murder victim, shot through the head in the mansion. Gwendolyn heard the shot and found the body. Auntie was pleased those policeman tramping around the big house knew their place and were ever so polite.

George Hendricks, the faithful servitor, fled the premises. He said he was originally Quincy Margate but changed his name after doing hard time in San Quentin for cheque kiting and drug dealing. The plot became confused at this point, with a gardener growing marihuana, and Mrs Margate good with a gun. The police resolved the matter by arresting all the surviving Margates.

From PETE KELLY'S BLUES came "The Veda Brand Story" aired on 1951-07-11 and written by Joe Eisinger. Pete Kelly noticed a woman sitting at the same table each night in the nightclub where he worked. A gunsel stood nearby as a bodyguard.

The woman stared at Kelly all night long, enough to make him nervous. "She's beginning to make me feel like a wayside shrine", he said. Veda Brand, for that was her name, invited Kelly to her table after he finished playing his set. She gushed over him and her bodyguard suggested it would be wise to return the favour.

After the jazz playing was over, Brand took Kelly to an after-hours casino behind the Grundy Bank and Savings. She introduced him to the gangsters who ran the joint. They suggested that Kelly marry Brand because they wanted her to be happy. He had a choice of being a live husband or a dead bachelor.

Kelly decided to depart Kansas City sooner rather than later. After a brief detour to his club to say goodbye, he went to his apartment to grab a few things. He found Brand stretched across his bed, strangled to death.

Needless to say, he was in a fix. If the police didn't get him, the gangsters would, led by Mugsy Brand, Veda's father. Back to the Grundy casino for the final showdown. Shots were fired and the supporting cast eradicated each other. And so to a mournful blues tune.

"June Gould" aired on 1951-09-12 and was written by Joe Eisinger. A dear old lady was searching the nightclubs of Kansas City for her daughter June Gould, gone astray as a torch singer. Pete Kelly volunteered to help find her.

Mrs Gould told him that June had been sending her money orders for her support. Last heard of, June had been at Morley's nightclub, so Kelly began his search there. No luck.

A name that came up was Nails Norton, gangster about town. In between jazz sets, Kelly crossed back and forth between the two Kansas Citys. One clue led to another and a flotilla of supporting characters.

Kelly finally found June in Norton's apartment. An angry wife had thrown acid in her face, leaving her a living horror. Norton nursed her as best he could, and sent money orders to her mother. June didn't want her mother to know. Nothing more for anyone to do. If that wasn't noir, then I don't know what is.

Bulldog Drummond.

Bulldog Drummond was based on the novels by H.C. McNeile. There was little continuity between the books, a plethora of movies, and the radio series. The novels and movies were set in Britain where Drummond was some sort of police detective. In the books, he was a married man, in the movies he was forever affianced, and in the radio series he was a loner.

The radio series soon moved Drummond to the USA. He roamed the country as a paladin with no visible source of income and unspecified police powers, assisted by his valet Denny, a blithering idiot. The radio series aired from 1941 to 1954. The episodes were mediocre, worth listening to once and then forgotten.

The short story "Counterpunch" by S. Subramanian (2019 October, MYSTERY WEEKLY MAGAZINE, available from Amazon print-on-demand) was a Bulldog Drummond pastiche. This must be a rarity, especially for a detective long past his sell-by date. I don't recall reading any other Drummond pastiches.

This Drummond version was the one residing in England with his faithful valet Denny. There was a murder, as there so often was. The victim was a biochemist who had just invented an antidote for zombies. Not the Hollywood movie type but people whose minds had been taken over by evil spirits out to rule the world.

Since these zombies looked normal, Drummond's first task was to identify them, not an easy task. Then he had to spray the antidote on them, which crumbled them into dust. A policeman's lot is not a happy one.

"Terror In The Circus" aired on 1944-01-14, no writer credited. Bulldog Drummond and Denny were strolling about a circus when a young lady Marion Norris accosted them, seeking protection. She then disappeared while a man following her identified her as an acrobat.

She slipped a handgun into Drummond's pocket before she ran away. Drummond found a roustabout who said her husband Paul owned the gun. Paul was extremely jealous of their co-star Chris Adams, whom he thought was romancing her.

The Flying Norrises did their act without a net. Paul switched their routine at the last moment. That cost him his life when he fell from the top of the trapeze. The audience certainly got their money's worth.

Drummond barged into the act, or investigation rather. Police? What of them? They said it was an accident. Drummond declared the ropes had been sabotaged. It wasn't mentioned but the only way he could have known that was to climb to the top of the trapeze to examine them. Evidently the police were afraid of heights.

Suspicion was on everyone. A gangster barged into the act. Drummond snooped about Adams' trailer and found a file used to damage the rope. The gangster turned out to be Val Monahan, an insurance investigator, who suspected Adams. He said Adams was implicated in the death of another acrobat Evelyn Roberts sometime before at another circus.

The main sticking point was that Paul was the one who switched the act around at the last moment. Adams would have been the one to die if he had not done so. That transferred suspicion to Marion.

Monahan was a fake, who was really Roberts' husband. He tried to shoot Adams to finish the job but failed. Blabbing all, he blamed Adams for his wife's death. The rest was a wrap. Drummond and Denny went off to enjoy the surviving acts.

"Dinner Of Death" aired on 1945-04-23. District Attorney Mahoney was prosecuting Barnaby Mullens and Spike Saunders for hijacking trucks. Mullens was released on bail and went to Mahoney to strike a bargain, a confession in exchange for delaying the trial a couple of days. He had some unfinished business.

Thomas Pepper was a crusading newspaperman who had exposed the racket. He had a bodyguard named Dodo, who could barely speak English and served as a foil for everyone.

A banquet was being given in Pepper's honour. In the cocktail hour just before it began, Pepper and Mahoney each had a bourbon. Captain Drummond and Denny had been invited and thus saw the other two men collapse from poisoning. They had dry sherries.

Pepper barely survived but Mahoney didn't. Drummond and Denny began investigating since New York City was too small to have a Homicide squad. They found Mullens murdered and Dodo lurking about. Drummond was very nice and telephoned the police. When making the call, he learned that Saunders had escaped from remand.

