OPUNTIA 413

Victoria Day 2018

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.

CHESTERMERE LAKE 2018-05-08
photos by Dale Speirs

I had to do a business errand out at Chestermere Lake, a satellite town east of Calgary about a 15-minute drive across the flatlands. I never have reason to get out there otherwise, so after taking care of business, I drove around for a look.

Going down West Chestermere Drive, I spotted a house with several large pieces of topiary, shown on this page and the cover. They speak for themselves.

The area was settled in the late 1800s and was originally called Kinniburgh Slough after the first homesteader. When the Western Irrigation District was formed a century ago, they built a levee across each end of the slough and converted it into a reservoir. By itself, the slough didn't collect enough water for irrigation farming, so the WID built a canal from the Bow River at Calgary to the south end of what became the lake.

During the Great Depression, they sold beachfront lots to Calgarians wanting a summer cottage. The name was changed to something more upscale, after the English manor house of one of the major investors. It wasn't until the 1990s that settlement took off, and Chestermere developed into a commuter city of about 10,000.

Those beachfront lots now have McMansions starting in the $3 or $4 million range, although the urban sprawl out onto the flatlands has houses mostly in the $500,000 range. Location is everything, as the realtors say.

Left: Looking southwest from the south end of Chestermere Lake. Calgary and the headwaters of the canal are about 30 km over the horizon.

Below: The canal empties into the reservoir. The lake is kept low in winter so that the pack ice will not damage boat docks, then slowly refilled with spring flood waters.

Left: Turning the camera around from the views on the previous page and looking into the lake.

Below: The south end of the lake, showing the original levee from a century ago, still holding up as strong as ever.

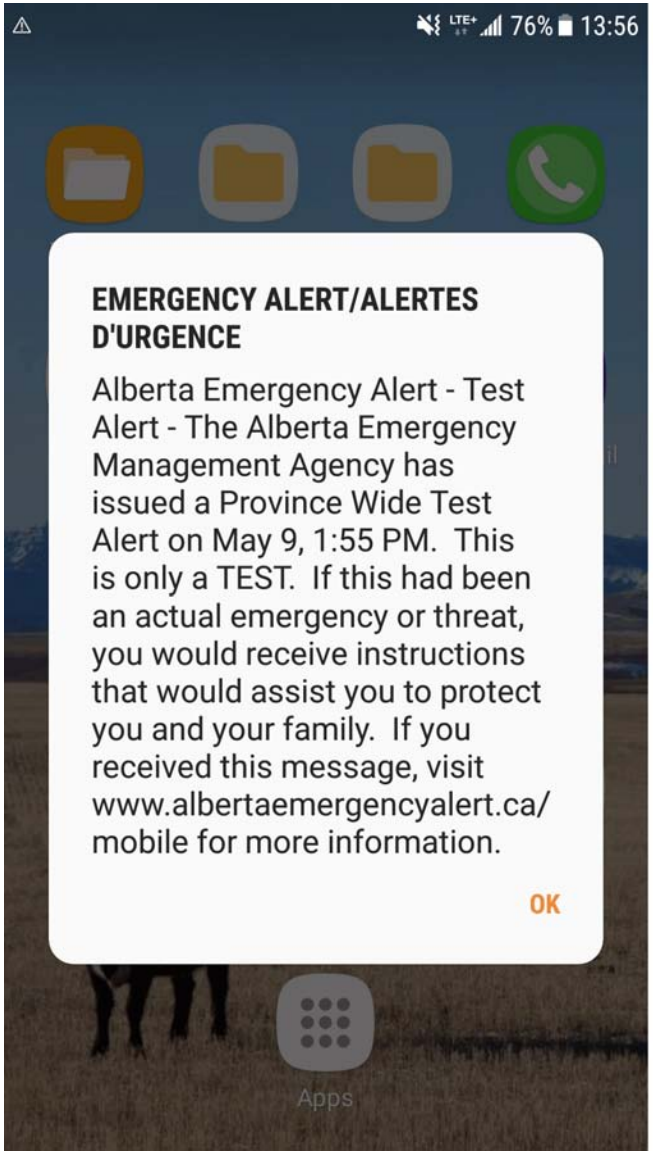
Above: You can't afford any of these houses. Any ten of us together can't afford one.

Right: On my way back home, I stopped at a viewpoint in central Calgary, showing the start of the canal. The headwaters and diversion dam on the Bow River are hidden by trees in the distance. The freeway is Deerfoot Trail, Calgary's largest parking lot during peak hours. I took this photo about 14h00 when traffic was light.

THE NUMBER YOU HAVE DIALED

by Dale Speirs

The federal Ministry of Communications mandated that all telecoms must provide a uniform emergency text alert service with no opt-out choice to cellphones running on LTE or better. Each province will run the alert service by its own disaster services agency. After the debacle earlier this year when Hawaiians received a false alarm about missiles headed their way, the provincial governments have bent over backwards.to ensure there will not be any false messages. We shall see.



May 7 was the test date for Ontario and Quebec. It was a miserable failure. No one in Quebec got a text, and very few in Ontario. The contractor blamed it on coding errors.

May 9 was the test date for the rest of Canada except Nunavut. Each province was supposed to send out a text at 13h55 local time.

In Alberta, it was late by one minute. I took a screen shot of my smartphone; notice the time stamp. My phone was on screensaver at the time, but the alert automatically opened the phone and displayed the message overtop the home screen.

LONG TIME PASSING

photo by Dale Speirs

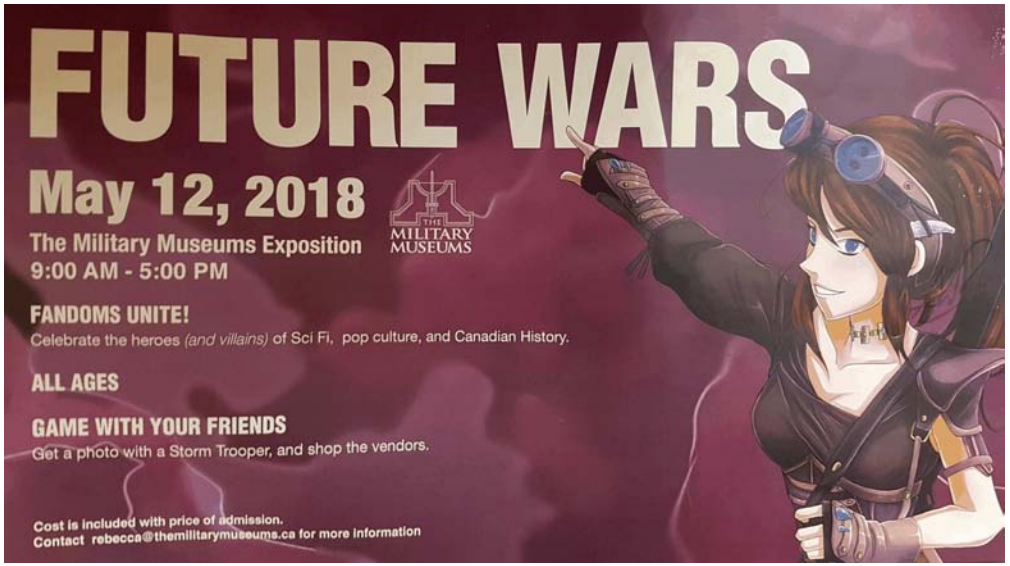
Billy's News, established 1910 when Calgary was still a small town, closed earlier this year. It was the last news agent in the city. I took the photo below on May 10 as I walked by the vacant store. Drug stores and convenience stores still have magazine racks but they are smaller and smaller each passing year, and only carry the most popular magazines.

