OPUNTIA

367

National Flag Day 2017

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.

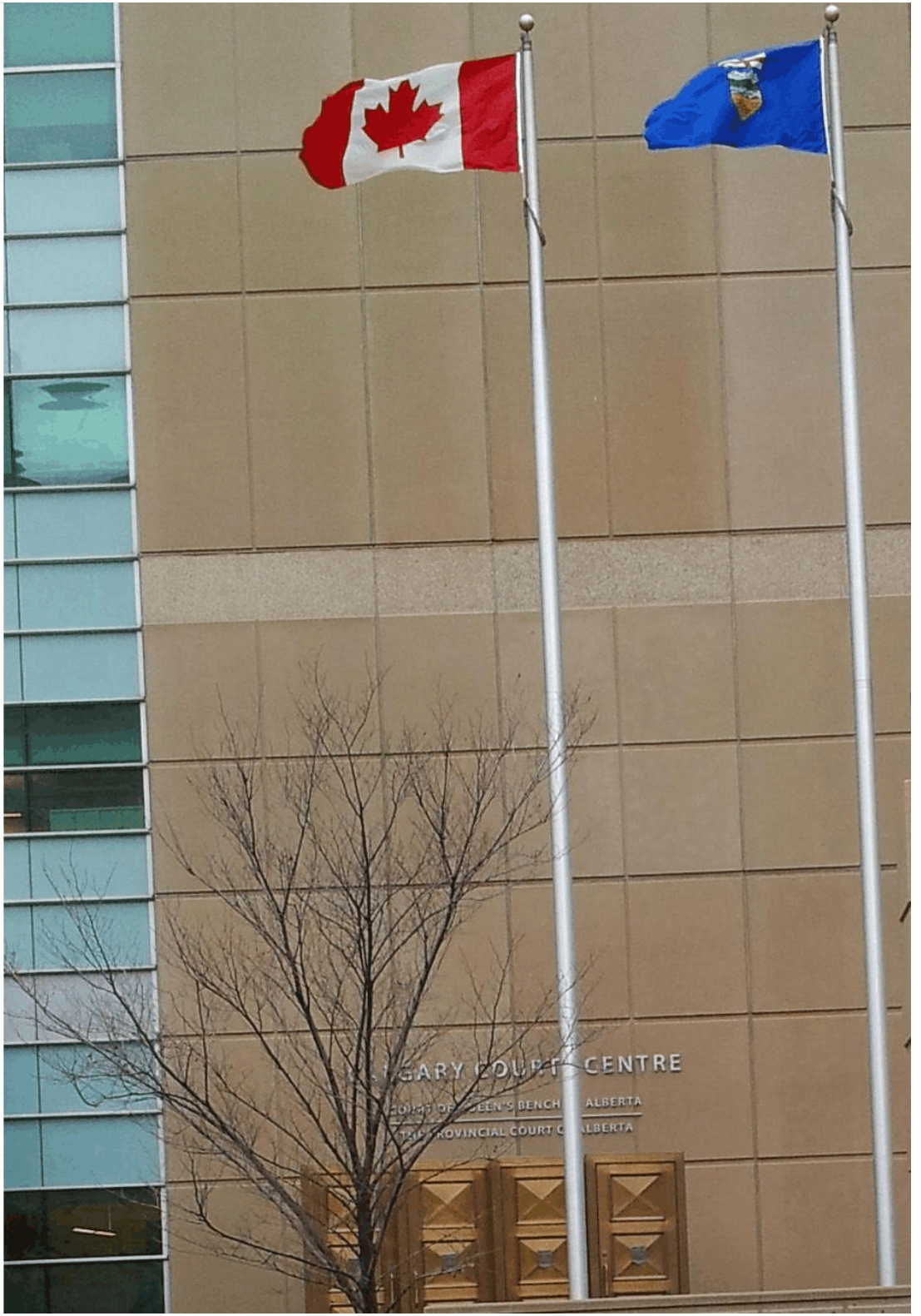
COWTOWN VEXILLOLOGY

photos by Dale Speirs

The Maple Leaf Flag became the first official flag of Canada on February 15, 1965, and the anniversary of that date is National Flag Day. I've been accumulating photos of flags and banners which have been used to brighten up downtown Calgary, so this is a good excuse to unload them all into this issue.

When I worked in the Parks Dept., one of our responsibilities was raising and lowering flags at parks and city buildings. Remembrance Day was quite a chore, but that wasn't so bad since we knew it was coming and could schedule all the crews around the city to do the job. The last decade I worked before retiring in 2010 was as Weekend Trouble Calls Supervisor (Friday to Saturday 13-hour shift plus statutory holidays). I always hoped royalty or politicians would die on a weekday, but sometimes I had to hustle about lowering flags when someone keeled over on the weekend. Unfortunately Queen Elizabeth the Queen Mother died on my shift.