Pepper had his own alarums, including being shot at and later kidnapped. The denouement took place in the hijackers' warehouse, with Pepper and Saunders dueling with guns. Pepper won. Drummond then took him into custody for the murder of Mullens, whom he had been blackmailing.

Drummond got Pepper's gun and Pepper got Saunders gun. They shot at each other in the darkened warehouse, both carefully counting each other's shots. None of this business about firing a dozen rounds from a revolver as so many shows do. When they ran out of ammo, Denny got the jump on Pepper with a crate. And so to home, with another day's work done.

Dr Thorndyke.

Not well remembered today are the 21 novels and 40 short stories by R. Austin Freeman about the English private detective Dr John Evelyn Thorndyke. This forensic investigator was assisted by Dr Christopher Jervis, who acted as his Watson in cases and narrated them. Their laboratory assistant was Nathaniel Polton.

The stories were forensic procedurals, the distant ancestors of the CSI television series. A procedural story is one in which the criminal and the crime are known to the reader from the beginning. The interest is not in solving a mystery but following the detective as he investigated.

THE ADVENTURES OF DR THORNDYKE was a collection of five procedural detective stories, published in 1923. It is available as a free pdf from www.gutenberg.org

"The Case Of Oscar Brodski" began with Silas Hickler, who earned a fair living as a burglar. By happenstance he met up with the diamond merchant Oscar Brodski and invited him into the house. He then murdered him for the packet of rough diamonds he was carrying.

Hickler carried the body to nearby railroad tracks and laid it on the tracks. The next train ran it over and the death was first deemed an accident. But Thorndyke, carrying his portable laboratory in a custom luggage, was called into the case as an observer.

The events were told twice, from the perspective of Hickler and of Dr Christopher Jervis. The latter analyzed the clues step by step. No Holmesian nonsense about withholding information from the reader for a surprise ending. Hickler did not escape.

"A Case Of Premeditation" began with a retired warden named Pratt recognizing on a train a long-ago escaped felon Francis Dobbs, now living quietly as Rufus Pembury. Rather than summon a constable, Pratt suggested a financial arrangement to keep quiet. Blackmailers tend to have shortened lives, so the subsequent events were obvious.

Pembury's plan to kill Pratt was extremely elaborate, enough to fill a chapter. Alas, immediately after the murder, his plan gang aft agley. One piece of luck for Pembury was that the police immediately arrested the wrong man, a partial fulfillment of his plan. Thorndyke was called in to assist the police. He puzzled out the plan over the next few days and succeeded in getting Dobbs' fingerprints.

The culprit had, in the meantime, converted his assets into cash and disappeared. Thorndyke wasn't bothered, as he had figured out that Pratt was a blackmailer and deserved to die. This denouement was similar to some Sherlock Holmes case in the original canon. The great detective was not disturbed that someone escaped if thereby justice was served.

"The Echo Of A Mutiny" was about James Brown, a retired mariner who was now a newly-hired lighthouse keeper. Arriving at the lighthouse, he met the other keeper Tom Jeffreys.

They recognized each other as murderers in a long-ago mutiny. Brown had testified against the other, who had since escaped prison and assumed a new identity. They fought each other and Jeffreys won, sending Brown to a watery grave.

Time passed. Thorndyke's laboratory assistant Polton invented a new prism suitable for a lighthouse beacon. As they arrived at the docks for a presentation

on the device, a body washed ashore. The discrepancy of details prompted a visit to the lighthouse to interrogate Jeffreys.

For all the evidence gathered, there was not enough to convict him in court. The interest in this story is the myriad of little details which Thorndyke elucidated out of next to nothing.

"A Wastrel's Romance" was about a manor house party, a dance where the richest spinsters in the county were gathering. Augustus Bailey was an uninvited attendee, a small-time thief who lived by his wits, and not very well at that.

His attempted theft of a woman's jewelry went horribly wrong. He almost killed her in the bungled attack. When he fled the manor house, he left a litter of clues behind, including his overcoat. Christopher Jervis and his wife had attended the ball, which naturally brought Thorndyke into the affray.

Analyzing the dust on the overcoat enabled Thorndyke to logically identify what district of London the thief came from. They found him living in absolute poverty in a cheap room. Prison would be a boon to him, with three meals a day and a warm bed. The victim showed mercy by declining to press charges.

"The Old Lag" was the final story. Frank Belfield, running from the law on a murder charge, was the client appealing to Thorndyke for help. Belfield's fingerprints had been found at the scene of the crime. The fingerprints were identical to those taken when Belfield had been sent to prison years ago.

The catch was that later he had scarred his fingertips in a minor accident. The corrupt warder who had copied the original fingerprints and made a rubber stamp of them didn't know that. Additionally the warder, who wanted to frame Belfield, put the thumb print next to the four fingers.

Thumbs are always printed separately by police because they are at an angle to the fingers. Check for yourself. Put your hand flat on the table in a natural manner. Your fingertips will be flat on the table, but the thumb will be at a 45° angle.

And so ended the book. An interesting read because Thorndyke's methods were very different from other fictional detectives at the time. He was in fact a superior investigator to his contemporary Sherlock Holmes.

SEEN IN THE LITERATURE

Lozovsky, M., et al (2021) **Why do more massive stars host larger planets?**A S T R O N O M Y A N D A S T R O P H Y S I C S 652:doi.org/10.1051/0004-6361/202140563 (available as a free pdf)

Authors' abstract: In this study, we explore whether this inferred relation of planetary size and host star mass can be explained by a higher planetary mass of planets orbiting higher-mass stars, inflation of the planetary radius due to the difference in stellar irradiation, or different planetary compositions and structures.

Using exoplanetary data of planets with measured masses and radii, we investigated the relations between stellar mass and various planetary properties for G and K stars. We confirm that more massive stars host larger and more massive planets.

We find that the differences in the planetary masses and temperatures are insufficient to explain the measured differences in radii for planets surrounding different stellar types. We show that the larger planetary radii can be explained by a larger fraction of volatile material (H-He atmospheres) in planets surrounding more massive stars.

We conclude that planets around more massive stars are most probably larger as a result of larger H-He atmospheres. Our findings imply that planets forming around more massive stars tend to accrete H-He atmospheres more efficiently.

