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THE CALGARY MILITARY MUSEUMS: PART 4. ROYAL CANADIAN NAVY

photos by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIAs #415, 416, and 425.]

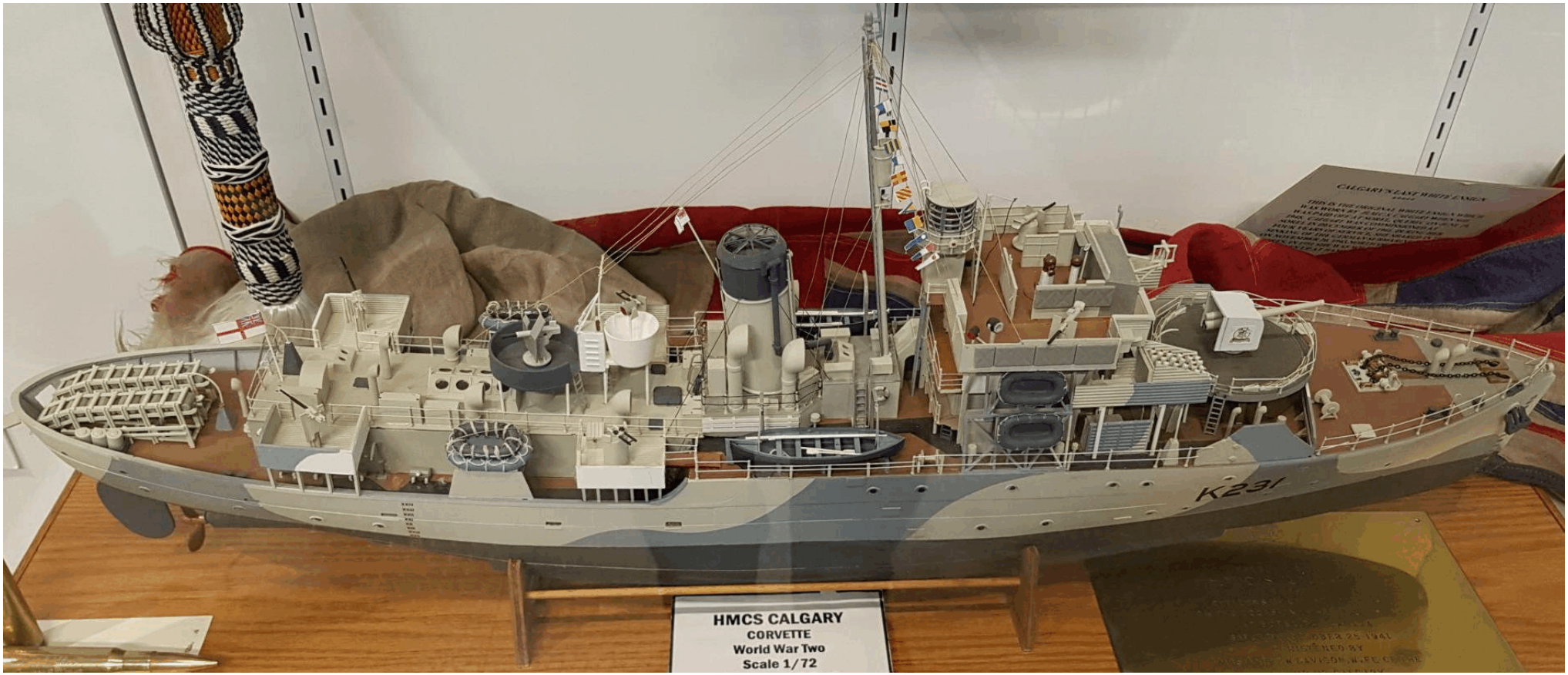
Continuing with the tour of the CMM, we now come to the naval museum. It is hampered by the fact that Calgary is 700 km from the nearest ocean and the Bow River is not navigable, so there can't be any old warships tied up at a dock as a floating museum. The CMM has to satisfy itself with bits and pieces of ships, and lots of models.

The RCN always said the best sailors were flatlanders. Farm boys had no preconceptions about sailing and could be trained from scratch about the best way to run a warship, as opposed to fishermen's sons, who had to unlearn what their fathers had taught them on their trawlers.

Calgary has a naval base called HMCS Tecumseh, what is referred to as a stone frigate, where new recruits and militia receive basic training before moving out to the coast. Stone frigates are common across the interior of Canada.

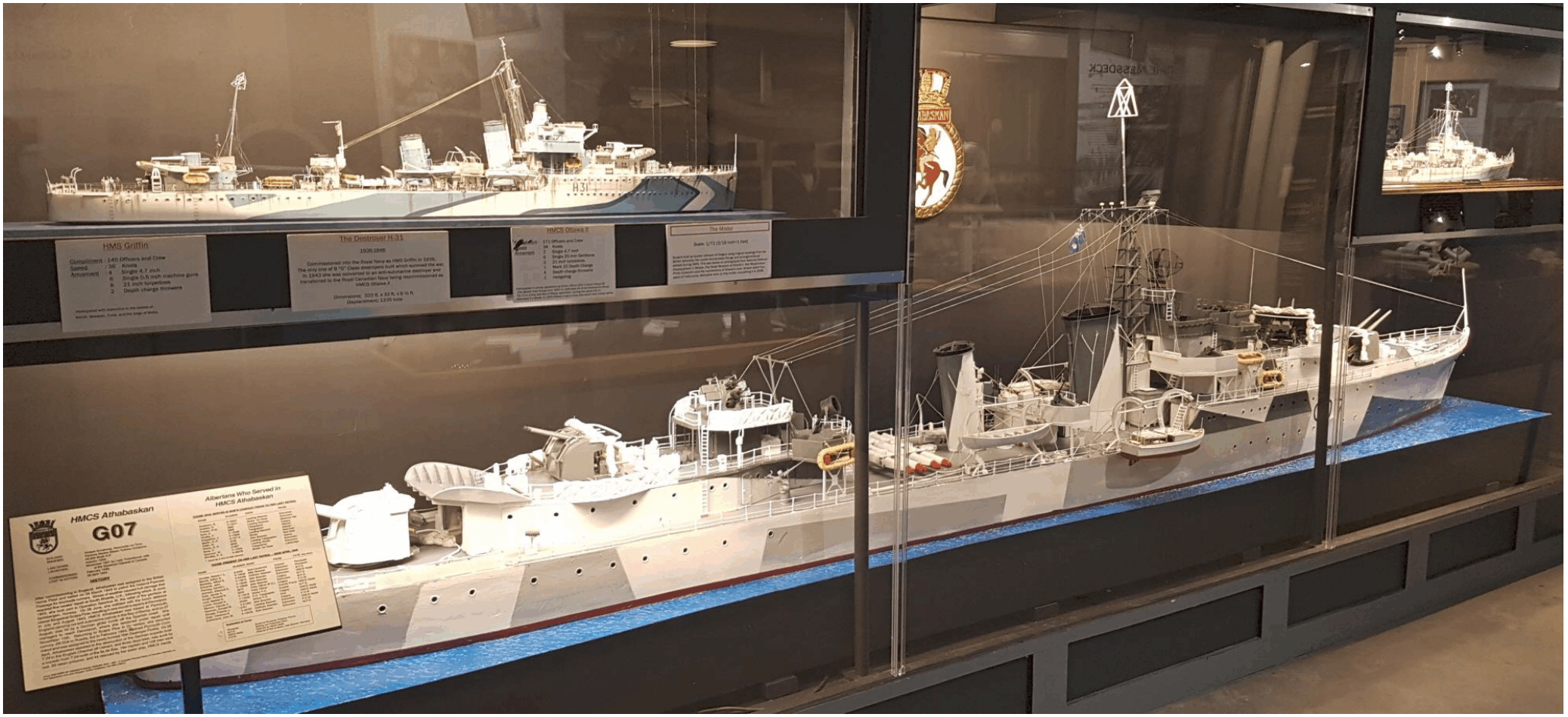
The city also has a close relationship with HMCS Calgary, a real frigate on duty in the Pacific Ocean, and the only navy unit which wears cowboy hats as part of their dress uniform. The crew march in the Calgary Stampede parade every year and are always well received.