Alberta's flag is rather blah, a shield on a blue background. The photo at right was taken at the courthouse in downtown Calgary. As soon as I took out my camera, the wind died down and the flags hung limply. Eventually the breeze came back up after about five minutes of waiting.



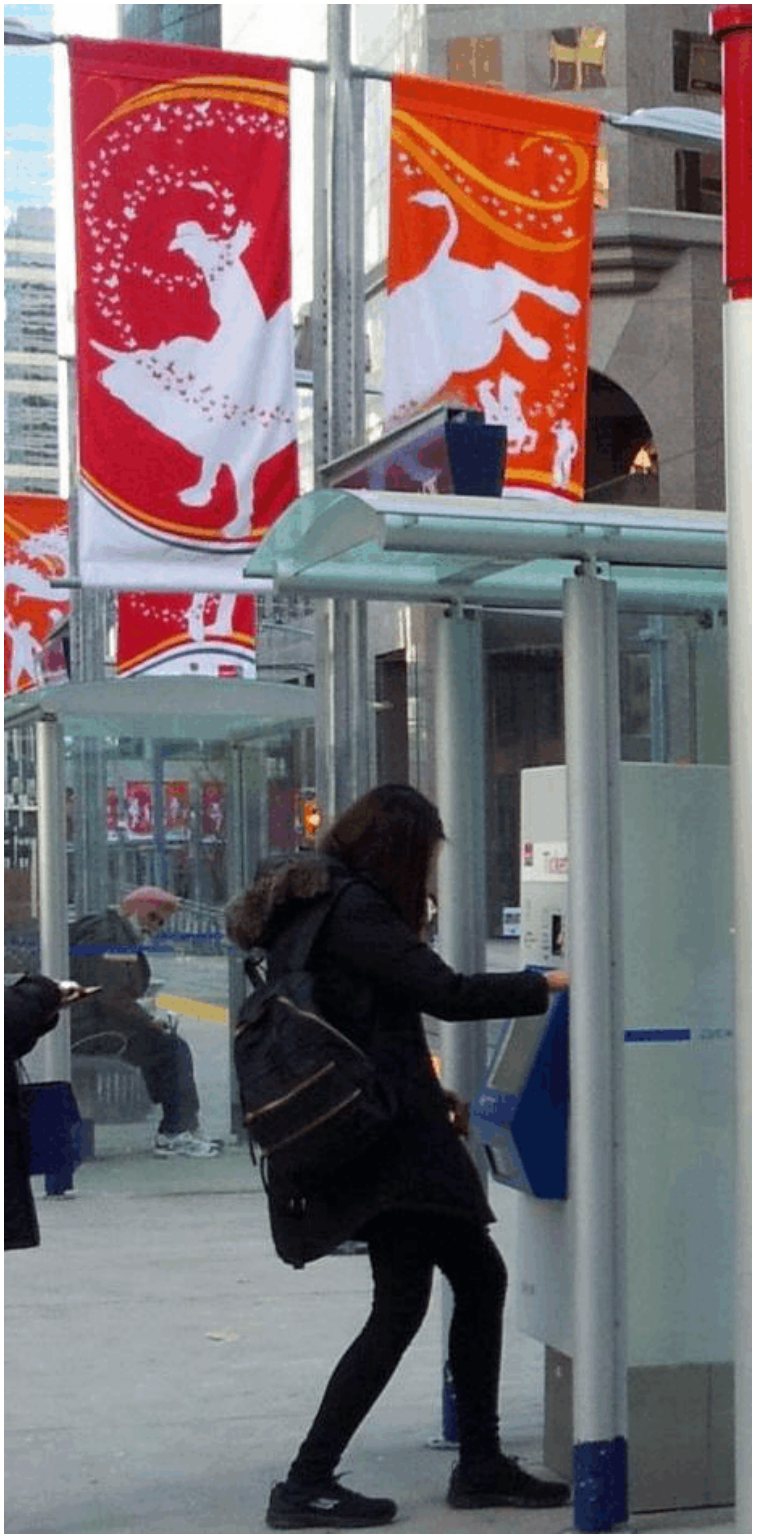
Say it with Pepsi. I actually prefer Coca Cola but bought this bottle to photograph it.

Banners are very popular in Calgary. The LRT stations on 7 Avenue South in the downtown core are positively festooned with them. Below is the 3rd Street station.

The City of Calgary has an official public arts budget, part of which is spent on colourful banners for parks and streetlights.

Hockey is, of course, the dominant religion in Canada. The Calgary Flames last won the Stanley Cup in 1989. It is said that if they win it again, that will be a sign of the impending Apocalypse.

In Alberta, the second sport, which actually draws more people than football, is rodeo. The Calgary Stampede, founded 1912, is the world's largest rodeo. Bull riding is said to have been invented by the ancient Mediterranean peoples as a method of weeding out their dumbest men. It still applies today.



We're not all rednecks though. The Calgary Philharmonic Orchestra has been cranking out the music since 1910.

The Calgary Zoo is conveniently located on the Saddletowne line with its own LRT station.

