

OPUNTIA

368

Late February 2017

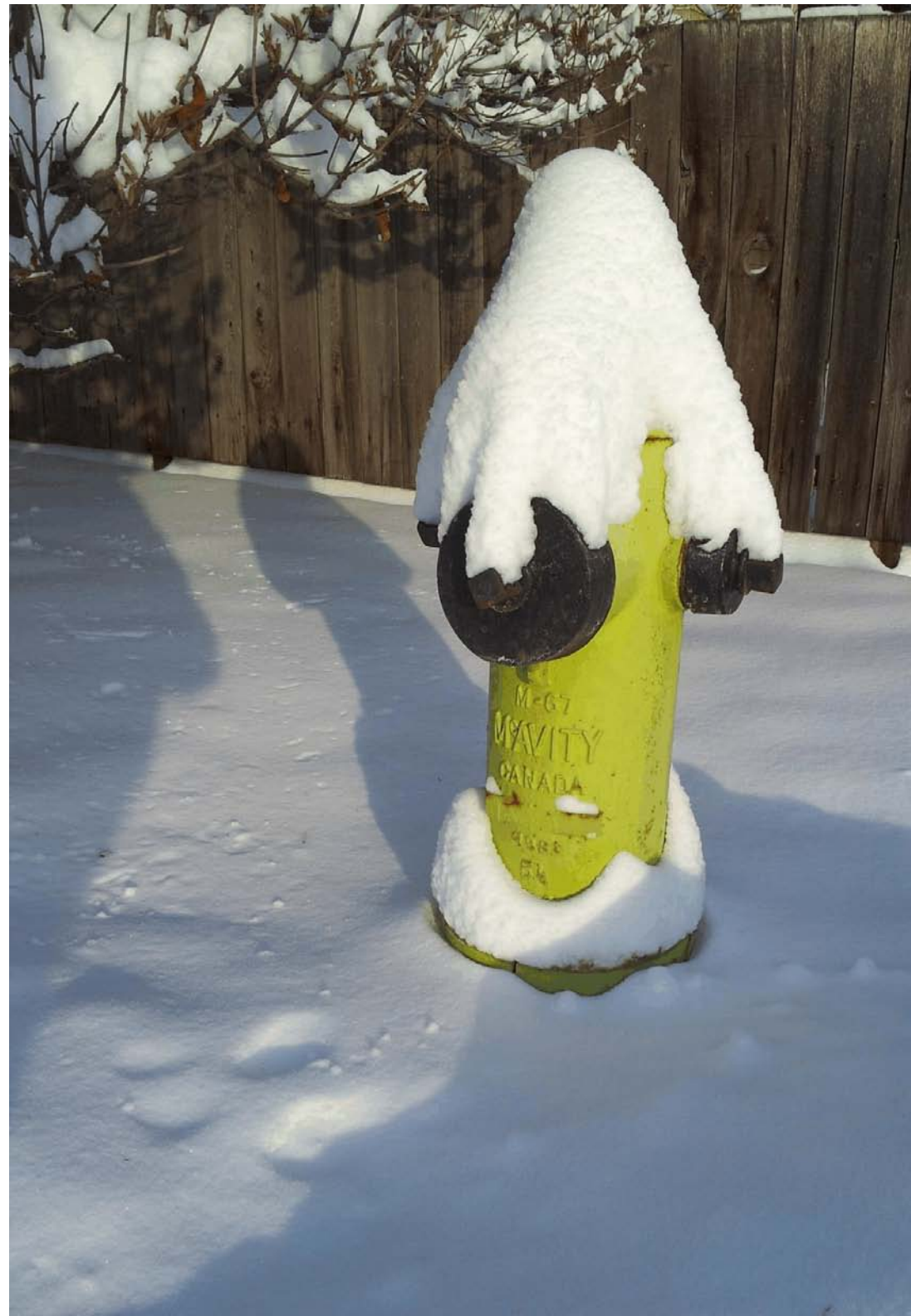
Opuntia is published by Dale Speirs, Calgary, Alberta. It is posted on www.efanzines.com and www.fanac.org. My e-mail address is: opuntia57@hotmail.com When sending me an emailed letter of comment, please include your name and town in the message.

SNOW BUSINESS IN COWTOWN

photos by Dale Speirs

In issue #363, I showed a sequence of photos of my front yard in December. Since then, it's been a cold snowy winter, interrupted by only one chinook. I'm glad I'm retired and don't have to drive to work anymore.

