OPUNTIA 476

Middle June 2020

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.

About The Cover: Nanking cherries blooming in my yard on June 2.

LICENCED TO DRIVE: PART 1

photos by Dale Speirs

[Previous licence plate photos were in OPUNTIAs #63.5A, 410, 421, 445, 452, 459, and 471.]

As I take my pandemic walks, I put my smartphone camera to good use. I've been photographing vanity plates on vehicles even before we had to learn to walk two metres apart. I have photographed quite a few more, enough that I'll start a new column. I won't illustrate the plates that are only personal names, just the more imaginative ones.

The plate below needs no comment. The two plates at right belong to avid golfers. 5 holes in 1 and Late for one's tee time (note the plate holder).

These were a matched pair of Fiats parked in front of the same house in the Marda Loop district. I Googled MINI Z, which proved to be a popular line of radio-controlled toy cars. COOKIEQ came up ambiguous but was probably something a geek would play or use.

Exercise buffs.

Don't ask me.


PONTIAC G5
Alberta
SKOOZME


4X4
Alberta
RIG
Wild Rose Country


Alberta
CHKNHWK
Wild Rose Country
mazda


128i
Alberta
SANDALS
Calgary BMW

Now for the ongoing saga of OPUNTIA, the licence plate, which is actually older than OPUNTIA the zine. The name is the Latin genus of pricklypear cacti, of which two species are found in Alberta. While an undergraduate at the University of Alberta in Edmonton, I published papers on them.

After graduation in 1978, I moved to Calgary. For many years I drove secondhand cars but eventually came out of poverty, bought a house in 1982, and bought my first new car in 1987, a Nissan Micra. The first issue of the zine OPUNTIA was published in March 1991, three decades ago. The zine is still going strong as you can see, but the cars were a different story.

The proud owner of a shiny new car posing in October 1987. For the benefit of the younger generation who view this photo without ever having seen a film camera, it was taken in black-and-white because that film was cheaper to develop. The car was burgundy red, and I got the OPUNTIA licence plate to make it easier to find in a parking lot.

In 1997, I paid off my mortgage. Suddenly having extra money, I bought a 1998 Honda Civic hatchback as a second car. The hatchback got the plate NOPALEA, the Spanish word for pricklypear cacti. By now I had risen to District Foreman with the City of Calgary Parks Dept. Since I was the person who unlocked the depot each morning at 06h30, I wanted a backup vehicle so I could get to work on time if one car failed.

The Nissan Micra was in two accidents, neither of them my fault, and was never the same. Eventually I junked it and bought a 2002 Honda Civic coupe, which I still drive today. I transferred the OPUNTIA licence plate to the coupe.

This photo was taken in 2011, the year after I retired, having made Trouble Calls Supervisor. In retirement I didn't need two cars, so I gave the hatchback to my nephew in Victoria, British Columbia. He drove it a few years until a drunk driver ran a red light and took off the front end. He wasn't hurt but the car was written off.

After 18 years, the coupe only has 143,000 km on it. Nowadays I use it for grocery shopping once a week, club meetings, and, in the summer, driving out to the mountains. Since I retired, the car usually goes from November to March on one tank of gasoline. Around the city, I prefer riding Calgary Transit and letting the bus driver be the one aggravated by the traffic.

ACTION ADVENTURE ON THE AIR: PART 3
by Dale Speirs

[Parts 1 to 2 appeared in OPUNTIAs #426 and 447.]

(This and other old-time radio shows are available as free mp3s from the Old Time Radio Researchers at www.otrrlibrary.org.)

Morse Decoded.

Carlton E. Morse was a prolific writer/director/producer in the era of old-time radio. He most commonly produced serial action adventure stories that ranged from three to ten episodes per serial. A radio season was 26 weeks, so Morse would alternate 10-episode stories with 3-episode stories.

Morse didn't like the usual method of characters constantly referring to each other by name in every other sentence they spoke. Instead, each character had a distinctive accent to prevent confusion as to who was speaking. The plot was summarized after each commercial break so no listener could lose their way.

"It's Dismal To Die" was a three-part 1944 serial within ADVENTURES BY MORSE. The hero of the series was Capt. Bart Friday, a San Francisco detective who spent little time there and roamed the world on cases. His sidekick was Skip Turner, who had a Texas drawl thick enough to be cut with a knife.

This particular case took the men to the Dismal Swamp of South Carolina. Julie Lane asked them to help find her husband Johnny, who had vanished into the swamp a month ago. Friday and Turner were suspicious about her story and why she waited so long. She said Johnny had been kidnapped but the ransom wasn't money. The kidnappers wanted him to do some sort of job, but she suspected once it was done so would be Johnny.

Other characters were introduced. The Dummy was a giant shaggy mute Cajun who pretended to be stupider than he really was. He could only moan. Think Chewbacca. Julie said he made a supply run into the swamp once a week, so the three followed him. Next up was Morales, an Hispanic henchman.

Julie was kidnapped by The Dummy and Morales, who took her to their boss Herr Doktor Eckhardt. Friday and Turner trailed them to the hideout and were caught. Eckhardt spoke with a thick Prussian accent. World War Two was still under way, so there were lots of German spies roaming about in fiction. The whole contretemps had to do with a superscience death ray. The war was winding down, but the Nazis were planning ahead for the next one. Johnny Lane was to help them with the ray machine or die trying, or rather, for not trying.

Much running about. The sound man must have worked up quite a sweat doing all those footsteps. In old-time radio, every character wore tap shoes. Eckhardt actually went bwah-ha!-ha! as he contemplated ravishing Julie. He didn't actually do it but did kill Morales for the fun of it.

Eckhardt cackled as he threatened to kill Johnny Lane. Instead of shooting him immediately, he followed the traditional mad scientist method of bragging at length about how the master race would rule, bwah-ha!-ha! This gave Friday and Turner a chance on a desperate measure that just might work and did.

Before that though, all parties concerned explained at great length what they did or were going to do. Eckhardt had been smuggling Nazi spies into America from South America via Florida and the Dismal Swamp.

Eventually everyone ran out of breath and the action commenced. The hideout was set on fire and Eckhardt escaped. The chase was on through quicksand and marsh grass in the black of night. After much splashing around in the mud, Eckhardt was captured and the war was won.

"Dead Men Prowl" was a 10-part serial of half-hour episodes, first aired in 1945. The setting was a resort camp on the far shore of San Francisco Bay. The only access was by boat. Capt Friday arrived with his friend Doctor Jamie Croft, who spoke with an English accent.

They met with a young couple, cousins Andreas Luis (Hispanic accent) and Carmel Luis, who told them they had just seen a skeleton walking about. Moments later all four found the body of the mayor Doc Sims on the beach, with no obvious reason for his death. They hauled it up to the village, then found a second body shot dead, Hartley the village idiot.

They hardly had time to identify the second corpse before the young couple found another body, this one hanged. He was their uncle, Andrew Walters. Friday said someone was committing a nuisance, and wondered if the entire village would be wiped out before sunrise. Wandering about the village, they

saw one of the dead men walking ahead of them. All that in the first half hour. Never a dull moment out that way.

The dead man, Doc Sims, got away. The four protagonists retired for the night, or at least tried to. Not that simple of course. A mysterious boat puttered along the water in the dark, and one idiot left a window open for the convenience of any intruders. Siblings Gail and Martin Stanley arrived, claiming to be the niece and nephew of Doc Sims. Unaccountably, neither of them had accents.

Everyone finally got into their beds, just in time for a dead man to clamber in. Gail was kidnapped, snatched through the open window, and then buried alive. Friday and Doc retrieved her in time from the grave. Her brother Martin acted up to provide additional drama. She didn't behave much better after revival but at least she had reasonable cause.

Most of episode 3 was taken up with people being hysterical. After that was out of the way, a couple of the men walked over to the morgue to see which corpse had gone roving this time. They found the body of Doc Sims again, once more dead. On the other hand, the body of Uncle Andrew had disappeared.

Part 4 opened with the third body gone walkabout. Friday was thinking he should have handcuffed the bodies to the slabs in the morgue. Dr Croft reminisced about similar cases involving hypnosis, but since one body was hanged and the other was shot, he didn't have an explanation.