Next page: Century Gardens, built for Canada's centennial in 1967. The 8th Street LRT station is directly behind the camera.


Calgary
Calgary
Calgary
Calgary

INSTALLATION ART IN CALGARY
photos by Dale Speirs

Below is a recycling display in the TD Square atrium in the downtown core. Recycling is good, and, it says here in the brochure, we should minimize waste in the first instance.

Meanwhile, a stone's throw away in the Plus 15 pedestrian overpass between TD Square and Bankers Hall, this temporary installation was created during the last week of January. The Boxtape Project creators bragged about how they used 5,000 metres of clear box wrap tape to produce this giant web.


RODEO

THE DAWN OF TELEVISION: PART 2
by Dale Speirs

[Part 1 appeared in OPUNTIA #309.]

Had it not been for the Great Depression and World War Two, mass-market television would have arrived a decade before it did, which would have also preempted old-time radio (OTR). The idea was not unknown to the public in the 1930s and Part 1 of this review discussed movies of that age which presented television as science fiction.

THE SHADOW had many lives in pulp magazines, OTR, 1950s television, and movies. From the radio series is a 1944 episode "Death To The Shadow", written by David Kogan. (This and other OTR shows are available as free mp3s from www.archive.org.) It opens with a professor demonstrating to a criminal how his new device works. It is a television receiver which can peer into any place without a camera and not only see what is going on but receive sound. Kudos to the Professor, who can come up with a device that even today we are nowhere near achieving.

While testing it, they accidently tune in on a crime scene where the Shadow is at work and realize they can see him without his mind-clouding ability affecting them. The criminal kills the Professor and begins a crime spree, knowing the Shadow is Lamont Cranston and able to keep track of him. The Shadow is stymied at every turn until his girlfriend, the lovely Margo Lane, mentions that it was as if someone was spying on them. He remembers reading an article about the defunct Professor who had announced to the press that he was working on a miracle television device.

Realizing that he had been watched with the device, the Shadow takes countermeasures and sets a trap. Before he can act, Lane fulfills her usual role by being kidnapped. She was kidnapped about every other episode, which leads me to suspect that she must have been into bondage. That is the only explanation of why she kept dating Cranston.

The Shadow manages to get into the gang's headquarters because they are too busy watching others to monitor their own hideout. The criminal is killed before he can divulge Cranston's secret to anyone else. A dramatic rescue, and then a long monologue as the Shadow ties up all the loose ends by explaining them to Lane. An average episode, made cutting edge by the use of television.

"The TV Poisoning" was a 1945 episode of the OTR show BOSTON BLACKIE written by Frederick Ziv. Blackie was a reformed jewel thief who constantly tangled with Police Inspector Faraday. The latter always leaped to conclusions and arrested the first available suspect, often Blackie himself, instead of doing a proper investigation. One wonders how such an incompetent hothead ever made Inspector in the first place. For his part, Blackie delighted in barging into Faraday's investigations and making a fool out of him, not a difficult task admittedly.

The episode at hand is from the dawn of mass television in 1945. Blackie and his girlfriend Mary are watching a public affairs programme on television. After much discussion on how to work a television set, such as turning it on by rotating a knob, they see Faraday and three other men discussing politics. District Attorney Baxter announces he is about to indict a man named ... , at which point he croaks, and not just figuratively. The D.A. is dead from poisoning, after taking a drink of water from a pitcher in front of the panelists, making a croaking sound before he drops onto the floor. All the other panelists had also drunk from the pitcher, so the question was how the poison could have been administered.

Blackie quickly shows up at the studio and tells Faraday that he should arrest himself. The investigation proceeds, and it is learned that before the show, the panelists had dinner together with the main suspects. They all ate the same food, so the dinner couldn't have been poisoned either. The cook becomes corpse #2, then the obvious suspect is almost murdered as well but escapes by a lucky chance.

Blackie convinces Faraday to re-stage the dinner and television panel, wherein they'll catch the conscience of the murderer. At the television studio, Blackie bluffs the guilty man into fleeing when no one pursues. The method the culprit used was to give everyone at the dinner the antidote to the poison except the D.A., then poison the pitcher of water at the studio.

BOSTON BLACKIE moves at a quick pace, with lots of snappy organ music. Blackie and Faraday are constantly exchanging insults and crosstalk. Separately or together, neither of them pay much attention to legal procedures. One can make a game of counting how many times they commit felonies or violate rules of evidence. It was meant to be a serious show, but comes across as an inadvertent comedy.

FROM THE BARGAIN BIN: PART 1
by Dale Speirs

This will be the first in a series of miscellaneous SF and fantasy DVD reviews, of the kind of movies found in the 50 for $10 sets. These are the ones that the producers allowed their copyrights to lapse and thus put the films in the public domain. Most are bad, some try hard but fail for lack of budget, and others could have succeeded with competent actors or writers.