This hydrant is on my boulevard. The photo was taken February 6 after 25 cm of snow during the previous 25 hours. One cm of snow per hour; that's not too much. To make things even more symmetrical, the temperature when I took the photo was -25°C.



At bottom left is my yard on January 11 after a 15-cm snowfall at -20°C.

At top right, the photo was taken a week later when a chinook blew in. After it passed, temperatures stayed just below freezing, so the view didn't change for a couple of weeks.

At bottom right is my yard on February 6, just after the 25-cm snowfall concluded and I finished shoveling the sidewalks. Because the house is on a corner lot, I have three times as much sidewalk to clear as my neighbours.

A chinook arrived on February 9 and the cycle began again.



Human curling at Olympic Plaza on February 10. The inner tubes are attached to polished disks that are very slippery to enable the slider to get across the rink.



And they're off!





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.

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

GLOW FESTIVAL
photos by Dale Speirs



Calgary has a lights festival in February to break up the monotony of the long winter nights. It was renamed this year as the Glow Festival and went the weekend of February 17 to 20. At Olympic Plaza were 2-metre-tall prisms, shown here by day and by night.





Stephen Avenue pedestrian mall. Below are dancers with light-spangled umbrellas. At right, a block further away, was a tricked-out bicycle. I took the second photo when I noticed the children's shoes.



At right: James Short Park is at Centre Street and 4 Avenue SW, just at the boundary line of Chinatown. This light sculpture is called Chopsticks Chandelier, and was suspended from a construction crane over the centre of the park. It was fashioned by Jeremy Tsang in memory of the Chinese labourers who worked on the transcontinental railroad when it came through Calgary in 1883. After the railroad was completed in 1884, many settled in Calgary.

Below: All around downtown were various light displays projected onto buildings.



This light sculpture at Fifth Avenue Place was called Pulse Quasar.



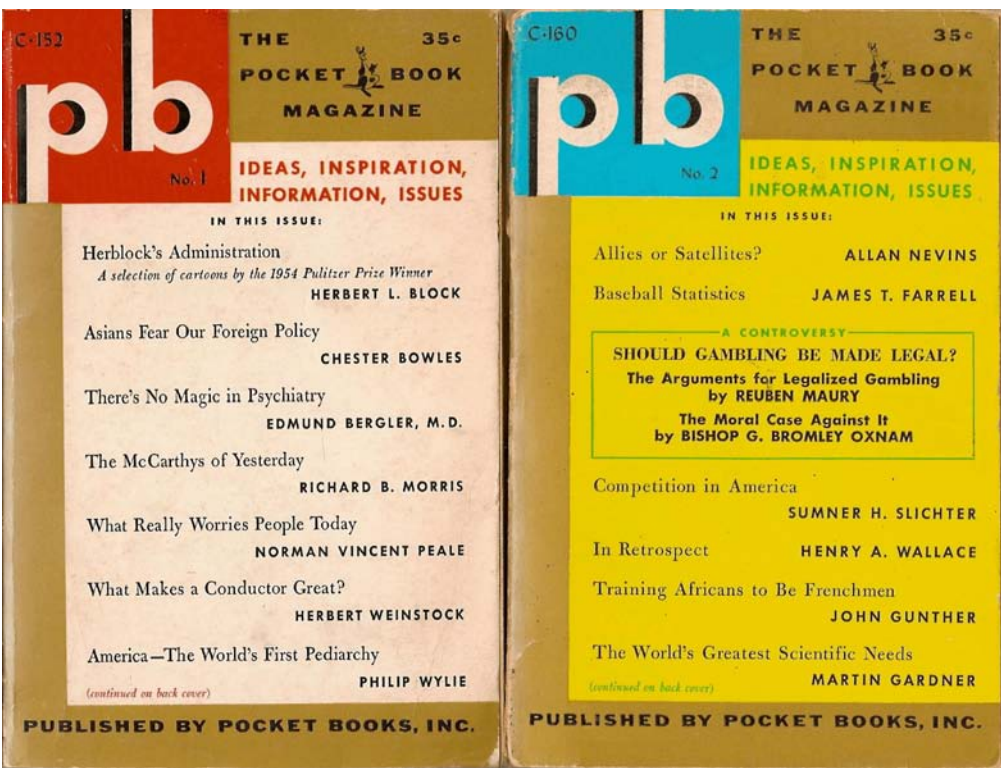
LITERA SCRIPTA MANET AND MAGAZINES OF YORE: PART 3
by Dale Speirs

[Parts 1 and 2 appeared in OPUNTIA #365 and 366.]