Martin and Friday went to Sims place to find the will. Sims, still walking dead, arrived and rendered the two men unconscious, then opened the wall safe containing the will. The morning finally came.

A delegation of villagers arrived, understandably upset. Friday was quite the negotiator because he not only mollified them but they elected him Special Constable to investigate the matter. There was to be an inquest, for which Friday's greatest difficulty would be to ensure the corpses showed up for the hearing.

Doc Sims had taken his will out of safe, a peculiar thing for a dead man to do. Friday checked the remaining papers and found a letter from Sims to Walter. In it, Sims threatened to expose Walters for a past murder. Friday and Cross went to the morgue and found Sims' body again. On the corpse was the will and a sealed letter. This time Friday made sure that body was tied down.

They were still missing one of the corpses, the halfwit boy Hartley, who was out gallivanting around. Friday and several others went to Walters' house to search for his papers. Meanwhile the villagers were working themselves into a frenzy. The mob decided Andreas was the killer, so Friday went to pacify them again. While he was away, the cousins and the siblings squabbled between themselves. Friday returned and not long after so did the dead boy.

Episode 6 began with wonderment about how the corpses kept coming to life. Friday then began reading the wills of Sims and Walters, who were brothers, much to everyone's surprise. There were also three sisters. Walters' real name was Vance Sims.

Their brother Franklin had been murdered. Vance was arrested but broke prison and assumed his new identity. Doc Sims had cheated his siblings out of the estate. There was a lengthy discussion of the wills, which explained a lot but not how the dead came back to life. Doc Sims' corpse broke its bonds and went wandering once more. You can't keep a dead man down.

Episode 7 began with Friday and Croft given knockout drugs and then locked inside a closet for two hours before they woke up. That was good for five minutes of dialogue as they discussed how to break down the door before actually doing it. Morse was second to none when it came to padding stories.

Rushing back to the house where the four young people had been, they found it deserted. More rushing about the village in the fog. All three corpses were missing, which made Friday spitting mad. He mentioned that he didn't want to lose face at the inquest if he had to tell everyone the corpses were misplaced.

Friday and Croft descended into basement of the morgue, constantly talking as they went. The Hartley corpse took a shot at them. The other two corpses were on guard in front of the refrigeration unit but were immobile. That was where the missing four were, almost frozen to death.

It took ten minutes of dialogue to get them up the stairs to the ground floor and apply first aid for hypothermia. Friday locked the three corpses into the refrigerator in hopes that freezing them solid would stop their gallivanting about the village.

Part 8 began after locking the three dead men inside the refrigerator. Friday and Croft treated the four kids. Friday then went off to sleuth around. Upon

returning, Friday accused Andreas of killing the Hartley boy. He had shot at the skeleton on the beach which frightened him. Friday's investigation revealed the boy had been in costume. After being fatally wounded, the boy bled to death as he crawled back to the village. It was obviously not premeditated murder.

Friday needed sleep and Andreas needed fresh air. More alarums, which proved to be mostly padding. Next was an extensive review of past events, possibly including another unknown person behind the prowling dead men. The morgue was then blown apart. You can't keep three dead men down.

A second explosion trapped Friday and Andreas in the wreckage of the morgue. This was obviously meant to be a cliffhanger to bring listeners back for the next episode. Since Friday was the star of the show, there wasn't much suspense.

Part 9 took the first three minutes to sum up the story so far, then revealed that, surprise!, they survived. After clambering out of the bombed ruins, they dashed back to the house. Andreas pointed out something obvious that listeners were already wondering about. Despite all the alarums, some of them quite noisy, the screaming and explosions had not brought the villagers out. Friday said, in effect, that no one wanted to be a witness who had to testify in court. That made sense.

Back at the house, they found Croft bound and gagged. Off to the docks, where Martin and Gail Stanley had taken a motor launch. Friday had his own speedboat so the chase began across the fog-shrouded bay to San Francisco. They caught up with them and towed them back to the village. On the trip back Andreas and Martin got into a fistfight. Once more to the house, only to find Carmel was missing. One of the dead men had come and got her.

Part 10 finally solved everything. Friday went out on his own and rescued Carmel. The rescue was rather improbable, so the episode had to stop for a few minutes while Friday explained everything and tied up the loose ends. Plenty of handwaving was required. Carmel said she had bitten her captor on the finger and drew blood. Croft pointed out that dead men don't bleed.

Friday went out and captured Andrew Walters. It was really Croft, wearing a rubber mask. He confessed that he was an uncle to the four young people. He was Franklin Sims, who had survived the murder attempt by Vance. His explanation was interminable but basically he wanted the inheritance to pay for his biological experiments. He didn't actually bwah-ha!-ha!.

He had been impersonating his brother Doc Sims. He wanted to eliminate the four cousins so that the entire estate would go to him. The last ten minutes were a extended narration by Franklin qua Croft about how he did it all. Actually if you don't have time to listen to the entire series, you only need listen to the final episode.

With two minutes to go, Skip Turner arrived. Remember him? The Texas accent? Well, at least he got a bit part. His purpose was to announce the next serial, taking place in Hollywood. That next adventure was "You'll Be Dead In A Week". Off they went, taking Franklin with them to deposit at the police station. Turner tried to hit on Carmel but Friday put him in his place. Such a boor.

Sailing, Sailing, Over The Bounding Main.

BOLD VENTURE aired on old-time radio in the 1951-52 season, and was written by Morton Fine and David Friedkin. They syndicated the show as a star vehicle for Humphrey Bogart and Lauren Bacall. The setting was Havana, Cuba, long before the Communists.

Bogart played a hotel owner Slate Shannon and Bacall was his supposed ward Sailor Duval. Supposed, because she was definitely an adult woman, who was on the make for Shannon. On the side, Shannon owned a speedboat called Bold Venture, which served to move people around as the plots required. King Moses was a calypso singer who occasionally came in and out of the plot. He often narrated part of the story in the form of calypso lyrics.

"Black Tie Affair" aired on September 17, 1951, as the first episode of the series. Duval talked Shannon into attending a swanky party on board a cruise ship. Two thieves, a man and a woman, were seeking the combination to the ship's safe that had been hidden in a rental tuxedo.

They found out that Shannon had rented it. Uttering threats with menaces didn't work. At the ship the threats were renewed. The purser was shot dead without getting a speaking part.

The party and alarums continued, but the band played on. Duval was kidnapped and hidden in a cabin, in the hopes of making Shannon negotiate. People were slugged or tossed overboard with great abandon.

In the end the thieves got the cash from the safe. They didn't have long to spend it. After much chasing up and down the piers, the finale brought everyone together to divvy the cash. Honour among thieves being what it is, it did not go well for the guilty.

After the death toll spiked, the episode ended abruptly with numerous loose threads dangling. The writers weren't even trying. They apparently thought that all the action scenes would distract the listener. Perhaps they were correct.

Deep In The Jungle.

THE HALL OF FANTASY was an old-time radio anthology series that aired for the 1952-53 season. The episodes were written by Richard Thorne, who also directed the episodes and often played characters. The shows were a mixture of supernatural and mystery stories.

"The Diamonds Of Death" aired in 1953 and was a standard type of jungle adventure that even then was obsolete. The protagonists had been told of a strange tribe in darkest Belgian Congo who worshiped an idol which had a giant diamond for an eye. There were countless other diamonds lying around the idol, heaped up like gravel.

The last profiteer who tried to make off with the diamonds barely made it out alive. All the others in his party died horribly en route. The idol's diamond eye could see from vast distances away and warn the tribe. Notwithstanding that, the second group decided to try for the diamonds.

They were portrayed as the good guys, with a square-jawed young hero, an experienced hunter, and a beautiful young woman. No matter how the situation was analyzed, they were thieves. The tribe were called troublemakers, just because they didn't want to give away their diamonds.

Thorne wrote this on autopilot and no doubt did his research in old pulp magazines. As an example, the greatest threat coming or going to the idol's village was tiger attacks. Tigers, of course, are not native to Africa. The plot staggered to an end and so did the listener.