HORRORS OF SPIDER ISLAND is a 1962 German film written by the director Fritz Boettger. It mixes in lots of bikini-clad women with a flimsy excuse for a script that hardly tries to sustain any suspense. The bad dubbing into English doesn't even pretend to be lip synced. The story begins in a casting office where a group of dancers is assembled for a gig in Singapore. The manager has the women strip down to undies before deciding who to hire, but it's all very ethical because his choreographer is there to chaperon him. Her presence ensures this is a respectable movie.

Off they go to Singapore, in an airplane that has two engines on take-off and then picks up two more engines by the time it levels off at cruising altitude. Continuity of stock shots was obviously not a priority. As the plane crosses the Pacific Ocean, it changes form again (number of engines indeterminate), bursts into flame, and nosedives straight down into the water. Not surprising, considering the stress on the fuselage from all those shape changes.

Jump cut to a lifeboat with the women and their manager, the only male. This avoids having to explain why an airplane was carrying a lifeboat, how anyone survived a vertical nosedive crash, much less all the women, and how the boat was deployed after the plane smacked into the water at full speed.

Finally a landing on an uncharted desert isle. No sign of Gilligan. In both this movie and the television series, their islands are referred to as desert isles despite the obvious fact that they are covered with jungle vegetation. The women and their manager make it ashore, dying of thirst. The gloom and doom is lifted when they find fresh water cascading down a cliff.

The women strip off, it being the only way for the producers to retain any audience interest. They subsequently spend the rest of the movie in bikinis or bras and panties. The manager gets his shirt off but keeps his pants on. They begin searching the island and soon discover a cabin in the jungle.

There's trouble in paradise. On opening the cabin door, they find a dead man tangled in a giant spider web. Subsequent investigation reveals that the defunct was a professor who was prospecting for uranium. The manager wanders out to the jungle while the women tidy up the cabin.

He is bitten by a giant spider. Not a bungalow-size spider but rather about the mass of a medium dog. No worries here concerning the square-cube law. One wonders though, why the spider was the only giant creature on the island. Within a minute the man's head is transformed into a spider's head and his hands into claws, although the rest of his body stays human. Probably saved on the makeup and costume costs.

Spiderman does not do whatever a spider can, notwithstanding the bite of the radioactive spider. No web spinning, no swinging from tree to tree by silk threads. Just lurching about like a zombie, and picking off stragglers from the herd of women. They don't see him just yet, but do notice that one of their kind is missing.

Nowadays we know that a bit of uranium here or there does not lead to giant mutations. If so, the Precambrian bedrock of Canada, and the atomic bomb testing sites in southwestern USA, would be crawling with mutants. Chernobyl and Fukushima should have produced all sorts of giant critters to terrorize the villages of Ukraine and Japan, yet the news media remain silent. Where are the superheroes who are gifted with powers thanks to a lucky dip in the U235 lottery?

Getting back to the movie, life in paradise can be annoying while waiting to be rescued. The women fall to bickering, and there are several cat fights to pad out the action. Mud wrestling apparently didn't exist in Germany back then, elsewise the producers would have included it.

The death of one of the women doesn't seem to produce any shock or mourning, but that is understandable considering their jealousies about each other. The consensus is that there is one less competitor for star billing in their act.

Two men are dropped off from a passing ship, bringing supplies for the professor. They are naturally surprised at finding him dead and gone, with a posse of bikini-clad women instead. They react accordingly. Not just two girls for every boy, as the song goes, but about ten per male. If this isn't paradise, then what is?

Time for a party! It supposedly takes place at night but the scenes fluctuate between bright daylight and dark gloom. Obviously a case of shooting day for night by sticking a polarized filter on the camera lens. Either that or there was one heck of a full moon.

Spiderman returns to create more havoc, so the women break out flares and chase after him. They hound him to his death in a quicksand pit on the beach. The ship that had passed by returns to pick up the two men, and undoubtedly the captain and crew got a real surprise.

In Memoriam.

HMV, the last video store in Calgary, has gone into receivership and will wind down its affairs by the end of April. I have bought many DVDs from amazon.ca but also relied on the HMV bargain bins for oddball stuff. The Internet continues to grind down entire industries.

TAKEN AT THE FLOOD: PART 2
by Dale Speirs

[Part 1 appeared in OPUNTIA #70.1G.]

Landslide Tsunamis.

Tsunamis, often incorrectly referred to as tidal waves, are most commonly caused by earthquakes under the ocean that suddenly displace a huge mass of water and send it traveling. They can also be caused by very large landslides falling into the water, again displacing a huge mass.

I was surprised to learn that one country that has many tsunamis is Norway. The mountains that line the fjords are unstable, and if one of them drops a huge slab of rock into the water, 80-metre-high tsunamis can roar down the narrow confines of the fjord.

Entire villages have been wiped out over the last century by these tsunamis, as a result of which the Norwegian government has set up a network of monitoring stations and alarm systems.