Good Things In Small Packages.

There have been a number of attempts over the decades to publish magazines in mass-market paperback format. The idea is that they will reach readers who don't browse the regular magazine racks, and that paperbacks will stay longer on the rack if they have no visible date. It never seemed to work, but publishers kept trying. I've always had my doubts about the belief that paperback readers never look at magazines.

In OPUNTIA #306, I wrote about a series of science fiction paperback magazines from 1978 to 1990. Here I look at an attempt in 1954 and 1955 to do the same with a general interest paperback series titled THE POCKET BOOK MAGAZINE. It came from Pocket Books Inc, the publishers. I have the first two issues. An Internet search didn't turn up much, other than there was a third issue before PBM died.



The covers of PBM list the contents but not in the order they actually appear. Most of the current events discussed in these issues have lost any interest to our generation, and the vast majority have been made moot by subsequent history. As an example, editorial cartoons by Herblock, featured in the first issue, are mostly jokes about Eisenhower and Congress, incomprehensible to us today unless well read in history, no matter how funny they may have been back then. Topical humour does not last.

The opening editorial of PBM #1, by Franklin Watts, explains that the magazine will have no editorial point of view, and will have articles appearing in the same issue that conflict with each other. That does indeed seem to be the case.

Watts also writes that the paperback format will encourage people to save PBMs as permanent books in their libraries. My copies, six decades after publication, had to be read very carefully to keep the pages from cracking loose from the petrified glue and falling out. That is why I show no scans of interior pages, since to force open the paperback so the pages are flat on the scanner would cause the book to disintegrate.

PBM #1 begins with "America: The World's First Pediarchy" by Philip Wylie. His complaint is the familiar "kids these days" line, and how we spoil our children. He'd get a shock to see what today's soccer moms are like. Television may have been bad for the Boomer generation, but that is nothing compared to kids these days with their smartphones.

McCarthyism is the subject of "Personal Liberties Are Indivisible" by Thurman Arnold. The greatest damage is done when people begin accepting guilt by association as proof of high crimes and misdemeanors. It works both ways. Further on in this issue, Devin Garrity asks "How Liberal Are The "Liberals"?" He notes that their favourite tactic is to assign a label to individual enemies and then attack the labels. The details of politics and the cast of characters are constantly changing, but the procedures they use are no new thing.

"Asians Fear Our Foreign Policy" writes Chester Bowles, who had considerable experience living in Asian countries and learning to understand their foreign cultures. He points out that in the immediate aftermath of World War Two, countries that defeated Communism were independent and succeeded, while colonies in southeast Asia went Communist because the Reds were identified as liberators.

To those who espoused the domino effect, and remember this was in 1954, he pointed out that Vietnam, Laos, and Cambodia had no love for Red China and would not become its colonies after throwing out the French.

Richard B. Morris notes in “The McCarthys Of Yesterday” that McCarthyism was no new thing. American senators and state politicians many times went on the warpath against evil infiltrations of [insert name of group] who were attempting to overthrow a prosperous and peaceful society in the USA. The name of the group varied. Jews were a traditional enemy, but Catholics had to be put in their place, said many. The Negroes had so many politicians against civil rights that it wasn’t a partisan issue.

“What Really Worries People” by Norman Vincent Peale is based on his decades as a church minister. His conclusion was that financial or marital problems were just the outward expression. The real cause was the person’s mental outlook on life. Depression is the natural state of the brain, and people must learn to look to an optimistic future instead of blaming everything on the President or their spouse.

The most eye-opening article is “What A Modern Moslem Believes” by Mohammed H. El-Zayyat. It is a calm straightforward statement of the basic principles of Islam, not at all what the modern radicals espouse. The essay suggests the reason why Islam in general, and moderate Muslims in general, are in the ascendent today. The basic principles have not been lost, as was the case with Christianity. Weak-willed Christianity dominates today, with watered-down beliefs and political correctness, while Islam makes it clear that once a Muslim, always a Muslim, and there is no god but Allah.

PBM #2 has a pro/con pair of articles about legalized gambling. That problem was settled long ago in both Canada and the USA. Anyone who wants to ruin themselves can now do it in countless casinos or, in the alternative, stop off at the neighbourhood convenience store and buy lottery tickets.