BOTANICAL FICTION: PART 13
by Dale Speirs

[Parts 1 to 12 appeared in OPUNTIAs #316, 317, 320, 323, 325, 334, 369, 380, 402, 412, 438, and 459.]

Carnivorous Plants.

Long a popular favourite, stories of man-eating plants faded out several decades ago after we ran out of unexplored jungles. Giving it a modern take was "Yamadori" by Stephen R. Wilk (2019 Nov/Dec, ANALOG). A rich horticulturist, one bwah-ha!-ha! short of being a mad scientist, had specimens of a carnivorous species from Madagascar.

He surmised that it needed more food, so hired a technician to spotweld some busbars and build a robot that could feed the meat to the plant automatically. Sort of like a pop-up valve irrigation system running on a timer, but with blood. He got results of a sort.

A more subtle approach to carnivorophytes was "The Mystery Of Sylmare" by Hugh Irish (1927 July, WEIRD TALES, available as a free pdf from www.archive.org). An uninhabited island off the west coast of Florida was a place of no return.

The cause was trees which exuded a depressant, so powerful that humans died from it by suicide. Presumably the decaying corpses on the ground provided nutrients. *As a pitcher-plant lies in wait for its prey, these misshapen monsters of the vegetable world awaited their victims.*

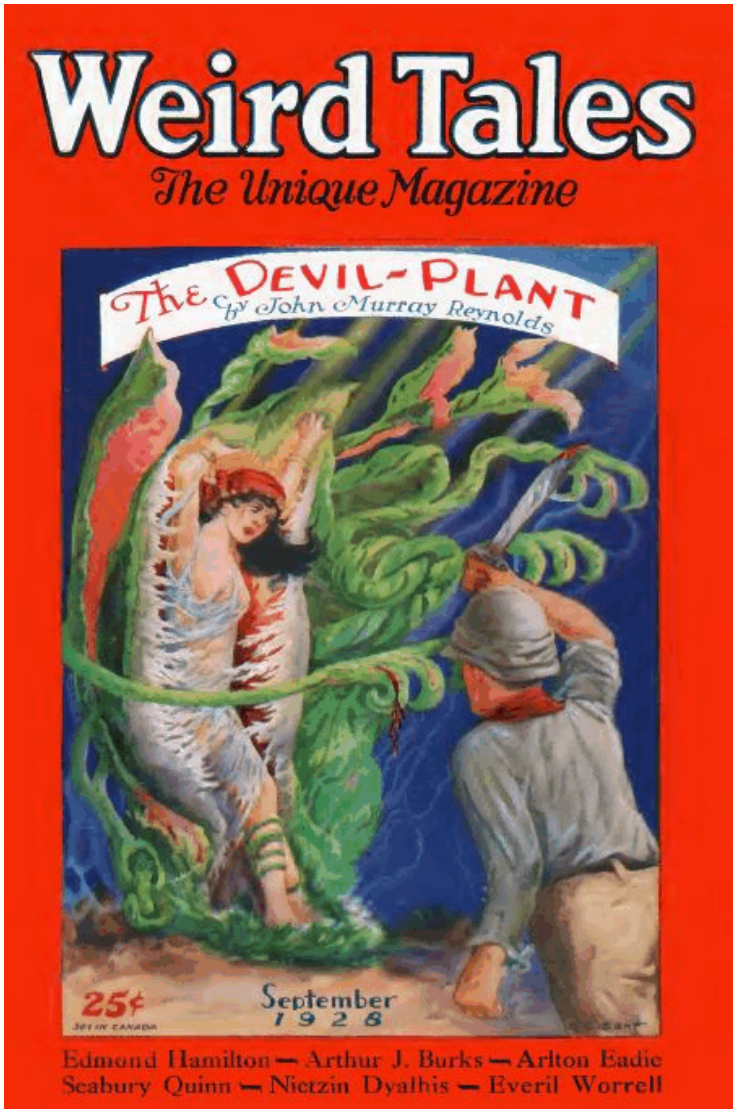
What caught my eye was that the hero was a flatlander from Saskatchewan: *But the trip had all been different enough from selling farm machinery in Saskatchewan, which was my own specialty, and as I went down the hotel steps on the way to the railroad station I carried, besides my traveling bag, an equally heavy regret that my week in Tampa was up.*

They never have this sort of trouble in Regina.

There was no idea that WEIRD TALES wasn't ashamed to ring the changes on again and again. In its 1927 December issue was "White Orchids" by Gordon England. This time the locale was deepest Amazonia, where an explorer came across a clump of white orchids with human bones scattered around it. The

orchids exuded a combination of pheromones to draw in their prey and depressants to kill them. The rotting flesh would then decay and supply nutrients. The hero barely escaped and only with incredible force of willpower. He made his way back to civilization where no one believed his story and he died in an insane asylum.

WEIRD TALES revisited the subject a year later with "The Devil Plant" by John Murray Reynolds (1928 September). A mad scientist built himself a laboratory in the deepest Amazon where he bred a giant Venus flytrap, big enough to eat humans, then added in animal cells. Because he could, apparently. The plant's roots became motile, and once it learned to walk, it was game over. Nothing about orchids though.



"Suzanne" by J. Joseph Renaud (1930 April, WEIRD TALES) was the next variation. Spies led by Dr Salzmann were trying to make a diplomatic attache named Wilson reveal state secrets by feeding him to a carnivorous tree.

The tree was said to have been developed from *Nepenthes* pitcher plants. As that genus only grows as vines, it was difficult to believe. The doctor left Wilson to his fate. The hero escaped because he happened to have about his person a bottle of chloroform.

I feel safe in saying that even medical staff don't walk about off duty carrying bottles of the stuff. By sprinkling chloroform about, Wilson put the carnivorophyte to sleep and escaped. A more contrived ending I have seldom seen.

"The Seeds Of Death" by David H. Keller (1931 June, WEIRD TALES) was the investigation of a series of missing men who dropped out of sight while visiting a beauteous senorita in a Spanish castle. She had found a rare species of orchid growing in the woods nearby, flowering with its roots in a freshly dead horse.

She discovered that the seeds fed on fresh meat. Loving the flowers as much as she did, it was an easy step into cultivating them inside the castle. Dead horses smell a fair bit, so she took a series of lovers, put a seed into their salad at the dinner table, then kept them restrained in beds while the orchids germinated and grew on them. The final harvest of flowers was always stunning.

Puffing About.

"Up Irriwaddy Way" by Edgar Gardiner (1929 April, WEIRD TALES) was a lost worlds story with fungi not from Yuggoth. A group of white men entered the Burma jungles to locate and loot a treasure horde in an ancient temple. Didn't work.

As the natives hotly pursued them, the men were caught by carnivorous fungi in the form of giant puffballs. The last survivor used up his remaining ammunition on his pursuers. He inadvertently hit some of the puffballs that had swallowed his companions. The puffballs exploded and sprayed poisonous spores over the natives, solving that problem.

Once more with feeling was the 1931 April-May WEIRD TALES story about hungry puffballs, "The Dust Of Death" by Hugh Jeffries. It was different from the previous story because it was set in Florida.

Actually there were some other differences, the puffballs in this case being produced by agricultural breeding done by two mad scientists, a Caucasian and a Chinaman. Yellow Peril stories were popular in this era. It is nice to realize that today no American leader would be ranting about the Yellow Peril, at least not in those exact words. However, I'm not on Twitter so I could be wrong.

Be that as it may, the puffballs began moving out. Miami, Tampa, and on to Jacksonville. Cities crumbled as the fungi plugged up water mains and cracked structures when they expanded. The end seemed nigh until several generations of puffballs later they began reverting to normal size and behaviour. The genes weren't stable, and the giant puffballs didn't make it out of Florida.

How Does Your Garden Grow?

QUIET PLEASE was an old-time radio series that aired from 1947 to 1949, created, written, and directed by Wyllis Cooper. The episodes included a lot of weird fiction. Well worth downloading as free mp3s from www.otrrlibrary.org

"Let The Lilies Consider" was a 1948 episode. The narrator was James R. James, accused by police of murdering his wife Gretchen. James said he buried her under the lilies but no grave could be found. The rest of the garden had been dug up by the police but they found nothing. Only one lily was left growing in the garden. As the police detective grilled him, James quoted the Biblical verses about considering the lilies.