When I moved to Calgary in 1978, Billy's News was a weekly stop for me to pick up oddball magazines and specialized hobby magazines not found elsewhere. About the early 2000s, I stopped visiting that often, and by the time it closed, hadn't set foot in it in years.

When I bought my house in 1982, there was a CALGARY HERALD street box at the next corner, and every second corner through the neighbourhood. Each morning on the way to work, I would first walk to the corner and buy a newspaper before driving off. They vanished sometime in the 1990s, as I and many others realized that we had read yesterday on the Internet all the news in it. The only street boxes left today are the free newspaper STAR METRO and advertising magazines. Sic transit gloria litera.

MILITARY SF
photos by Dale Speirs

On May 12, the Calgary Military Museums staged a one-day event called Future Wars, with the help of local cosplayers and SF gamers. The museum takes up one gigantic building about the size of three football fields, plus dozens of vehicles parked outside on the grounds. It uses a plural in its name because it is a merger of several military museums. At one time in Calgary, each army regiment, militia regiment, navy stone frigate, and air force unit had its own little museum. They were combined a couple of decades ago. Each unit has a wing in the museum to display its history. In addition, there are thematic exhibits such as the Cold War, the Balkans, and Afghanistan.



I took in the event and browsed the regular displays as well, taking about 200 megabytes worth of photos. I won't jam them all into one issue of this zine, as it would be about 70 pages long and take you about fifteen minutes to download the pdf. Instead, this issue will concentrate on the Future Wars event, and there will be a series of articles about each aspect of the museum in following issues of this zine.

The museum has world-class dioramas. Full-size dioramas, using real equipment, showed individual units in battle. Tabletop dioramas were used to show the full extent of battles that Calgary units were involved in.

Outside the museum, these hombres demonstrated target shooting with Old West handguns. They had to get within about three paces to hit the balloons because the guns were temperamental. Contrary to Hollywood, the revolvers didn't fire thirty rounds in a battle with every shot hitting home. The guns had to be worked hard with one hand, while pulling the trigger with the other. A re-enactor remarked that it was a wonder any gunslinger could even hit the side of a barn. He said the best weapon in the Old West for gunfights was a shotgun because there was a better chance of winging the target.

One of the gamers explains a board to a family.

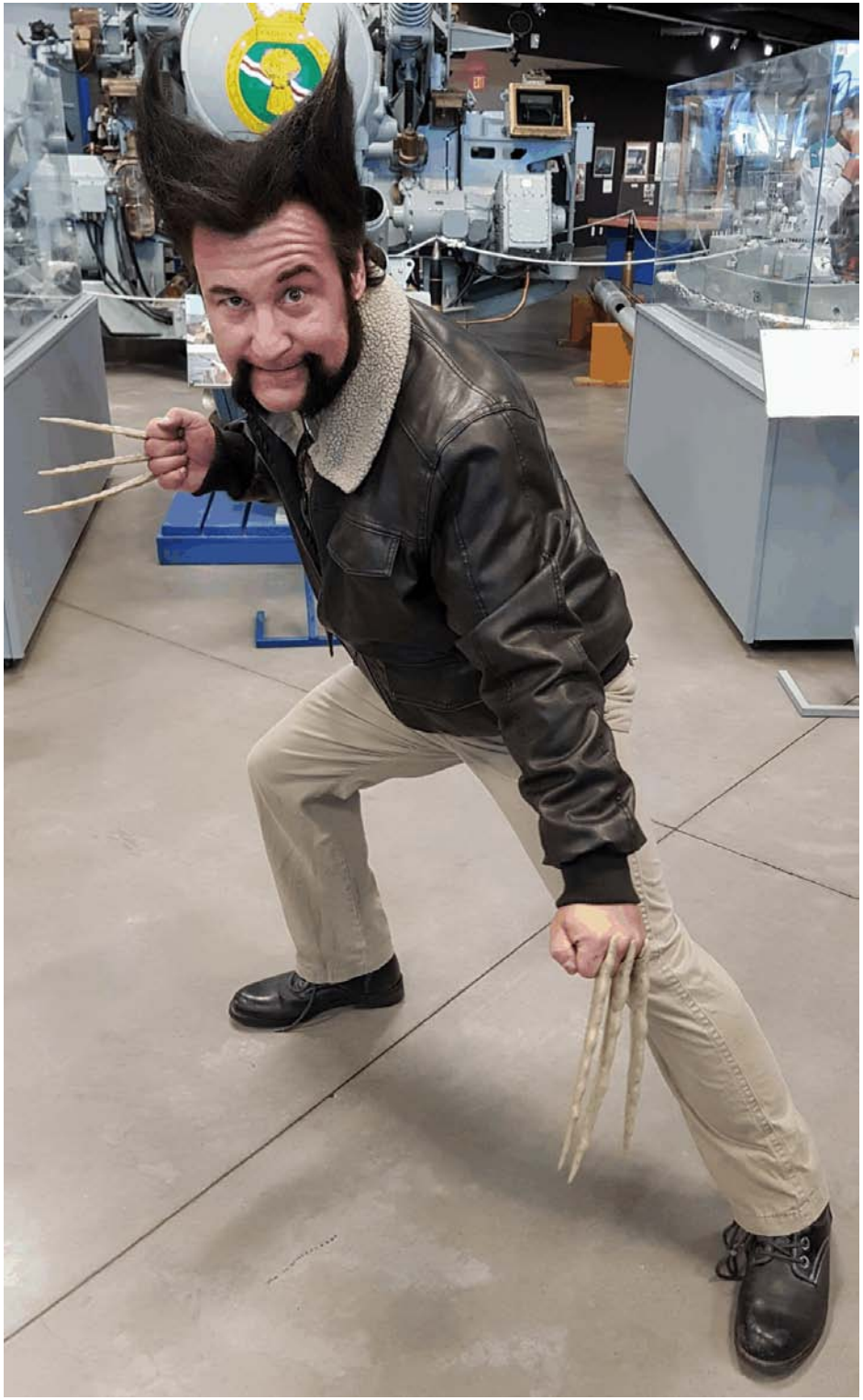
The entrance into the museum is a bridge over a life-size WW2 diorama, showing how Canadian troops fought house to house. The tank and jeep are real. It must have been quite a job to get the tank into the basement.

This annoying little creature kept beeping and chirping at me as if there was something I was expected to do. I'm sure I don't know what.

The Calgary Trekkies were there. Spot the tribble.

The Klingon at left must be from a Highland regiment.

This gentleman told me he was visiting from Fort McMurray.



