

OPUNTIA 548



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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.

CALGARY COMIC EXPO PARADE
photos by Dale Speirs

2023-04-28

[Reports of previous parades appeared in OPUNTIA's #276, 305, 340, 374, 411, and 442. No parades from 2020 to 2021 due to COVID-19 pandemic and in 2022 due to a blizzard.]

Calgary's Comic Expo returned live for the weekend of April 28 to 30, with 200,000 cosplayers and media fans converging on the downtown core. The venue was the Stampede rodeo grounds, the only place big enough to hold the mob. I didn't go but did view the opening parade along the Stephen Avenue pedestrian mall on Friday morning.



Below: These two cowgirls would fit right in at the Calgary Stampede parade.

Top right: Actually the Calgary Ghostbusters were indeed in last year's Stampede parade.

Bottom right: But who you gonna call in England?









Above: Lou Ferrigno put quite a strain on the rear suspension of this Karman Ghia. I'm not exaggerating; look closely at the rear wheels.



[Part 1 appeared in OPUNTIA #524.]

Last spring I published photographs of a display of giant pysanky, shown at the Southcentre Mall in support of Ukraine. I thought it was a one-time event but this spring they hosted a second round of 1-metre-tall eggs. A few selections are shown herewith. I have a sad feeling there'll be another display next year.





CRIME AND PUBLISHMENT: PART 7

by Dale Speirs

[Parts 1 to 6 appeared in OPUNTIA's #61.1, 391, 422, 471, 494, and 527.]

Plagiarism.

“The Outline Of Mystery” by Chris Chan appeared in SHERLOCK HOLMES: FURTHER ADVENTURES IN THE REALMS OF H.G. WELLS, Volume 1 (2021), a pastiche anthology edited by C. Edward Davis and Derrick Belanger.

The story was based on true events. A Canadian author Florence Deeks had produced an extensive manuscript outlining history from the woman’s point of view. She submitted it to the same publisher that H.G. Wells used. When his outline was published, she sued for plagiarism but was unsuccessful.

In Chan’s version, she appealed to Holmes for help. He was retired and keeping bees. While assisting her somewhat after she inadvertently became embroiled with a gang of criminals, ultimately he could do nothing about the plagiarism. He was too old and she was fighting entrenched interests.

MURDER IN AN IRISH BOOKSHOP (2021) by Carlene O’Connor (pseudonym of Mary Carter) was set in Kilbane, Ireland. The protagonist was Siobhan O’Sullivan, a garda who was a busy woman with her upcoming nuptials.

A new bookstore opened in the village but the proprietors only stocked the high-class stuff. No genre fiction, which made everyone wonder how it would stay in business. Strangely, its opening event was a readings and autographs session with new authors such as Diedre Walsh.

She was a whiner and complainer who soon starred as the murder victim. Garda O’Sullivan was assigned the case. Walsh had been a ghostwriter and a good one, in demand by some big name authors.

She couldn’t get books published under her own name, which made her resentful. She said some things to one of her clients, who decided the time had come to plug the leak. All else followed, including police procedure.

Plotting.

“Design For Dying” by Anthony Boucher (1983 November, ELLERY QUEEN MYSTERY MAGAZINE) was about a mystery writer who inadvertently planned his own death. John Bennington devised a perfect crime for his next novel, assisted by his private secretary Ronald Markham.

Markham was having it on with Bennington’s wife Loretta and thought seriously about marrying a rich attractive widow. He used the fictional plan to stage the perfect murder and almost got away with the crime. Trouble was, the police noticed one little detail.

Bennington had accidentally cut himself on a finger and bled slightly on the device used to fire the handgun. Supposedly he was already dead but if so, then he would not have bled. It’s the little details that get you hanged.

THE POSTSCRIPT MURDERS (2020) by Elly Griffiths began with the death of a 90-year-old woman Peggy Smith. After her death, the discovery was made that she had a collection of mystery novels by various authors, all of which were dedicated to her. She had business cards which identified her as “Murder Consultant”.

Detective Sergeant Harbinder Kaur, a Sikh woman, didn’t think the death was suspicious. When some of those authors began dying, definitely murdered, matters changed. Kaur made the rounds of publishers and literary festivals to dredge up information about Smith.

The deceased might have been with a spy agency in her younger days. That would explain how she could assist authors in thinking up new ways to kill characters.

Another author had plagiarized one of Smith’s murders, then enacted three in real life to cover up. The rest was silence.

Editing.

“Temporarily Purple” was written by Ernest Kinoy and aired on 1948-11-29. The episode was an installment in the old-time anthology series RADIO CITY PLAYHOUSE, which aired from 1948 to 1950. The free mp3s are available from the Old Time Radio Researchers at www.otrr.org/OTRRLibrary.

The story began in the boardroom of a publisher's office. The directors prided themselves in publishing books of significance and substance, the kind that get learned reviews in small-press magazines but seldom earn back their costs.

A young editor Herbert Baron argued with them, pointing out that the company was a hair's breadth from bankruptcy. He had a travelogue manuscript by Michael Farrow which he proposed to rewrite as an action-adventure with lots of sex and violence.

And so he did, without the author's consent or knowledge. The contract said the book could be edited in any manner. The revision was a million-copy success. Farrow arrived at the publishing office, angrier than a wet hen.

She was in fact a hen, who used the male name for better luck in selling the book. Finding it converted from a serious tome about jungle travel into slash-and-punch pulp was too much for her.

From there developed a romance amidst the trouble and strife. The plot was predictable and inevitable as Farrow and Baron squabbled, then kissed and made up.

The road to matrimony was rocky as she objected to the publicity campaign but he finally won her over by the end credits. So much so that she sold the honeymoon photo rights to LIFE magazine.

"The Case Of Herbert Thorpe" by Henry Kuttner (1937 November, WEIRD TALES, available as a free pdf from www.archive.org) had a predictable plot. Science fiction pulp editor Herbert Thorpe was meeting in his office with writer Neil Beckett and rejecting his story.

The plot was about a businessman who was meeting in his office with a salesman and declining a deal. The salesman left. A magical door then formed in a blank wall of the office, the businessman was dragged in to a nether world where ghouls feasted on human flesh.

He woke up at his desk, realized it wasn't a dream and died of heart failure. After sending Beckett away, a magical door opened in Thorpe's office, etcetera. The reader will see this coming on the first page of the story.

"Meanwhile, Far Across The Caspian Sea ..." by Daniel Stashower was from the anthology DEATH'S EXCELLENT VACATION (2010), edited by Charlane Harris and Toni L.P. Kelner. Jeff Clarke had just gotten a job at LifeSpan Books as a fact checker in the editorial department.

His nemesis was Thaddeus Palgrave, who kept turning in copy with phrases that were very difficult to verify. Eventually the truth came out that Palgrave was 1,266 years old and still annoying people with his self-righteous attitude.

The problem was how to deal with him. He cited facts about events in the past where he was there. Facts that were never recorded in print and therefore Clarke would have to take on trust.

Publishing.

"Killer's Cruise" by Brett Halliday (1981 September, MIKE SHAYNE MYSTERY MAGAZINE) was an installment in the series about private eye Michael Shayne of New Orleans.

A cruise ship was departing the port with a mystery convention aboard. A publisher Martin Sanger hired Michael Shayne as a bodyguard for himself and author Troy Dalton. The latter was a just-retired mercenary whose tell-all book was in press with Sanger.