As to where I learned this, that brings me to the movie THE WAVE (2015), written by John Kare Raake and Harald Rosenlow Eeg, set in a Norwegian fjord. The DVD came with a dubbed anglophone version, but I watched it with English subtitles over the original Norwegian soundtrack. The SFX of the tsunami are top Hollywood level quality and entirely believable.

The scenery is the star of the movie. The fjords and mountains are absolutely spectacular, and the photography leaves nothing to be desired. I say that as someone who lives on the edge of the Rockies and who knows what a real

mountain looks like. For any readers who like foreign travel, a cruise ship booking into the Norwegian fjords would be money well spent.

The chief protagonist of the movie is geologist Kristian Eikjord, who monitors mountains in the fjords. The movie begins slowly, but then a mountain starts to move and so does the plot. The storyline is the conventional disaster movie plot. Eikjord is the man-of-the-hour scientist whose warnings are ignored.

There are the usual soap opera sub-plots to pad out the movie, such as the troubles of the Eikjord family, and arguments about warning the public because the tourist season is underway and it would be bad for business. The ominous forebodings check in on schedule, such as sensors placed on the mountain giving strange readings, and flocks of birds flapping out of the fjord.

From there, the deluge. The town is slammed into rubble by the tsunami, and most of the supporting characters killed off. Then there is the long aftermath, sometimes tedious, of rescue scenes, emoting lots of anguish, and survivors struggling to re-unite. Finally the obligatory group hug, and someone singing the Norwegian version of "Blue Skies Coming My Way".

I bought this DVD from the bargain bin but it is worth list price if you order it online. It is a refreshingly different disaster movie, and I recommend it.

Terrorists read books and go to movies, so it is plausible that they might want to trigger a tsunami against their enemies. DEEP BLACK: DEATH WAVE (2011) by Stephen Coonts and William H. Keith uses the idea that an underwater landslide at the Canary Islands off the coast of Africa could trigger a megatsunami that would devastate the eastern coast of continental USA. (And also the Canadian Maritimes, but the authors are American, so the provinces don't count.)

There is some factual basis for this, as volcanically activated tsunamis have propagated out from the Canary Islands in the past. The islands are active volcanos, which occasionally erupt and shake loose enough mass to shove the water away.

Notwithstanding sensationalist claims, there is no danger of a megatsunami wiping out the North American and European coasts. That being said, the premise of this novel is that Islamic terrorists are plotting to create such a scenario.

The plan begins with the theft of ex-Soviet nukes in Tajikistan by the terrorists. They intend to get them to the Canary Islands and then place them down into boreholes on the flanks of a volcanic island. The idea is to space out ten nukes at depth in order to shear off the largest amount of rock possible. This would thus displace the largest volume of water and therefore send a megatsunami across the Atlantic Ocean.

Charlie Dean and his cohort are counterterrorist operatives with a supersecret NSA group known variously as Desk 3 or Deep Black. They pick up the threads of the plot and begin a chase hither and yon. They take out bad guys from China to Pakistan to just about any nation where the Koran is widely read. Assorted bodies from both sides pile up.

The terrorists almost finish the drilling and emplacing of the nukes. The American President orders a USAF strike against the Canary Islands to prevent the nukes from being detonated. Nevermind Spanish sovereignty, not that the USA ever did in the past. USAF destroys nine out of the ten nukes before they can be detonated.

90% is an excellent grade in school, but that tenth nuke does detonate and trigger an underwater landslide. It isn't enough though, and the tsunami that reaches North America is only a foot high.

This novel is action-adventure flag waving, so it isn't great literature. It is, however, a novel of ideas, and keeps the reader turning the pages for them.

Asteroid Tsunamis.

An asteroid slamming into Earth will cause a lot of damage if it craters into solid ground, but the damage will multiply exponentially if it splashes into the ocean. Dark cold objects are very difficult to detect inbound to Earth. There aren't enough telescopes or radars to scan the all the skies. Even if there were, there wouldn't be enough time to launch spacecraft to deflect a big rock away in time.

It is this premise used by the novel ROGUE WAVE (2009) by Boyd Morrison, about The Big One, which in Hawaii doesn't mean an earthquake but a tsunami. The main protagonist is Kai Tanaka, in charge of the Pacific Tsunami Warning Center in Honolulu. The story takes a while to get going as all the subplots are introduced, mostly with Tanaka's family, a soap opera if ever there was one.

Something has happened in the ocean near Palmyra Atoll, an explosion of some kind, with an associated minor earthquake. Not enough to cause a tsunami, based on available information. The PTWC issues an advisory, using a phrase that I thought was cute, "*not tsunamigenic*".

The oceanographers begin to piece the data together bit by bit. The anomalies appear. The tidal gauge at Christmas Island suddenly stops transmitting. Then Johnson Island observers confirm a visual observation of a tsunami just before they are wiped out. Hawaii has one hour before the disaster.

Even as they deal with the evacuation of Honolulu, the oceanographers are trying to figure out the cause of the tsunami. Not an earthquake; the shake was too small. No underwater landslide because there were no seamounts in the area. No one was testing fusion bombs underwater.