The cover shows the current HMCS Calgary, the second ship of that name. Below is the first HMCS Calgary, a corvette that served on North Atlantic convoy duty during World War Two.



The museum has dozens of large models of RCN ships, some of which are very impressive in their size and detail. In the display case shown below, the bottom ship is HMCS Athabaskan, which I measured as four paces long. There were three ships of this name. The model shows the second one, a destroyer commissioned in 1943 but torpedoed in the English Channel on April 29, 1944.

At right is a smaller model of HMCS Swift Current leaving the dock. It was a WW2 minesweeper that served in the North Atlantic convoys. After the war, it was laid up until sold to the Turkish Navy, who eventually scrapped it in 1971.



Canada's last aircraft carrier was HMCS Bonaventure, decommissioned in 1971.
The naval museum floor has several aircraft that flew from its deck.

When a ship is decommissioned, its guns are commonly adapted for army use. Many thus survived to eventually be saved for museums.

At right: Gun crews wore protection against both the flashes and the cold North Atlantic weather. This is a Bofors gun, later used by the army into the 1990s.

Top left: A life-size diorama of life on board a typical RCN ship. Note the hammocks above the mess room table. Crews bunked wherever they could find a space.

Below left: WRCNS did their part on shore.

Below right: Every sailor's nightmare.

At right: Why is an Enigma machine on display? Because the ability to decode German transmissions saved thousands of lives on the North Atlantic convoys, where the RCN had a major responsibility. The British succeeded in capturing some machines and were able to decode German military messages.

Below: Hammerhead drone speedboat, first deployed by the RCN in 2008 for both training and offensive purposes. It can be operated in swarms of up to 40 boats.

TRANSIT FANNING IN CALGARY: PART 24

by Dale Speirs

[Parts 1 to 23 appeared in OPUNTIAs #256, 258, 260, 264, 269, 275, 283, 298, 302, 327, 333, 341, 348, 357, 359, 365, 369, 371, 392, 394, 396, 407, and 412.]

Fiction.

THE FIFTH HORSEMAN was a 1946 radio mini-series about atomic warfare. (This and hundreds of other old-time radio shows are available as free mp3s at www.otrrlibrary.org) The atomic bombs were still very fresh on everyone's minds. Over the next few years, the Soviets would consolidate their grip on eastern Europe. Written and produced by Arnold Marquis, the episodes progress from the USA's tense relationship with Nation X to full-scale atomic warfare to the aftermath.

The episode "Dawn" is set entirely on a subway train running underneath a river in New York City. The characters are introduced: a pompous Senator (why is he riding a train instead of a limousine?), a businessman calculating out loud the profit on his next deal, a married woman flirting with an acquaintance, and a scientist who lectures the other passengers as if they were in his classroom.

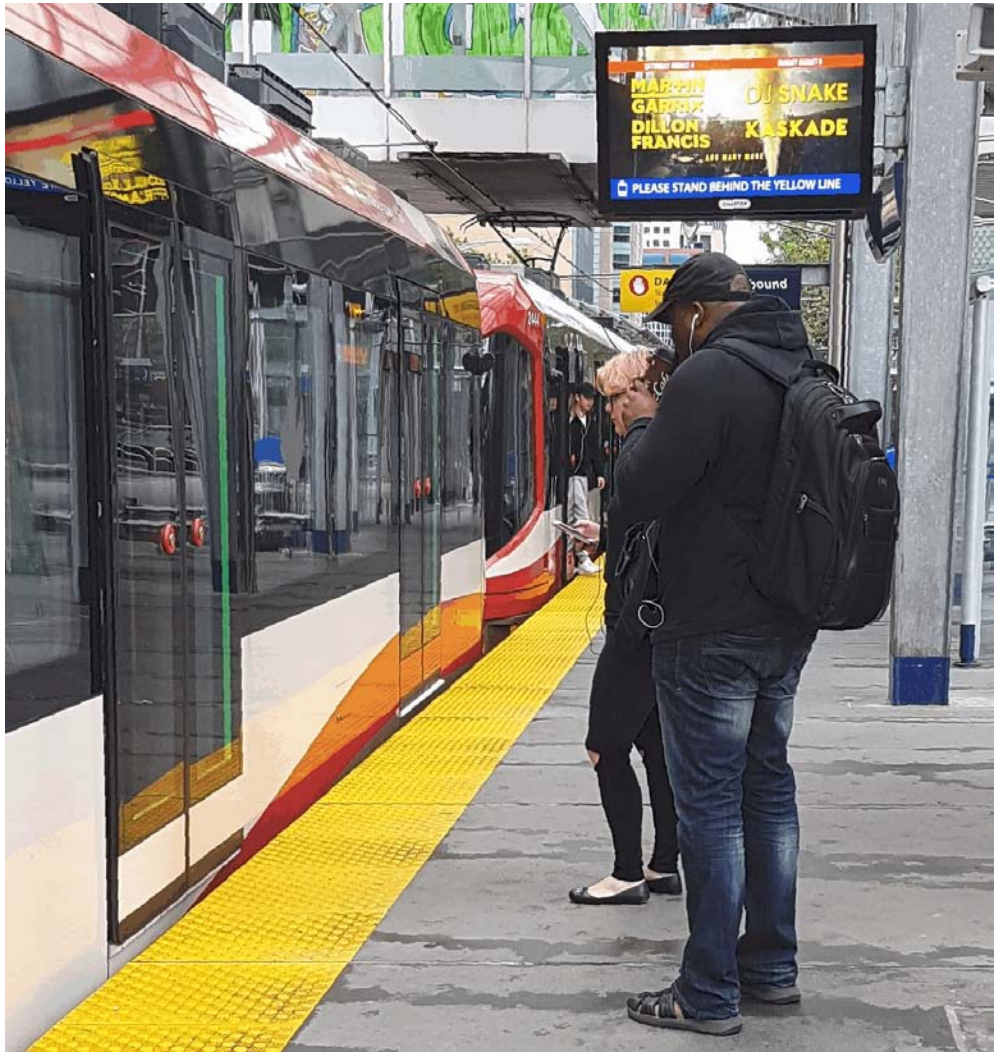
Halfway across, the power goes out and the train stops. The motorman goes hiking down the line to find the problem, leaving the passengers to bicker among themselves. They begin talking about atomic war. The scientist says the only hope is to abandon the cities, which the others dispute.

The hours go by without the motorman returning. The passengers are uncertain what happened. The tunnel may have caved in. Perhaps there was a nuclear strike just as they went under the river, in which case they are safer there from the radiation than anyone else. Maybe the outside world isn't there anymore, and all that is left are the subway passengers.