In the flashback sequences that followed, Gretchen displayed her jealousy of all the time James spent with his garden flowers. She also thought the lilies were eavesdropping on their conversations. She hated them and wanted them destroyed. Gretchen gave James an ultimatum: the flowers or her.

Much of the episode was padding as James waxed rhapsodically about the beauty of the lilies. He could hear them crooning to him. Gretchen took matters into her own hands and set fire to the garden. She said she was leaving him.

Back to the police detective. He left James for a moment and when he returned he discovered the man had vanished. There were now two lilies growing in the garden. Indeed. Wyllis Cooper obviously wrote himself into a corner. Not knowing how to end the story, he pulled a rabbit out of a hat.

"Black Spot" by S.L.M. Barlow (1966 May, THE SAINT MAGAZINE, available as a free download from www.archive.org) telegraphed its plot ahead as it took the scenic route before a murder attempt finally happened. The protagonists were dear old ladies from a garden club, who spent much of their time discussing herbal lore.

The would-be murderer, stymied in the nick of time, tried to speed up her inheritance by helping an asthmatic with a humidifier steeped in poison ivy leaves. The plant is bad enough when touched, but its vapours would have killed the victim had not one of the ladies deduced what was up.

SHAKE, MURDER, AND ROLL (2011) by Gail Oust was a novel in a cozy series about the Bunco Babes, a group of retired women in Serenity Cove Estates, South Carolina. They spent their time golfing, gambling, and Marpleing. The head Marple was Kate McCall, assisted by her Bunco friend Rita Larsen.

The pair attended a garden club banquet whose featured speaker was Sheila Rappaport and her boyfriend Vaughan Bascomb. Although Rappaport was described as a botanist, she was obviously a horticulturist.

There is a difference, if I may be pedantic for a moment. I originally began university reading for a BSc in Palaeobotany, then graduated with a BSc in Horticulture after I realized how few botanical jobs there were. Botany is the study of plants, and horticulture is the study of growing them.

Meanwhile, back at the banquet, it broke up in disorder when Rappaport and Bascomb were poisoned. He didn't survive but she spent some time in hospital before recovering. McCall and the police raced each other to find out who was the intended target and why.

McCall provided the idiot in the idiot plot by not knowing how to work her cellphone camera properly. The two victims had a television gardening show, which provided further suspects from the production management.

The stage set wasn't all roses. Many alarums and poisonings later, Rappaport was run in for murder. She had a very good knowledge of garden plant poisons.

Enough to fake her own illness and kill those who were trying to cut her out of a business deal. If you would murder someone, first plant azaleas.

Speaking of which, another gardening cozy was THE AZALEA ASSAULT (2012) by Alyse Carlson (pseudonym of Hart Johnson). It was the first novel in a series about Camellia Harris, a publicity agent in Roanoke, Virginia. A national gardening magazine chose a local garden for an 8-page feature article.

First-class photographer Jean-Jacques Georges was to do the honours. At a meet-and-greet, he proved to be a first-class boor as well. He insulted guests, complained about how boring flowers were, and hit on almost every woman. Thus it was that there was little surprise when his body was found the next morning in an azalea bed with a pair of hedge shears deeply embedded into him.

Harris' brother-in-law was the main suspect because Georges had groped his wife. Harris began Marpleing and soon determined that Georges was an imposter, not French at all. He had been a Virginia boy who framed his sister for fraud in order to cheat her out of an inheritance.

The first murder led to a second one. The killer wanted to settle accounts, and not just in the ledger books used to embezzle the money. The good news was that the magazine found a replacement photographer, so the garden feature went through.

The Funnier Side Of Gardening.

Tony Hancock was an English comedian who had a radio series from 1954 to 1959, then went on to television and movies. "The Marrow Contest" was a 1955 episode written by Ray Galton and Alan Simpson. (Still under copyright but available at www.bbc.co.uk)

Hancock was proud of his giant marrow, about ready for the town borough's annual vegetable competition. His anticipation was marred by the borough deciding to widen a road and take out six yards of his garden, including the marrow. Since he lived in a council house he had no legal recourse.

Hancock appealed to the borough mayor, who turned out to be the spiv Sidney James. No luck there, as James was more concerned with looting the public treasury through graft. The two men quoted obscure laws at each other but with no satisfaction for Hancock.

James, a thoroughly citified type, had no idea what a marrow was. Hancock told him it was a type of squash from Spain. James said it was therefore an alien and had no rights under British law. Hancock then quoted a law that said any alien in Britain more than six months was entitled to equality of treatment. The marrow was more than six months old, therefore it had the privilege.

Eventually they ran out of bizarre laws to quote and James concluded with "Because I said so, that's why". Hancock's next appeal was to his Member of Parliament, a wet twit who sat as an independent because no party wanted him. The final step was the courts. The judge issued a compromise, declaring that the borough had to build a bridge over the marrow.

More twists came when the shade from the bridge killed the marrow. It didn't matter anyway. The bridge was so expensive that the borough had to slash its budget, including canceling the vegetable competition.

Fun With Evolution.

"Evolution Island" by Edmond Hamilton (1927 March, WEIRD TALES) had as its resident mad scientist Dr Walton. He had discovered a device called the Garner Ray, after its inventor, could speed up evolution. Like any good mad scientist, he had an independent income and his own island.

The plot was obvious. Turn the ray on various critters, including humans, to see what happened. They evolved rapidly into unspeakable things that would conquer the world if they could only get off the island. What wasn't obvious was that the plant life would also speed up its evolution and develop into sentient and mobile organisms that would rule the world if only, etcetera.

Then a bright one figured out how to make balloons. The world was doomed, but for the quick thinking of the hero. In an early example of reversing the polarity, he switched the positive and negative electrical terminals to convert the Garner Ray into a de-evolution ray.

The plant men were degenerated into primordial algal slime. As for the balloons, with only slime inside of them, they never made it to Neunundneunzig Luftballons status.

Edmond Hamilton's hobby must have been gardening, for he soon came up with another plant kingdom story. "Ten Million Years Ahead" (1931 April-

May, WEIRD TALES) was about three time travelers who went ahead and discovered the descendants of humanity groaning under the oppression of sapient plants.

Many an alarum and excursion, but they were unsuccessful in liberating humanity. They narrowly escaped the plants in a few dash back to the safety of their time machine (called a time doubler). Once in our time again, or at least 1931, they destroyed the machine. The story concluded with a lecture by the leader of the group:

Species rise and rule and fall again. We have seen how in that far day man will have fallen and the plants will have risen in his place to be lords of earth. But who can know what lies beyond even that far time we saw? We three will never know, for we know but too well now that to move out of one's own time is a thing forbidden, a thing terrible, and only with the time-doubler destroyed will we ever again feel easy.

But we do know that beyond the ten million years whose culminated changes we saw, there lie other countless centuries and other changes. In that farther time the plants must fall from their lordship of earth as its other lords have fallen, and who can tell but that man will rise in their place again? Who can say but that we saw only a temporary reverse or setback in our race's progress, soon to be overcome, a mere strange episode in man's titanic upward march from did sea slime to the stars?

Think about that the next time you munch on a salad.

Pest Control.

"The Secret Life Of Bots" by Suzanne Palmer (*in* THE NEW VOICES OF SCIENCE FICTION (2019), edited by Hannu Rajaniemi and Jacob Weisman) considered the practical problems of long-term space travel, specifically pest control. A spaceship's computer had activated a microbot to travel in the spaces inside the ship, searching for a pest that was eating the insulation off electrical wires. Silkbots spun new insulation over the wires but the pest began preying on the silkbots. The ending was inconclusive but then again so is pest control.

"The Plant Revolt" by Edmond Hamilton (1930 April, WEIRD TALES, available as a free pdf from www.archive.org) had an obvious plot just from the title. Edward Harley, the hero of the story, narrated that woeful time when farmers in central Pennsylvania reported the spring seeding had been extraordinarily successful. Plants grew very rapidly but didn't seem to have much in the way of root systems.