I don’t follow sports myself but James T. Farrell’s history of baseball statistics was an interesting read. The statistics are increasingly less comparative the further that one goes back. Some ballfields had smaller outfields than others, which increased home runs batted in by local players. The ball itself changed from a live ball (high rebound) to a dead ball (dropped onto the turf and lay there) and back again. This obviously affected a batter’s success even if he was hitting the ball at the same rate.

Margaret Mead, in her article “Why Large Families Are Fashionable Today”, gets it completely wrong when she predicts the average American family size would be four to six children in the future. As it was, North American births dropped below the replacement level in the postwar prosperity, helped along by the invention of the birth control pill.

To sum up the two issues of PBM at hand, they were basically like READER’S DIGEST but more political and unabridged.

VENUS IN HER GLIMMERING SPHERE: PART 3
by Dale Speirs

[Parts 1 to 2 appeared in OPUNTIA #324 and 329.]

Old Venus.

The space probes of the 1960s destroyed a time-honoured staple of science fiction, the steamy jungles of Venus, and made obsolete thousands of stories. There is a faint hope though, and S.M. Stirling has shown us the way with his 2006 novel THE SKY PEOPLE. This is set in an alternative timeline where the Venus and Mars probes discovered abundant life on both planets. (This book is part of a series which also includes Mars.) Just for fun, Kennedy served a second term as President.

Not only that, there are humanoids, if not actual humans on Venus as native life. The Venusian jungles, however, present a problem. They have a mixture of Carboniferous life (giant dragonflies with 1-metre wingspans), Cretaceous dinosaurs, and Pleistocene sabertooths. They are so much like the Earth fossils that biologists are tying themselves into knots attempting to come up with explanations. It cannot be parallel evolution, which never duplicates species.

Both the Americans and the Russians have colonized Venus. The colonies are a mixture of high technology, mostly electronics, and agrarian tech, such as ceratopsians trained as draft animals because that’s cheaper than shipping in bulldozers and tractors from Earth, plus fuel and spare parts. Airships are used for the same reason instead of jet-powered aircraft.

Meanwhile, back in the highlands, the natives are restless. The humanoids qua humans are constantly battling the beastmen, or Neanderthals. There are subplots and soap operas to pad out the novel. After all the to- and fro-ing in the middle section of the novel, we reach the Cave of the Mysteries. It must be important because the natives speak of it with capital letters.

In the denouement, everything comes down to an alien intelligence importing life from Earth at intervals over the past hundreds of megayears and then observing the consequences. With that discovery, the novel abruptly terminates, obviously awaiting a sequel.

Colonization.

STARR OF SPACE was a deservedly brief old-time radio series (OTR) that ran in 1953 and 1954. (This and other OTR shows are available as free mp3s from www.archive.org.) It was a children’s show which probably annoyed the kids of that era who wished their parents would buy a television set so they didn’t have to listen to the radio.

“Mericus Plague”, written by Tom Hubbard and Fred Egger, is about a colony of Earthlings who are suffering from an epidemic. The natives of Venus, treated about as well as indigenous tribes in North America, are understandably reluctant to supply the cure. The planet is being terraformed to higher oxygen levels, which is rough on the natives. They can’t be coddled just to slow down the imperialists.

Captain Starr blasts off from Earth to investigate. The extra oxygen has forced the natives into the highlands. Starr visits them to find the cure for the disease. The elders are forced to cough it up so that the overlords can survive. To be fair about it, they are promised assistance in adapting to the terraforming. This will allow them to return to the valley and resume working for Massuh on de olde plantation. They don’t actually sing “Swing Low, Sweet Chariot”, but probably because the writers didn’t think of it.

CONTAINMENT (2010) is a novel by Christian Cantrell about a colony on Venus called V1. It has 1,100 colonists who live in a massive dome, and the population is now into its fifth generation of locally-born humans. The book is a series of infodumps about the Venus colony, Earth’s tribulations as it runs into the limits to growth, and assorted nifty SF ideas that the author crams in whether they fit or not.

Terraforming Venus is slow, and the colony has to limit its population to the amount of oxygen that can be produced by aeroponic culture. That is the cultivation of ferns suspended in midair inside the dome and watered and fed by sprays of nutrient solutions.