A Klingon browsing one of the exhibits.

The dealer bourse was in the naval hall.

I was impressed with the extent of the museum displays. The Future Wars event had a wide variety of activities such as seminars and workshops. The gamers had a large room for board games. Video enthusiasts were invited to play Call Of Duty against a serving soldier. I missed the seminar about Wolverine's tour of duty with the Canadian Forces, although as you saw on the previous page, I did meet the man himself.

All told, the event was quite enjoyable. The various activities were interspersed among all the exhibits throughout the huge building. A lot of walking to see everything. More photos to come in future issues.

INTERPROVINCIAL WARFARE
by Dale Speirs

When last we left Canadian politics (OPUNTIA #404, page 22) Alberta was feuding with Saskatchewan over licence plates. A overly patriotic contractor in Alberta told Saskatchewan workers they couldn't park their vehicles at the job site if they had Saskatchewan licence plates. Saskatchewan Premier Brad Wall, then-leader of the Saskatchewan Party, retaliated by banning Alberta contractors in his province. Push came to shove, and he had to back down.

Fresh from that victory, Alberta Premier Rachel Notley turned her attention to British Columbia. She leads the Alberta NDP party (labour-socialist), which won the last election because the two opposition parties split the right-wing vote. In B.C.'s recent provincial election, the NDP squeaked into power with a minority government propped up by the Green Party.

B.C. Premier John Horgan, pushed by the Greenies, announced that he would try to stop a proposed pipeline that would take oil from the Athabasca Tar Sands to tidewater on the B.C. coast. An eastern Canada pipeline had been stymied, but the Alberta NDP know that if they don't get a pipeline across the mountains to B.C., they are committing political suicide.

Although both premiers are Dippers, they certainly are not singing "Solidarity Forever" together. In a classic example of political interests trumping ideology, Notley began by banning the import of B.C. wines into Alberta, which economically crippled their vintners.

Next up, the valves were partly choked on the existing pipelines, as a result of which B.C. motorists now pay the highest gasoline prices in North America. Notley introduced a bill into the Alberta legislature to cut the flow completely, titled the Preserving Canada's Economic Prosperity Act. The cutoff would not just be pipelines, but include railway and tanker truck shipments.

Digression: The trend to naming legislative bills these days is to cloak them in patriotic titles or something that sugarcoats the nasty stuff. Back in 1970 during the October Crisis, when Prime Minister Pierre Trudeau sent the army into Quebec to crush the separatists, he at least had the decency to use the War Measures Act.

The licence plate dispute has been forgotten, and now the Premiers of Saskatchewan and Alberta (Canada's two major oil producers) stand shoulder to shoulder. Premier Scott Moe is the new leader of the Saskatchewan Party, a right-wing party. I doubt very much if he knows the words to "Solidarity Forever". The two provinces have to sell their oil at a $20 discount to cover the cost of shipping through southbound pipelines, which is several hundred millions of dollars per year that goes to American pipeline companies.

Prime Minister Justin Trudeau (Liberal, son of Pierre) had to take time out from posing for selfies with tourists and fly out west to try and mediate the dispute. He had been waffling on the issue, instead spending his time burbling about gender issues and visiting foreign countries instead of attending to the nation's business. A recent trip he made to India was so disastrous that as soon as he departed that country, they imposed a ban on peas, lentils, and wheat from Canada. Not that Trudeau had the farm vote to begin with, but he certainly isn't winning any friends among them.

Trudeau came out west in mid-April to mediate the pipeline dispute. Pipelines and railroads are under federal jurisdiction, and he can overrule the B.C. government. The meeting was a failure, and Trudeau had to go back to Ottawa with his tail tucked between his legs.

Seen on May 12 on Stephen Avenue Mall, downtown Calgary.

VENUS IN HER GLIMMERING SPHERE: PART 6
by Dale Speirs

[Parts 1 to 5 appeared in OPUNTIAs #324, 329, 368, 373, and 381.]

Palaeo Venus.

Homer Eon Flint (real name Homer Eon Flindt) was a science fiction writer of the post-WW1 era. He was killed in 1924 in a mysterious incident, possibly a gangland hit or a failed robbery. Had he lived into the SF pulp magazine age he would be better remembered.

In 1919, he published a pair of stories, part of the Dr Kinney series, one set on Mercury (reviewed in a different column in this zine) and the other on Venus, which were later issued in book form as THE LORD OF DEATH AND THE QUEEN OF LIFE. The book is available as a free download from www.gutenberg.org.

"The Queen Of Life" was about a voyage to Venus which began immediately after the events of "The Lord Of Death". The four men are lifting off from Mercury, bound for Venus. There had been excitement and alarums on Mercury which had necessitated a hasty departure, during which it was discovered that one of the men was actually a woman in disguise. Since the ship was now bound for Venus, there wasn't much to do but accept the situation.

The planet turns out to be different than expected. Venus was white not because it was shrouded in clouds but because it was encased in reflective glass, a perfect sphere. The ship lands on the glass, obviously laminated.

The crew step out in their suits, connected to each other by telephone wires, which hinders their movements. Commercial radio was still being born at the time, and evidently Flint didn't follow the science news.

They had only just EVAed when an elevator rises out of the glass. A Venusian greets them, a humanoid speaking English. Estra, their guide, gives them the standard Welcome to Utopia tour, wherein all the wonders that be are explained with the usual smug superiority. Venus has One World Government, and everyone speaks the same language. One city spans the planet, and everything is run by a superscience machine.

There are gaps, however. Estra explains: *We have never been able to improve on the common telephone. That is why we must still assemble in person whenever we have any collective activity; while on the Earth the time will come when your wireless principle will be developed to the point of transmitting both light and sound; and after that there will be little need of gatherings of any sort.*

It must be remembered that radio broadcasting was a few more years away at the time this novel was written. It wasn't until the early 1920s that the first baby steps were taken, so wireless voice communication wasn't yet obvious. Despite not having radio broadcasting, the Venusians do have mechanical universal translators:

It consisted of a miniature head telephone, connected to a small, metallic case the size of a cigar-box, the cover of which was a transparent diaphragm. Estra did not open the case, but showed the mechanism through the cover.

"Essentially, this is a 'word-for-word' device", said he, pointing to a swiftly revolving dial within the box. "On one face of that dial are some ten thousand word-images, made by vibration, after the phonograph method. Directly opposite, on the other face, are the corresponding words in the other language. The disk is rotating at such an enormous speed that, for all practical purposes, any word which may chance to be spoken will be translated almost instantaneously."

He indicated two delicate, many-tentacled 'feelers', as he called them, one on each face of the disk. One of these felt the proper word-image as it whirled beneath, while the other established an electrical contact with the corresponding waves beneath, at the same time exciting a complicated-looking talking machine.

The description seems like a computer hard drive in many respects. Having adjusted to that marvel, the Earthlings then go into a city. Each Venusian lives within a glass capsule that provides them with all the necessities and luxuries of life without having to come into contact with others. One hopes the machine will not stop someday.