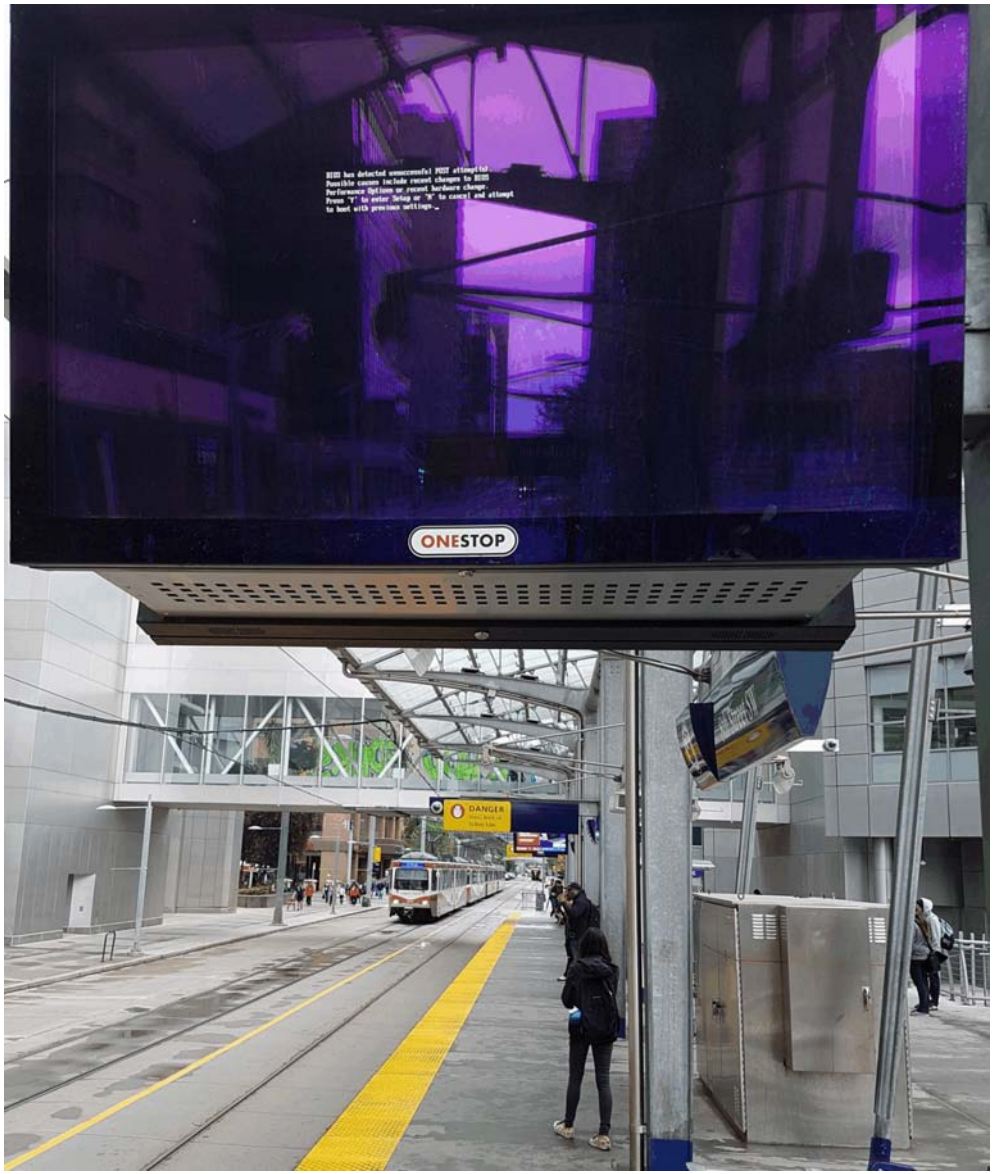
After seven hours, the emergency batteries start to fade. They wonder if they should sit there in the dark for help that may never come, or go stumbling down the tunnel in pitch blackness. Just as they reach the breaking point, the power comes back on, the motorman returns, and the train rumbles on. Back to the real world, where the trains run on time and no one has to worry about atomic warfare.

Calgary Non-Fiction.

The LRT stations have electronic screens used to flash out-of-date information about the system, although their main purpose seems to be selling advertisements. Hint to Calgary Transit: You need more than one person looking after these screens, and all shifts should be covered.



Just before Stampede this year, I spotted this malfunctioning sign. It stayed like that for several days but fortunately was fixed before the Stampede began.



Many trains are covered with all-over ads. The Calgary Zoo is hosting the pandas this year.

The downtown platforms on 7 Avenue South are lit at night with strip LEDs that constantly cycle through various colours.

I had a business errand in the Sunalta district of central Calgary, about a kilometre southwest of the downtown core. The Sunalta station is quite impressive, standing four stories above the valley floor. The view at right is looking west.

At left: The interior of the station.

I was waiting for a different bus in front of the downtown Bay store when I saw this. The dog was paralyzed in its hind legs, so the owner made this cart for it. Dogs are permitted on buses but a fare must be paid for them.

Other than occasional guide dogs, I rarely see them on the buses.

All Calgary buses have fold-out ramps, normally used by wheelchair riders.

MATTHEW 24:6: PART 5
by Dale Speirs

[Parts 1to 4 appeared in OPUNTIAs #389, 391, 392, and 412.]

Ley Lines.

STONEHENGE APOCALYPSE is a 2010 movie, written by Paul Ziller and Brad Abraham, with 1990s SFX that ties together conspiracy theory, ley lines, and a touch of Glastonbury mysticism. The opening set up a radio talk show host named Jacob Glaser who specialized in conspiracy theory and aliens. (A tip of the hat to George Noory. Google his name if you don't know who he is.)

Also in the setup was an archaeological dig specified by subtitles to be 10,000 feet below Waterside, in the state of Maine. That converts to about 3 km below the surface. For comparison, the ten deepest mines in the world (eight in South Africa, two in Canada; I looked it up in Wikipedia) range from 2.5 to 4 km deep.

So the movie was depicting one heck of an archaeological dig, a world record setter in its own right. The deep gold mines are cooled down to only Death Valley temperatures by massive air-conditioning systems. The Maine dig was unreinforced tunnels with no sign of ducts or pipes, yet everyone walked around in street clothing as fresh as a daisy.

It got better. They were digging into an Egyptian tomb. Intact, created 5,000 years ago, deep under Maine. Even the Mormons wouldn't buy that. It became moot when the archaeologists triggered massive electrical discharges that dashed across the Atlantic Ocean via ley lines and sparked Stonehenge into action.

We thought Stonehenge was an astronomical observatory but instead it was revealed to be an alien terraforming machine. It was apparently used to create life on Earth four gigayears ago, then shut down and had been in standby mode ever since. If it started up again, it would reset Earth back to default conditions and start life over again from thermophilic bacteria. The obvious fallacy is that four billion years is a long time for a machine to sit in standby mode. Nor was the landscape that old. England has been submerged and re-exposed many times. I don't know the geology of the bedrock, but I'll bet the rocks below the plain aren't four gigayears old.

The monoliths began moving around the altar stone in a circle, giving off tremendous lightning storms and vapourizing a group of tourists. The British government cordoned off Stonehenge with squaddies and brought in scientists. They analyzed radio waves reflecting around inside the circle between the monoliths. There was a pattern, a sequence that was counting down. The head scientist said it was a decaying sequence. The C.O. of the soldiers replied: *In my world, if something is counting down, it usually ends with a boom.*

Digression: The scientists used computer keyboards that clickety-clacked like manual typewriters. Everywhere else in the world we have silent keyboards, but in Hollywood all computer keyboards are noisier than a freight train crossing a switching point. Additionally, Stonehenge was counting down on the 24-hour clock. Every ten hours it released more electricity and triggered action elsewhere in the world. Why was it using human time instead of its own system?