The main protagonist is Arik Ockley, the second human born on Venus. An engineer, he is helping to develop new technology such as artificial photosynthesis to enable the colony to expand. He stumbles into a hidden conspiracy, and as one infodump follows another, the big picture is blurred by all the emerging details. A question arises: Is V1 actually on Venus, or is it a last-ditch survival attempt on an incredibly polluted Earth?



The Name
VENUS
*Still stands for
Quality in Pencils*

In wars of olden days, Venus—goddess of love—became known as Victrix or Victory. Thus did the ancient Romans transform their symbol of perfection—just as we do today. Despite wartime control of supply and manufacture, the new ‘Utility’ and ‘War Drawing’ pencils produced by Venus conform to the highest possible standard of quality.

*from PUNCH,
1943-04-21*

The Venus Pencil Co. Ltd., Lower Clapton Road, London, E.5

ALBERTA BOUND AND GAGGED

by Dale Speirs

AB NEGATIVE (2015) is an anthology of crime stories mostly set in Alberta, edited by Axel Howerton. It leads off with “Murder On The Mall” by Randy McCharles. The story venue is the Stephen Avenue pedestrian mall in downtown Calgary, the heart of the city. The narrator is a private investigator hired by a shop owner to deal with punks trying to shake him down for a protection racket. One of them is gunned down in front of the store by an unknown assailant. The PI does his investigation while the police do theirs. It is, of course, the former who succeeds in tracking down the culprit. The story is written in a crime noir mode, not quite the image that the Calgary Tourist and Convention Bureau would like.

“Freezer Breakdown” by Susan Clader is about a man dominated by his mother to the point where he kills her with an insulin overdose to get free. He subsequently realizes that he needs a domineering woman to survive. An aggressive neighbourhood spinster attaches herself to him after the funeral, at which point the reader can guess the future.

“Devil’s Due” by Axel Howerton is a vignette about a drug dealer beating up two of his street pushers. They violated his rule of not peddling to teenagers or housewives by hanging around Ernest Manning High School (an actual Calgary school named after Alberta’s longest serving premier). The story plays for emotion rather than plot.

“Movable Type” by S.G. Wong is set in an alternative Los Angeles and has nothing to do with Alberta. She writes about a Chinaman who claims to have invented a typesetting device for Chinese ideographs that works twice as fast as anything else. The plot quickly goes sideways into a tong war and then once around the block for a twist ending.

“A Dead Reckoning” by Robert Bose is about a man who survives being killed multiple times because he subscribes to a revival service. He leads a dangerous life among the criminal element and is constantly making fatal mistakes. Each revival becomes more difficult, until he realizes he has reached his final resurrection.

“The Workman’s Friend” by Janice MacDonald is a cliched cozy mystery about a husband murdering his wife. Nothing really to say about it.

“The Coelacanth Samba” by Al Onia isn’t so much about a murder in the Calgary oilpatch as it is about how the killer disposed of the body. A very large aquarium with deep gravel comes in handy for more than just fish.

The most authentically Calgary story in this anthology, which wouldn’t make sense in any other city, is “Cappy’s Smart Monkey” by Sharon Wildwood. It is set in pioneer Calgary after the railroad arrived in 1883 but when it was still a village. A pair of bank robbers ride into town but learn that it won’t be easy to escape after knocking over the local bank.

Calgary then was in the middle of nowhere. The robbers would have no place to hide from the Mounties if they ran east, south, or north over the treeless prairies. To the west were impenetrable mountains. Taking a train would be foolhardy because they would be met at the next station by police forewarned by telegraph.

The monkey of the title was the pet of the Calgary Fire Dept. chief Capt. James “Cappy” Smart. The Captain really did exist, an eccentric Scotsman who had a Calgary school named after him. He made good in Calgary from the 1880s to the 1930s, and was famous as a publicity-loving oddball who was always up to weird doings.

Getting back to the bank robbers, they are just about to pull off a raid when the village is flooded by heavy rain and the Bow River washes out over the floodplain. The two scoundrels decide to switch to an insurance dodge to take advantage of the flood but those plans aft agley. All sorts of historical events are worked into the plot. An amusing read.

“Silicone Hearts” by Brent Nichols is set in a world where humanoid robots are common. A PI is asked to locate a Kenbot, a male lovebot, whose mistress suspects foul play. As he checks around, he meets a group of five robots dressed up in superhero costumes determined to protect their fellow bots. There are assorted encounters with bikers and mad scientists. The plot is standard superhero action-adventure movie. With any luck, the author might be able to sell it to Hollywood.