Estra runs out of things to lecture about. As happens in most utopian stories, the arrival of the strangers triggers sudden events that collapse the society. In this case, a war of the genders breaks out, as a female Venusian has found a way to reproduce by parthenogenesis, thereby rendering the males redundant.

Having ruined yet another utopia, the travelers take their leave. It was ever thus. And so to Earth.

Old Venus.

Giant tortoises on Venus. That pretty much sums up the plot of "Old Man Mulligan" (1940 December, ASTOUNDING) by P. Schuyler Miller. It is, of course, Old Venus, the one with the tropical jungles and oceans. The heroes are stranded on an island where gigantic tortoises the size of houses are coming ashore to lay their eggs. The humans manage to capture and kill a tortoise, then use its shell as a boat to escape. Various other alarums finish off the second half of the story. I got the impression this was two different short stories welded together to make a novella.

The square-cube law does not apply to large animals in water since their buoyancy allows them to grow to the size of houses. However, the tortoises would still be subject to the law when they came ashore. Their flippers would not support their bulk. Even their bulk would not support itself, and the organs would collapse into jelly. That is the main difficulty with giant monster stories; how do they stand up and breathe?

Venusians generally don't like invading Earthmen. "A Can Of Paint" by A.E. van Vogt (1944 September, ASTOUNDING) begins with the first Earthman landing on Venus. Kilgour's spaceship sets down in a lush green valley. For some reason, van Vogt throws in some gibberish about how previous spaceships failed because they flew too close to the Sun.

On stepping outside, and yes, the air is breathable, he finds a cube lying beside his ship. He opens it and multi-coloured paint flows over him. He strips his clothes off, but the paint then flows onto his skin and will not be removed. It is light emitting paint that shines brightly in the colours of the rainbow.

He tries a number of remedies, such as turpentine, gasoline, rocket fuel, and wine, which makes one wonder what else was in the spaceship. I feel safe in saying that Apollo astronauts did not carry gasoline or turpentine with them. In any event, the paint will not come off and instead acts as a living organism, actively resisting attempts to be removed. Not only that, when he poured the rocket fuel back into the ship's tank after using a small quantity in an unsuccessful attempt to remove the paint, it contaminated the whole tank and turned the fuel into inert liquid.

At that point, Venusians contact Kilgour and tell him it is a test. They have doubts about Earthlings. Kilgour must get the paint off by himself and be able to restore the fuel so he can lift off again. He doesn't radio anyone on Earth about this contretemps. They may not be able to help him but at least they could be warned.

Eventually Kilgour figures out that if he could sit in darkness, it would suck the light from the paint and kill it. The method doesn't work either inside or outside the spaceship because the emitted light is reflected back to the paint and reabsorbed, keeping it alive. He then has an inspiration and sets up a room with solar cells. They absorb the light, convert it into electricity, and the paint dries off to a lifeless dry powder. Home again and free.

This is a puzzle story of the type that the editor John W. Campbell Jr liked so much. He also liked to see humans demonstrate their superiority over aliens. van Vogt knew how to write to a market in those days.

"Collector's Item" by Evelyn E. Smith (1954 December, GALAXY) is a farce about the first humans to land on Venus. They find saurians who speak English via telepathy and plot how to take one as a specimen for a zoo. The story begins with a rather snappy opening that I'm sure many of us have thought about watching those 1950s sci-fi B-movies.

"What I should like to know", Professor Bernardi said, gazing pensively after the lizard-man as he bore the shrieking form of Miss Anspacher off in his scaly arms, "is whether he is planning to eat her or make love to her. Because, in the latter instance, I'm not sure we should interfere. It may be her only chance."

What the Earthlings don't know is that the saurians are from another planet and are also collecting specimens. A third species shows up with the same idea, and they maneuver against each other, each trying to keep their own secrets safe while plotting to grab specimens. It turns out to be moot, for the vegetation on Venus is sapient, and they want specimens for <u>their</u> zoo.

Modern Venus.

Alas, the Soviet and American space probes consigned Carboniferous swamps on Venus into the dustbin of history. Venus is Hell, and not just figuratively. Not all is lost for SF writers. Indeed, the plausible ideas of terraforming Venus or using robots to explore it have created new ideas for stories.

"An Incident On Ishtar" by Brian Trent (2018 Mar/Apr, ANALOG) is about a young woman who volunteers for Ishtar Colony on Venus. Strictly speaking, the colony is not on the planet. It is a modular ship floating through the upper skies, held aloft by balloons. This puts it in a much more inhabitable zone, not breathable but far cooler and with low atmospheric pressures. Mining equipment on the surface works by remote control. At intervals, the robots fill bins with ores which are then lifted into the sky by inflatable balloons for retrieval and trans-shipment.

A severe storm broke Ishtar apart. All but one module have been recovered and reassembled. The plot is complicated by an attempted attack by asteroid miners, who resent the competition. An interesting story of concepts. John Campbell Jr would have bought it on sight.

LIGHTS, CAMERA, MURDER!: PART 2

by Dale Speirs

[Part 1 appeared in OPUNTIA #394.]

Never Be A Technical Advisor.

A popular old-time radio mystery series was BOSTON BLACKIE. (This and other OTR shows are available as free mp3s from www.archive.org.) Boston Blackie, real name Horatio Black, was a supposedly retired and reformed safecracker and jewel thief. I say supposedly because he had no visible source of income, squired his girlfriend Mary Wesley around town to fancy nightclubs, and enjoyed the good life. It was never explained in the series where he got the money to live his lifestyle.

His nemesis was Inspector Faraday of the Homicide Squad, a man who should never have gone past foot patrol. He was always ready to arrest Blackie on general principles, which meant that in each episode Blackie had to find the murderer to exonerate himself. Maybe Faraday wasn't so stupid after all, getting Blackie to do all the work.

The segues and musical intros and outros were done by a organist whose berserk music is the funniest part of the show. The music was used almost as punctuation for scenes or even every few lines.

"Murder At The Movies" was a 1945 episode in which, Blackie was asked to advise about safe cracking techniques for a movie. No writer credits were given on the mp3; they may have been clipped off. Blackie and Wesley go along to watch a different scene being filmed, where the leading man and leading lady are at home when a bad guy comes to visit. The lady wants to avoid him, so as he knocks on the door, she climbs into an empty trunk to hide.

After the scene is filmed, she doesn't come out. The crew open the trunk to find her dead from a gunshot. There is no bullet hole through the trunk, so it becomes a miniature locked room mystery. Faraday is summoned and is not overly surprised to see Blackie present at the scene of the crime.

Since they don't know how the shooting was done or who did it, they concentrate at first on motive. A major distraction is the property manager, responsible for the guns used in the movie, being stabbed to death by a knife that Blackie misplaced.

In reviewing the script, Blackie notices that it had called for a long camera shot but was instead filmed as a close-up. That meant instead of using the stand-in for the scene, the leading lady had to be in it. This suggested that murderer was actually aiming at the stand-in and didn't know about the change.

Blackie does some snooping around and learns there was a love triangle going on between the leading couple and the stand-in. The leading man had shot his victim with a silenced pistol as she was lowering the trunk lid during the scene.