Meanwhile, out along the ley lines around the world, things were happening. Mexican pyramids erupted in flames, and a supervolcano in Java took out Indonesia. Glaser showed up at Stonehenge with a wild and crazy plan that involved using the Antikythera mechanism as a key to shut down the terraforming machine. (See OPUNTIA #291 for an explanation of the Antikythera mechanism.) He was competing with the Maine archaeologists, who had their own plans as they were religious fanatics who wanted to trigger the End Times, when only they, the Chosen Ones, would be saved.

The alien machine ground on. The Egyptian pyramids collapsed in upon themselves and became a supervolcano. The eruptions were gasoline explosion SFX which even in the 1990s were passe, much less 2010, although the satellite views were better done.

Glaser and his sidekick headed back to Waterside, Maine, to retrieve the Antikythera mechanism from the fanatics who stole it out of a museum. The Chosen Few activated an end-times power source with it. A pyramid rose in the middle of a cow pasture from 10,000 feet below, pristine and ready to go.

Stonehenge began sucking up all the planet's electromagnetic energy. Glaser, having retrieved the Antikythera mechanism, rushed across the Atlantic Ocean to Stonehenge. Despite gunfire from British fanatics and other assorted alarums, he managed to use the Antikythera mechanism to disable Stonehenge with 11 seconds to spare.

I couldn't follow why the mechanism turned on devices elsewhere in the world but if used on Stonehenge it would turn it off. Nonetheless, Stonehenge reverted to a clutter of monoliths.

Cue the sunny skies. Not just figuratively. Seconds after Glaser succeeded, the clouds immediately parted and the Sun shone gaily on Stonehenge. The triumphal music swelled up and the orchestra worked itself into a frenzy. All ended well, except for the millions who died when pyramids around the world suddenly converted into supervolcanos.

The Ice Came By.

10,000 DAYS is a 2014 disaster movie written and directed by Eric Small. It is about the aftermath of a comet strike on Earth 27 years prior. A new ice age was triggered, supposedly because Earth was knocked out of its orbit. This is the usual bad pseudoscience of Hollywood, since any comet big enough to do that would have obliterated the planet.

The movie concerned two surviving families, the Becks and the Farnwells, competing tribes of savages who lived in the frozen wastes of the Colorado Rockies. One family found the frozen remains of Air Force One, which must have been going to or coming from NORAD headquarters.

The pacing of this movie was tedious. Conversations were used to move the plot in lieu of action or SFX. I'm not sure what happened during the movie, as much of the time I ran it at 2X speed, and often up to 8X speed. Endless conversations. The emoting of the actors would have been better had they been briefer. Too many scenes were stretched beyond endurance.

I had no idea which family was the Becks and who were the Farnwells. One family had a greenhouse and several aquariums filled with tropical fish. The choreography of fight scenes was so bad that they were sped up and slowed down with flash freeze frames interposed to make them look better, but the ineptitude was not disguised.

In B-movies such as these, the bad acting and worse scripts can be forgiven if they at least have some interesting SFX, even if rendered in 8-bit CGI. Not so here unfortunately, as the SFX are limited to crumbling glaciers and mattes of buildings atop ice-covered mountains. A movie to avoid. I have it on the bargain bin DVD pack "4-Film Disaster" (2018) from Echo Bridge.

Trashing Cities.

THE DOOM OF LONDON (1903) is a collection of six stories by Fred M. White depicting the English capital under siege by natural events. It is available as a free download in a variety of formats from www.gutenberg.org

The first story is "The Four White Days", about an Arctic blizzard settling down onto London. In Canada and northern USA, blizzards are not considered as disasters, since people are actually safer if they stay at home rather than try to evacuate. Out here, the only people who die are those on the road. There are inconveniences, mainly traffic jams and occasional power outages, but without mass destruction like floods, hurricanes, or earthquakes.

In London circa 1903 when this story was written, it was a different matter. No snow clearing equipment meant the streets were blocked, and stores could not restock from the warehouses. The river froze over, so the warehouses could not resupply from across the ocean, since Britain is not self-sufficient in food. Unlike Canada where water lines and sewers are a minimum of two metres deep, the London lines were shallow and quickly froze.

Commodity dealers began scalping coal supplies, so an M.P. organized the working class to raid the warehouses and get coal for the working classes. Fires broke out, big ones in hotels, and burned out of control with no water for the firefighters. The best they could do was shovel snow onto the flames. Finally the weather turned and warmed up. The bad news was what was coming up next.

"The Four Days' Night" was positively prescient, written fifty years before the Great Smog of 1952 killed 4,000 Londoners overnight and another 10,000 over the next few weeks. The 1952 disaster was caused by Londoners burning high-sulphur coal in their fireplaces and industrial boilers. A heavy fog settled over the city and was held in place by a temperature inversion sitting over the valley.

The story began with Martin Hackness, a meteorologist, looking at the instrument readings and realizing a great fog was inbound for the Thames valley and London. Not so bad as such, but as the fog slides over the city, a huge fire breaks out in a petroleum storage depot. The firefighters can only let it burn because pouring water on an oil fire makes it worse.

The author got quite a few details most accurately. The black smog meant that a hansom cab driver couldn't see his horse. Traffic was at a standstill, and pedestrians couldn't find their way. The smog penetrated inside buildings. Theatres cancelled their performances because the audience couldn't see the stage, something that actually happened in the 1952 disaster.

Hackness had a plan, at first ignored by authorities, but as the days passed they came around and agreed to it. He took an airship up and dropped high-explosive charges primed for air bursts. The explosions tore holes in the smog, and enough explosions finally cleared the air.

"The Dust Of Death" hammered London with the plague, a new and virulent form of diphtheria. It spread through the city quickly enough. Citizens panicked and ran for the clean air of the country, thereby taking the disease across the nation.

The problem was lack of sanitation. Medical doctors don't like to admit it, but sanitary engineers have saved more lives than they have. The plague began in a new suburb built on top of sewage landfill dumped on swamps. Sooner or later, someone would dig up contaminated soil, and did.

The answer was to discharge electricity into the soil. A realistic touch is the city council kicking about costs, but in the face of the disease they had no choice but to comply.

"A Bubble Burst" is about a panic in London's financial district. It was set in 1906, three years into the future, and was based on speculators faking news about South African gold mines. Another good call, because there was a real financial panic in 1907, triggered by speculators manipulating Montana mining stocks.

The London stock brokers provoked a drop in mine share prices with their fake news. The idea was that they would buy shares at bottom prices. When the fake news was discovered, the shares would go back up, for a nice profit. What the speculators hadn't realized was that there were a lot of small fry in the market as well who were ruined by the drop.

Their margin loans were called in, they couldn't pay, and when enough people can't pay, the banks began to topple, for they exist only on depositor's money. (Canada hasn't had a bank run since 1928, so we don't know what it's like, but

the Panic of 2008 taught the Americans in a hurry.) The bank runs spread across Britain, and mobs surrounded the London banks and brokerages demanding their money back.

Just as emails can be traced back to their originators if the authorities decide it is worth the trouble, so it was that the speculators were caught by the telegraph office for sending fake news, just as they were about to enjoy the cash from their plan. The real news got through, and that broke the panic. Those who sold out lost big time.