“A Little Bit Easy” by Therese Greenwood is about a rancher who rents a vacant house on his property to a young woman from New Orleans. The ranch is in southeastern Alberta, which is desert flatlands, like North Dakota only not as exciting. It is almost completely uninhabited rangeland. At first the rancher

thinks the woman is hiding from someone. It transpires that she is actually using voodoo to lure an evil man and dispose of him away from any prying eyes. There is no better place to be unseen than in the middle of a desert.

“Butch’s Last Lesson” by R. Overwater is a biker gang/drug dealer story where everyone is a loser. Worse yet, it’s boring.

“Hell Hath No Fury” by Dwayne Clayden has a PI investigating a mean-streets domestic problem. The PI blunders his way through the case, which ends in a pile of corpses. Average.



“Sudden Death” by Jayne Barnard is a humorous story about inept thieves in Calgary who decide to do their crimes during a Stanley Cup game in which the Flames are playing.

Operating on the correct assumption that every security guard will be watching television

screens instead of closed-circuit screens, they get their loot. But then complications set in, with bungling by the thieves not helping either. A funny twist ending.

The final story is “The Mystery Of The Missing Heir” by Kevin Thornton, which brings Sherlock Holmes to Fort McMurray in 1893 to track down Queen Victoria’s grandson, alias Jack The Ripper. This was long before the Athabasca Tar Sands mines began operations, and the village economy was based on hunting and furs. A good place for a bloodthirsty madman to be exiled, where he can take it out on wildlife instead of women. Clever.

Overall, I would give this anthology a 60% grade. Some good stories, several bad ones, and lots of average stories.

FROM THE BARGAIN BIN: PART 2

by Dale Speirs

[Part 1 appeared in OPUNTIA #367.]

By The Light Of The Silvery Screen.

Today the general public thinks of movies when they think of science fiction. Yes, the literary stuff is still popular, but in dollar terms wouldn’t even be a line item for movie studios. It has been pointed out that in THE BIG BANG THEORY, one of the most successful television series of modern times, the characters don’t make reference to Asimov or Heinlein, they mention only movies or video games. (Asimov? Didn’t he write that Will Smith movie?)

Which brings us to JAR JAR BINKS MUST DIE (2011) by Daniel M. Kimmel, a general survey of SF movies. He begins by noting the prejudice against them by critics and film studios, who acknowledge their money-making potential but deny their validity as artistic works.

It is commonplace for actors or directors to say of their latest production that it isn’t really SF. Instead, it’s about human relationships or a statement about (insert political cause), and has nothing to do with talking squids. Dave Langford’s zine ANSIBLE has a regular department reporting such quotes. Kimmel points out that Meryl Streep or Jennifer Anniston never say that their latest movie isn’t a romcom, it’s about human relationships, etcetera.

Kimmel looks at the restored version of Fritz Lang’s 1927 silent film METROPOLIS. It was produced as a 3-hour movie, with intermission, but was chopped to 90 minutes for theatrical release. The chopping was done differently in each country, and fans soon noticed that some versions had scenes others didn’t and vice versa. An entire industry developed in which restored versions were released every decade or so. In 2010, a complete print was discovered in Argentina, and a full version then released. Critics immediately claimed this proved it wasn’t SF, notwithstanding robots and future societies, and that it was about human relationships, etcetera. There’s just no pleasing them.

This book is a series of film reviews, from the popular and great SF movies to some which should have been smothered at birth. Kimmel notes that many SF movies from the 1950s and 1960s have contexts that are unknown to the Millennials today. Back then there was a real fear of invasion or nuclear war

among the general public, which carried over into all those alien invasion movies. Boomers who were kids back then have a partial understanding because we soaked up the fear from our parents, but to Millennials it seems like so much needless worry. Didn't we know the Berlin Wall was going to fall?

Some movies are completely obsolete. The Millennials know what a book is because they've seen their Boomer parents reading them. Two more generations from now, FAHRENHEIT 451 will be completely baffling. What's a book, grandpa? When I think about it, the story could be adapted for them, with computer techies rushing to houses and deleting illegal files on offline hard drives.

Some SF movies failed because they demanded too much intelligence from their audiences. The best example is 2001: A SPACE ODYSSEY, incomprehensible to the general public and film critics alike. The trite response was to consider it an acid trip, while the critics tied themselves into knots because it definitely wasn't about human relationships, etcetera.