There seemed to be a bit of hand-waving in the explanation, but for a fast-paced show like this one, any confused listener wouldn't have time to reflect on the plausibility of the events. A fair to middling episode, bearing in mind that no one ever pretended it was anything more than action adventure.

THE CASEBOOK OF GREGORY HOOD was an old-time radio series about an amateur sleuth in San Francisco who owned an import-export business. "Murder In Celluloid" was a 1946 episode written by Denis Green and Anthony Boucher.

Hood is called to Hollywood as a technical advisor for a movie titled "Passport To Danger". He meets Annie, the child star, who asks him to find a map she had drawn of imaginary places and military bases, which someone had stolen for reasons unknown. He doesn't have to do any investigating, as while they are talking, a crew member brings it in, having found it lying on the studio floor. A puzzling but seemingly trivial incident.

A moment later, in an adjacent dressing room, Hood finds something else lying on the floor, the body of the leading lady. He does his investigation (the police? what about them?). The deceased may have been an espionage agent and had taken the map by mistake, thinking it was real, then discarding it once she realized her mistake.

Hood identifies the murderer as an actor on another movie production nearby. With the company of a U.S. Army intelligence officer, he goes to make an arrest (the police? what about them?). Annie wanted to come along but a takedown is no place for a child.

When the traitor is confronted, he pulls a gun. After a soliloquy about yes, he did it and would gladly do it again, he is about to shoot Hood when Annie sandbags him from a catwalk. She had defied orders and snuck along to see the excitement, climbing unnoticed up onto the catwalk to get a better view. Seeing what was about to happen, she manages to lift a sandbag and drop it on the murderer. The rest is details and tying off loose threads. The epilogue wraps up the storyline (the police? what about them?).

Sharp Practice Men.

BARRIE CRAIG, CONFIDENTIAL INVESTIGATOR was an OTR series about a private detective who was, at best, B-grade. The stories fill the time adequately and are worth listening to once, particularly if you like old-style private investigator fiction.

"For Love Of Murder", written by John Roeburt, was a 1954 episode which brought Craig a client named Maxie Potter, who wants him to investigate his girlfriend's connections with a movie agent named Randy Lomax. Paula Paloma is a recent 'discovery', the kind that the old studio system used to hype. The problem, as it transpires, is that she foolishly signed a 10-year contract with Lomax that gave her a share of the profits minus his expenses. It's a poor accountant who can't charge off 110% of the profit amount as expenses.

Paloma doesn't return Potter's affections as much as he believes. She is looking to make it big, and only too late discovers that Lomax is bleeding her dry. His bloodletting abruptly stops in real blood. Potter is so besotted with Paloma that

he tries to take the rap for her and beat it in court by pleading insanity. That doesn't work, so she tries to plead insanity. They'll both be going to prison. A cautionary tale for movie agents.

THE CHOCOLATE PUPPY PUZZLE (2004) by JoAnna Carl (pseudonym of Eve Sandstrom) is a novel in a cozy mystery series about Lee McKinney, chocolate shop proprietor in the village of Warner Pier, Michigan. Aubrey Andrews Armstrong blows into town, saying he's a Hollywood producer who is going to use the village and its townfolk in his next movie. Monte, his chocolate Labrador retriever, is also a charmer. Armstrong is going to base the movie on a romance novel published by local writer Maia Ensminger.

The first body, which McKinney finds, is a local farmer Silas Snow. Her sleuthing into his murder runs parallel with her sleuthing into Armstrong, who doesn't seem to be what he claims to be. No one heard of him in Hollywood, and there is nothing on the Internet about the movies he supposedly made. Someone fires a rifle shot at Armstrong but misses. McKinney was there, in her capacity as the resident Miss Marple.

Armstrong disappears the next day, leaving Monte behind and dragging McKinney into the dogsitting business. She then becomes the sniper's target. Her sleuthing dredges up village scandals and star-crossed lovers from decades past, as well as land development deals gone wrong that involved the late Snow. Plenty of clues but no case.

The final confrontation is almost a convention, with all the suspects gathered at a remote farmhouse. Most of them are carrying hunting rifles, but McKinney manages to get the drop on all of them. The murders devolve to the old emotional problems of yore. Armstrong had been kidnapped for other reasons. He is fortunate to survive the firefight and be run in by the bunco squad, having used his fake movie scam to success in a number of Michigan villages.

The epilogue busily ties together loose threads. McKinney lives for another day and another novel in the series. Worth reading once if you like cozies.

Bystanders, None Of Them Innocent.

One of the more unusual OTR detective series was CANDY MATSON, YUKON 2-8209, set in San Francisco. It was on the air from 1949 to 1951. YUkon 2-8209 refers to the system of telephone numbers used back in those days. Each episode opened with her answering the phone as per the title of the show. The series was written and directed by Monte Masters. His wife Natalie Parks played Matson.

There may have been other female private detectives who had their own series back then but offhand I don't know of any. She was a competent and practical detective, not a Dumb Dora. She had a penthouse apartment on Telegraph Hill overlooking the bay. Her boyfriend was SFPD Lt. Ray Mallard. In the last episode of the series they were married.

"The Movie Company" was a 1950 episode. Mallard had been detailed to babysit a Hollywood movie production on Telegraph Hill, and since Matson lived adjacent, she was watching the shoot with him. The movie was set during the gold rush era, and in the distant background were some fake trees with fake bodies hanging from them, depicting a lynching.

Except that one of the bodies was not a fake. Much to Mallard's disgust, his easy posting turns into a homicide investigation, made worse by the fact that no one knows who the victim is and there is no identification on the body. At first they think he may have been an extra. The extras were paid nightly in cash as they were needed, so the first idea is to check off their names one by one as they claim their pay packets. Whoever didn't pick up his packet must be the victim. Unfortunately they all come forward for their pay.

Matson gets a come-on from one of the assistants and leads him on in an effort to find out more. She isn't successful, and for that matter, neither is he. The leading man was someone she once dated years ago, so that gets Mallard jealous. Their attention is distracted by a second murder. The director of the movie is shot dead in his hotel room.

The producer has a multitude of sins that he had managed to cover up, but events overtake him and he is exposed as the murderer. The first body is implausibly explained with facts not known to the listener until the denouement. In the final chase, Matson has to crawl out onto a skyscraper ledge after the murderer. It ends messily for him, and the rest is tying up loose ends in the epilogue.

This series is well done and the mp3s are good quality sound. Matson is a rare exemplar of level-headed women who don't scream every time they see a body. It would be interesting to know if any feminists have done a thesis on this

series. The show was atypical of Hollywood, and positively revolutionary for the early 1950s. Worth listening to.

CLOSE-UP ON MURDER (2013) by Jessica Fletcher and Donald Bain is a novel in the MURDER, SHE WROTE series, based on the television show. It is set in Cabot Cove, Maine, a village which has the highest per-capita murder rate in the world. Fletcher is always there at the scene of the crime. She is the successor to Miss Jane Marple.

A Hollywood studio is filming one of Fletcher's novels on location in Cabot Cove. Obviously the location scout didn't do proper research. The novel had been based on a true murder. Soon it becomes evident that it isn't a cold case. Fletcher had been hired as a screenwriter for her novel, although her work is constantly revised by others. She is quickly learning that in a movie studio, the writer is the least important person.