DeSouza, S.R., et al (2021) Can a jumping-Jupiter trigger the Moon's formation impact? MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 507:doi.org/10.1093/mnras/stab2188

Authors' abstract: We investigate the possibility that the Moon's formation impact was triggered by an early dynamical instability of the giant planets.

We consider the well-studied 'jumping Jupiter' hypothesis for the Solar system's instability, where Jupiter and Saturn's semimajor axes evolve in step-wise manner from their primordially compact architecture to their present locations.

Moreover, we test multiple different configurations for the primordial system of terrestrial planets and the Moon-forming projectile, with particular focus on the almost equal masses impact. We find that the instability/migration of the giant planets excites the orbits of the terrestrial planets through dynamical perturbations, thus allowing collisions between them.

About 10 per cent of the simulations lead to a collision with the proto-Earth which resulted in a final configuration of the terrestrial system that reproduces, to some extent, its present architecture. Most of these collisions occur in the hit-and-run domain, but about 15 per cent occur in the partial accretion regime, with the right conditions for a Moon-forming impact.

In most of the simulations, there is a delay of more than ~ 20 megayears between the time of the instability and the Moon-forming impact. This supports the occurrence of an early instability (< 10 My after dissipation of the gas in the protoplanetary disc), compatible with the time of the Moon-forming impact (30 to 60 megayears) inferred from cosmochemical constraints.

In general, the final states of the inner Solar system in our simulations show an excess of Angular Momentum Deficit, mostly attributed to the overexcitation of Mercury's eccentricity and inclination.

Martínez-Giménez, J.A., R. Tabares-Seisdedos (2021) **Possible ancestral functions of the genetic and RNA operational pre-codes and the origin of the genetic system.** ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES 51:167-183

Authors' abstract: The origin of genetic systems is the central problem in the study of the origin of life for which various explanatory hypotheses have been presented. One model suggests that both ancestral transfer ribonucleic acid (tRNA) molecules and primitive ribosomes were originally involved in RNA replication.

According to this model the early tRNA molecules catalyzed their own self-loading with a trinucleotide complementary to their anticodon triplet, while the primordial ribosome (protoribosome) catalyzed the transfer of these terminal trinucleotides from one tRNA to another tRNA harboring the growing RNA polymer at the 3'-end.

Here we present the notion that the anticodon-codon-like pairs presumably located in the acceptor stem of primordial tRNAs (thus being and remaining, after the code and translation origins, the major contributor to the RNA operational code) might have originally been used for RNA replication rather than translation.

These anticodon and acceptor stem triplets would have been involved in accurately loading the 3'-end of tRNAs with a trinucleotide complementary to their anticodon triplet, thus allowing the accurate repair of tRNAs for their use by the protoribosome during RNA replication.

We propose that tRNAs could have catalyzed their own trinucleotide self-loading by forming catalytic tRNA dimers which would have had polymerase activity.

Therefore, the loading mechanism and its evolution may have been a basic step in the emergence of new genetic mechanisms such as genetic translation. The evolutionary implications of this proposed loading mechanism are also discussed.

Caron, J-B, and J. Moysiuk (2021) **A giant nektobenthic radiodont from the Burgess Shale and the significance of hurdiid carapace diversity.** ROYAL SOCIETY OPEN SCIENCE 8:doi.org/10.1098/rsos.210664 (available as a free pdf)

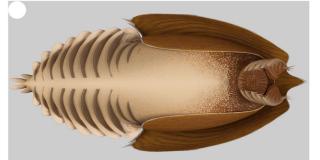
Authors' abstract: Radiodonts, stem-group euarthropods that evolved during the Cambrian explosion, were among the largest and most diversified lower palaeozoic predators. These animals were widespread geographically, occupying a variety of ecological niches, from benthic foragers to nektonic suspension feeders and apex predators.

Here, we describe the largest Cambrian hurdiid radiodont known so far, Titanokorys gainesi, gen. et sp. nov., from the Burgess Shale (Marble Canyon, Kootenay National Park, British Columbia). Estimated to reach half a metre in length, this new species bears a very large ovoid-shaped central carapace with distinct short posterolateral processes and an anterior spine.

Geometric morphometric analyses highlight the high diversity of carapace shapes in hurdiids and show that Titanokorys bridges a morphological gap between forms with long and short carapaces. Carapace shape, however, is prone to homoplasy and shows no consistent relationship with trophic ecology, as demonstrated by new data, including a reappraisal of the poorly known Pahvantia.

Despite distinct carapaces, Titanokorys shares similar rake-like appendages for sediment sifting with Cambroraster, a smaller but much more abundant sympatric hurdiid from the Burgess Shale.









The co-occurrence of these two species on the same bedding planes highlights potential competition for benthic resources and the high diversity of large predators sustained by Cambrian communities.

[Images are from this paper.]

Brocklehurst, N., and R.J. Benson (2021) **Multiple paths to morphological diversification during the origin of amniotes.** NATURE ECOLOGY AND EVOLUTION 5:1243-1249

Authors' abstract: Early terrestrial vertebrates (amniotes) provide a classic example of diversification following adaptive zone invasion. The initial terrestrialization of vertebrates was closely followed by dietary diversification, as evidenced by a proliferation of craniomandibular and dental adaptations.

However, morphological evolution of early amniotes has received limited study, in analyses with restricted taxonomic scope, leaving substantial questions about the dynamics of this important terrestrial radiation.

We use novel analyses of discrete characters to quantify variation in evolutionary rates and constraints during diversification of the amniote feeding apparatus. We find evidence for an early burst, comprising high rates of anatomical change that decelerated through time, giving way to a background of saturated morphological evolution.

Subsequent expansions of phenotypic diversity were not associated with increased evolutionary rates. Instead, variation in the mode of evolution became important, with groups representing independent origins of herbivory evolving distinctive, group-specific morphologies and thereby exploring novel character-state spaces.

Our findings indicate the importance of plant-animal interactions in structuring the earliest radiation of amniotes and demonstrate the importance of variation in modes of phenotypic divergence during a major evolutionary radiation.

Cui, Y., et al (2021) Massive and rapid predominantly volcanic CO2 emission during the end-Permian mass extinction. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2014701118 (available as a free pdf)

[The end-Permian extinction was the greatest mass extinction in Earth's history, when 97% of all life became extinct. Earth was super-heated by massive lava flows that flooded the supercontinent Pangea and boiled the ocean, called the Siberian Traps. 'traps' is a geological term for kilometres-thick lava deposits.]