(The Panic of 2008 bottomed out in March 2009, which was also when the majority of retail investors sold out and crystallized their losses. Those who held on have since doubled or tripled their money. That is why common people never get ahead; they haven't the guts.)

"The Invisible Force" was about a disaster deep in the underground train system. Not the trains themselves, but all the utility lines that ran in the tubes. A break had occurred. Some rusted rebar, some rotted concrete, a chunk fell onto a power line and simultaneously broke open a gas main.

The initial explosion propagated up and down the streets of London, tearing open utility lines in a chain reaction. The gas explosions lifted up the streets and buildings like an earthquake, while the torn power lines beside them electrocuted pedestrians.

The power stations had to be shut down, and the gas mains choked off. Then endless digging through the rubble to make safe, nevermind rebuild. Gloves and rubber-soled boots were worth their weight in gold.

"The River Of Death" is another plague story, this time bubonic. It was set during a hot summer when drought and water demand had reduced the Thames to a muddy creek. A plague ship foundered on the shore, and the surviving sailors fled, spreading the disease as they went.

Water treatment was primitive at best. All the towns and villages upstream of London used the Thames as a sewer dump, ensuring massive quantities of bacteria made their way down to the city. Filtration was minimal, and many who could not afford water rates hauled their own water by the bucket from the river.

The newspapers did their part by sensationalizing the story and starting a panic. The public fought and scrabbled for clean water from wells. Agitators stirred up the mobs and incited riots. Looters searched for fresh fruits and alcoholic beverages to assuage their thirsts.

Finally a man-of-the-hour medical scientist came forth with a method of fast and cheap water sterilization. We take such things for granted today, but remember this story was written in 1903.

This collection of stories reads well. It is astonishing, or perhaps not on further thought, how easily any of those 115-year-old stories could happen again today, in any large city. Sometimes they still do.

Blizzards are an inconvenience to those of us in cold climates, but many cities in climatic transition zones are unprepared if Arctic weather should shift south for a couple of weeks. Smogs still exist but efforts are being made to reduce them. Plagues are a different matter. With airplane travel, they can spread around the world faster than medics can track them. Financial panics are not history; we lived through one a decade ago that nearly collapsed the world's economy. (See OPUNTIA #70.1E for an explanation of the Panic of 2008.)

THE BLACK HOLE is a 2005 end-of-the-world movie, available on the DVD 4-pack "Sci-Fi Collector's Set". The screenplay was by David Goodwin, from a story by Boaz Davidson and Ken Badish. It should not be confused with an earlier movie of the same title from the Disney studio, which was about a spaceship orbiting a black hole.

The premise of the movie was based on a real-world controversy at the time about whether or not the Large Hadron Collider at CERN might inadvertently create a black hole that could destroy Earth. A panel of distinguished nuclear physicists was convened and came to the conclusion that such a thing was impossible. (See https://press.cern/backgrounders/safety-lhc) Distinguished scientists have been wrong before, and the movie starts from there.

The Midwest Quantum Research Laboratory in Saint Louis, Missouri, started up an experiment. Seconds later, there was a loud bang. We all know what it means when a piece of equipment does that, so the physicists sent a repair crew down into the tunnels to identify and fix the problem. They found what appeared to be a black hole a couple of metres in diameter.

An electrical monster, bipedal in shape, steps out of the black hole, and the first two casualties are ticked off.

3.5 hours later, an Army convoy showed up to quarantine the laboratory. Impressive how fast they could get a unit going, given that most sudden peacetime emergency response teams require two or three days to organize. One wonders also about posse comitatus. Be that as it may, the C.O. was a reasonable guy, and the military personnel were not made out to be the bad guys as such movies often do.

Some of the usual subplots were mixed in. The man-of-the-hour physicist had just gone through a nasty divorce, and did not have his full attention on the crisis. His family behaved like idiots and got themselves into trouble because they wouldn't listen to reason.

The black hole slowly expanded, causing frequent small earthquakes around the city. The scientists determined that the black hole was actually an interdimensional rift, out of which the electrical monster came. It began traveling on power transmission lines, creating havoc for the good citizens of Saint Louis. The SFX of the energy being were well done.

As the creature followed the power lines through the city, scientists and television station helicopters pursued it. Homeowners rushed out of their houses to watch it. This was just before the era of selfies and smartphone cameras, and we can guess what people would do today. When the monster arrived at an electrical substation and gorged itself on electricity, the black hole began growing rapidly. There was a bit of handwaving about superposition and quantum entanglement to explain why it was enlarging.

The black hole expanded and swallowed the campus, then began chewing on the city. A nice touch was the use of stock shots of building implosions, modified by SFX, to show the gravitational pull of the maelstrom. An evacuation order was given to the populace, followed quickly by massive gridlock on the freeways. The vortex of the black hole expanded and sucked in the Gateway Arch, then set about draining the river dry. What really got the citizenry upset though, was the loss of their sports stadium.

The scientists and the Army tried to trap the creature inside a Faraday cage jury-rigged from a metal freight container. It was smart enough to recognize the trap and evaded it. Plan B was a seat-of-the-pants plan thrown together even more hastily but succeeded in getting the creature back into the black hole. As soon as that happened, the CGI boys got in one last play with electrical sparking effects and then the black hole shrunk and winked out of existence.

Saint Louis was left with considerably more beachfront property than it had before the contretemps started, since the crater excavated by the black hole remained. And so to the end credits. The premise and execution of the movie are reasonably well done. Watchable.

SEATTLE SUPERSTORM (2011) was written by David Ray and Jeff Renfroe, and filmed in Vancouver, British Columbia. Since that city doesn't have a Space Needle, only a few establishing shots were filmed in Seattle. The movie is available on the bargain bin DVD pack "4-Film Disaster" (2018) from Echo Bridge.

The basic soap opera of this movie was the impending marriage of NASA scientist Tom Reynolds and USN Lt Cmdr Emma Peterson. Their teenaged children from previous marriages didn't get along. That strife might wreck the engagement of their parents. This was all filler in between the SFX and action sequences, and can be safely fast-forwarded to the interesting bits.

The movie began with an unidentified bolide shot down by the US Navy over the North Pacific Ocean. Two pieces hit Seattle and from there the story developed. One piece splashed into the harbour, and the other punched into a public market building. The bolide at the bottom of the water generated a narrow column of heat and black smoke that kept rising. As the column rose into high altitude, it generated rotating storms, tornados, lightning storms, and heavy rain. Lots of extras died the hard way.

The big SFX was the Space Needle being hit by a tornado and toppling into the streets. I'm glad I live several kilometres from the Calgary Tower. Strangely, the massive lightning storms and tornados didn't seem to damage the skyscrapers. The establishing shots of the Seattle skyline didn't change, other than the Space Needle. Presumably the SFX budget couldn't cover the cost of trashing the rest of Seattle.

As per standard practice in disaster movies, the leading scientist abandoned her post in the command centre in the middle of the crisis and rushed off to find the kids. This allowed for a saga of travel across a ruined city and more SFX. Since she was a military officer, she should have been court-martialed.

The meteorites were discovered to have tremendous catalytic reactivity, splitting all molecules they touched into component atoms. Meanwhile, there was a nutty old man wandering about, getting into high-security areas. After his arrest, he told his story. He was a Russian scientist who defected decades ago. During the Soviet era, he had worked on a team that created a super-oxidant as a mass-destruction weapon.