The phenomenon spread worldwide and all vegetation warped into rootless tendril-waving beings. The handwaving explanation, and as a professional horticulturist I can say there was a lot of it, was that the atmosphere had become suffused with all the nutrients that plants needed. Since they could absorb their food through their leaves, they began roving about. Carnivory was the next obvious step, and civilization was doomed.

Harley had a series of alarums and an excursion which brought him to the laboratory of a mad scientist who had started the problem. Dr Jackson Mandell was a rogue botanist who was going to replace humans with a new master race. His explanation took up five pages, although mercifully there was no bwah-ha!-ha!-ing. With a single bound and some running about, Harley destroyed the mechanism that turned plants into all-conquering armies. The world was saved, huzzah!

Arbouricultural Problems.

"The Gallows Tree" by N.J. Neail (1929 December, WEIRD TALES) was about Joseph Worth, a visitor to the Cornwall moors. He noticed an aged oak tree out in the middle of the moors and began to see it in his dreams. When he returned to the site, there was no trace of it. The oldest inhabitant told him there never was such a tree.

After more dreams and obsessions, Worth again visited to the site. A ghostly tree snatched him with a noose and hanged him. When his body was found by the villagers lying on the moors, they were baffled. The marks on his neck indicated he had been strangled but there was no evidence as to how it was done.

The newspaper report mentioned in passing that centuries ago there had been an old oak tree used as a gallows for highwaymen. One of the hanged men had shouted a curse just before he died, that any descendants of the man who betrayed him would die should they ever set foot on the moors. The tree had long since been cut down but its ghost lingered, ready to carry out the curse of the highwayman.

"The African Trick" by H.W. Guernsey (1940 April, UNKNOWN) was definitely something different in horticultural fiction. An explorer in Africa got revenge on a man in New York City by sending him a seed that grew into a human assassin. The tribal chief from whom the seed was stolen got revenge against the explorer with a poison snake.

The seed came from a tree, the last of its species, which produced the women for the tribe, there being otherwise only males. Each year the tree put out fewer flowers, and consequently seeds, so the tribe was dwindling into extinction. Nobody won in the end.

QUE SERA, SERA
by Dale Speirs

THE FUTURE IS WILD was a 2002 television mini-series now on DVD. It is done in documentary style, the premise being that humans abandoned Earth and went out to the stars. They were however, still interested in the fate of their cradle, so at intervals of millions of years they sent back robot probes to see how life was faring.

Each segment depicts sample fauna at a few locations on the planet, complete with life cycles of the animals, the climate, and the rearrangement of the continents due to plate tectonics. Each segment began with Paris, France, as it would be in the far future, then jumped to a couple of other locations around Earth to show other ecosystems.

The SFX were very well done, bearing in mind they were late 1990s state of the art technology. This meant that the computer rendering in those days couldn't handle hair, fur, or small feathers, so the animals seemed shiny. However the work was well done with no cost cutting measures evident. It would be unfair to judge them by the SFX two decades later.

5 megayears: The first segment took place 5 million years after humans left. Their descendants found the planet under another ice age. No trace of the city of Paris was left. Where it once was, a frozen tundra now prevailed. The first future animal shown was a Snow Stalker, a giant descendant of the wolverine with white fur.

One of its prey was Gannet Whales, flightless birds the size and shape of seals but with a long beak. Their defense against the Snow Stalker was to vomit acidic stomach contents. They came ashore in herds, and were too much en masse for the Snow Stalker. Its other prey were the Shag Rats, herd rodents the size of sheep, with heavy fur coats against the cold.

Another robot probe observed the interior plains of North America, a vast cold desert south of the continental ice sheet. Giant human-sized bats called Death Gleaners flapped through the sky. Underground were the Spinks, 30-cm long descendants of quails, who had become burrowers. Their wings had evolved into digging spades for tunneling, and they lived on roots and tubers.

The Rattleback was another root feeder that lived on the surface and dug out its food. It had evolved from rodents, was the size of a wild boar, and was clothed in large spines like a porcupine as defense against the Death Gleaners.

The next robot probe landed in the Amazon, now a savanna because the ice sheets had locked up the water that once supported the rainforest. Roaming the grasslands were the last remaining primates, the Babookari. Looking like baboons with human faces, they traveled in social groups. They knew how to weave baskets from coarse grasses and use them to trap fish along the shore.

The Babookari were preyed upon by flightless Carakiller birds, 2 metres tall, fast runners, and evolved from carrion feeding raptors. They were the top predators but their eggs were preyed upon by Rattlebacks. At this stage of evolution, primates had dwindled away and were facing extinction.

100 megayears: What were once humans sent out another set of space probes 100 million years later to Earth. Paris was now under a warm shallow ocean. Jellyfish had evolved into 10-metre long rafts with sails high up in the air to steer. The Ocean Phantoms had 3-metre long tentacles dangling underneath equipped with bell-shaped mouths and eyes.

Reef Gliders came from sea slugs, and looked vaguely like fish with a bushy tail. The tail was made of tentacles, there were three pairs of fins, and the eyes were clustered at the front. Ocean Phantoms fed on young Reef Gliders, but mature gliders, the size of a couch, fed on phantoms, a neat little cycle.

Elsewhere, plate tectonics had broken eastern Africa away from the continent (a process that is just starting in our time) and sent it east to a collision with

India. Part of the ocean was hemmed in and was now a brackish inland sea called the Calcutta Swamp.

The creatures thereof included the Swampus, an amphibian octopus that lived on land for several days at a time before having to return to the water to freshen up. A predator on the Swampus was the Lurkfish, which delivered a 1,000 volt charge to stun its prey. It lay in wait amongst the debris on the floor of the swamp and ambushed passing prey.

On the dry land of the Swamp were herds of Toratons, descended from tortoises. Instead of flippers they had pachyderm legs to support their 120-ton weight, for they were the largest land animals in history, bigger than sauropods.

100 megayears from now, plate tectonics will have propelled Australia up into the northern hemisphere, where it will collide with Siberia and Alaska, where the Bering Strait once was, raising up immense mountains. The Windrunner, evolved from cranes, was a denizen of the mountains. It had two pairs of wings, a biplane bird if you will, plus canards at the back of the head to support the long neck when flying.

Down in the canyons were Silver Spiders, big ones that wove webs across the valleys. Surprisingly the webs were mainly to catch windblown seeds similar to dandelion or poplar fluff. The Poggle, about the size of a mouse, was the last surviving mammal. It was a seed eater living in caves and stealing from the spiders, who tolerated it because mammals were good eating.

200 megayears: The third and final set of probes arrived at a time when plate tectonics had merged all the continents in a single supercontinent straddling the middle latitudes. Where Antarctica once was had become an ocean patrolled by Sharkopaths, whose derivation needs no explaining.

Another aquatic denizen was the Rainbow Squid, 40 metres long. It had far more chromatophores and brain cells, enabling itself to camouflage as anything and even turn invisible by matching the refractive index of water.

Birds had gone extinct and were replaced by Flish. They were flying fish, real ones, not the present-day kind that take brief hops out of the water. In the interior of the supercontinent was a hot desert, home to the Bumble Beetle, which laid its eggs in dead animals.

The Terrabyte (note the spelling) was not a computer term but an evolved termite with windowed cities containing algal gardens. Speaking of which, Garden Worms had symbiotic algae in their fronds to supply food. Or be food, as both the Terrabytes and the Slick Ribbon centipede fed on the worms.

Paris and northern Europe were now rainforest. Mammals were now extinct. The Megasquid could survive here, with tentacles turned into thick legs. Up in the trees were Squibbets, a different species of squid which filled the role that arboreal monkeys once had.

They swung from tree to tree, had complex societies, and were intelligent, almost sapient. They knew how to fight Megasquids which tried to dine on them by forming mass troops to throw down rocks and branches and drive them away. They were the first species to have organized warfare since the humans left the planets 200 million years before.

WORLD WIDE PARTY ON JUNE 21: NOW MORE THAN EVER!