Fletcher has to practice the delicate art of balancing egos. Vera Stockdale, the leading lady, hasn't worked in years, but still carries on as a diva, demanding script revisions from Fletcher and star treatment from everyone else. The director is ambitious and insecure in equal proportions, a dangerous combination. The production crew act as if they owned Cabot Cove, and treat the sheriff like a Deppity Dawg.

Stockdale is murdered on one of the sets, to no one's grief but everyone's annoyance. *"This hot set is now a crime scene*", announces the sheriff, and the plot moves into third gear. The police and movie producers clash with each other as to who has priority. Nevermind the body, it's the aftermath that isn't pretty. The feuding isn't helped by the influx of news reporters.

Fletcher finds herself investigating two murders, the original one, upon which her book and the movie are based, and Stockdale's death. Adult illegitimate children begin popping up, with many soap opera stories in the background.

The murderer is identified as an angry young man who killed Stockdale because he thought she was the mother who abandoned him at birth. He got the wrong woman; it was someone else on the set who had given him up for adoption. The epilogue trickles to a close, tying up loose threads, and adding another murder to the tally of the deadliest place in the world.

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: Alexander Case 2018-05-10
Portland, Oregon

Just read OPUNTIA #412. I read your review of AGATHA H. AND THE AIRSHIP CITY. In addition to reading the comic the books are based on (multi-time Hugo winning Girl Genius), I also listened to the audio books versions, and I can't recommend the audiobooks enough. The reader Audible got to do the books is fantastic, and does the accents for the Jagermonsters (which I'd describe as "High Katzenjammer") as incredibly well.

While the comic is still ongoing, sadly the books have stopped on something of a cliffhanger. The comic, being the source material, covers what comes later, and the novels expanded on the comics in some interesting and amusing ways that made it worth revisiting the stories through prose. I really wanted to see how the Foglio's, in prose, cover what they'd already covered in sequential art.

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.]

[The Usual means $5 cash ($6 overseas) or trade for your zine. Americans: please don't send cheques for small amounts to Canada or overseas (the bank fee to cash them is usually more than the amount) or mint USA stamps (which are not valid for postage outside USA). US$ banknotes are still acceptable around the world.]

BANANA WINGS #70 (The Usual from Claire Brialey and Mark Plummer, 59 Shirley Road, Croydon, Surrey CR0 7ES, England) SF fanzine, with essays and articles on conventions, why fandom isn't what it used to be, personal accounts, and lots of letters of comment.

Brown, M., et al (2018) **Earth's magnetic field is probably not reversing.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 115:doi.org/10.1073/pnas.1722110115

Authors' abstract: *Earth's magnetic field is generated in Earth's convecting liquid iron outer core and protects Earth's surface from harmful solar radiation. The field has varied on different timescales throughout geological history, and these variations reflect changes deep within the Earth. Two of the field's most extreme variations are reversals and excursions.*

During such events, the strength of the field decreases and the magnetic poles rapidly flip polarity, with reversals characterized by the pole retaining an opposite polarity, while excursions are marked by a return to the original polarity. Field strength over the past centuries has also been decreasing strongly; however, through analyzing previous excursions, we infer that Earth's magnetic field is not in an early stage of a reversal or excursion.

The geomagnetic field has been decaying at a rate of ~~5% per century from at least 1840, with indirect observations suggesting a decay since 1600 or even earlier. This has led to the assertion that the geomagnetic field may be undergoing a reversal or an excursion. We have derived a model of the geomagnetic field spanning 30 to 50 ka, constructed to study the behavior of the two most recent excursions: the Laschamp and Mono Lake, centered at 41 and 34 ka, respectively.

Here, we show that neither excursion demonstrates field evolution similar to current changes in the geomagnetic field. At earlier times, centered at 49 and 46 ka, the field is comparable to today's field, with an intensity structure similar to today's South Atlantic Anomaly (SAA); however, neither of these SAA-like fields develop into an excursion or reversal. This suggests that the current weakened field will also recover without an extreme event such as an excursion or reversal.

The SAA-like field structure at 46 ka appears to be coeval with published increases in geomagnetically modulated beryllium and chlorine nuclide production, despite the global dipole field not weakening significantly in our model during this time. This agreement suggests a greater complexity in the relationship between cosmogenic nuclide production and the geomagnetic field than is commonly assumed.

Ye, H., et al (2018) **Observation duration analysis for Earth surface features from a Moon-based platform.** ADVANCES IN SPACE RESEARCH doi.org/10.1016/j.asr.2018.04.029

Authors' abstract: *In this work, we propose to utilise the Moon as an Earth observation platform. Thanks to the long distance between the Earth and the Moon, and the vast space on the lunar surface which is suitable for sensor installation, this Earth observation platform could have large spatial coverage, long temporal duration, and could perform multi-layer detection of the Earth.*

The line of sight between a proposed Moon-based platform and the Earth will change with different lunar surface positions; therefore, in this work, the position of the lunar surface was divided into four regions, including one full observation region and three incomplete observation regions.

As existing methods are not able to perform global-scale observations, a Boolean matrix method was established to calculate the necessary observation durations from a Moon-based platform. Based on Jet Propulsion Laboratory (JPL) ephemerides and Earth Orientation Parameters (EOP), a formula was developed to describe the geometrical relationship between the Moon-based platform and Earth surface features in the unified spatial coordinate system and the unified time system.

In addition, we compared the observation geometries at different positions on the lunar surface and two parameters that are vital to observation duration calculations were considered. Finally, an analysis method was developed.

We found that the observation duration of a given Earth surface feature shows little difference regardless of sensor position within the full observation region. However, the observation duration for sensors in the incomplete observation regions is reduced by at least half.

Truche, L., et al (2018) **Clay minerals trap hydrogen in the Earth's crust: Evidence from the Cigar Lake uranium deposit, Athabasca.** EARTH AND PLANETARY SCIENCE LETTERS 493:186-197

Authors' abstract: *Hydrogen (H2)-rich fluids are observed in a wide variety of geologic settings including gas seeps in serpentinized ultramafic rocks, sub-seafloor hydrothermal vents, fracture networks in crystalline rocks from continental and oceanic crust, and volcanic gases. Natural hydrogen sources can sustain deep microbial ecosystems, induce abiotic hydrocarbons synthesis and trigger the formation of prebiotic organic compounds.*

However, due to its extreme mobility and small size, hydrogen is not easily trapped in the crust. If not rapidly consumed by redox reactions mediated by bacteria or suitable mineral catalysts it diffuses through the rocks and migrates toward the surface. Therefore, H2 is not supposed to accumulate in the crust.

We challenge this view by demonstrating that significant amount of H2 may be adsorbed by clay minerals and remain trapped beneath the surface. Here, we report for the first time H2 content in clay-rich rocks, mainly composed of illite, chlorite, and kaolinite from the Cigar Lake uranium ore deposit (northern Saskatchewan, Canada). Thermal desorption measurements reveal that H2 is enriched up to 500 ppm (i.e. 0.25 mol kg^{-1} of rock) in these water-saturated rocks having a very low total organic content (<0.5 wt%).