Needless to say, there were many foreign governments and wealthy ne'er-dowells who preferred the book not get past the manuscript. Sanger had his own enemies, having done some crooked deals in the past. The death toll rose steadily on board the ship, unfortunately too many of them being innocents who were in the wrong place at the time.

Dalton and Sanger both departed life violently. Shayne's investigation was confused by the fact that there were two murderers, each operating from different motives. That was all sorted out, and the manuscript turned over to the Justice Department.

MURDER IN THE MUSEUM (2003) by Simon Brett was about the tribulations of Bracketts House, West Sussex, now devoted to the life and times of Esmond Chadleigh, an out-of-print author. He was famous between the two world wars but was now forgotten.

The trustees needed money to stem the red tide of ink. Like many stately piles, Bracketts House cost a fortune to maintain. As a new trustee, Carole Seddon was brought in for prestige, she being a retired Home Office bureaucrat.

The controversy at hand was a proposal from an American professor Marla Teischbaum to write a biography of Chadleigh. She waved cash at the trustees but they declined.

Graham Chadleigh-Bewes, grandson of the original, was writing the authorized biography and had been for decades. His feelings about Teischbaum can be easily surmised.

His excuse for the delays was that he was constantly making the rounds of publishers trying to get Chadleigh's books back into print. Like so many authors, the fiction was unreadable for modern audiences.

Piling on awkwardness, volunteer staff renovating the landscaping dug up a skeleton in the kitchen garden. Police determined the skeleton dated from World War One and lost interest in the case. Carole and her friend Jude went sleuthing.

Graham was booted off the biography in favour of Teischbaum and ordered to turn over to her all the documentation about his grandfather. He crudely altered some of the papers but was caught out in his forgery.

Carole and Teischbaum were trapped inside a priest hole in the big house but they escaped. He had forgotten that the priest hole would have latches on both sides of the secret panel. During his research he had discovered the truth about the skeleton long before anyone knew it was buried there.

He killed another woman to keep the secret but ultimately failed. The biography would not be a hagiography.

THE ALTOGETHER UNEXPECTED DISAPPEARANCE OF ATTICUS CRAFTSMAN (2016) was by Mamen Sanchez, translated by Lucy Greaves.

The humourous novel deal with the misadventures of Atticus Craftsman in Spain, not the least of which was all the Spaniards pronouncing his name Crassman.

His father Marlow, of Craftsman & Co publishing, sent his son to shut down a failing magazine LIBRARTE. The five Spanish women who operated the magazine fiercely opposed the idea.

Atticus dropped out of sight for three months. Marlow asked Inspector Manchego, real name Alonso Jandalillo, to find his son. Atticus was not in any danger. He simply went touring, with and without women, to see the sights of Spain and forgot to phone home.

Manchego trailed behind, searching for him. The five women tried to keep Atticus distracted while they desperately cleaned up the magazine's accounts and tidied up other careless business. One of them, regrettably, had been fiddling the accounts with fake invoices.

Marlow arrived on scene to straighten up matters and found himself hunting an unknown notebook of Ernest Hemingway. All eventually ended well for the magazine, including a Spanish wedding for Atticus.

MANUSCRIPT FOR MURDER (2018) by Jessica Fletcher and Jon Lord took the plot to New York City, where a few more murders would not be noticed. Publisher Lane Barfield was under investigation for financial fraud. When he supposedly committed suicide, Jessica Fletcher was on the case.

Added into the mix was a missing manuscript that someone wanted to remain unpublished. Otto Penzler, a real-life publisher, got a shout-out although one wondered why he would risk his life near the world's greatest murder magnet. The First Lady also became involved.

From there the plot became too silly for the suspension of disbelief. Fletcher's J'accuse! meeting was in the White House, where she accused the President and First Lady of a conspiracy. There was a twist, for their daughter had written the manuscript, a tell-all. She wanted to be a published author. Don't we all?

"Whistler's Murder" (1946) by Fredric Brown was reprinted 2022 in the anthology GOLDEN AGE LOCKED ROOM MYSTERIES, edited by Otto Penzler, which is where I read it.. An insurance investigator Henry Smith arrived at the home of Carlos Perry, a song publisher, and found the house was a murder scene.

Smith got to talking with the sheriff and pumped him dry of information about the case. The victim was alone inside a flat-roofed farmhouse. He had received threats and therefore hired two bodyguards. Perry had cheated numerous writers out of their royalties during his career.

Since the house was otherwise empty, they went up onto the roof where they could easily see anyone approaching across the fields. They saw no one but Perry was nonetheless murdered. Among the numerous suspects were a pair of vaudevillians who once had a pantomime horse act. The rest is for you to deduce.

The Hemingway Industry.

HUNTING FOR HEMINGWAY (2010) by Diane Gilbert Madson was based on the true story about the loss in 1922 of all but two of Ernest Hemingway’s unpublished manuscripts. He was in Switzerland as a newspaper reporter when he met a publisher who asked to see some of his stories.

Hemingway’s wife Hadley was in Paris where the couple were living at the time. He sent her a message to bring his manuscripts to him. She packed them all, including carbon copies, into one suitcase, which was stolen on the train. No trace of the manuscripts was ever found.

The general belief is that a petty thief stole it hoping for something valuable inside, and was no doubt disgusted to find nothing but worthless papers. Years later, Hemingway said that the manuscripts were not a great loss, and he went on to better things.

That incident spawned an entire subgenre of mystery stories speculating about the missing manuscripts, which would be worth a fortune to collectors today. I reviewed some of those stories in OPUNTIA’s 71.1C and 422. Which brings us to this novel.

The protagonist was insurance agent D.D. McGill (only one ‘l’). Her friend David Barnes claimed to have recovered the manuscripts and was planning to auction them for millions.

The questions asked were about authenticity and provenance. Were the manuscripts genuine or forgeries? Lots of people tested them with various computer software to prove or disprove authenticity.

Were the manuscripts legitimately found or stolen? Not to mention lawyers circling about. When this novel was published, the copyrights were still valid for the Hemingway estate. (Some books began entering the public domain in the early 2020s.)

McGil’s sleuthing stirred up trouble. The death toll climbed, including Barnes. The murderer had been Barnes’ business partner, who resented being cut out of the deal. Whether the manuscripts were genuine was left as a grey area.

THE GROVES OF ACADEMIA: PART 8

by Dale Speirs

[Parts 1 to 7 appeared in OPUNTIA’s #67.1F, 262, 358, 372, 428, 468, and 527.]

Novels.

THIRD DEGREE (2010) by Maggie Barbieri was a novel in a cozy series about college professor Alison Bergerson. She lived in Westchester County and taught creative writing in New York City.

The plot started with a bang. Alison witnessed a brawl in a coffee shop where an unpopular blogger Carter Wilmott was killed by a single punch from his antagonist. Carter learned too late that it is easy to libel people online, but be careful what you say to a big guy when talking to him face to face.

After the police hauled the body away, Carter’s widow Lydia arrived at the scene to claim his personal effects, including the keys to his car parked out front. Fortunately she used the remote starter on the key fob, because the car was wired with a bomb in the engine compartment and detonated.

After the police finished the second investigation, Alison was dreading having to meet the parents of her new boyfriend, an NYPD detective. Nevermind the coffee shop owner, who was definitely having a bad day. Her Marpleing was limited because the college expected her to teach classes.

Alison did a lot of snooping around on campus and off. Some of her colleagues weren't exactly reading from the same page of the hymnal. Her boyfriend reminded her that cases were lost because of contaminated evidence. She received threatening notes but that was par for the course for Miss Marples.