Authors' abstract: The end-Permian mass extinction event (ca. 252 megayears ago) is the most-severe biodiversity loss in Earth's history and is globally recognized by a rapid negative carbon isotope excursion. The trigger of this event, however, remains controversial.

New paired terrestrial and marine compound-specific carbon isotope records may provide clues for this enigma. By comparing observed data to results from an isotope-enabled Earth system model, we find that a massive and rapid, predominantly volcanic CO_2 emission during the Siberian Traps volcanism is likely the trigger for the carbon isotope excursion and the severe mass extinction.

The end-Permian mass extinction event (~252 Mya) is associated with one of the largest global carbon cycle perturbations in the Phanerozoic and is thought to be triggered by the Siberian Traps volcanism. Sizable carbon isotope excursions (CIEs) have been found at numerous sites around the world, suggesting massive quantities of 13 C-depleted CO_2 input into the ocean and atmosphere system.

The exact magnitude and cause of the CIEs, the pace of CO_2 emission, and the total quantity of CO_2 , however, remain poorly known. Here, we quantify the CO_2 emission in an Earth system model based on new compound-specific carbon isotope records from the Finnmark Platform and an astronomically tuned age model.

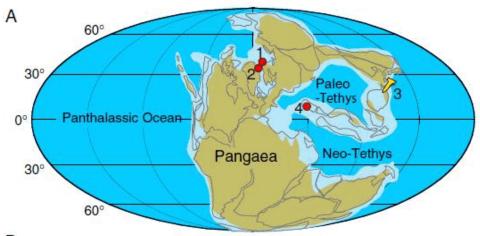
By quantitatively comparing the modeled surface ocean pH and boron isotope pH proxy, a massive (~36,000 gigatonnes C) and rapid emission (~5 Gt C yr¹) of largely volcanic CO_2 source (~-15%) is necessary to drive the observed pattern of CIE, the abrupt decline in surface ocean pH, and the extreme global temperature increase.

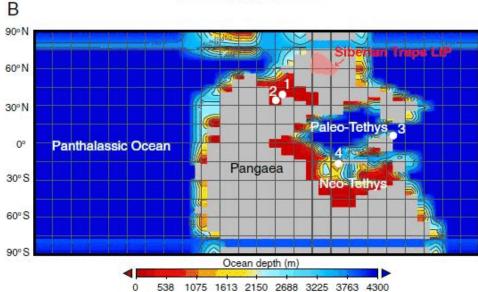
This suggests that the massive amount of greenhouse gases may have pushed the Earth system toward a critical tipping point, beyond which extreme changes in ocean pH and temperature led to irreversible mass extinction.

The comparatively amplified CIE observed in higher plant leaf waxes suggests that the surface waters of the Finnmark Platform were likely out of equilibrium with the initial massive centennial-scale release of carbon from the massive Siberian Traps volcanism, supporting the rapidity of carbon injection.

Our modeling work reveals that carbon emission pulses are accompanied by organic carbon burial, facilitated by widespread ocean anoxia.

[Maps are from this paper and show what Earth was like at the end-Permian.]





Moura, P.H., et al (2021) **Diversity and evolution of the extraordinary vocal sacs of casque-headed treefrogs (Anura: Hylidae).** BIOLOGICAL J O U R N A L O F T H E L I N N E A N S O C I E T Y 134:doi.org/10.1093/biolinnean/blab083

Authors' abstract: Vocal sacs are among the most conspicuous features of anurans and are particularly striking in casque-headed treefrogs (Hylidae: Hylinae: Lophyohylini) with their wide array of morphologies. In this paper, we assessed the anatomy of vocal sacs in representatives of the Lophyohylini, described eight discrete characters and studied their evolution.

We inferred that dorsolateral projections of the vocal sacs were already present during the early evolution of the tribe. Subsequently, they reached surprising volumes in some species, whereas in others they were notably reduced.

We inferred between nine and 11 independent events of reduction of the size and lateral projections of the vocal sac, showing unprecedented levels of plasticity for the structure.

Moreover, these events were strongly correlated with the colonization of phytotelmata as breeding sites, probably due to their confined space which hampers the inflation of large vocal sacs.

Finally, we discuss the evolution of paired lateral vocal sacs in different groups of anurans, and the extent to which the paired and dorsally projecting lobes of most Trachycephalus differ from those of distantly related taxa.

Teske, P.R., et al (2021) **The sardine run in southeastern Africa is a mass migration into an ecological trap.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abf4514 (available as a free pdf)

Authors' abstract: The KwaZulu-Natal sardine run, popularly known as the "greatest shoal on Earth", is a mass migration of South African sardines from their temperate core range into the subtropical Indian Ocean. It has been suggested that this represents the spawning migration of a distinct subtropical stock.

Using genomic and transcriptomic data from sardines collected around the South African coast, we identified two stocks, one cool temperate (Atlantic) and

the other warm temperate (Indian Ocean). Unexpectedly, we found that sardines participating in the sardine run are primarily of Atlantic origin and thus prefer colder water.

These sardines separate from the warm-temperate stock and move into temporarily favorable Indian Ocean habitat during brief cold-water upwelling periods. Once the upwelling ends, they find themselves trapped in physiologically challenging subtropical habitat and subject to intense predation pressure. This makes the sardine run a rare example of a mass migration that has no apparent fitness benefits.

Martínez, R.N., et al (2021) A Triassic stem lepidosaur illuminates the origin of lizard-like reptiles. NATURE 597:235-238

Authors' abstract: The early evolution of diapsid reptiles is marked by a deep contrast between our knowledge of the origin and early evolution of archosauromorphs (crocodiles, avian and non-avian dinosaurs) to that of lepidosauromorphs (squamates (lizards, snakes) and sphenodontians (tuataras)).

Whereas the former include hundreds of fossil species across various lineages during the Triassic period1, the latter are represented by an extremely patchy early fossil record comprising only a handful of fragmentary fossils, most of which have uncertain phylogenetic affinities and are confined to Europe.