Such hydrogen uptake is comparable and even exceeds adsorbed methane capacities reported elsewhere for pure clay minerals or shales. Sudoite (Al-Mg di-trioctahedral chlorite) is probably the main mineral responsible for H2 adsorption in the present case. The presence of multiple binding sites in interlinked nanopores between crystal layers of illite-chlorite particles offers the ideal conditions for hydrogen sorption.

We demonstrate that 4 to 17% of H2 produced by water radiolysis over the 1.4-Ga-lifetime of the Cigar Lake uranium ore deposit has been trapped in the surrounding clay alteration haloes. As a result, sorption processes on layered silicates must not be overlooked as they may exert an important control on the fate and mobility of H2 in the crust.

Furthermore, the high capacity of clay minerals to sorb molecular hydrogen may also open up new opportunities for exploration of unexpected energy resources and for H2 storage based on geo-inspired materials.

Speirs: The Cigar Lake mine in northeastern Saskatchewan is the world's richest uranium mine, with ore bodies of 20% uranium, compared to the rest of the world where ore bodies average less than 1%. It has had repeated problems with flooding, as the bedrock is cracked and water saturated, which is why there was a research team studying the underground water.

Myrow, P.M., et al (2018) **Rapid sea level rise in the aftermath of a Neoproterozoic snowball Earth**. SCIENCE 360:649-651

Authors' abstract: *The Marinoan "snowball Earth" glaciation covered most of the planet in ice. The surface melted only when enough carbon dioxide had accumulated in the atmosphere to trap the Sun's warmth. Melting must have occurred rapidly, but just how fast has been a topic of conjecture.*

We analyzed the wave ripples preserved in tidally deposited siltstones of the Elatina Formation, South Australia, to determine that sea level must have risen at the astounding rate of nearly 30 centimeters per year during the melting epoch, or roughly 100 times the rate that it is rising today.

Earth's most severe climate changes occurred during global-scale "snowball Earth" glaciations, which profoundly altered the planet's atmosphere, oceans, and biosphere. Extreme rates of glacioeustatic sea level rise are predicted by the snowball Earth hypothesis, but supporting geologic evidence has been lacking.

We use paleohydraulic analysis of wave ripples and tidal laminae in the Elatina Formation, Australia, deposited after the Marinoan glaciation ~635 million years ago, to show that water depths of 9 to 16 meters remained nearly constant for ~100 years throughout 27 meters of sediment accumulation.

This accumulation rate was too great to have been accommodated by subsidence and instead indicates an extraordinarily rapid rate of sea level rise (0.2 to 0.27 meters per year). Our results substantiate a fundamental prediction of snowball Earth models of rapid deglaciation during the early transition to a supergreenhouse climate.

Gross, Michael (2018) **Archaea cloaked in mystery.** CURRENT BIOLOGY 28:R367-R420

[Mitochondria are respiratory organelles found in all cells that have nuclei, such as in our bodies. Without them, we would die instantly. They are symbiotic and have their own genes. They operate the adenosine triphosphate (ATP) cycle, which is the basis of all energy in cells. Alphaproteobacteria are the most primitive type of free-living cells, believed to be related to mitochondria.]

Author's abstract and extracts: *Archaea were only belatedly recognised as a fundamental domain of life on equal rank with bacteria and eukaryotes. Important discoveries concerning their ecology, physiology and evolution are still being made. Their highly unusual membranes, in particular, hold the promise of shedding light on the last universal common ancestor and the origins of energy metabolism.*

Additions to the new domain came mainly from those researchers who sampled in extreme environments hitherto considered inhospitable, from the polar ice caps to the hot springs of Iceland and Yellowstone, and from the Dead Sea to the newly discovered black smokers on the ocean floor. Apart from the methanogens, salt-loving species like the halobacteria, record-beating hyperthermophiles like Pyrococcus furiosus and thermo-acidophiles like Sulfolobus solfataricus swelled the ranks of the Archaea.

Genome research showed that eukaryotes [whose cells have a nucleus, which includes humans] *derive from both bacteria and archaea, but the nature of the connection remained elusive. Alphaproteobacteria are considered a plausible candidate group for the bacterial symbiont, the vestiges of which we see in today's mitochondria.*

Martijn, J., et al (2018) **Deep mitochondrial origin outside the sampled alphaproteobacteria.** NATURE 557:101-105

Authors' abstract: *Mitochondria are ATP-generating organelles, the endosymbiotic origin of which was a key event in the evolution of eukaryotic cells. Despite strong phylogenetic evidence that mitochondria had an alphaproteobacterial ancestry, efforts to pinpoint their closest relatives among sampled alphaproteobacteria have generated conflicting results, complicating detailed inferences about the identity and nature of the mitochondrial ancestor. While most studies support the idea that mitochondria evolved from an ancestor related to Rickettsiales, an order that includes several host-associated pathogenic and endosymbiotic lineages, others have suggested that mitochondria evolved from a free-living group.*

Here we re-evaluate the phylogenetic placement of mitochondria. We used genome resolved binning of oceanic metagenome datasets and increased the genomic sampling of Alphaproteobacteria with twelve divergent clades, and one clade representing a sister group to all Alphaproteobacteria.

Subsequent phylogenomic analyses that specifically address long branch attraction and compositional bias artefacts suggest that mitochondria did not evolve from Rickettsiales or any other currently recognized alphaproteobacterial lineage. Rather, our analyses indicate that mitochondria evolved from a proteobacterial lineage that branched off before the divergence of all sampled alphaproteobacteria.

Csiki-Sava, Z., et al (2018) **Dome-headed, small-brained island mammal from the Late Cretaceous of Romania.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 115:4857-4862

Authors' abstract: *The island effect is a well-known evolutionary phenomenon, in which island-dwelling species isolated in a resource-limited environment often modify their size, anatomy, and behaviors compared with mainland relatives. This has been well documented in modern and Cenozoic mammals, but it remains unclear whether older, more primitive Mesozoic mammals responded in similar ways to island habitats.*

We describe a reasonably complete and well-preserved skeleton of a kogaionid, an enigmatic radiation of Cretaceous island-dwelling multituberculate mammals previously represented by fragmentary fossils. This skeleton, from the latest Cretaceous of Romania, belongs to a previously unreported genus and species that possesses several aberrant features, including an autapomorphically domed skull and one of the smallest brains relative to body size of any advanced mammaliaform, which nonetheless retains enlarged olfactory bulbs and paraflocculi for sensory processing.

Drawing on parallels with more recent island mammals, we interpret these unusual neurosensory features as related to the island effect. This indicates that

the ability to adapt to insular environments developed early in mammalian history, before the advent of therian mammals, and mammals with insular-related modifications were key components of well-known dwarfed dinosaur faunas. Furthermore, the specimen suggests that brain size reduction, in association with heightened sensory acuity but without marked body size change, is a novel expression of the island effect in mammals.