The denouement was complicated, with several twists. More than one murderer had been at work, although only one was successful. The novel had one false ending after another as the final chapters each had their own twist.

Jessica Fletcher was the protagonist of MURDER, SHE WROTE, a television mystery series from 1984 to 1997. Although the show is long gone, novels are still being published to date, bylined as "Jessica Fletcher and [name of ghostwriter]".

Fletcher lived in Cabot Cove, Maine, population 3,560, where most of the early murders were concentrated. Fans of the show calculated the town's murder rate at 149 per 100,000 on a per capita basis, which made the town the murder capital of the world.

In later episodes and novels, she went traveling so as to spread the murders around. People were talking in Cabot Cove, you know.

ALOHA BETRAYED (2014) by Jessica Fletcher and Donald Bain took place on Maui. The murder rate there was very low but Fletcher could fix that. She was lecturing at Maui College about community involvement in police investigations. If any person could discuss that subject with authority, she was the one.

Mala Kapul, a botany professor at the college, was the victim, her body found at the foot of the cliff. She was an environmental activist and controversial in public life. Then again the motive might have been personal, or campus politics over a department head vacancy for which she was competing.

Fletcher did the touristy things such as an island cruise, a catamaran trip, a bike ride through the mountains, and snooping through the victim's personal property.

The grand finale took place on the edge of the cliff where Kapul had died. Her competitor for the department head position met her there and so did his wife. She was the one who had shoved Kapul over the cliff so her husband could get

the job. In the denouement, she did the same again with her husband, thereby re-opening the position.

Short Stories.

"The Cutthroat World Of Academia" by Jon Matthew Farber (2022 October, MYSTERY MAGAZINE, available from Amazon) began with the death of Professor Stewart, an unpopular university dean. He was not mourned.

There were three suspects. Stewart had denied promotion to one, stymied another's attempt to expand his research programme, and discarded the third, a doctor, as his girlfriend. He traded her in for a younger model (his words, publicly said).

The police conducted an elaborate charade with smartphones. Stewart had been dialing a number on his smartphone but never completed it before the murderer smoothly and cleanly cut his throat. The police added digits at random to complete the call.

One of the suspects got the cellphone call, and broke down completely, confessing all. Had the suspect remained silent, nothing could be proved. She was the woman scorned. The clue given at the beginning was that the throat had been cut professionally, just as a doctor would do so.

The story was marred by the author getting too cute, naming all the characters after Star Trek actors. Jarring, and unnecessary.

Gimme That Old Time Radio.

LET GEORGE DO IT aired on radio from 1946 to 1954, sponsored by Standard Oil for its Chevron stations. The series was about George Valentine, a private investigator.

Valentine's secretary/girlfriend was Claire Brooks, whom everyone called Brooksie. Her main function was to act as a sounding board for Valentine and have the plot explained to her at intervals. The free mp3s are available from the Old Time Radio Researchers at www.otrr.org/OTRRLibrary.

"Eleven O'Clock" was written by David Victor and Jackson Gillis, and aired on 1950-07-17. Estella Blair was an undergraduate at a women's college. Her

uncle was concerned about her behaviour and wrote to George Valentine for help. On campus, Valentine and Claire Brooks talked with Mrs Ferris, whose husband was a psychology professor. She wasn't upset about the Professor (their first names were never given) going out horse riding with comely young coeds, particularly one named Vicki. No she wasn't.

An ambulance roared by to the stables. Vicki had been thrown by a horse whose saddle had been tampered with. The stablehand said Vicki had arrived without warning, saying she had been told to go riding at 11h00.

Valentine found the Professor, who told him that he had hypnotized many of his students to do various things at 11h00 the next day when they heard the campus bell tower chime. All part of his psychology class, teaching the effects of post-hypnotic suggestion.

Estella's classmate Cecile was told to leave the class and go down the hallway to water some paper flowers in a vase. There were live electrical cables in the vase, which sparked back and burned her face. Someone was using the Professor's suggestions to attempt murder.

The class had scattered over the campus at 11h00. Some were doing harmless stunts like cartwheeling on the lawns. Fourteen of the students, including Estella, were unaccounted for. Valentine, Brooks, and the campus police searched frantically for them.

Estella was shot at near the Ferris house. The Mrs gave her husband an angry lecture while the Professor defended his actions. She accused him of cheating with the coeds. Lots of shouting. Valentine noted that Estella had not waited until the chimes before cutting class. She had not been hypnotized but only pretended to be. The classmates heard each other's post-hypnotic suggestions, so Estella knew what was coming.

She was angry because the Professor never made advances to her. Only at this moment was it revealed that Estella was homely. This illustrated one disadvantage of radio and a failure of the script writers. They should have established at the beginning of the episode what Estella looked like instead of springing it as a surprise in the denouement.

Valentine grabbed Estella's purse, which had the gun, and which she next would have used against the Professor. 11h00 had come and gone, and nobody died.

MISCELLANEOUS SCIENCE FICTION REVIEWS

by Dale Speirs

Apocalypse Then.

FUTURE HUNTERS was a 1988 movie written by Anthony Maharaj and J.I. Thompson. My copy was on the DVD boxed set "Sci-Fi Invasion" from Mill Creek Entertainment.

The opening was set in the far distant future of 2025. The action began with a Mad Max style vehicle chase through a post-apocalyptic desert. Villains chased the nameless hero, firing thousands of rounds of ammunition but unable to hit him despite being only a few car lengths behind him.

He was driving a convertible with no protection from the rear and they were zooming down a straight highway. The submachine guns were fired continuously without reloading or the barrel melting down.

The chase was for the Spear of Destiny, used by a Roman soldier to stab Jesus Christ at the Crucifixion. The man grabbed the MacGuffin and was transported back in time to 1986, where a young couple were under attack by a bike gang. She was being ravished by them and her boyfriend had been rendered unconscious.

The hero saved them but not before getting a bullet in the abdomen at point-blank range. As he lay dying, he told the couple the spear must be reunited with the shaft, which would also prevent the apocalypse and change the future. The rest of the movie was a standard quest.

Bad guys continually popped up everywhere, trying to grab the spear and pausing only to ravish the heroine. She did a lot of nude scenes, the only reason I kept watching the movie.

The couple never had a moment's rest. Off to Hong Kong for some reason, mainly to allow some chop-socky fighting. Then to another city, where a neo-Nazi militia emerged as the main villains of the movie.

When that got dull, which didn't take long, there were helicopter chases, followed by a single-engine airplane chase. The couple's plane crashed into a jungle inhabited by a midget warrior tribe with not a little resemblance to

Ewoks. Somehow the neo-Nazis were camped there ahead of them. In sequence there was a horseback chase, a swinging bridge incident a la Indiana Jones, then a cave of troglodytes, Amazon women fighting by an alligator pit, a temple with priestesses clad in leather bikinis, and plenty of fast-forwarding by me.

The grand finale was an earthquake, with lots of styrofoam boulders rolling down and bouncing off extras. All and sundry were defeated by the couple. The heroine put the spear back on the shaft and raised it high in triumph. The survivors cheered. At that point the movie abruptly ended, and not a moment too soon.

Spaceships.

AVENUE 5 is an on again-off again television comedy series that had the misfortune to begin its first season just in time for the pandemic. I bought the DVD of the first season, dated 2020, which, like most science fiction series, started off well. The problem is that by the second season the script writers begin running out of ideas. But that is another rant for another day.

Avenue 5 was the name of a space cruise liner carrying 5,000 passengers. The vessel was one of a series owned by billionaire Herman Judd, an all-around boor and slob. The ship was so automated that it only required a few techies, so the captain Ryan Clark and visible crew were actors playing the parts.