Founded by Benoit Girard (Quebec) and Franz Miklis (Austria) in 1994, the World Wide Party is held on June 21st every year. 2020 will be the 27th year of the WWP. Mark your calendars now!

At 21h00 local time, everyone is invited to raise a glass and toast fellow members of zinedom 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 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.

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

SEEN IN THE LITERATURE

Over the last year or so, the constant reader of this column (if there are any) may have noticed that many of the citations now have a tag line "available as a free pdf". Historically most of the journal articles I cited were behind paywalls. I could get to the text via the University of Calgary Library, but anyone without access to a library computer would be out of luck.

The abstracts have always been freely available, and in most cases they are all that is needed to get the main gist of the article. Every scientific journal offers free email notification of current issues, and I subscribe to dozens. These tables of contents include links to the abstracts.

A recent trend is for authors to pay a small sum to make their article available as open access. This seems to be spreading, as universities and government agencies feel the taxpayers should be able to see the fruits of their money. Authors also like it because they want as many people to read their articles as possible. Publishers do not, because they can't make money with free pdfs, but if they are compensated, they will allow open access.

The easiest method to reach an open access article I have cited is to Google the title. Many journals are no longer available in print editions, so the DOI number will get you there as well. That acronym stands for Digital Object Identifier, provided by www.doi.org. This is part of an international agreement to give every paper its own unique identifier which will not change with time.

The old system of ISSN and ISBN numbering still exists, but I suspect it will eventually fade away with time. They number periodicals and books, whereas scientists are interested in individual articles.

Samuel Johnson notwithstanding, someone who publishes without thought of earning money is not a blockhead. Many people, myself included, are not interested in making money from a zine, even if such a thing was possible nowadays. We want our words and thoughts to be read, and preserved for posterity, on the off chance that perhaps one reader a year a century from now will keep our name alive.

Litera scripta manet.

Boutle, I.A., et al (2020) **Mineral dust increases the habitability of terrestrial planets but confounds biomarker detection.** NATURE COMMUNICATIONS 11:doi.org/10.1038/s41467-020-16543-8 (available as a free pdf)

Authors' abstract: *Identification of habitable planets beyond our solar system is a key goal of current and future space missions. Yet habitability depends not only on the stellar irradiance, but equally on constituent parts of the planetary atmosphere.*

Here we show, for the first time, that radiatively active mineral dust will have a significant impact on the habitability of Earth-like exoplanets. On tidally-locked planets, dust cools the day-side and warms the night-side, significantly widening the habitable zone. Independent of orbital configuration, we suggest that airborne dust can postpone planetary water loss at the inner edge of the habitable zone, through a feedback involving decreasing ocean coverage and increased dust loading.

The inclusion of dust significantly obscures key biomarker gases (e.g. ozone, methane) in simulated transmission spectra, implying an important influence on the interpretation of observations. We demonstrate that future observational and theoretical studies of terrestrial exoplanets must consider the effect of dust.

Sadlok, G. (2020) **On a hypothetical mechanism of interstellar life transfer through nomadic objects.** ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES 50:87-96 (available as a free pdf)

Author's abstract: *Lethal radiation, low vacuum pressure and low temperatures; this is how space welcomes organisms. Crossing of immense interstellar distances inflates the exposure time of biological material to harmful space conditions.*

This paper discusses the intriguing possibility of a life-bearing exoplanet being ejected from its planetary system and carrying life across interstellar distances (nomadic = free floating = rogue planet). The proposed interstellar panspermia mechanism reduces the exposure time to space conditions and provides multiple chances for interactions between microbes-bearing rock debris and exoplanets within system the nomadic object encountered on its way.

Kipping, David (2020) **An objective Bayesian analysis of life's early start and our late arrival.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:11995-12003 (available as a free pdf)

Author's abstract: *Does life's early emergence mean that it would reappear quickly if we were to rerun Earth's clock? If the timescale for intelligence evolution is very slow, then a quick start to life is actually necessary for our existence, and thus does not necessarily mean it is a generally quick process.*

Employing objective Bayesianism and a uniform-rate process assumption, we use just the chronology of life's appearance in the fossil record, that of ourselves, and Earth's habitability window to infer the true underlying rates accounting for this subtle selection effect. Our results find betting odds of >3:1 that abiogenesis is indeed a rapid process versus a slow and rare scenario, but 3:2 odds that intelligence may be rare.

Life emerged on Earth within the first quintile of its habitable window, but a technological civilization did not blossom until its last. Efforts to infer the rate of abiogenesis, based on its early emergence, are frustrated by the selection effect that if the evolution of intelligence is a slow process, then life's early start may simply be a prerequisite to our existence, rather than useful evidence for optimism.

In this work, we interpret the chronology of these two events in a Bayesian framework, extending upon previous work by considering that the evolutionary timescale is itself an unknown that needs to be jointly inferred, rather than fiducially set. We further adopt an objective Bayesian approach, such that our results would be agreed upon even by those using wildly different priors for the rates of abiogenesis and evolution, common points of contention for this problem.

It is then shown that the earliest microfossil evidence for life indicates that the rate of abiogenesis is at least 2.8 times more likely to be a typically rapid process, rather than a slow one. This modest limiting Bayes factor rises to 8.7 if we accept the more disputed evidence of ^{13}C-depleted zircon deposits. For intelligence evolution, it is found that a rare-intelligence scenario is slightly favored at 3:2 betting odds. Thus, if we reran Earth's clock, one should statistically favor life to frequently re-emerge, but intelligence may not be as inevitable.

Xu, J., et al (2020) **Selective prebiotic formation of RNA pyrimidine and DNA purine nucleosides.** NATURE 582:60-66

Authors' abstract: *The nature of the first genetic polymer is the subject of major debate. Although the 'RNA world' theory suggests that RNA was the first replicable information carrier of the prebiotic era, that is, prior to the dawn of life, other evidence implies that life may have started with a heterogeneous nucleic acid genetic system that included both RNA and DNA.*

Such a theory streamlines the eventual 'genetic takeover' of homogeneous DNA from RNA as the principal information-storage molecule, but requires a selective abiotic synthesis of both RNA and DNA building blocks in the same local primordial geochemical scenario.

Here we demonstrate a high-yielding, completely stereo-, regio- and furanosylselective prebiotic synthesis of the purine deoxyribonucleosides: deoxyadenosine and deoxyinosine. Our synthesis uses key intermediates in the prebiotic synthesis of the canonical pyrimidine ribonucleosides (cytidine and uridine).

We show that, once generated, the pyrimidines persist throughout the synthesis of the purine deoxyribonucleosides, leading to a mixture of deoxyadenosine, deoxyinosine, cytidine and uridine. These results support the notion that purine deoxyribonucleosides and pyrimidine ribonucleosides may have coexisted before the emergence of life.

Liu, Y., et al (2020) **Large equatorial seasonal cycle during Marinoan snowball Earth.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.aay2471 (available as a free pdf)

Authors' abstract: *In the equatorial regions on Earth today, the seasonal cycle of the monthly mean surface air temperature is <10°C. However, deep (>1 m) sand wedges were found near the paleoequator in the Marinoan glaciogenic deposits at ~635 million years ago, indicating a large seasonal cycle (probably >30°C).*

Through numerical simulations, we show that the equatorial seasonal cycle could reach >30°C at various continental locations if the oceans are completely frozen over, as would have been the case for a snowball Earth, or could reach

~20˚C if the oceans are not completely frozen over, as would have been the case for a waterbelt Earth.

These values are obtained at the maximum eccentricity of the Earth orbit, i.e., 0.0679, and will be approximately 10˚C smaller if the present-day eccentricity is used. For these seasonal cycles, theoretical calculations show that the deep sand wedges form readily in a snowball Earth while hardly form in a waterbelt Earth.

Laakso, T.A., et al (2020) **Ediacaran reorganization of the marine phosphorus cycle.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:11961-11967 (available as a free pdf)

Authors' abstract: *The evolution of macroscopic animals in the latest Proterozoic Eon is associated with many changes in the geochemical environment, but the sequence of cause and effect remains a topic of intense research and debate.*

In this study, we use two apparently paradoxical observations, that massively phosphorus rich rocks first appear at this time, and that the median P content of rocks does not change, to argue for a change in internal marine P cycling associated with rising sulfate levels. We argue that this change was self-sustaining, setting in motion a cascade of biogeochemical transformations that led to conditions favorable for major ecological and evolutionary change.