It was found to be too dangerous to handle, and too dangerous to dispose of on Earth. It was loaded into a spacecraft and lofted into orbit. After the fall of the USSR, no one was left to monitor the spaceship, whose orbit eventually decayed and it fell to Earth. The meteorites were the large chunks of super-oxidant.

A plan was developed to stop the catalysts by dumping heavy water on them. Much babbling of pseudoscientific gibberish ensued, including the surprising fact that ordinary water has a circadian rhythm while heavy water does not. There just happened to be a bottle of heavy water on hand in the field laboratory to test a small sample. Really? At about $700 per litre? Well, it was a government laboratory where the taxpayers were good for the money, and a pail of heavy water would be charged off as petty cash. But this was a jury-rig emergency laboratory, hastily set up in a warehouse to handle the crisis.

Another SFX showed the Seattle harbour gone dry, the lump of catalyst having converted all the water to hydrogen and oxygen gas. One wonders why there wasn't a stream of water flowing in from the Pacific Ocean, since the harbour is an inlet.

Off the scientists went to get the heavy water in bulk quantity to flood the two chunks of super-oxidant and extinguish them. Because they were working in a military command post, they should have sent a squad to get the stuff. That would have ruined the idiot subplot, the one where they went out in the storm, dodged tornados, and got trapped in rubble. A military helicopter arrived to pick up a load of heavy water in a sling tank. It was immediately sucked into a tornado. "*We need a Plan B. Got any ideas?*" said Reynolds. That was one way to depress the others.

Eventually they devised a backup plan with tanker trucks for the heavy water. There followed many down-to-the-last-second excursions, but the catalysts are finally overcome. The clouds vanish in seconds. As one character remarked: "*Imagine that, a sunny day in Seattle.*" That was the real science fiction.

ACTION ADVENTURE ON THE AIR
by Dale Speirs

Carlton E. Morse is forgotten today except by old-time radio enthusiasts, but in his day, he was famous for his fast-paced radio series. I LOVE A MYSTERY typically had 3-part or 10-part episodes between 1939 and 1952. There was an interlude in 1948 when it changed networks and became I LOVE ADVENTURE. Between them, the shows appeared on four different major networks and under several different names. (This and hundreds of other OTR shows are available as free mp3s at www.otrrlibrary.org)

The characters varied a bit but included Capt. Jack Packard, owner of the A-1 Detective Agency, his sidekick Doc Long who had a Texas drawl, and Reggie Yorke, an Englishman, plus at least one female assistant. Morse didn't like the habit of many shows where characters were constantly identified by name in every sentence of dialogue, so he used people with distinctive accents or voices. The audience could then know without stage directions who was speaking.

Each episode, whether a single or multi-part, took the gang to some exotic part of the world to fight evil and rescue someone or something. The jungles of the Amazon or French Indochina, the Nevada desert, tropical islands, or remote mountains provided the setting. There were priests of some ancient religion centred in a pyramid, Aztec vampires, Cambodian werewolves, and other supernatural skullduggery. The episodes were sometimes so bloodthirsty as to draw official protest.

I LOVE ADVENTURE was a series where the men were working for a somewhat secret organization in London, England, called the 21 Old Men of #10 Gramercy Park. A rather strange title for a spy organization. It was surprising they didn't include their telephone number. Packard and the boys were briefed in a room with a wall-sized one-way mirror behind which sat the old men to hide their identity.

"The Great Airmail Robbery" was a 1948 episode of I LOVE ADVENTURE. It began after the Bombay-London flights were repeatedly hijacked in midair. The pirates flew over the giant passenger plane (30 1st-class passengers, 70 in economy, specifically stated as such). They paced it from above and behind, so the pilots couldn't see it. They then lowered two bandits on a rope ladder, busted in through the fuselage, and robbed the passengers and registered mails.

Packard and his men went along as passengers. Their instructions from the 21 Old Men were to take out the two bandits, put on their clothing, and then climb up into pirate aircraft and take it over. Much excitement in trying to get up the rope ladder as it fluttered in the slipstream. It is amazing they made it. I've had to climb a rope ladder a couple of times while it was dangling calmly in midair and that was difficult enough. The rest of the episode was an anticlimax.

Another 1948 episode was "The Pearl Of Great Price". The adventurers were once again summoned to Gramercy Park. Before the briefing began, one of the old men querulously complained that one of the boys had been overheard referring to them as greybeards. He wanted to make it clear that almost all of the old men were clean shaven.

On that petulant note, the adventurers were advised they would be sent to French Indochina, then head up river into the deepest jungles of the northwestern part of the country. They were warned that the Sikhs and Hindus were restless. This was odd because that area was present-day Laos, nowhere near their homelands.

Despite the confused geography, the adventurers are sent off in search of The Pearl of Great Price, which they naturally assume is a jewel. They were to go to the lost city of Sheba to find it. No, not the one in Ethiopia, but a hitherto unknown duplicate in the Laotian jungles. On arrival at a remote landing strip, they were met by an Englishwoman who was accompanied by Tibetan bearers to carry the baggage. Morse was obviously weak on geography.

The High Priest who ruled Sheba was sheltering the gang of bandits who raided across the border into Burma and had stolen the Pearl. The adventurers were captured and taken by elephants to the city. They escaped and headed into the temple, where they encountered another group of lost Tibetans.

After sorting out various misunderstandings, they learned that the Pearl of Great Price was actually a Burmese princess who was kidnapped by the gang. Her rescue was relatively straightforward. The men hardly have time to congratulate each other before the Old Men assign them to next week's task.

"The Man With The Third Green Eye" (1948) involved only Capt. Jack Packard and Reggie Yorke. They were hired to find a stolen 4-cent stamp, used to mail a letter from the Philippines to an American government agency. On the back of the stamp was a map showing some newly discovered deposits of uranium ore. The man who drew the map had been murdered. Their job: find the stamp. The only clue was that the agent who had the stamp was in San Francisco and was known as The Man With The Third Green Eye. Off they went by train to the city. In their private compartment they found a jolly fat man, blatantly imitating Sydney Greenstreet, who said he was a philatelist who would meet them again in San Francisco.

He then excused himself and departed. A moment after he left, the men noticed blood stains on the floor. Under the seat was the body of a man who had a tattoo of a postage stamp on his forearm. No sooner had they found the body than the state police burst in and tried to arrest them for murder. Obviously Packard and Yorke were set up to take the rap for the murder and prevent them from finding the stamp.

They escaped and made their way to the fat man's house in San Francisco. He wasn't at home, so they let themselves in through a window and began searching the house. On a desk in the library was a stamp album. There is no better place to hide a stamp than amidst hundreds of others. While they searched, they were gassed unconscious.

They regained consciousness on board a ship in San Francisco harbour. The estranged wife of the fat man told them they could find both the stamp and The Man With The Third Green Eye in a waterfront tavern called the Rusty Sword. She wanted them to retrieve the stamp and bring it back to her ship, otherwise she would inform state police of their whereabouts.

In the tavern, they met the fat man again. The Man With The Third Green Eye turned out to be an Arab who wore a turban with a large green emerald set in it. He was about to auction the stamp in a back room filled with international spies. Packard and Yorke got into a scuffle with the fat man and killed him with his own gun. They then grabbed the stamp off the auctioneer's podium and made a run for it. The widow didn't mourn the death of her husband. She told them to take the stamp to the 21 Old Men.

ADVENTURES BY MORSE was another variation of his series but just a matter of changing names. Captain Bart Friday was the square-jawed lead, with his sidekick Skip Turner, who had a thick Texas accent.