The de facto captain was the chief engineer, who knew how to fix things but unfortunately died at the beginning of the series in an accident which also threw the ship off course. Instead of looping around Saturn and other assorted places for an 8-week voyage, the ship would be six months, possibly 5 years, then later 8 years returning to Earth.

The passengers were restless and refused to accept the premise that orbital dynamics cannot be wished away. Clark had his hands full trying to keep them quiet if not calm.

There were subsequent problems which, because of the ship's large size and mass, resulted it being orbited by assorted bodies tossed out the airlock and a cloud of excrement when an outside sewage line broke.

Back on Earth, the Judd Corporation mission control was having difficulty getting any help. NASA wanted to be paid up front, several trillion dollars, before it would send a rescue mission. The ship went from one crisis to another, although most of them were passenger related.

Lots of comedy, although too much profanity. The science in the science fiction was reasonably good. In particular, the problems with delta vector and orbital dynamics were reasonably well explained to what would be a non-technical viewing audience.

MISSION STARDUST was a 1967 Perry Rhodan movie, written by Karl Heinz Vogelmann, Sergio Donati, and Primo Zeglio. My copy was on the DVD boxed set "Sci-Fi Invasion" from Mill Creek Entertainment.

Perry Rhodan led a mission to the Moon to find radioactive minerals. The spacecraft, named Stardust, traveled sideways through space at a 45-degree angle. Although this was a colour movie, the SFX were no better than a 1950s black-and-white B-movie.

The Stardust touched down and landed on three legs with clawed feet. Shortly thereafter the crew unloaded a rover, during which it could be clearly seen that the spacecraft had only one leg. A remarkable balancing act, probably done with gyros. After the astronauts walked out to the rover, there were three legs again but this time with disk-shaped feet.

The astronauts walked as in normal Earth gravity. Even the old B-movies made an attempt to have astronauts walk with bouncing steps to simulate lunar gravity.

The astronauts spotted an alien spacecraft and were taken inside by ugly humanoid robots. There were two biological humanoids, an old scientist named Crest, and Thora, a gorgeous platinum blonde. Rhodan tried to make love to Thora but failed and deservedly so.

Crest was dying by degrees. Rhodan figured out the cause was leukemia and said there was a cure back on Earth. All and sundry piled into the alien spaceship and eventually landed in an African desert. The local army bounced bullets and shells off the force shield that protected the ship.

This got tiresome for all three, the aliens, the army, and the viewer. After demonstrating its powers, there was a negotiated peace. Meanwhile, a crime boss got wind of the events and decided he wanted in on the deal.

Assorted alarums followed, none of them particularly alarming. The aliens had such superscience machines there was never any doubt, although one wondered why, if they could travel from another star, why they didn't know what leukemia was or how to cure the disease.

Crest was cured by the Earthlings, the crime boss got what was coming to him, and the movie more or less fizzled out.

Computers.

The concept of giant supercomputers running amok is passé these days, now that we know the problem is giant networks running amok. A standard story was how to stop a computer.

“Information Please” by Stanley Whiteside (1946 Winter, THRILLING WONDER STORIES, available as a free pdf from www.gutenberg.org) was an early depiction of a software problem. The Solver was the world's biggest and most advanced computer, covering an acre of floor space, with countless relays and bio-chemical cells.

The first public demonstration was put on by a proto-dictator named Sassoon. Rumours said he was going to use the computer to rule the world, bwah-ha!-ha! and all that. He strutted and fretted his hour on a stage showing off the computer.

To demonstrate the Solver's ability, he picked a humble-looking man at random and invited him to ask the computer any question he liked. The question posed was to calculate the exact value of pi. The key word was ‘exact’, since the result would be endless.

The problem was that the computer programmers had not thought of any method to abort a computer job and purge the memory. Solver kept grinding out the numerals. Switching it off wouldn't work because the process would stay in the flash memory and restart as soon as it was turned back on. Sassoon was ruined. A vastly expensive computer was now junk.

The concept of this story was used in an episode of Original Star Trek, “Wolf In The Fold”, written by Robert Bloch. An energy entity took over the Enterprise's computer systems. Spock drove it out by ordering the computer to calculate pi to the last decimal place.

Bloch was an old-time science fiction writer, so he undoubtedly was recycling an idea that had been around since the 1940s or earlier. I leave it to someone else to identify when the idea was first written up in a story.

Anthologies.

DEATH'S EXCELLENT VACATION (2010) was an anthology of 13 paranormal stories edited by Charlaine Harris and Toni L.P. Kelner. I noted several stories but some of them will be slotted into other thematic reviews, leaving these two as examples..

“Pirate Dave's Haunted Amusement Park” by Toni L.P. Kelner was about a werewolf on vacation. She visited Pirate Dave's and found the place run down. The boss was a vampire who wasn't very good with staff relations. As a result, one of the employees tried sabotage, triggering assorted alarums both natural and supernatural.

“The Boys Go Fishing” was about a retired superhero gone to the woods. He had outlived all his fellow superheroes and friends. A tour group of children tried to cheer him up but to no avail. Not to be read on a rainy Sunday afternoon when you are feeling depressed.

SOLARPUNK (2018) was an anthology of 9 stories and novellas edited by Gerson Lodi-Ribeiro and translated from Portuguese by Fabio Fernandes. The theme was utopian eco-fiction, of which I'll mention two stories.

“Soylent Green Is People!” by Carlos Orsi was about an electronic engineer who invented a machine capable of processing whole animals into biofuel on the go. He installed one in a car, and first processed his domineering mother through the device. In all fairness, she had died a natural death beforehand.

The inventor then committed suicide, leaving his and his mother's estate to his domineering common-law wife. His church tried to grab the estate on the grounds he wasn't legally married.

Since a substantial inheritance was involved, a private detective was hired to sort out the order of death, the mother's passing not having been reported.

“When Kingdoms Collide” by Telino Marcal took place during the rise of the photosynthetic people, humans with chlorophyll in their skins. No need to eat if living in a sunny climate. Given today's race wars, there was no surprise when the Greenies and the non-photosynthetic folk didn't get along. The problem, as the narrator remarked, was separating the edible from the poisonous Greenies.

Astronomy.

FIBBER MCGEE AND MOLLY aired as a 30-minute hit comedy series from 1935 to 1953. Available as free mp3s from the Old Time Radio Researchers at www.otrr.org/OTRRLibrary.

“Fibber Builds A Telescope” was written by Don Quinn and aired on 1941-04-08. The title summarizes the opening section. Fibber McGee was susceptible to different fads and hobbies, one a week given the insatiable demands of script writing.

The construction part was accompanied by much hammer pounding. I've never built a telescope but am certain that hammers and nails are not part of it. The sound effects man had to present something though. Various stock characters came and went. They mostly did unrelated gags that betrayed their vaudeville roots. Harlow Wilcox the announcer also did the commercials for the sponsor Johnson Wax.

Molly was worried about Fibber straining his eyes. She kept insisting he go to an optometrist (her word) and get glasses. Everyone thought of the telescope as a good way to snoop on the neighbours.

Eventually though, Fibber got the telescope pointed at the sky. He became excited when he spotted a fuzzy patch that appeared to be a new comet. The next-door neighbour Throckmorton P. Gildersleeve arrived. He wanted a look through the telescope but Fibber said he'd have to wait for Halley's Comet. When Gildersleeve asked how long that would be, Fibber told him 1986.