The Ediacaran Period (635 to 541 Ma) marks the global transition to a more productive biosphere, evidenced by increased availability of food and oxidants, the appearance of macroscopic animals, significant populations of eukaryotic phytoplankton, and the onset of massive phosphorite deposition.

We propose this entire suite of changes results from an increase in the size of the deepwater marine phosphorus reservoir, associated with rising sulfate concentrations and increased remineralization of organic P by sulfate-reducing bacteria.

Simple mass balance calculations, constrained by modern anoxic basins, suggest that deep-water phosphate concentrations may have increased by an order of magnitude without any increase in the rate of P input from the continents.

Strikingly, despite a major shift in phosphorite deposition, a new compilation of the phosphorus content of Neoproterozoic and early Paleozoic shows little secular change in median values, supporting the view that changes in remineralization and not erosional P fluxes were the principal drivers of observed shifts in phosphorite accumulation.

The trigger for these changes may have been transient Neoproterozoic weathering events whose biogeochemical consequences were sustained by a set of positive feedbacks, mediated by the oxygen and sulfur cycles, that led to permanent state change in biogeochemical cycling, primary production, and biological diversity by the end of the Ediacaran Period.

Dececchi, T.A., et al (2020) **The fast and the frugal: Divergent locomotory strategies drive limb lengthening in theropod dinosaurs.** PLOS ONE 15(5):doi.org/10.1371/journal.pone.0223698 (available as a free pdf)

Authors' abstract: *Limb length, cursoriality and speed have long been areas of significant interest in theropod paleobiology, since locomotory capacity, especially running ability, is critical in the pursuit of prey and to avoid becoming prey. The impact of allometry on running ability, and the limiting effect of large body size, are aspects that are traditionally overlooked.*

Since several different non-avian theropod lineages have each independently evolved body sizes greater than any known terrestrial carnivorous mammal, ~1000kg or more, the effect that such large mass has on movement ability and energetics is an area with significant implications for Mesozoic paleoecology.

Here, using expansive datasets that incorporate several different metrics to estimate body size, limb length and running speed, we calculate the effects of allometry on running ability. We test traditional metrics used to evaluate cursoriality in nonavian theropods such as distal limb length, relative hindlimb length, and compare the energetic cost savings of relative hindlimb elongation between members of the Tyrannosauridae and more basal megacarnivores such as Allosauroidea or Ceratosauridae.

We find that once the limiting effects of body size increase is incorporated there is no significant correlation to top speed between any of the commonly used metrics, including the newly suggested distal limb index (Tibia + Metatarsus/ Femur length). The data also shows a significant split between large and small

bodied theropods in terms of maximizing running potential suggesting two distinct strategies for promoting limb elongation based on the organisms' size.

For small and medium sized theropods increased leg length seems to correlate with a desire to increase top speed while amongst larger taxa it corresponds more closely to energetic efficiency and reducing foraging costs. We also find, using 3D volumetric mass estimates, that the Tyrannosauridae show significant cost of transport savings compared to more basal clades, indicating reduced energy expenditures during foraging and likely reduced need for hunting forays.

This suggests that amongst theropods, hindlimb evolution was not dictated by one particular strategy. Amongst smaller bodied taxa the competing pressures of being both a predator and a prey item dominant while larger ones, freed from predation pressure, seek to maximize foraging ability.

Higginbottom, Gail (2020) **The world ends here, the world begins here: Bronze Age megalithic monuments in western Scotland.** JOURNAL OF WORLD PREHISTORY 33:25-134 (available as a free pdf)

Author's abstract: *This paper presents a study of free-standing Bronze Age megalithic monuments across western Scotland: Argyll, Lochaber, Kintyre, and the isles of Mull, Coll and Tiree. The original project was designed to unearth the locational choices of their builders, the reasons for these choices, and what they reveal about the belief systems of these societies.*

Using statistical analyses and 2D and 3D GIS, it will be demonstrated that vision is the main force behind locational decisions. The GIS analyses revealed that the builders chose a particular horizon shape, defined by qualities of distance, direction and relative apparent height as viewed from the monument (altitude).

Significantly, approximately half the sites have the same locational variables as all the sites considered on the isles of Coll and Tiree, while the other half are the topographical reverse ('reverse sites'), where the major 'astronomical show' differs due to the topographical differences between the site types.

It is relevant to note that landscapes that block views of particular major astronomical phenomena in the south are significantly more common at reverse sites than at classic sites. Specific results pertaining to individual areas will also be highlighted. It will be seen that the interplay between the astronomy and the topographical choices of the builders at each site highlights possible cosmological ideologies that can be observed and that were shared across western Scotland.

Speirs: This caught my eye for no better reason than Calgary, Alberta, was named after Calgary, Isle of Mull, Scotland. But if you're interested in standing stones, by all means download this free pdf.

Stasek, D.J., et al (2020) **The nature of the symbiosis between Cannonball Jellyfish and spider crabs in Georgia's coastal waters.** SOUTHEASTERN NATURALIST 19:233-240

Authors' abstract: S*tomolophus meleagris (Cannonball Jellyfish) is a common cnidarian species in the coastal waters of Georgia. Libinia spp. (spider crab) juveniles commonly inhabit the bell of the Cannonball Jellyfish, but there is uncertainty as to whether the crabs are parasitic on the Cannonball Jellyfish or are commensals.*

To assess the nature of this symbiosis, Cannonball Jellyfish were randomly sampled at multiple sites along the Georgia coast. For each Cannonball Jellyfish, the number of juvenile spider crabs inhabiting the bell was recorded along with multiple measurements of Cannonball Jellyfish and spider crabs. Our results suggest that the symbiosis between the Cannonball Jellyfish and juvenile spider crabs is an example of commensalism and not parasitism.

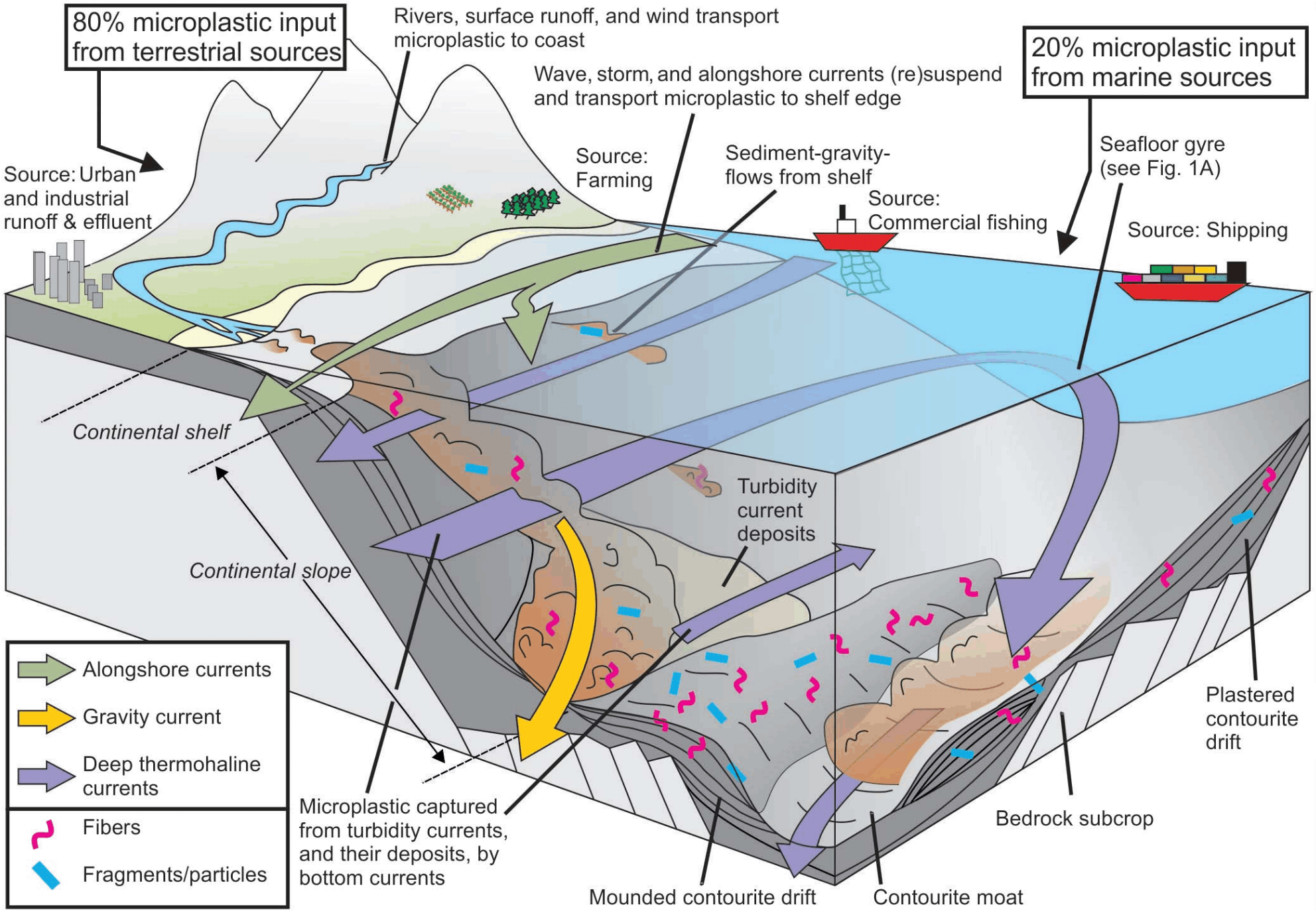
Kane, I.A., et al (2020) **Seafloor microplastic hotspots controlled by deep-sea circulation.** SCIENCE 368:1140-1145 (available as a free pdf)