Here we report the discovery of a three-dimensionally preserved reptile skull, assigned as Taytalura alcoberi gen. et sp. nov., from the Late Triassic epoch of Argentina that is robustly inferred phylogenetically as the earliest evolving lepidosauromorph, using various data types and optimality criteria. Microcomputed tomography scans of this skull reveal details about the origin of the lepidosaurian skull from early diapsids, suggesting that several traits traditionally associated with sphenodontians in fact originated much earlier in lepidosauromorph evolution.

Taytalura suggests that the strongly evolutionarily conserved skull architecture of sphenodontians represents the plesiomorphic condition for all lepidosaurs, that stem and crown lepidosaurs were contemporaries for at least ten million years during the Triassic, and that early lepidosauromorphs had a much broader geographical distribution than has previously been thought.

James, F.C. (2021) **How many dinosaurs are birds?** BIOSCIENCE 71: 991-994 (available as a free pdf)

Author's extracts: Thomas Huxley, known as Charles Darwin's bulldog in Victorian England, was the first to propose the idea that birds evolved from dinosaurs (Huxley, 1868, 1870) or, at least, that birds and dinosaurs have a common ancestor (Naish 2012). The more specific idea that birds evolved from small theropod dinosaurs was proposed in 1969 in John Ostrom's monograph about the bipedal raptor Deinonychus.

Even more specifically, the prevailing hypothesis today is that the closest relatives (sister group) of birds are among the maniraptoran theropod dinosaurs. Theropoda is a large group of bipedal dinosaurs, most of which had three forward-facing toes and three fingers. They ranged in size from diminutive to gigantic, like the famous Tyrannosaurus rex.

In spite of all this confidence that the problem of the origin of birds has been solved, strong grounds exist for regarding the issue as unsettled, and that is exactly the subject of Alan Feduccia's new book. He thinks not only that Archaeopteryx could fly but also that birds and avian flight evolved long before Archaeopteryx. Indeed, in his view, birds were already distributed worldwide at the time of Archaeopteryx.

Feduccia's biggest issue is the neoflightless problem. He argues that some unknown number of flying and flightless birds are being misclassified as dinosaurs.

Gohar, A.S., et al (2021) A new protocetid whale offers clues to biogeography and feeding ecology in early cetacean evolution. PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON 288B:doi.org/10.1098/rspb.2021.1368 (available as a free pdf)

Authors' abstract: Over about 10 million years, the ancestors of whales transformed from herbivorous, deer-like, terrestrial mammals into carnivorous and fully aquatic cetaceans. Protocetids are Eocene whales that represent a unique semiaquatic stage in that dramatic evolutionary transformation.

Here, we report on a new medium-sized protocetid, Phiomicetus anubis gen. et sp. nov., consisting of a partial skeleton from the middle Eocene (Lutetian) of

the Fayum Depression in Egypt. The new species differs from other protocetids in having large, elongated temporal fossae, anteriorly placed pterygoids, elongated parietals, an unfused mandibular symphysis that terminates at the level of P3, and a relatively enlarged I3.

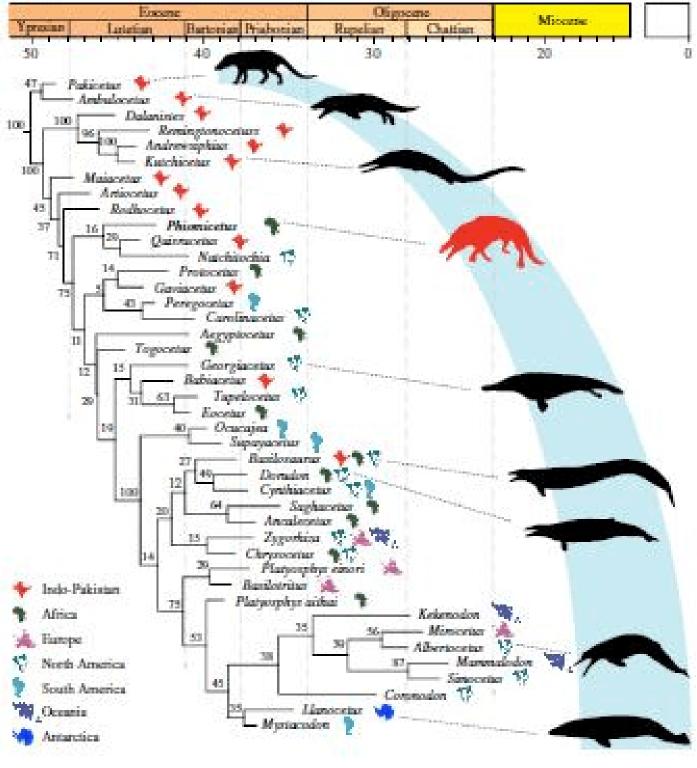
Unique features of the skull and mandible suggest a capacity for more efficient oral mechanical processing than the typical protocetid condition, thereby allowing for a strong raptorial feeding style. Phylogenetic analysis nests Phiomicetus within the paraphyletic Protocetidae, as the most basal protocetid known from Africa.

Recovery of Phiomicetus from the same bed that yielded the remingtonocetid Rayanistes afer provides the first clear evidence for the co-occurrence of the basal cetacean families Remingtonocetidae and Protocetidae in Africa.

The discovery of Phiomicetus further augments our understanding of the biogeography and feeding ecology of early whales.

[Images are from this paper.]





Bisconti, M., et al (2021) **Evolution of gigantism in right and bowhead whales (Cetacea: Mysticeti: Balaenidae).** BIOLOGICAL JOURNAL OF THE LINNEAN SOCIETY 134:doi.org/10.1093/biolinnean/blab086

Authors' abstract; The evolution of gigantic body size represents a key to understand the ecological role of baleen whales in oceanic ecosystems. Many efforts have been devoted to the formulation of equations relating different body parts to total body length and mass in living and fossil mysticetes, mainly focusing on balaenopterid and balaenopterid-like mysticetes.

Right whales (family Balaenidae) have a unique head-to-body length ratio, suggesting that their body proportions cannot be predicted effectively using equations based primarily on non-balaenid mysticetes. A new morphometric dataset of living and fossil balaenids is provided herein, and new regression equations allow one to predict the body length and mass of extinct species based on the expected head-to-body length ratio of extant balaenids.