Fibber told Gildersleeve about the new comet. The latter telephoned the newspaper to announce the discovery, with Fibber listening in. When

Gildersleeve attempted to claim credit, Fibber grabbed the instrument out of his hands and set the editor straight. The newspaper headlined it as McGee's Comet. The radio news announced that Flabber McGraw had discovered the comet. The press swarmed the McGee house and a professional astronomer confirmed the discovery. In the epilogue, Fibber told Molly he didn't need glasses.

IN MEMORIAM: JOHN MANSFIELD

by Dale Speirs

John Mansfield of Winnipeg died on April 19, 2023. He was survived by his wife Linda. An obituary is on the Pemmi-Con website at main.pemmi-con.ca. He was scheduled as a Guest of Honour at Pemmi-Con from July 20 to 23.

John had been actively involved in convention fandom since the 1970s. His greatest accomplishment was to chair the 1994 Worldcon in Winnipeg, called ConAdian.

I met John frequently at Calgary conventions in the 1980s and 1990s, and when I traveled to Winnipeg in 1994, the only Worldcon I have attended. He was an efficient administrator and had no patience for the delicate egos that infested con-running, then and now.

John served 25 years in the Canadian Forces where he obviously learned how to organize things. In our conversations at fan lounges, I appreciated his knowledge of convention running. He had a wealth of gossip about some of the prima donas in North American fandom.

There were no social media back then but fanzine editors were always on the lookout for controversy. They could find nothing to stir up about ConAdian. Today trolls and wokers have ruined many conventions, not so much by their actions but because convention committees were too weak-willed to stand up to them. John would have put them in their place quite firmly.

My report on ConAdian appeared in OPUNTIA #21 and follow-up comments by others in issue #22. Both issues are available as free pdfs from either fanac.org/fanzines/Opuntia or efanzines.com/Opuntia/index.htm

SEEN IN THE LITERATURE

Planets.

Spinelli, R., et al (2023) **The ultraviolet habitable zone of exoplanets.** MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 522:doi.org/10.1093/mnras/stad928 (available as a free pdf)

Authors’ abstract: *The dozens of rocky exoplanets discovered in the circumstellar habitable zone (CHZ) currently represent the most suitable places to host life as we know it outside the Solar system.*

However, the presumed presence of liquid water on the CHZ planets does not guarantee suitable environments for the emergence of life. According to experimental studies, the building blocks of life are most likely produced photochemically in presence of a minimum ultraviolet (UV) flux.

On the other hand, high UV flux can be life-threatening, leading to atmospheric erosion and damaging biomolecules essential to life. These arguments raise questions about the actual habitability of CHZ planets around stars other than Solar-type ones, with different UV to bolometric luminosity ratios.

By combining the ‘principle of mediocrity’ and recent experimental studies, we define UV boundary conditions (UV-habitable zone, UHZ) within which life can possibly emerge and evolve.

We investigate whether exoplanets discovered in CHZs do indeed experience such conditions. By analysing Swift-UV/Optical Telescope data, we measure the near ultraviolet (NUV) luminosities of 17 stars harbouring 23 planets in their CHZ.

We derive an empirical relation between NUV luminosity and stellar effective temperature. We find that 18 of the CHZ exoplanets actually orbit outside the UHZ, i.e. the NUV luminosity of their M-dwarf hosts is decisively too low to trigger abiogenesis, through cyanosulfidic chemistry, on them.

Only stars with effective temperature > 3900 K illuminate their CHZ planets with enough NUV radiation to trigger abiogenesis. Alternatively, colder stars would require a high-energy flaring activity.

Ben-Jaffel, L., et al (2023) **The enigmatic abundance of atomic hydrogen in Saturn’s upper atmosphere.** PLANETARY SCIENCE JOURNAL 4:doi.org/10.3847/PSJ/acaf78 (available as a free pdf)

[Lyman alpha radiation is emitted by hydrogen when its electron drops into a lower orbit around the proton. It is easily absorbed by air and therefore can only be observed by space probes.]

Authors’ abstract: *A planet’s Lyman alpha emission is sensitive to its thermospheric structure. Here we report joint Hubble Space Telescope and Cassini cross-calibration observations of the Saturn Lyman alpha emission made 2 weeks before the Cassini grand finale.*

To investigate the long-term Saturn Lyman alpha airglow observed by different ultraviolet instruments, we cross correlate their calibration, finding that while the official Cassini/UVIS sensitivity should be lowered by $\sim 75\%$, the Voyager 1/UVS sensitivities should be enhanced by $\sim 20\%$ at the Lyman alpha channels.

This comparison also allowed us to discover a permanent feature of the Saturn disk Lyman alpha brightness that appears at all longitudes as a brightness excess (Lyman alpha bulge) of $\sim 30\%$ extending over the latitude range $\sim 5^{\circ}$ – 35° N compared to the regions at equator and $\sim 60^{\circ}$ N.

This feature is confirmed by three distinct instruments between 1980 and 2017 in the Saturn north hemisphere. To analyze the Lyman alpha observations, we use a radiation transfer model of resonant scattering of solar and interplanetary Lyman alpha photons and a latitude-dependent photochemistry model of the upper atmosphere constrained by occultation and remote-sensing observations.

For each latitude, we show that the Lyman alpha observations are sensitive to the temperature profile in the upper stratosphere and lower thermosphere, thus providing useful information in a region of the atmosphere that is difficult to probe by other means.

In the Saturn Lyman alpha bulge region, at latitudes between $\sim 5^{\circ}$ and $\sim 35^{\circ}$, the observed brightening and line broadening support seasonal effects, variation of the temperature vertical profile, and potential superthermal atoms that require confirmation.

Asteroids.

Daly, R.T., et al (2023) **Successful kinetic impact into an asteroid for planetary defence.** NATURE 616:doi.org/10.1038/s41586-023-05810-5 (available as a free pdf)

Authors’ abstract: *Although no known asteroid poses a threat to Earth for at least the next century, the catalogue of near-Earth asteroids is incomplete for objects whose impacts would produce regional devastation.*

Several approaches have been proposed to potentially prevent an asteroid impact with Earth by deflecting or disrupting an asteroid.

A test of kinetic impact technology was identified as the highest-priority space mission related to asteroid mitigation. NASA’s Double Asteroid Redirection Test (DART) mission is a full-scale test of kinetic impact technology.

The mission’s target asteroid was Dimorphos, the secondary member of the S-type binary near-Earth asteroid (65803) Didymos. This binary asteroid system was chosen to enable ground-based telescopes to quantify the asteroid deflection caused by the impact of the DART spacecraft.

Although past missions have utilized impactors to investigate the properties of small bodies, those earlier missions were not intended to deflect their targets and did not achieve measurable deflections.

The successful impact of the DART spacecraft with Dimorphos and the resulting change in the orbit of Dimorphos demonstrates that kinetic impactor technology is a viable technique to potentially defend Earth if necessary.

Thomas, C.A., et al (2023) **Orbital period change of Dimorphos due to the DART kinetic impact.** NATURE 616:doi.org/10.1038/s41586-023-05805-2 (available as a free pdf)

Authors’ abstract: *The Double Asteroid Redirection Test (DART) spacecraft successfully performed the first test of a kinetic impactor for asteroid deflection by impacting Dimorphos, the secondary of near-Earth binary asteroid (65803) Didymos, and changing the orbital period of Dimorphos.*

A change in orbital period of approximately 7 minutes was expected if the incident momentum from the DART spacecraft was directly transferred to the asteroid target in a perfectly inelastic collision¹, but studies of the probable impact conditions and asteroid properties indicated that a considerable momentum enhancement was possible.