Each adventure was ten parts. The episodes of this series are 30 minutes long, less clipped out commercials, so the entire serial is about 5 hours listening time. The otrrlibrary.org mp3s have excellent sound quality, and far better listening

than audio books with their droning readers. The dialogue pulls the listener along. Well worth listening to.

"The City Of The Dead" was a 10-part serial in this series, first aired in 1946. The setting was a giant cemetery near San Francisco, with 10,000 graves and now full, closed to any new burials. Friday's father Joshua, known as the Mayor, was the caretaker, with a half-wit assistant Lammy Fink to help him. There was also a retired doctor staying with them. All his patients were buried in the City of the Dead.

Mysterious events transpire. To explain the convoluted plot would take pages so I won't even try. Much of it, however, relied on held-back knowledge, where Friday and others acted on information not shared with the listener. A young couple had their car stolen near the cemetery. They sought help from the Mayor et al, but were held in forcible confinement, constantly reassured by Captain Friday and others that there was a reason.

Captain Friday didn't appear until the second episode, after the first installment set up the mystery. Turner never appeared at all. A ghostly church bell rang at random, moans and wails were heard, and characters disappeared at random.

Corpses wouldn't stay put, rather upsetting in a cemetery where they're supposed to have the decency to stay in their appointed place. A mysterious creature called Clawfoot prowled about. Someone was apparently looking for something and wanted to scare off anyone who would get in the way.

The bodies accumulated, fresh ones that is, not the 10,000 already there. No episode went by without someone being rendered unconscious, stabbed, or outright murdered. It couldn't go on indefinitely without letting the listener learn at least a little bit about the background. Therefore, in Episode 4 (The Skeleton Walks) it was revealed that $500,000 in black pearls were hidden somewhere in the cemetery. (About $5,000,000 in today's currency.) Word got out, so there were multiple diggers trying to locate the treasure.

The alarums and excursions continued, although they were repetitious. The ninth episode began to wrap up events, and the final episode rushed to an end with lots of infodumps and withheld knowledge to explain everything. A snappy show best heard in installments rather than a binge listen.

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 2018-10-15
Etobicoke, Ontario

OPUNTIA #424: Re: Beakerhead techno art festival. The cover made me smile. If that's the house from UP, the balloons are on the wrong side. True, dream never die as long as you remember them. They may also take on a form you don't expect, or realize or recognize. Take them as they come.

The various art installations in the pictures look great. We've got something similar here, but there are times they are too far away, or unreachable, or admission is unaffordable. There's one big event here called the Luminato Festival, but its disadvantage is that it on for one night, and all night long. The installations are often gone in the morning, and it's been a long time now since I could pull all-nighters.

Re: alien science fiction. First contact stories aren't so much about how weird and outlandish the aliens could be, but they are more a study of how humanity reacts to the true alien. Will human society accept these aliens? Will a sector of society reject the aliens (often, a religious group of some kind)? The show of human intolerance provides the turbulence for the story in many cases. Of course, for me, I think of the old TWILIGHT ZONE episode… "To Serve Man…it's…it's a cookbook!" Fava beans, and a nice Chianti.

Re: Little Free Libraries. It's good to see little library boxes in Calgary. There's a few of them here, and I wish there were more. The one in your picture is nearly empty. Is this a good sign, or are people simply taking books, without thinking of the idea of putting others back? In some area of the US, these boxes are illegal, and putting one up could get you jail time.

[I think it was just a normal fluctuation. Sometimes the LFLs are overflowing, and other times they are empty.]

My previous letter: The show we vended at in High Park was great fun, even if it was a little chilly. We did some business. This show might be considered

a rehearsal for a much bigger show that may be coming in 2019. Details to follow.

OPUNTIA #425: Once again, there's a reminder that I need to explore the OTR (old time radio) online library again, and see what else is there. I remember THE SAINT more for Roger Moore on television, but I have meant to check out the Leslie Charteris books, and see how well they've aged.

[The books haven't aged well. Even Charteris admitted it. In an essay in THE SAINT magazine, he pointed out that he began writing in the 1920s as a young man, and it was unreasonable to expect that the earliest stories could hold up to his later writing, published for readers in a much-changed society.]

We're getting our fall colours, although not far north from here, the leaves have fallen, and snow covers them. In some areas of this province, autumn was about a week or two long. I see on page 23, you sure do have the snow, too. Looks like we won't be far behind you.

[A chinook blew into Calgary the date of your letter, so our snow is all gone.]

We do have about another four shows to do before the end of the year. We have one last outdoor show (hope that's a warm weekend), and then three indoor shows to cater to some Christmas shopping.

SEEN IN THE LITERATURE

Schart, C. (2018) **Rocky planet rotation, thermal tide resonances, and the influence of biological activity.** ASTROBIOLOGY 18:doi.org/10.1089/ast.2017.1726

Author's abstract and extracts: *It has been established theoretically that atmospheric thermal tides on rocky planets can lead to significant modifications of rotational evolution, both close to synchronous rotation and at faster rotations if certain resonant conditions are met. Here it is demonstrated that the normally considered dissipative gravitational tidal evolution of rocky planet rotation could, in principle, be ''stalled'' by thermal tide resonances for Earth-analog worlds in the liquid-water orbital zone of stars more massive than ~0:3 solar masses .*

The possibility of feedback effects between a planetary biosphere and the planetary rotational evolution is examined. Building on earlier studies, it is suggested that atmospheric oxygenation and ozone production could play a key role in planetary rotational evolution, and therefore represents a surprising but potent form of biological imprint on astronomically accessible planetary characteristics.

For modern Earth the semidiurnal tide can be thought of as the movement of atmospheric mass away from the hottest point, which occurs a few hours after midday. Mass then accumulates in bulges on the dayside (approaching the substellar point) and nightside (receding from substellar point). Therefore, the solar torque on Earth's dayside bulge acts to accelerate rotation, but this torque is currently far smaller than lunar and solar solid body and oceanic torques.

Oxygenation of an atmosphere and/or the formation of a significant ozone layer can alter the resonant daylength for thermal tides by ~0:5 hr. Ozone-mediated stratospheric heating shortens the resonant daylength. Higher O_2 abundance lengthens the daylength by decreasing the atmospheric scale height, assuming displacement of an N_2-rich atmosphere. However, ozone enhancement would be expected early in an oxygenation event, before any significant rise in O_2.

Clearly the frequency with which such coincidences might happen on Earth-analog worlds around low-mass stars is extremely hard to quantify. Nonetheless, the relevant tidal evolution timescales around lower mass stars are closely matched to the timescales of early terrestrial biosphere innovations (photosynthesis, eukaryotic cells).

Given the theoretical evidence for the robustness of resonant thermal and solar torque balances once they are established, it can be hypothesized that biospheres might experience and even help sustain very long periods of essentially fixed, comparatively fast, planetary rotation, rather than the typically assumed slow synchronous rotation.

Them, T.R., et al (2018) **Thallium isotopes reveal protracted anoxia during the Toarcian (Early Jurassic) associated with volcanism, carbon burial, and mass extinction.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 115:6596-6601

[Anoxia is the deoxygenation of ocean waters.]