A very popular technique for criticizing SF films is to compare the worst of it with the best of mundane movies. Westerns suffered the same problem when studios declared them to be kiddie shows with singing cowboys, and critics lumped HIGH NOON in with them. Genre fiction sells better than what I call pretentious drivel. The bad reviews of SF are the result of envy, not objective standards.

They're Here!

It didn't help that Hollywood studios were their own worst enemies when it came to marketing SF movies. An example is THE MONOLITH MONSTERS (1957) which is actually quite a good movie but stumbled at the gate with a title that put it in with the teenager horror flicks.

The movie begins with a meteorite crashing into mountains above a desert town, scattering chunks of obsidian-like rock in the upper slopes. Some of the rocks are picked up by local yokels, such as a girl on a school field trip or a government geologist. As they find out the hard way, when the rocks are wetted, they grow up into giant crystals, towering up into the sky until they topple. On smashing to the ground, the crystals shatter and spray fragments everywhere, which in turn grow up into new giant crystals.

The exponential spread of these implacable monoliths can be imagined. Their growth is constrained by the need for silicon for mass, and water to allow chemical reactions. Humans who handle the rocks will die because silicon is an essential micronutrient in the body, and the body is basically a bag of water. Both the hospital and the field geologists are desperately trying to figure out how to stop the monoliths from spreading out of the mountains.

The problem is that the surrounding terrain is sandy desert. Common sand is silicon dioxide. If the monoliths reach the desert, they will be unstoppable, and it will just be a matter of time before Earth is covered with them. Problem #2 is that the weather forecast calls for sustained heavy rainfall. The monoliths begin marching down the valleys toward the desert.

At the hospital, they discover that a saline solution stops the rocks's effect on humans. The geologists extrapolate this and decide to flood the desert by blowing open a reservoir dam to take out salt deposits adjacent to the desert. The plan works and the monoliths are stopped.

The movie follows the traditional route of disaster movies, from unawareness of the threat to realization of impending doom to a plan that succeeds with seconds to spare. The science behind the monoliths is reasonably believable. Unlike many alien invasion movies, the monoliths are inanimate, just part of an uncaring universe.

The SFX are well done, even for the 1950s. Good humour in the movie as well, such as the scene where the heroes need to know how long the rain is going to last. They telephone the local Weather Bureau office, whose meteorologist answers their questions by looking out his office window and guessing.

Unlike many bad movies, then and now, where it all depends on a man-of-the-hour renegade scientist bucking the system, this one emphasizes the co-operation between geologists, medics, and local authorities. They work together to find the solution, instead of depending on a superhero to save them. As the lady sang, we don't need another hero.

ZINE LISTINGS

[I only list zines I receive from the Papernet. If the zine is posted on www.efanzines.com or www.fanac.org, then I don't mention it since you can read it directly.]

CHRISTIAN NEW AGE QUARTERLY V22#4 (US\$5 from Catherine Groves, Box 276, Clifton, New Jersey 07015-0276) In this issue, a look at the boundaries between traditional story-telling, folklore, legends, and religion, which often blur into each other. Lots of letters of comment. An extended article on a hiking trip in the Grand Canyon, which, to be honest, I couldn't finish.

SEEN IN THE LITERATURE

Han, J., et al (2017) **Meiofaunal deuterostomes from the basal Cambrian of Shaanxi (China).** NATURE 542:228-231

Authors' abstract: "*Deuterostomes include the group we belong to (vertebrates) as well as an array of disparate forms that include echinoderms, hemichordates and more problematic groups such as vetulicolians and vetulocystids. The Cambrian fossil record is well-populated with representative examples, but possible intermediates are controversial and the nature of the original deuterostome remains idealized.*"

"Here we report millimetric fossils, Saccorhytus coronarius nov. gen., nov. sp., from an Orsten-like Lagerstätte from the earliest Cambrian period of South China, which stratigraphically are amongst the earliest of deuterostomes. The bag-like body bears a prominent mouth and associated folds, and behind them up to four conical openings on either side of the body as well as possible sensory structures. An anus may have been absent, and correspondingly the lateral openings probably served to expel water and waste material."

"This new form has similarities to both the vetulicolians and vetulocystids and collectively these findings suggest that a key step in deuterostome evolution was the development of lateral openings that subsequently were co-opted as pharyngeal gills. Depending on its exact phylogenetic position, the meiofaunal habit of Saccorhytus may help to explain the major gap between divergence times seen in the fossil record and estimates based on molecular clocks."