In the years before impact, we used lightcurve observations to accurately determine the pre-impact orbit parameters of Dimorphos with respect to Didymos. Here we report the change in the orbital period of Dimorphos as a result of the DART kinetic impact to be -33.0 ± 1.0 (3s) min.

Using new Earth-based lightcurve and radar observations, two independent approaches determined identical values for the change in the orbital period. This large orbit period change suggests that ejecta contributed a substantial amount of momentum to the asteroid beyond what the DART spacecraft carried.

The DART spacecraft collided head-on into the leading hemisphere of Dimorphos to maximize the momentum transfer and reduce the semimajor axis of the Dimorphos orbit, resulting in a shorter orbital period.

Li, J.Y., et al (2023) **Ejecta from the DART-produced active asteroid Dimorphos.** NATURE 616:doi.org/10.1038/s41586-023-05811-4 (available as a free pdf)

Authors’ abstract: *Some active asteroids have been proposed to be formed as a result of impact events. Because active asteroids are generally discovered by chance only after their tails have fully formed, the process of how impact ejecta evolve into a tail has, to our knowledge, not been directly observed.*

The Double Asteroid Redirection Test (DART) mission of NASA, in addition to having successfully changed the orbital period of Dimorphos, demonstrated the activation process of an asteroid resulting from an impact under precisely known conditions.

Here we report the observations of the DART impact ejecta with the Hubble Space Telescope from impact time $T + 15$ min to $T + 18.5$ days at spatial resolutions of around 2.1 km per pixel.

Our observations reveal the complex evolution of the ejecta, which are first dominated by the gravitational interaction between the Didymos binary system and the ejected dust and subsequently by solar radiation pressure. The lowest-speed ejecta dispersed through a sustained tail that had a consistent morphology with previously observed asteroid tails thought to be produced by an impact.

The Hubble Space Telescope (HST) observed the ejecta once every 1.6 hours during the first 8 hours after the DART impact. The image collected at about $T + 0.4$ hours shows diffuse ejecta with several linear structures and clumps (concentration of materials ejected at similar velocities) spanning nearly the entire eastern hemisphere of Didymos.

After about $T + 2$ hours, the initial, diffuse dust cloud had mostly dissipated and an overall cone-shaped ejecta morphology emerged with the edges of the hollow cone shown as two linear features because of the optical depth effect. The ejecta cone showed many distinct morphological features, some of which are visible in several images between $T + 3$ and $T + 10$ hours and extending to nearly 500 km from the asteroid.

These features moved radially away from the asteroid at constant speeds of a few to about 30 m s⁻¹ as projected in the sky. The radial expansion motion of these features suggests that this material is directly ejected from the Didymos system without being appreciably influenced by the gravity of the system or by solar radiation pressure.

On the basis of the position angles (angle measured from the north towards the east) of the cone and a simple model (Methods), we find that the observed ejecta cone is consistent with a three-dimensional opening angle of $125^\circ \pm 10^\circ$ and centreline at a position angle of $67^\circ \pm 8^\circ$ which is almost parallel to the incoming direction of the DART spacecraft.

The observed ejecta cone is wider than the ejecta produced by the vertical impact cratering experiments on granular media, although wider opening angles could be explained by the curvature of the target surface and the angle of internal friction of the target as well as the geometry of the projectile.

The ejecta of Dimorphos were different from the ejecta of comet 9P/Tempel 1 produced by Deep Impact¹², a previous planetary impact.

Alien Life.

Smith, G.H. (2023) **On the first probe to transit between two interstellar civilizations** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 22:doi.org/10.1017/S1473550422000428

Author’s abstract: If a space-faring civilization embarks on a program to send probes to interstellar destinations, the first probe to arrive at such a destination is not likely to be one of the earliest probes, but one of much more advanced capability.

This conclusion is based on a scenario in which an extraterrestrial civilization (ETC) embarks upon an interstellar program during which it launches increasingly sophisticated probes whose departure speed increases as a function of time throughout the program.

Two back-of-the-envelope models are considered: one in which the launch velocity of an outgoing vehicle increases linearly with the time of launch, and a second in which the increase is exponential with launch date.

In this paper consideration is directed to an hypothesized probe arriving within the Solar System from a non-terrestrial civilization. Within the above scenarios, a first-encounter probe will be one that was launched well after the initiation of an interstellar program by an ETC.

Consequently, such a probe would be the product of a relatively advanced phase of that ETC’s technology. The more distant the site from which an ETC is launching probes, the greater will be the technology gap between a first-encounter probe and terrestrial technology.

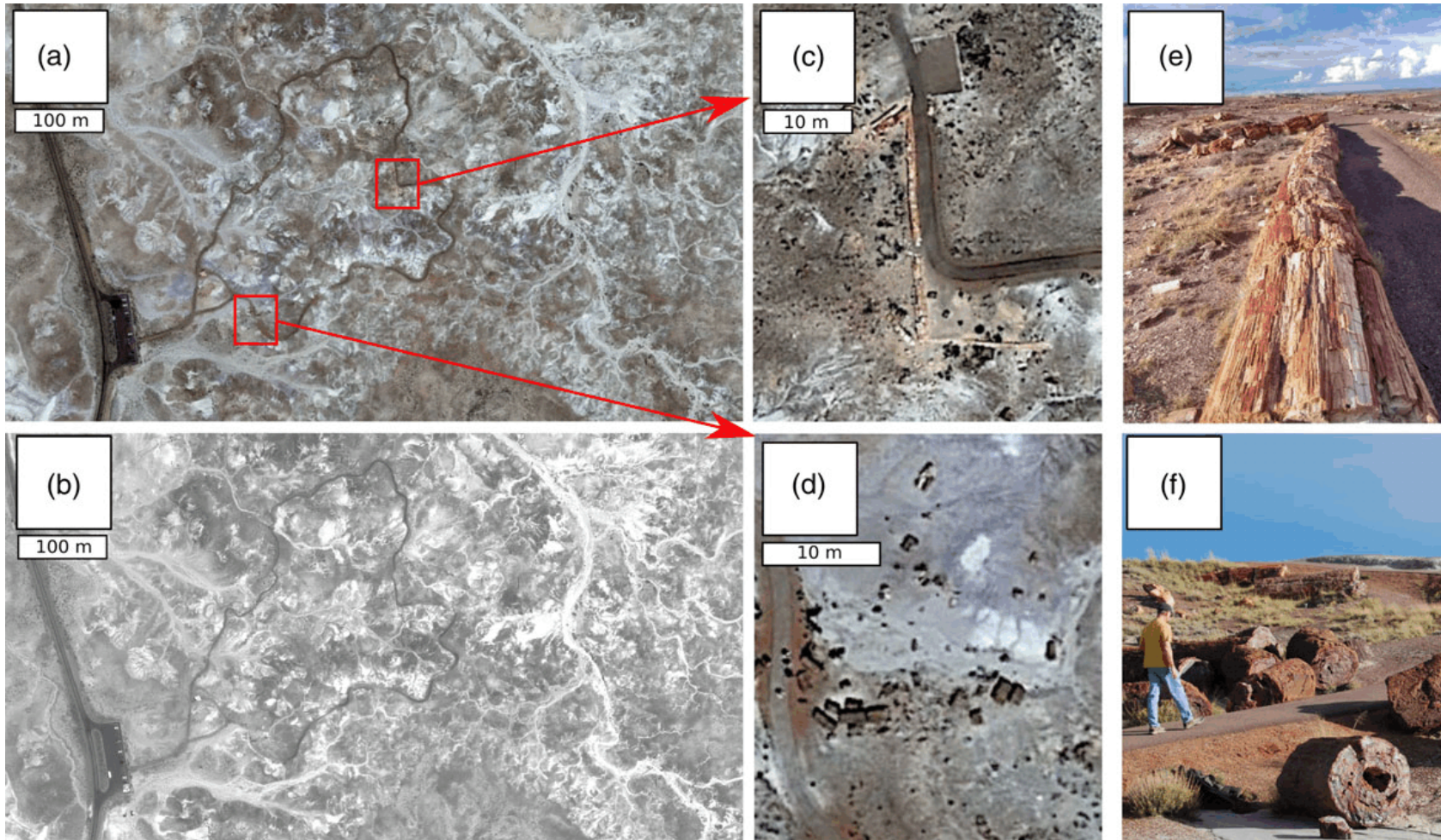
One possible ramification may pertain to interpreting the nature of Unidentified Aerial Phenomena (UAP). Are flight characteristics of any UAP singular enough as to be consistent with an origin from a distant ETC?