The reconstructed values are mapped on a new phylogenetic analysis of the Balaenidae, inferring body size and mass at ancestral nodes. The variations of body size and mass in Balaenidae since the early Miocene are reconstructed, revealing that:

- (1) a reduction in total body length occurred in the early Pliocene;
- (2) the origin of the gigantic body size in the bowhead whale (Balaena mysticetus) is probably related to invasion of the Arctic Ocean in the last 3 megayears; and
- (3) the origin of the gigantic body size in the right whales (genus Eubalaena) occurred since the latest Miocene, probably concomitant with pulses of nutrients sustaining large zooplankton populations.

We suggest that the evolution of gigantism in Balaenidae occurred independently in two lineages and, probably, in response to different palaeoenvironmental drivers.

Cantalapiedra, J.L., et al (2021) **The rise and fall of proboscidean ecological diversity.** NATURE ECOLOGY AND EVOLUTION 5:1266-1272

[Proboscideans are elephants, mammoths, and mastodons.]

Authors' abstract: Proboscideans were keystone Cenozoic megaherbivores and present a highly relevant case study to frame the timing and magnitude of recent megafauna extinctions against long-term macroevolutionary patterns. By surveying the entire proboscidean fossil history using model-based approaches, we show that the dramatic Miocene explosion of proboscidean functional diversity was triggered by their biogeographical expansion beyond Africa.

Ecomorphological innovations drove niche differentiation; communities that accommodated several disparate proboscidean species in sympatry became commonplace. The first burst of extinctions took place in the late Miocene, approximately 7 million years ago (Ma).

Importantly, this and subsequent extinction trends showed high ecomorphological selectivity and went hand in hand with palaeoclimate dynamics. The global extirpation of proboscideans began escalating from 3 Ma with further extinctions in Eurasia and then a dramatic increase in African extinctions at 2.4 Ma.

Overhunting by humans may have served as a final double jeopardy in the late Pleistocene after climate-triggered extinction trends that began long before hominins evolved suitable hunting capabilities.

Adamec, L., et al (2021) **Recent ecophysiological, biochemical and evolutional insights into plant carnivory.** ANNALS OF BOTANY 128:241-259 (available as a free pdf)

Authors' abstract: Carnivorous plants are an ecological group of approximately 810 vascular species which capture and digest animal prey, absorb prey-derived nutrients and utilize them to enhance their growth and development.

Extant carnivorous plants have evolved in at least ten independent lineages, and their adaptive traits represent an example of structural and functional

convergence. Plant carnivory is a result of complex adaptations to mostly nutrient-poor, wet and sunny habitats when the benefits of carnivory exceed the costs.

We focus on those processes and traits in carnivorous plants associated with their ecological characterization, mineral nutrition, cost-benefit relationships, functioning of digestive enzymes and regulation of the hunting cycle in traps. We elucidate mechanisms by which uptake of prey-derived nutrients leads to stimulation of photosynthesis and root nutrient uptake.

Utilization of prey-derived mineral (mainly N and P) and organic nutrients is highly beneficial for plants and increases the photosynthetic rate in leaves as a prerequisite for faster plant growth. Whole-genome and tandem gene duplications brought gene material for diversification into carnivorous functions and enabled recruitment of defence-related genes.

Speirs: Some excellent photographs and much good reading into how plants turn the tables.

McCormick, E.L., et al (2021) Widespread woody plant use of water stored in bedrock. NATURE 597:225-229

Authors' abstract: In the past several decades, field studies have shown that woody plants can access substantial volumes of water from the pores and fractures of bedrock.

If, like soil moisture, bedrock water storage serves as an important source of plant-available water, then conceptual paradigms regarding water and carbon cycling may need to be revised to incorporate bedrock properties and processes.

Here we present a lower-bound estimate of the contribution of bedrock water storage to transpiration across the continental United States using distributed, publicly available datasets. Temporal and spatial patterns of bedrock water use across the continental United States indicate that woody plants extensively access bedrock water for transpiration.

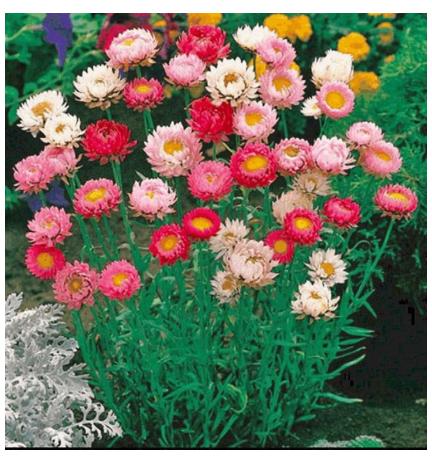
Plants across diverse climates and biomes access bedrock water routinely and not just during extreme drought conditions. On an annual basis in California, the volumes of bedrock water transpiration exceed the volumes of water stored

in human-made reservoirs, and woody vegetation that accesses bedrock water accounts for over 50% of the aboveground carbon stocks in the state.

Our findings indicate that plants commonly access rock moisture, as opposed to groundwater, from bedrock and that, like soil moisture, rock moisture is a critical component of terrestrial water and carbon cycling.

Collins, T.L., et al (2021) **Tracing the origins of hybrids through history:** monstrous cultivars and Napoléon Bonaparte's exiled paper daisies (Asteraceae; Gnaphalieae). BOTANICAL JOURNAL OF THE LINNEAN SOCIETY 197:doi.org/10.1093/botlinnean/boab020

Authors' abstract: Golden everlasting paper daisies (Xerochrysum, Gnaphalieae, Asteraceae) were some of the earliest Australian native plants to be cultivated in Europe. Reputedly a favourite of Napoléon Bonaparte and Empress Joséphine, X. bracteatum is thought to have been introduced to the island of St Helena in the South Atlantic during Napoléon's exile there.



Colourful cultivars were developed in the 1850s, and there is a widely held view that these were produced by crossing Xerochrysum with African or Asian Helichrysum spp. Recent molecular phylogenetic analyses and subtribal classification of Gnaphalieae cast doubt on this idea.

Using single-nucleotide polymorphism (SNP) data, we looked for evidence of gene flow between modern cultivars, naturalized paper daisies from St Helena and four Xerochrysum spp. recorded in Europe in the 1800s. There was strong support for gene flow between cultivars and X. macranthum.