It appears to have been a meteorite strike, undetected in that remote unpopulated area of the Pacific Ocean. When the satellite photos come in, with thirty minutes to go, they confirm a multiple asteroid strike, with as many tsunamis up to 50 metres high.

Evacuating a million people out of Honolulu to higher ground in an hour is an impossibility. Panic in the streets, and no one is prepared. People don't listen to sirens anymore than someone's car alarm in a parking lot. When they see the first wave, it is too late to run.

What isn't shattered in the first wave is scrubbed away in the second, third, and fourth waves. Skyscrapers cannot withstand them, and the island lowlands are scoured clean. Then the waves move on to the coast lines of the Americas. California is next, and on that note the book ends.

Judged as an action-adventure novel, this book does the job. The author's data dumps are not too intrusive, and the technical side of tsunamis and asteroid strikes is well explained. Worth reading.

SECRET HISTORY REVIEWS

by Dale Speirs

Secret history is often confused with alternative history. Secret history does not result in a timeline change. Instead it only offers a different explanation of how something happened instead of the generally agreed story.

We All Did Our Part.

SHAMBLING TOWARDS HIROSHIMA (2009) by James Morrow is a humourous novel about the U.S. Navy developing a top-secret plan in 1945 called the Knickerbocker Project. Its purpose is to produce fire-breathing giant reptiles for deployment against Japanese cities.

Hollywood actor Syms Thorley, best known for his roles as Corpuscula and the living mummy Kha-Ton-Ra, is conscripted by the Navy to don a rubber monster suit for a propaganda film "What Rough Beast". He will play Gorgantis, stomping flat a miniature Japanese city. The idea is to warn the Japanese of what will befall them if they don't surrender. The Navy is well aware that the Army Air Force has the atomic bomb, and wants to get to Tokyo without the flyboys hogging the credit for ending the war.

At a briefing, the Navy commander of the project shows Thorley the monsters they created from desert lizards after fifteen generations of very much directed breeding. The critters are hidden in an artificial lake in the desert, and any one of them is big enough to destroy a city in a few hours.

And so to the filming, Thorley in his rubber suit and a miniature duplicate of Shirazuka city built in an aircraft hanger. Trouble arises when the real giant monsters begin dying prematurely but the Navy hopes enough of them will survive for when they are needed. More trouble when Thorley and his girlfriend take the rubber suit to the beach for fun in the surf and are arrested for disturbing the peace. Still more trouble when a rival actor kidnaps Thorley and holds him to ransom for the suit, which he wants for his own movie.

Unfortunately the Japanese delegation doesn't buy the idea that the monsters are unstoppable. General Groves therefore gets to use his bombs on Hiroshima and Nagasaki. In disgust, the Navy wipes all records and physical evidence of the Knickerbocker Project. Notwithstanding that, a copy of the film finds its way to Tokyo, where it is eventually incorporated into a monster movie.

The finish of this novel peters out with moralizing about Hiroshima and Nagasaki. The story is told in flashbacks by Thorley from the present day but is sometimes confusing because the editorial demarcations between past and present aren't always clear. Nonetheless, it is an enjoyable read.

On the other side of the globe is a secret history about Hitler's last day in Berlin, "Fall Of Zoo" by Edward D. Hoch (1967 January, THE SAINT MYSTERY MAGAZINE). An SS Major in Berlin knows the Russians are in the suburbs and his time is near. Before the war, he had grown up near the Tiergarten and later worked in it as a groundskeeper. He walks over to the zoo and meets up with a woman who is still zookeeper for the few animals left. They reminisce as forward patrols of the Russians enter the grounds. He tells her just before their deaths that he was in Hitler's bunker and found Eva Braun dead but the Fuhrer still alive. In anger, he shot Hitler dead and made it look like a suicide.

Aliens.

"A Matter Of No Great Significance" by Richard Cowper (1985 December, MAGAZINE OF FANTASY AND SF) is about the visitation of an alien starship to Earth two millennia ago. The aliens are humanoids and have sent down thirty shuttle craft across the planet to collect specimens and study the inhabitants. The starship prepares to leave and sends the recall signal.

One of the shuttles is late getting back because that team was in what we call Judea. En route to their craft, they were intercepted by a frantic Joseph, whose wife Mary had trouble in birth. The three humanoids revive the stillborn baby and give Joseph some salve to heal Mary's injuries from the birth. They make it back to the shuttle in time and lift off in a blaze of light seen by shepherds watching over their flocks by night. The story is slightly better than the old cliche "And their names were Adam and Eve", but not by much.

James Morrow carried on secret history with THE MADONNA AND THE STARSHIP (2014), which is set at the dawn of the television age in the early 1950s. Those familiar with the history of television will easily recognize the source of many of the television shows and characters in this novel. The novel is about Kurt Jastrow, a scriptwriter for BROCK BARTON AND HIS ROCKET RANGERS, and who also writes and stars in the science show UNCLE WONDER'S ATTIC. A character that magazine SF fans will recognize is Saul Silver, an agoraphobic editor for ANDROMEDA magazine.