Paleobiology.

Ghezzi, E., et al (2023) **Multispectral satellite imaging improves detection of large individual fossils.** GEOLOGICAL MAGAZINE 160:doi.org/10.1017/S001675682200108X (available as a free pdf)

Authors’ abstract: *Palaeontological field surveys in remote regions are a challenge, because of uncertainty in finding new specimens, high transportation costs, risks for the crew and a long time commitment. The effort can be facilitated by using high-resolution satellite imagery.*

Here we present a new opportunity to investigate remote fossil localities in detail, mapping the optical signature of individual fossils. We explain a practical workflow for detecting fossils using remote-sensing platforms and cluster algorithms.



We tested the method within the Petrified Forest National Park, where fossil logs are sparse in a large area with mixed lithologies. We ran both unsupervised and supervised classifications, obtaining the best estimations for the presence of fossil logs using the likelihood and spectral angle mapper algorithms.

We recognized general constraints and described logical and physical pros and cons of each estimated map. We also explained how the outcomes should be critically evaluated with consistent accuracy tests.

Instead of searching for fossiliferous outcrops, our method targets single fossil specimens (or highly condensed accumulations), obtaining a significant increase in potential efficiency and effectiveness of field surveys.

When repeatedly applied to the same region over time, it could also be useful for monitoring palaeontological heritage localities.

Most importantly, the method here described is feasible, easily applicable to both fossil logs and bones, and represents a step towards standard best practices for applying remote sensing in the palaeontological field.

[Images are from this paper.]

Kalluraya, C.A., et al (2023) **Bacterial origin of a key innovation in the evolution of the vertebrate eye.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 120:doi.org/10.1073/pnas.2214815120 (available as a free pdf)

Authors' abstract: *Here, we describe the essential contribution of bacteria to the evolution of the vertebrate eye, via interdomain horizontal gene transfer (iHGT), of a bacterial gene that gave rise to the vertebrate-specific interphotoreceptor retinoid binding protein (IRBP).*

We demonstrate that IRBP, a highly conserved and essential retinoid shuttling protein, arose from a bacterial gene that was acquired, duplicated, and neofunctionalized coincident with the development of the vertebrate-type eye >500 megayears ago.

Importantly, our findings provide a path by which complex structures like the vertebrate eye can evolve: not just by tinkering with existing genetic material, but also by acquiring and functionally integrating foreign genes.

The vertebrate eye was described by Charles Darwin as one of the greatest potential challenges to a theory of natural selection by stepwise evolutionary processes.

While numerous evolutionary transitions that led to the vertebrate eye have been explained, some aspects appear to be vertebrate specific with no obvious metazoan precursor.

One critical difference between vertebrate and invertebrate vision hinges on interphotoreceptor retinoid-binding protein (IRBP, also known as retinol-binding protein, RBP3), which enables the physical separation and specialization of cells in the vertebrate visual cycle by promoting retinoid shuttling between cell types.

While IRBP has been functionally described, its evolutionary origin has remained elusive. Here, we show that IRBP arose via acquisition of novel genetic material from bacteria by interdomain horizontal gene transfer (iHGT).

We demonstrate that a gene encoding a bacterial peptidase was acquired prior to the radiation of extant vertebrates >500 Mya and underwent subsequent domain duplication and neofunctionalization to give rise to vertebrate IRBP.

Our phylogenomic analyses on >900 high-quality genomes across the tree of life provided the resolution to distinguish contamination in genome assemblies from true instances of horizontal acquisition of IRBP and led us to discover additional independent transfers of the same bacterial peptidase gene family into distinct eukaryotic lineages.

Importantly, this work illustrates the evolutionary basis of a key transition that led to the vertebrate visual cycle and highlights the striking impact that acquisition of bacterial genes has had on vertebrate evolution.

Bicknell, R.D.C., et al (2023) **Malformed individuals of the trilobite *Estaingia bilobata* from the Cambrian Emu Bay Shale and their palaeobiological implications.** GEOLOGICAL MAGAZINE 160:doi.org/10.1017/S0016756822001261 (available as a free pdf)

Authors' abstract: *Malformed trilobite specimens present important insight into understanding how this extinct arthropod group recovered from developmental or moulting malfunctions, pathologies, and injuries.*

Previously documented examples of malformed trilobite specimens are often considered in isolation, with few studies reporting on multiple malformations in the same species.

*Here we report malformed specimens of the ellipsocephaloid trilobite *Estaingia bilobata* from the Emu Bay Shale Konservat-Lagerstätte (Cambrian Series 2, Stage 4) on Kangaroo Island, South Australia.*

*Ten malformed specimens exhibiting injuries, pathologies, and a range of teratologies are documented. Furthermore, five examples of mangled exoskeletons are presented, indicative of predation on *E. bilobata*.*

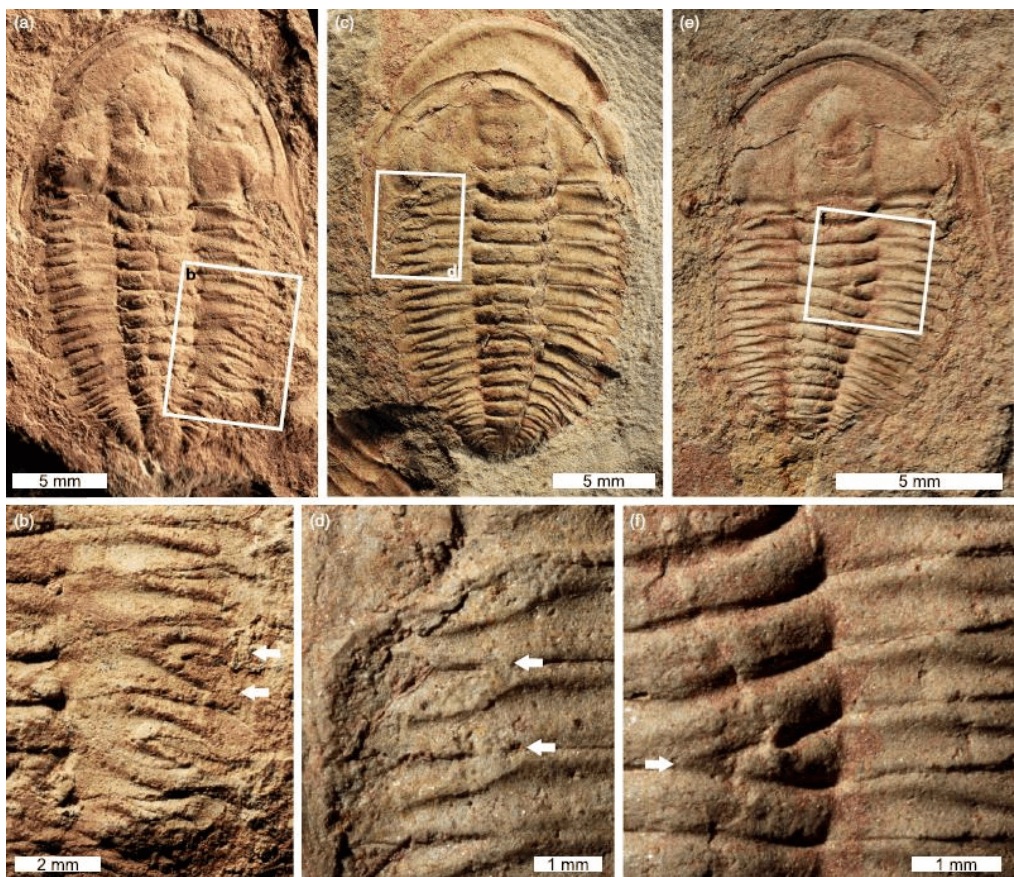
*Considering the position of malformed and normal specimens of *E. bilobata* in bivariate space, we demonstrate that the majority of malformed specimens cluster among the larger individuals.*