Paper daisies from St Helena were genotypically congruent with X. bracteatum and showed no indications of ancestry from other species or from the cultivars, consistent with the continuous occurrence of naturalized paper daisies introduced by Joséphine and Napoléon.

We also present new evidence for the origin of colourful Xerochrysum cultivars and hybridization of congeners in Europe from Australian collections.

Selig, K.R., and M.T. Silcox (2021) The largest and earliest known sample of dental caries in an extinct mammal (Mammalia, Euarchonta, Microsyops latidens) and its ecological implications. SCIENTIFIC REPORTS 11:doi.org/10.1038/s41598-021-95330-x (available as a free pdf)

Authors' abstract: Dental cavities or caries is a common disease among modern humans, affecting almost every adult. Caries frequency has been used to study dietary change in humans over time, based on an inferred tie between the incidence of caries and a carbohydrate-rich diet. However, the disease is not unique to our species.

Among non-human primates, there is also variation in caries frequency associated with diet, suggesting that this metric may provide a mechanism for studying diet in broader contexts, and across geological time. To date, very few studies have examined caries among fossil mammals, and none have done so among Eocene mammals.

Here, we present our analysis of the largest sample to date of fossil caries in a single extinct mammal species, Microsyops latidens, a stem primate from the early Eocene, which is known from over a thousand specimens from the Southern Bighorn Basin of Wyoming (n = 1030).

Our results show that Microsyops latidens is characterized by a high prevalence of dental caries (7.48% of individuals), with notable variation through time, reaching 17.24% of individuals from a particular interval. This interval is also associated with a change in overall dental form, as quantified by dental topographic analysis, which measures functional aspects of the chewing surface of teeth.

These observations suggest that this species experienced a shift in their diet to include more fruit or other sugar rich-foods for a short period. Our analysis, therefore, suggests that the diet of M. latidens fluctuated over time, as well as providing a framework for assessing caries in other fossil taxa.

Diedrich, C.G. (2021) **Top predators at war: Ice Age lions versus competing spotted hyenas.** ACTA ZOOLOGICA 102:doi.org/10.1111/azo.12345

Author's abstract: In the fossil record, 3.097 studied bones including 40 skulls of grown-up individuals from 81 German, Czech, English, and Spanish extant spotted hyena Crocuta crocuta spelaea den sites led to distinguish two main types of pathologies.

Ageing pathologies in the form of arthritis are typical for elderly hyenas. Their strong tooth use or losses and canine damages due to intensive bone crushing made them finally defenceless.

Bite trauma on the sagittal crests of the crania is the secure proof for battles between top predators: lions and hyenas. A full crest healing resulted in a strong convex deformed skull shape.

Other complete upper/lower jaw bites made by lions are found at a hyena skeleton shoulder, in which scapulae are partly healed. This hyena died in its den cave finally; as such, it is known for another Ice Age spotted hyena that was found recently as a skeleton in a Spanish cave, but with a non-healed strong sagittal crest bite trauma.

The postcranial bite traumas in the Ice Age spotted hyenas are predominantly on the distal hind legs (tibia/fibula about 68% of all traumas). This correlates to African relatives because spotted hyenas attack enemies from behind.

Ceballos, F.C., et al (2021) **Human inbreeding has decreased in time through the Holocene**. CURRENT BIOLOGY 31:doi.org/10.1016/j.cub.2021.06.027 (available as a free pdf)

Authors' abstract: The history of human inbreeding is controversial. In particular, how the development of sedentary and/or agricultural societies may have influenced overall inbreeding levels, relative to those of hunter-gatherer communities, is unclear.

Here, we present an approach for reliable estimation of runs of homozygosity (ROHs) in genomes with R33 mean sequence coverage across >1 million SNPs and apply this to 411 ancient Eurasian genomes from the last 15,000 years. We show that the frequency of inbreeding, as measured by ROHs, has decreased over time.

The strongest effect is associated with the Neolithic transition, but the trend has since continued, indicating a population size effect on inbreeding prevalence. We further show that most inbreeding in our historical sample can be attributed to small population size instead of consanguinity.

Cases of high consanguinity were rare and only observed among members of farming societies in our sample. Despite the lack of evidence for common consanguinity in our ancient sample, consanguineous traditions are today prevalent in various modern-day Eurasian societies, suggesting that such practices may have become widespread within the last few millennia.

Groucutt, H.S., et al (2021) Multiple hominin dispersals into Southwest Asia over the past 400,000 years. NATURE 597:doi.org/10.1038/s41586-021-03863-y (available as a free pdf)

Authors' abstract: Pleistocene hominin dispersals out of, and back into, Africa necessarily involved traversing the diverse and often challenging environments of Southwest Asia.

Archaeological and palaeontological records from the Levantine woodland zone document major biological and cultural shifts, such as alternating occupations by Homo sapiens and Neanderthals.

However, Late Quaternary cultural, biological and environmental records from the vast arid zone that constitutes most of Southwest Asia remain scarce, limiting regional-scale insights into changes in hominin demography and behaviour.

Here we report a series of dated palaeolake sequences, associated with stone tool assemblages and vertebrate fossils, from the Khall Amayshan 4 and Jubbah basins in the Nefud Desert.

These findings, including the oldest dated hominin occupations in Arabia, reveal at least five hominin expansions into the Arabian interior, coinciding with brief 'green' windows of reduced aridity approximately 400, 300, 200, 130–75 and 55 thousand years ago.

Each occupation phase is characterized by a distinct form of material culture, indicating colonization by diverse hominin groups, and a lack of long-term Southwest Asian population continuity. Within a general pattern of African and Eurasian hominin groups being separated by Pleistocene Saharo-Arabian aridity, our findings reveal the tempo and character of climatically modulated windows for dispersal and admixture.

As the only land bridge between Africa and Eurasia, Southwest Asia occupies a unique position for understanding key stages of human evolution and the peopling of the planet.

Changing environmental and ecological conditions at the shifting interface between the Saharo-Arabian and Palaearctic biomes strongly influenced patterns of human demography through the isolation, diversification and subsequent mixing of populations.

A prominent example concerns the geographical context of Neanderthal-sapiens admixture. Although it has been suggested that this occurred in Southwest Asia owing to the ubiquity of Neanderthal ancestry in humans outside Africa, 'on-the-ground' evidence for admixture, or even spatial and temporal contemporaneity with H. sapiens, has remained elusive in the region.