It turns out that Uncle Wonder is a hit on the planet Qualimosa in the Procyon system. The sapient crustaceans who live there pay a visit to Earth to meet their hero, and Jastrow has his hands full. The aliens are fanboys, and they come to present the Zorningorg Prize to Jastrow.

Connie Osborne is Jastrow's love interest. She writes the Sunday morning religious show NOT BY BREAD ALONE. The Qualimosans believe in logic and facts. When they see an episode of BREAD, they decide to piggyback a death ray into every television set turned on during the show, thereby eliminating millions of irrationalists. Osborne and Jastrow try to convince the aliens that BREAD is a satirical show and the Qualimosans misinterpreted the episode they saw. That allows time to rewrite the next episode to criticize received religion, nevermind what effects that will have on the viewers. It turns out that the garbled episode sold more breakfast cereal than ever before, which made the sponsors happy. No network executive will argue with a happy sponsor. The Qualimosan death ray was never activated.

The Qualimosans show up on Uncle Wonder's stage to present the award. Jastrow knew they were coming, so he warned everyone in advance about actors dressed in costume. Television being what it is, everyone took Jastrow at his word and assumed the giant crustaceans were sci-fi actors. Jastrow and Osborne are married, and all ends well. Another good read from Morrow.

Not Such A Lone Gunman.

"Comrade 35" by Jeffery Deaver (2014, from the mystery anthology ICE COLD) is a secret history about a GRU agent sent from the USSR to the USA in late November 1963. The GRU has an agent named Comrade 35 who will be arriving in Dallas and is under threat by two Cuban agents trying to stop him. As the story proceeds, the viewpoints change back and forth between the GRU agent, the Cubans, Lee Harvey Oswald, and an FBI agent sent to Dallas to sort everything out.

It seems obvious that Comrade 35 is Oswald, up until a remarkable series of twists and turns in the plot. For it was Kennedy that the GRU man was trying to protect, unsuccessfully as it turned out because the agent didn't know about Oswald. A well-written story, and you don't have to be a conspiracy theorist to like it.

WHEN WORDS COLLIDE 2017

Calgary's annual readercon When Words Collide will be held this year on the weekend of August 11 to 13, at the Delta Calgary South Hotel on Southland Drive SE and Fairmount Drive. Details from www.whenwordscollide.org

WWC has a membership cap of 750 and usually sells out by June. The hotel is fully booked by then as well. The January progress report says that membership registration passed 350 at Christmas.

I've been to all of the WWCs since the first one in 2011 and enjoyed all of them. The reports are in OPUNTIAs #71, 253, 266, 282, 318, and 350. The conventions are strictly literary stuff, with panels by authors, editors, publishers, and screenwriters. The dealer bourse is books only, with lots of small-press publishers hawking their wares.

WORLD WIDE PARTY ON JUNE 21

Founded by Benoit Girard (Quebec) and Franz Miklis (Austria) in 1994, the World Wide Party is held on June 21st every year. 2017 will be the 24th year of the WWP.

At 21h00 local time, everyone is invited to raise a glass and toast fellow members of the Papernet around the world. It is important to have it exactly at 21h00 your time. The idea is to get a wave of fellowship circling the planet. Rescheduling it to a club meeting or more convenient time negates the idea of a wave of celebration by SF fans and zinesters circling the globe.

At 21h00, face to the east and salute those who have already celebrated. Then face north, then south, and toast those in your time zone who are celebrating as you do. Finally, face west and raise a glass to those who will celebrate WWP in the next hour.

Raise a glass, publish a one-shot zine, have a party, or do a mail art project for the WWP. Let me know how you celebrated the day.

SEEN IN THE LITERATURE

Zelenitsky, D.K., et al (2017) **Latest Cretaceous eggshell assemblage from the Willow Creek Formation (upper Maastrichtian-lower Paleocene) of Alberta, Canada, reveals higher dinosaur diversity.** CANADIAN JOURNAL OF EARTH SCIENCES 54:134-140

Authors' abstract: "*The Willow Creek Formation (upper Maastrichtian-lower Paleocene) of southwestern Alberta is a poorly fossiliferous formation that preserves a low end-Cretaceous dinosaur diversity compared with most correlative terrestrial deposits in the North American Western Interior. Although only three dinosaur taxa are known from skeletal remains (Tyrannosaurus rex, Hadrosauridae indet., and Leptoceratopsidae indet.), study of hundreds of dinosaur eggshells recovered from several sites in the formation reveals the presence of a more diverse dinosaur assemblage. Morphological and histological analyses of the eggshells indicate the presence of at least seven dinosaur ootaxa (Continuoolithus, Montanoolithus, Porituberoolithus, Prismatoolithus spp., Spheroolithus spp.). These ootaxa are referable to at least two ornithopod and five small theropod species, likely including dromaeosaurids, oviraptorosaurs, and troodontids.*"