Authors' abstract: *Although microplastics are known to pervade the global seafloor, the processes that control their dispersal and concentration in the deep sea remain largely unknown. Here, we show that thermohaline driven currents, which build extensive seafloor sediment accumulations, can control the distribution of microplastics and create hotspots with the highest concentrations reported for any seafloor setting (190 pieces per 50 grams).*

Previous studies propose that microplastics are transported to the seafloor by vertical settling from surface accumulations; here, we demonstrate that the

spatial distribution and ultimate fate of microplastics are strongly controlled by near-bed thermohaline currents (bottom currents). These currents are known to supply oxygen and nutrients to deep-sea benthos, suggesting that deep-sea biodiversity hotspots are also likely to be microplastic hotspots.

[Image is from this paper.]



Suaria, G., et al (2020) **Microfibers in oceanic surface waters: A global characterization.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.aay8493 (available as a free pdf)

Authors' abstract: *Microfibers are ubiquitous contaminants of emerging concern. Traditionally ascribed to the "microplastics" family, their widespread occurrence in the natural environment is commonly reported in plastic pollution studies, based on the assumption that fibers largely derive from wear and tear of synthetic textiles.*

By compiling a global dataset from 916 seawater samples collected in six ocean basins, we show that although synthetic polymers currently account for two-thirds of global fiber production, oceanic fibers are mainly composed of natural polymers. μFT-IR characterization of ~2000 fibers revealed that only 8.2% of oceanic fibers are synthetic, with most being cellulosic (79.5%) or of animal origin (12.3%).

The widespread occurrence of natural fibers throughout marine environments emphasizes the necessity of chemically identifying microfibers before classifying them as microplastics. Our results highlight a considerable mismatch between the global production of synthetic fibers and the current composition of marine fibers, a finding that clearly deserves further attention.

Stadnytskyi, V., et al (2020) **The airborne lifetime of small speech droplets and their potential importance in SARS-CoV-2 transmission.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:11875-11877

Authors' abstract: *Speech droplets generated by asymptomatic carriers of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are increasingly considered to be a likely mode of disease transmission. Highly sensitive laser light scattering observations have revealed that loud speech can emit thousands of oral fluid droplets per second.*

In a closed, stagnant air environment, they disappear from the window of view with time constants in the range of 8 to 14 min, which corresponds to droplet nuclei of ca. 4 μm diameter, or 12- to 21-μm droplets prior to dehydration. These observations confirm that there is a substantial probability that normal speaking causes airborne virus transmission in confined environments.

LETTERS TO THE EDITOR

[Editor's remarks in square brackets. Please include your name and town when sending a comment. Email to opuntia57@hotmail.com]

FROM: Lloyd Penney 2020-06-02
Etobicoke, Ontario

OPUNTIA #473: [Re: pandemic social distancing] The good old days, when we could still assemble. I certainly understand why, but I long for those days when there was a convention coming up, and we could prepare for it. Our premier has extended the ban on gatherings until the end of June; perhaps he is more optimistic, but he has been criticized for making these easing of lockdown decisions without consulting scientists and doctors.

[Back in March, Calgary mayor Naheed Nenshi banned public meetings until June 30. Now Alberta is slowly disengaging. Because Calgary has one-third the population of Alberta but two-thirds of coronavirus infections, we were delayed by ten days from the relaxation.]

We are making some plans for the World Wide Party, but given the pandemic, I suspect our celebration will be simply toasting our friends in our living room. Still, it is the observation that counts.

[Yes indeed. No parties this year but I encourage my readers to at least raise a glass to friends near and far in zinedom on June 21 at 21h00 local time.]

My previous letter: It's about five weeks since I wrote that letter, and while the highways are now busier and noisier, the number of closed stores continues to rise. I still must call the Canada Revenue Agency to see if I truly qualify for the CERB [emergency income], but I admit I am somewhat loathe to call in case they give me some bad news, and I must repay everything.

Many stores now have line ups to keep the number of people in the store at a certain number. I am finally losing weight, and I am down about five pounds. I hope this will continue.

[My weight is bouncing around. Good luck getting through on anyone's call centre, much less the CRA. In 2010, when I took early retirement on a reduced pension, I was nervous about having made the wrong decision. If I hadn't, I

would still be working (I turn 65 in November this year) and stressed out to the max. I'm glad I took that decade of freedom.]

I would be most interested to see anything about the exploration of the cave in Wells Gray Provincial Park. Sounds like some of it might be underwater, but there is fertile ground for explorers, geologists and archaeologists to find perhaps new animal species, and even human remains.

[Probably not. The cave had been plugged by ice since the Pleistocene, which only melted away in the last decade. Therefore there would be nothing of any archaeological interest.]

OPUNTIA #474: [Re: Sherlockiana] I have plenty to do, but if I didn't, I'd be pleased to find all of the Jeremy Brett Sherlocks, and watch them, one after the other, and a pot of tea beside us. We did see the movie MR. HOLMES with Ian McKellen, and their use of using 221B Baker Street as a store front while actually living across the street was an interesting and useful twist on the canon. Also, the idea of one of the greatest minds having to deal with dementia is a bittersweet one.

[Don't forget all the old-time radio episodes of Sherlock Holmes, available as free mp3s from the Old Time Radio Researchers at www.otrrlibrary.org]

Recently, I did see that the north magnetic pole is moving fairly rapidly towards Russia, and more and more aviators are relying more on GPS locators rather than geomagnetic readings, given they are in flux, and changes are accelerating.

Pandemic activities: Yvonne has been making masks for friends, and she has made about 80 or so, so far.

[I see online various themed masks such as science fiction or fantasy. I found a bandana from my boyhood days on the cattle ranch and tried it on in case masks became compulsory. Goodness gracious me! I forgot how hot and sweat-soaked they become. It brought back some of the less pleasant memories of our straw baling and cattle drives, two extremely dusty activities of ranching.]

I am writing locs, editing for AMAZING STORIES and the Amazing Selects books, and other editorial for World Vision. The World Vision work is paid work, so for once, I am actually in good financial shape. I do know that the WV workload will end later this month, so additional bills are getting paid.

AROUND COWTOWN
photo by Dale Speirs

Seen on a new building at 6 Street SW and 11 Avenue in the Beltline district.