Speirs: This is, believe it or not, an ancestor of vertebrates from 540 megayears ago. It is about the size of a grain of rice and looks more like a sponge but did have the rudiments of gills. The image, from the article, is perhaps misleading as it is a view looking down onto the bag-like creature. Most people will, as I did at first glance, think it is a head-on photo of a strange fish.



Smith, K.E., et al (2017) **Spontaneous oligomerization of nucleotide alternatives in aqueous solutions.** ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES 47:3-11

Authors’ abstract: “*On early Earth, a primitive polymer that could spontaneously form from likely available precursors may have preceded both RNA and DNA as the first genetic material. Here, we report that heated aqueous solutions containing 5-hydroxymethyluracil (HMU) result in oligomers of uracil, heated solutions containing 5-hydroxymethylcytosine (HMC) result in oligomers of cytosine, and heated solutions containing both HMU and HMC result in mixed oligomers of uracil and cytosine. Oligomerization of hydroxymethylated pyrimidines, which may have been abundant on the primitive Earth, might have been important in the development of simple informational polymers.*”

Speirs: One of the basic arguments about the origin of life is whether RNA or proteins came first. (DNA is derived from RNA, so we know it wasn't first.) This paper looks at chemicals which could have replicated in early Earth conditions and then later given rise to RNA.

Gumsley, A.P., et al (2017) **Timing and tempo of the Great Oxidation Event.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:1811-1816

Authors’ abstract: “*The first significant buildup in atmospheric oxygen, the Great Oxidation Event (GOE), began in the early Paleoproterozoic in association with global glaciations and continued until the end of the Lomagundi carbon isotope excursion ca. 2,060 million years ago (Ma). The exact timing of and relationships among these events are debated because of poor age constraints and contradictory stratigraphic correlations. Here, we show that the first Paleoproterozoic global glaciation and the onset of the GOE occurred between ca. 2,460 and 2,426 Ma, about 100 megayears earlier than previously estimated, based on an age of $2,426 \pm 3$ Ma for Ongeluk Formation magmatism from the Kaapvaal Craton of southern Africa. This age helps define a key paleomagnetic pole that positions the Kaapvaal Craton at equatorial latitudes of $11^\circ \pm 6^\circ$ at this time.*”

“*Furthermore, the rise of atmospheric oxygen was not monotonic, but was instead characterized by oscillations, which together with climatic instabilities*

may have continued over the next approximately 200 My until or before 2,250 to 2,240 Ma. Ongeluk Formation volcanism at ca. 2,426 Ma was part of a large igneous province (LIP) and represents a waning stage in the emplacement of several temporally discrete LIPs across a large low-latitude continental landmass. These LIPs played critical, albeit complex, roles in the rise of oxygen and in both initiating and terminating global glaciations. This series of events invites comparison with the Neoproterozoic oxygen increase and Sturtian Snowball Earth glaciation, which accompanied emplacement of LIPs across supercontinent Rodinia, also positioned at low latitude.”

Speirs: The first microbes that developed photosynthesis not only had a better energy source for life, but the oxygen they emitted was poisonous to the pre-existing anaerobic life and wiped them out except for a few microhabitats such as seafloor volcanic vents. As this paper reports, the flood of oxygen was not a steady flow but oscillated at first because of feedback loops and LIPs, which were massive lava flows that covered continents.

Bagby, S.C., et al (2017) **Persistence and biodegradation of oil at the ocean floor following Deepwater Horizon.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:E9-E18

Authors’ abstract: “*The Deepwater Horizon event led to an unprecedented discharge of about 4.1 million barrels of oil to the Gulf of Mexico. The deposition of about 4 to 31% of this oil to the seafloor has been quantified previously on a bulk basis. In this work, we assess the extent of degradation over 4 year post-spill for each of 125 petroleum hydrocarbons that contaminated the seafloor. As expected, chemically simpler compounds broke down more quickly than complex compounds, but degradation rates also depended on environmental context. Breakdown often was faster before seafloor deposition than after and for oil trapped in small droplets than for oil in large particles. These results provide a basis to predict the long-term fate of seafloor oil.*”

Speirs: See OPUNTIA #70.1G for a detailed report on the disaster.

UTILITY BOX ART IN CALGARY

photos by Dale Speirs

This example, with a close-up of the pattern, is downtown on the corner of Government House. The stately pile, once a teachers college, is now used for provincial government offices.