"When considering the taxonomic affinity of eggshells and skeletal remains, the present study triples the known dinosaur diversity of the Willow Creek Formation, increasing the number of dinosaurs from three to at least nine species. Probable ornithopod eggshells comprise most of the eggshells preserved, although small theropods were likely an important component of the Willow Creek ecosystem, as most ootaxa can be ascribed to these dinosaurs. Although fossil bones are rarely found in the Willow Creek Formation, fossil eggshells are common compared with most other dinosaur-bearing formations in Alberta. The caliche-bearing deposits, indicative of arid to semi-arid conditions, typical of the formation were likely conducive to the preservation of calcareous eggshells."

Speirs: The big skeletons of dinosaurs are crowd-pleasers in museums, but palaeo-ecologists are more interested in how many species there were in a deposit. A difficult task if, like the Willow Creek Formation, bones are seldom found because of the arid sediments. Using eggshell fragments is one method of finding out how many species roamed the area.

Miyake, F., et al (2017) **Large 14C excursion in 5480 BC indicates an abnormal sun in the mid-Holocene.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:881-884

Authors' abstract: "*Carbon-14 contents in tree rings tell us information of the past cosmic ray intensities because cosmic rays produce 14C in the atmosphere. We found a signature of a quite large increase of incoming cosmic ray intensity in the mid-Holocene (the 5480 BC event) from the measurement of 14C content in North American tree rings. The cause of this event is supposed to be an extremely weak sun, or a combination of successive strong solar bursts and variation of a solar magnetic activity. In any case, 14C variation of the 5480 BC event is extraordinary in the Holocene, and this event indicates the abnormal solar activity compared with other periods*."

"*Here, we report the result of 14C measurements using the bristlecone pine tree rings for the period from 5490 BC to 5411 BC with 1- to 2-y resolution, and a finding of an extraordinarily large 14C increase (20‰) from 5481 BC to 5471 BC (the 5480 BC event). The 14C increase rate of this event is much larger than that of the normal grand solar minima. We propose the possible causes of this event are an unknown phase of grand solar minimum, or a combination of successive solar proton events and a normal grand solar minimum*."

Lingam, M., and A. Loeb (2017-01-02) **Fast radio bursts from extragalactic light sails.** Preprint from arXiv:1701.01109v1 [astro-ph.HE]

Authors' abstract: "*We examine the possibility that Fast Radio Bursts (FRBs) originate from the activity of extragalactic civilizations. Our analysis shows that beams used for powering large light sails could yield parameters that are consistent with FRBs. The characteristic diameter of the beam emitter is estimated through a combination of energetic and engineering constraints, and both approaches intriguingly yield a similar result which is on the scale of a large rocky planet. Moreover, the optimal frequency for powering the light sail is shown to be similar to the detected FRB frequencies. These 'coincidences' lend some credence to the possibility that FRBs might be artificial in origin."*

"Other relevant quantities, such as the typical mass of the light sail, and the angular velocity of the beam, are also derived. By using the FRB occurrence rate, we infer upper bounds on the rate of FRBs from extragalactic civilizations in a typical galaxy. The possibility of detecting fainter signals is briefly discussed, and the wait time for an exceptionally bright FRB event in the Milky Way is estimated."

"*If each civilization broadcasts only a single beam, this allows us to place a bound on the number of technologically sophisticated civilizations. Using this value of f in conjunction with the fact that there are about 1010 habitable Earth-size planets in our Galaxy leads us to the conclusion that there are less than 10,000 FRB-producing civilizations in a galaxy similar to our own. These civilizations must be slightly more advanced than the Kardashev I type ... Although these estimates are undoubtedly on the higher side, they are consistent with the earlier, more optimistic studies involving the famous Drake equation; some of the current theories have also yielded similar values. We reiterate that the range derived above is the upper bound*."

"*We showed that the FRB parameters were consistent with the assumption that they are artificial beams. Along the way, we also demonstrated that there was a natural size for the emitter, and that it was approximately twice the diameter of the Earth. This value was arrived at by adopting two contrasting estimates, the first from energy considerations, whilst the second was obtained through engineering constraints. Subsequently, we illustrated that the frequency needed to power the light sail was consistent with those observed for FRBs, lending further credence to our hypothesis."*

"Our analysis gave rise to many interesting consequences. It was shown that the payload of the light sail must be approximately 106 tons, and that the beam has a characteristic period of approximately one week. Moreover, under certain simplifying assumptions, we derived an upper bound on the total number of intelligent civilizations in a galaxy (akin to the Milky Way). We also suggested that there may be a potentially large number of smaller light sails which are presently undetectable as their spectral flux densities are too low. Using the all sky cosmological rate of FRBs, we argued that an FRB might originate within the Milky Way once every several centuries, and the striking Galactic event could be utilized in improving our understanding of FRBs."