One reason for this is the severely fragmented nature of Southwest Asian palaeontological, palaeoenvironmental and archaeological records. This has in turn limited our ability to overcome problematic generalizations regarding the palaeoanthropological record of Southwest Asia and address key questions

about the extent to which hominin occupations of the region were continuous, the role of hominin dispersals into and within the region, and how these dispersals and interactions between hominin populations related to changes in biogeography, environment and ecology.

Speirs: Humans evolved in eastern Africa and then dispersed into Europe and Asia. However, they did not just get up one day and start walking north or east.

There were multiple waves of colonizations. Some failed, and those humans were driven back into Africa or died out where they were. Eventually, of course, successive waves managed to persist and keep spreading into the other continents.

Taylor, S.R., et al (2021) **Dietary fructose improves intestinal cell survival** and nutrient absorption. NATURE 597:263-267

Authors' abstract: Fructose consumption is linked to the rising incidence of obesity and cancer, which are two of the leading causes of morbidity and mortality globally.

Dietary fructose metabolism begins at the epithelium of the small intestine, where fructose is transported by glucose transporter type 5 (GLUT5; encoded by SLC2A5) and phosphorylated by ketohexokinase to form fructose 1-phosphate, which accumulates to high levels in the cell.

Although this pathway has been implicated in obesity and tumour promotion, the exact mechanism that drives these pathologies in the intestine remains unclear. Here we show that dietary fructose improves the survival of intestinal cells and increases intestinal villus length in several mouse models.

The increase in villus length expands the surface area of the gut and increases nutrient absorption and adiposity in mice that are fed a high-fat diet. In hypoxic intestinal cells, fructose 1-phosphate inhibits the M2 isoform of pyruvate kinase to promote cell survival.

Genetic ablation of ketohexokinase or stimulation of pyruvate kinase prevents villus elongation and abolishes the nutrient absorption and tumour growth that are induced by feeding mice with high-fructose corn syrup.

The ability of fructose to promote cell survival through an allosteric metabolite thus provides additional insights into the excess adiposity generated by a Western diet, and a compelling explanation for the promotion of tumour growth by high-fructose corn syrup.

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 2021-09-13

OPUNTIA 507: We are still having a warm summer here, but the temperatures are starting to drop at night, and we have had a few evenings of thunderstorms, with the odd tornado reported in southern and central Ontario.

[So far a mild autumn in Calgary, with an occasional bout of rain showers but mainly shirtsleeve weather.]

Reading about the food- and fruit-oriented crime stories is just making me hungry again, especially the ice cream books. I like your terms Fletchering and Marpling.

[If the amateur sleuth lives in a coastal village, her snooping is Fletchering, after Jessica Fletcher of Cabot Cove, Maine. Otherwise she is a Miss Marple.]

My previous letter: Good to see people wearing masks voluntarily, but the Delta variant is still out there.

[Having had a Pfizer and a Moderna vaccination, and wearing a bandana indoors or on buses, I'm not worried about Delta. What we are seeing in Alberta is a fourth wave that is almost entirely among the unvaccinated. Natural selection in action.]

I think there should still be a mandate on wearing masks. It's not a curb on freedom, but protecting yourself and the people around you. The Ontario government did exactly as you predicted, and said they would go with public demand, and create the vaccination passports. Still, they probably won't be ready for another month or so.

[Alberta Premier Jason Kenney abandoned all pretense of leadership and left hospitals to fend for themselves. The Tories will therefore be ousted in the next provincial election. The Alberta Ministry of Health announced September 15 that they would finally offer a vaxport. Trudeau should have done it months ago.]

I had thought to check out When Words Collide, but sometimes, Zoom calls are tiresome, especially when someone takes over the whole discussion. I doubt I will ever get to it, but if there is any programming for book editors, copy editors and proofreaders, perhaps I could join in virtually.

[You're not obligated to stay in a Zoom meeting. If it becomes tiresome, just click out or go get something from the refrigerator.]

OPUNTIA 508: Special curbside services will probably be continued long after the pandemic is done. Another level of service will change business, and reduce the demand on brick and mortar stores just a little. Might increase, business, too.

[Cowtown fast food outlets are automating customer service, mostly with smartphone apps. Whenever I go into McDonald's or A&W, there is a steady stream of Skip The Dishes or Door Dash couriers.]

In Toronto, the city is now looking at the pandemic-based dining areas on the sidewalk to make them permanent, if the nearby restaurant(s) want them.

[Exactly what is happening in Calgary. City Council decided that patio culture is here to stay. The adjacent curb lanes are then closed for pedestrians, which helps to force more people out of their cars because they know they'll never find a parking spot.]

I must go to Fanac.org more often. So much to see there, and perhaps get a look at so many hallowed fanzines you can't get copies of any more.

[I highly recommend the site for its free pdfs of zines from the 1930s to date, plus video and audio files.]

Yes, the current government has driven debt through the roof, but if the CERB, CRB, etc. programmes hadn't been created, how many people would have been out on the street because work was stopped, but bills, like rent, still had to be paid? Those programmes certainly got us through the pandemic, and good for us they were available. Of course, the resulting debt must be paid, but the pandemic made it all special circumstances.

[Agreed, but it still sticks in my craw about all the CERB cheaters, rent deferrers, and the failure of the Trudeau government to deal with them. The CRA is checking income tax returns and clawing back money, but even with computers many miscreants are escaping.]

I am getting this done today because tomorrow is training for the election. Yvonne and I will be deputy returning officers in two polls at our nearby library branch, and we will be spending September 20 there, looking after our small part of the election in Etobicoke Centre. Thanks for these issues, and I will look for more.

[For my non-Canadian readers, Canada had a federal election on September 20. Before Justin Trudeau called the election, the Liberals had a weak minority government propped up by the New Democratic Party (socialist). The Tories got a greater percentage of the vote in the last election but because the Liberals carried metro Toronto, the Conservatives were thirty seats behind the Liberals.]

[Unfortunately the election decided nothing. 170 seats are needed for majority.

	Before	<u>After</u>
Liberal	155	156
Conservative	119	121
NDP	24	28
Green	2	2
Bloc Québecois	32	30
Independent	5	0

Meet the new boss, same as the old boss.]