Steinbauer, M.J., et al (2018) **Accelerated increase in plant species richness on mountain summits is linked to warming.** NATURE 556:231-234

Authors' abstract: *Here we use a data set of repeated plant surveys from 302 mountain summits across Europe, spanning 145 years of observation, to assess the temporal trajectory of mountain biodiversity changes as a globally coherent imprint of the Anthropocene. We find a continent-wide acceleration in the rate of increase in plant species richness, with five times as much species enrichment between 2007 and 2016 as fifty years ago, between 1957 and 1966.*

This acceleration is strikingly synchronized with accelerated global warming and is not linked to alternative global change drivers. The accelerating increases in species richness on mountain summits across this broad spatial extent demonstrate that acceleration in climate-induced biotic change is occurring even in remote places on Earth, with potentially far-ranging consequences not only for biodiversity, but also for ecosystem functioning and services.

O'Hanlon, S.J., et al (2018) **Recent Asian origin of chytrid fungi causing global amphibian declines.** SCIENCE 360:621-627

Authors' abstract: *We used whole genome sequencing to solve the spatiotemporal origins of the most devastating panzootic to date, caused by the fungus Batrachochytrium dendrobatidis, a proximate driver of global amphibian declines. We traced the source of B. dendrobatidis to the Korean peninsula, where one lineage, BdASIA-1, exhibits the genetic hallmarks of an ancestral population that seeded the panzootic.*

We date the emergence of this pathogen to the early 20th century, coinciding with the global expansion of commercial trade in amphibians, and we show that intercontinental transmission is ongoing. Our findings point to East Asia as a geographic hotspot for B. dendrobatidis biodiversity and the original source of these lineages that now parasitize amphibians worldwide.

Singer, M.C., and C. Parmesan (2018) **Lethal trap created by adaptive evolutionary response to an exotic resource.** NATURE 557:238-241

Authors' abstract: *Global transport of organisms by humans provides novel resources to wild species, which often respond maladaptively. Native herbivorous insects have been killed feeding on toxic exotic plants, which acted as 'ecological traps'. We document a novel 'eco-evolutionary trap' stemming from the opposite effect; that is, high fitness on an exotic resource despite lack of adaptation to it.*

Plantago lanceolata was introduced to western North America by cattle-ranching. Feeding on this exotic plant released a large, isolated population of the native butterfly Euphydryas editha from a longstanding trade-off between maternal fecundity and offspring mortality. Because of this release, and despite a reduced insect developmental rate when feeding on this exotic, Plantago immediately supported higher larval survival than did the insects' traditional host, Collinsia parviflora.

Previous work from the 1980s documented an evolving preference for Plantago by ovipositing adults. We predicted that if this trend continued the insects could endanger themselves, because the availability of Plantago to butterflies is controlled by humans, who change land management practices faster than butterflies evolve.

Here we report the fulfilment of this prediction. The butterflies abandoned Collinsia and evolved total dependence on Plantago. The trap was set. In 2005, humans withdrew their cattle, springing the trap. Grasses grew around the Plantago, cooling the thermophilic insects, which then went extinct. This local extinction could have been prevented if the population had retained partial use of Collinsia, which occupied drier microhabitats unaffected by cattle removal.

The flush of grasses abated quickly, rendering the meadow once again suitable for Euphydryas feeding on either host, but no butterflies were observed from 2008 to 2012. In 2013-2014, the site was naturally recolonized by Euphydryas feeding exclusively on Collinsia, returning the system to its starting point and setting the stage for a repeat of the anthropogenic evolutionary cycle.

Youngsteadt, E., et al (2018) **Venus flytrap rarely traps its pollinators.** AMERICAN NATURALIST 191:539-546

Authors' abstract: *Because carnivorous plants rely on arthropods as pollinators and prey, they risk consuming would-be mutualists. We examined this potential conflict in the Venus flytrap (Dionaea muscipula), whose pollinators were previously unknown. Diverse arthropods from two classes and nine orders visited flowers; 56% of visitors carried D. muscipula pollen, often mixed with pollen of coflowering species. Within this diverse, generalized community, certain bee and beetle species appear to be the most important pollinators, on the basis of their abundance, pollen load size, and pollen fidelity.*

Dionaea muscipula prey spanned four invertebrate classes and 11 orders; spiders, beetles, and ants were most common. At the family and species levels, few taxa were shared between traps and flowers, yielding a near-zero value of niche overlap for these potentially competing structures. Spatial separation of traps and flowers may contribute to partitioning the invertebrate community between nutritional and reproductive functions in D. muscipula.

Franzese, G., at al (2018) **Electric properties of dust devils.** EARTH AND PLANETARY SCIENCE LETTERS 493:71-81

Authors' abstract: *Dust devils are one of the most effective phenomena able to inject dust grains into the atmosphere. On Mars, they play an important role to maintain the haze and can significantly affect the global dust loading, especially outside the dust storm season.*

Despite dust devils having been studied for a century and a half, many open questions regarding their physics still exist. In particular, the nature of the dust lifting mechanisms inside the vortices, the development of the induced electric field and the exact contribution to the global atmospheric dust budget are still debated topics.

In this paper, we analyze the dust devil activity observed in the Moroccan Sahara desert during a 2014 field campaign. We have acquired the most comprehensive field data set presently available for the dust devils: including meteorological, atmospheric electric field and lifted dust concentration measurements. We focus our attention on the electric field induced by vortices, using this as the principal detection parameter.

Dust devil induced E-field is linearly related to vortex pressure drop and speed. Dust devils and dust storms show the same relation E-field/lifted dust grains. Terrestrial and Martian dust devils show similar pressure drops distributions.

Hlusko, L.J., et al (2018) **Environmental selection during the last ice age on the mother-to-infant transmission of vitamin D and fatty acids through breast milk.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 115:E4426-E4432

Authors' abstract: *By 32,000 years ago, people were living in Arctic Beringia, and during the Last Glacial Maximum (LGM; 28,000 to 18,000 y ago), they likely persisted in the Beringian refugium. Such high latitudes provide only very low levels of UV radiation, and can thereby lead to dangerously low levels of biosynthesized vitamin D. The physiological effects of vitamin D deficiency range from reduced dietary absorption of calcium to a compromised immune system and modified adipose tissue function.*

The ectodysplasin A receptor (EDAR) gene has a range of pleiotropic effects, including sweat gland density, incisor shoveling, and mammary gland ductal branching. The frequency of the human-specific EDAR V370A allele appears to be uniquely elevated in North and East Asian and New World populations due to a bout of positive selection likely to have occurred circa 20,000 y ago. The dental pleiotropic effects of this allele suggest an even higher occurrence among indigenous people in the Western Hemisphere before European colonization.

We hypothesize that selection on EDAR V370A occurred in the Beringian refugium because it increases mammary ductal branching, and thereby may amplify the transfer of critical nutrients in vitamin D-deficient conditions to infants via mothers' milk. This hypothesized selective context for EDAR V370A was likely intertwined with selection on the fatty acid desaturase (FADS) gene cluster because it is known to modulate lipid profiles transmitted to milk from a vitamin D-rich diet high in omega-3 fatty acids.