Authors' abstract: *Declining oxygen contents in today's oceans highlight the need to better understand ancient, natural marine deoxygenation and associated extinctions. In the Early Jurassic, the Toarcian Oceanic Anoxic Event (TOAE; ~183 Ma) is associated with significant perturbations to the Earth system, historically defined by carbon isotopes.*

We reconstructed global oceanic (de)oxygenation using thallium isotopes from two ocean basins that suggest a stepwise decline of oxygen that initiated before and extended well after the classically defined T-OAE interval. This initial deoxygenation occurs with the start of massive volcanism and marine extinctions, while a later shift corresponds to the traditional T-OAE. This emphasizes the need for more nuanced records of ancient environmental and biogeochemical feedbacks that lead to and maintain widespread marine anoxia.

For this study, we generated thallium (Tl) isotope records from two anoxic basins to track the earliest changes in global bottom water oxygen contents over the Toarcian Oceanic Anoxic Event (T-OAE; ~183 Ma) of the Early Jurassic. The T-OAE, like other Mesozoic OAEs, has been interpreted as an expansion of marine oxygen depletion based on indirect methods such as organic-rich facies, carbon isotope excursions, and biological turnover.

Our Tl isotope data, however, reveal explicit evidence for earlier global marine deoxygenation of ocean water, some 600 ka before the classically defined T-OAE. This antecedent deoxygenation occurs at the Pliensbachian/Toarcian boundary and is coeval with the onset of initial large igneous province (LIP) volcanism and the initiation of a marine mass extinction. Thallium isotopes are also perturbed during the T-OAE interval, as defined by carbon isotopes, reflecting a second deoxygenation event that coincides with the acme of elevated marine mass extinctions and the main phase of LIP volcanism.

This suggests that the duration of widespread anoxic bottom waters was at least 1 million years in duration and spanned early to middle Toarcian time. Thus, the Tl data reveal a more nuanced record of marine oxygen depletion and its links to biological change during a period of climatic warming in Earth's past and highlight the role of oxygen depletion on past biological evolution.

K. G. MacLeod, K.G., et al (2018) **Post-impact earliest Paleogene warming shown by fish debris oxygen isotopes (El Kef, Tunisia).** SCIENCE 360:1467-1469

Authors' abstract: *The Chicxulub impact 65 million years ago, which caused the mass extinction at the Cretaceous-Paleogene boundary, also initiated a long period of strong global warming. ... Immediately after the asteroid strike, temperatures increased by ~5˚C and remained high for about 100,000 years. These results are relevant to current climate projections, because the Chicxulub impact perturbed Earth systems on time scales even shorter than the current rate of change.*

Greenhouse warming is a predicted consequence of the Chicxulub impact, but supporting data are sparse. This shortcoming compromises understanding of the impact's effects, and it has persisted due to an absence of sections that both contain suitable material for traditional carbonate- or organic-based paleothermometry and are complete and expanded enough to resolve changes on short time scales.

We address the problem by analyzing the oxygen isotopic composition of fish debris, phosphatic microfossils that are relatively resistant to diagenetic alteration, from the Global Stratotype Section and Point for the Cretaceous/Paleogene boundary at El Kef, Tunisia. We report an ~1 per mil decrease in oxygen isotopic values (~5˚C warming) beginning at the boundary and spanning ~300 centimeters of section (~100,000 years). The pattern found matches expectations for impact-initiated greenhouse warming.

Martos, Y.M., et al (2018) **Geothermal heat flux reveals the Iceland hotspot track underneath Greenland.** GEOPHYSICAL RESEARCH LETTERS doi.org/10.1029/2018GL078289

Authors' abstract: *In this study we used variations in the Earth's magnetic field to map out the variations in the amount of heat being supplied to the base of the Greenland Ice Sheet from the Earth's interior. Ice sheet models incorporating these new and improved results will help better constrain future predictions of*

ice sheet evolution. Overall the new map not only shows less extreme variations than previous studies, but also reveals a previously unseen band of warmer than expected rock stretching northwest to southeast across Greenland.

This band, together with lithospheric models derived from gravity data, is interpreted to be the scar left as the Greenland tectonic plate moved over a region of hot upwelling mantle (the material beneath the tectonic plates), which now underlies Iceland.

We interpret this feature to be the relic of the passage of the Iceland hotspot from 80 to 50 megayears ago. The expected partial melting of the lithosphere and magmatic underplating or intrusion into the lower crust is compatible with models of observed satellite gravity data and recent seismic observations.

Speirs: Most vulcanism around the planet is due to subduction zones, where one tectonic plate burrows underneath another. However, there are a number of places where vulcanism is unrelated to tectonic plates, and is instead caused by vertical plumes of magma burning a hole in the crust. As a tectonic plate moves over the hotspot, a string of volcanos is formed.

The Hawaiian Islands from Midway south the big island are the result of the Pacific tectonic plate drifting over a hotspot. The Yellowstone supervolcano is another example, where North America is sliding over a hotspot. This study shows that as the North American plate broke away from the supercontinent Pangea and drifted northwest, Greenland got its bottom toasted by the Atlantic hotspot, which is now building the island of Iceland.

Allen, G.H., and T.M. Pavelsky (2018) **Global extent of rivers and streams.** SCIENCE 361:585-588

Authors' abstract: *The turbulent surfaces of rivers and streams are natural hotspots of biogeochemical exchange with the atmosphere. At the global scale, the total river-atmosphere flux of trace gasses such as carbon dioxide depends on the proportion of Earth's surface that is covered by the fluvial network, yet the total surface area of rivers and streams is poorly constrained.*

We used a global database of planform river hydromorphology and a statistical approach to show that global river and stream surface area at mean annual discharge is 773,000 ± 79,000 square kilometers (0.58 ± 0.06%) of Earth's nonglaciated land surface, an area 44 ± 15% larger than previous spatial estimates. We found that rivers and streams likely play a greater role in controlling land-atmosphere fluxes than is currently represented in global carbon budgets.

Willett, S.D., et al (2018) **Transience of the North American High Plains landscape and its impact on surface water.** NATURE 561:528-532

Authors' abstract: *Ecosystem diversity and human activity in dry climates depend not just on the magnitude of rainfall, but also on the landscape's ability to retain water. This is illustrated dramatically in the High Plains of North America, where despite the semi-arid modern and past climate, the hydrologic conditions are diverse. Large rivers sourced in the Rocky Mountains cut through elevated plains that exhibit limited river drainage but widespread surface water in the form of ephemeral (seasonal) playa lakes, as well as extensive groundwater hosted in the High Plains aquifer of the Ogallala formations.*

Here we present a model, with supporting evidence, which shows that the High Plains landscape is currently in a transient state, in which the landscape has bifurcated into an older region with an inefficient river network and a younger, more efficient, river channel network that is progressively cannibalizing the older region. The older landscape represents the remnants of the Ogallala sediments that once covered the entirety of the High Plains, forming depositional fans that buried the pre-existing river network and effectively 'repaved' the High Plains.

Today we are witnessing the establishment of a new river network that is dissecting the landscape, capturing channels and eroding these sediment fans. Through quantitative analysis of the geometry of the river network, we show how network reorganization has resulted in a distinctive pattern of erosion, whereby the largest rivers have incised the older surface, removed fan heads near the Rocky Mountains and eroded the fan toes, but left portions of the central fan surface and the Ogallala sediments largely intact.

These preserved fan surfaces have poor surface water drainage, and thus retain ephemeral water for wetlands and groundwater recharge. Our findings suggest that the surface hydrology and associated ecosystems are transient features on million-year timescales, and reflect the mode of landscape evolution.

SEEN AROUND COWTOWN
photos by Dale Speirs

The Bow Valley Square skyscraper complex have introduced electronic art along the entrance corridors.