Such specimens may exemplify larger forms successfully escaping predation attempts, but could equally represent individuals exhibiting old injuries that were made during earlier (smaller) growth stages that have healed through subsequent moulting events.

The available evidence from the Emu Bay Shale suggests that this small, extremely abundant trilobite likely played an important role in the structure of the local ecosystem, occupying a low trophic level and being preyed upon by multiple durophagous arthropods.

*Furthermore, the scarcity of malformed *E. bilobata* specimens demonstrates how rarely injuries, developmental malfunctions, and pathological infestations occurred within the species.*

[Images are from this paper.]



Yuan, W., et al (2023) **Mercury isotopes show vascular plants had colonized land extensively by the early Silurian.** SCIENCE ADVANCES 9:doi.org/10.1126/sciadv.ade9510 (available as a free pdf)

[Vascular plants are land plants with veins, such as mosses, conifers, and flowering plants. Algae date back 3.8 billion years but have no veins.]

Authors' abstract: *The colonization and expansion of plants on land is considered one of the most profound ecological revolutions, yet the precise timing remains controversial.*

Because land vegetation can enhance weathering intensity and affect terrigenous input to the ocean, changes in terrestrial plant biomass with distinct negative $\delta^{199}\text{Hg}$ and $\delta^{200}\text{Hg}$ signatures may overwrite the positive Hg isotope signatures commonly found in marine sediments.

By investigating secular Hg isotopic variations in the Paleozoic marine sediments from South China and peripheral paleocontinents, we highlight distinct negative excursions in both $\delta^{199}\text{Hg}$ and $\delta^{200}\text{Hg}$ at Stage level starting in the early Silurian and again in the Carboniferous.

These geochemical signatures were driven by increased terrestrial contribution of Hg due to the rapid expansion of vascular plants. These excursions broadly coincide with rising atmospheric oxygen concentrations and global cooling.

Therefore, vascular plants were widely distributed on land during the Ordovician-Silurian transition (~444 million years), long before the earliest reported vascular plant fossil, Cooksonia (~430 million years).

Hoffman, D.K., et al (2023) **A diverse diapsid tooth assemblage from the Early Triassic (Driefontein locality, South Africa) records the recovery of diapsids following the end-Permian mass extinction.** PLOS ONE 18:doi.org/10.1371/journal.pone.0285111 (available as a free pdf)

Authors' abstract: *Mass extinctions change the trajectory of evolution and restructure ecosystems. The largest mass extinction, the end-Permian, is a particularly interesting case due to the hypothesized delay in the recovery of global ecosystems, where total trophic level recovery is not thought to have occurred until 5 to 9 million years after the extinction event.*

Diapsids, especially archosauromorphs, play an important role in this recovery, filling niches left vacant by therapsids and anapsids. However, the nature of lineage and ecological diversification of diapsids is obscured by the limited number of continuous, well-dated stratigraphic sections at the Permian-Triassic boundary and continuing through the first half of the Triassic.

The Karoo Basin of South Africa is one such record, and particularly the late Early Triassic (Olenekian) Driefontein locality fills this gap in the diapsid fossil record. We collected a total of 102 teeth of which 81 are identified as diapsids and the remaining 21 as identified as temnospondyls.

From the sample, seven distinct tooth morphotypes of diapsids are recognized, six of which are new to the locality. We used a combination of linear measurements, 3D geomorphometrics, and nMDS ordination to compare these morphotypes and made inferences about their possible diets.

Although the morphotypes are readily differentiated in nMDS, the overall morphological disparity is low, and we infer five morphotypes are faunivorous with the other two potentially omnivorous or piscivorous based on their morphological similarities with dentitions from extant diapsids, demonstrating an unsampled taxonomic and ecological diversity of diapsids in the Early Triassic based on teeth.

Although ecological specialization at Driefontein may be low, it records a diversity of diapsid taxa, specifically of archosauromorph lineages.

Bordy, E.M., et al (2023) Life and land engulfed in the late Early Jurassic Karoo lavas of southern Gondwana. GEOLOGICAL MAGAZINE 160:doi.org/10.1017/S0016756822001169 (available as a free pdf)

Authors' abstract: The rock record from the late Early Jurassic in southern Africa encompasses the history of voluminous continental flood basalt outpourings associated with the magmatic events in the Karoo–Ferrar Large Igneous Province (LIP) in southern and eastern Gondwana.

This multiphase magmatism produced one of Earth's largest continental flood basalt successions volumetrically and is assumed to have been a main driving mechanism in late Early Jurassic global environmental perturbations, including mass extinctions and changes in climate.

In southern Africa, these Lower Jurassic flood basalts are interbedded with fossiliferous sedimentary rocks, which in turn host the last signs of 'Karoo life' in the form of fossil plants, invertebrates and vertebrates, including the trackways of hopping mammals and the ultimate Karoo dinosaurs.

The sedimentology and palaeontology of the interbeds archived depositional and biotic processes in running water as well as in and around shallow, up to ~10 m deep freshwater lakes and ponds in the late Early Jurassic.

This study explains how a complex freshwater palaeo-habitat prevailed, albeit temporarily, in this extremely stressful environment, which was unlike any modern volcanic system. The evidence collectively points to seasonally wet, warm temperate climatic conditions during the early phases of Karoo volcanism.

Moreover, the evidence in the rocks also suggests that the dynamic volcanic conditions resulted in shifting habitats that likely facilitated the migration of the ultimate Karoo biota towards the north and west, away from the main Karoo land of fire, just before Gondwana started to disassemble.

Dinosaurs.

Peñalver, E., et al (2023) Symbiosis between Cretaceous dinosaurs and feather-feeding beetles. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 120:doi.org/10.1073/pnas.2217872120 (available as a free pdf)

Authors' abstract: Extant terrestrial vertebrates, including birds, have a panoply of symbiotic relationships with many insects and arachnids, such as parasitism or mutualism.

Yet, identifying arthropod-vertebrate symbioses in the fossil record has been based largely on indirect evidence; findings of direct association between arthropod guests and dinosaur host remains are exceedingly scarce.

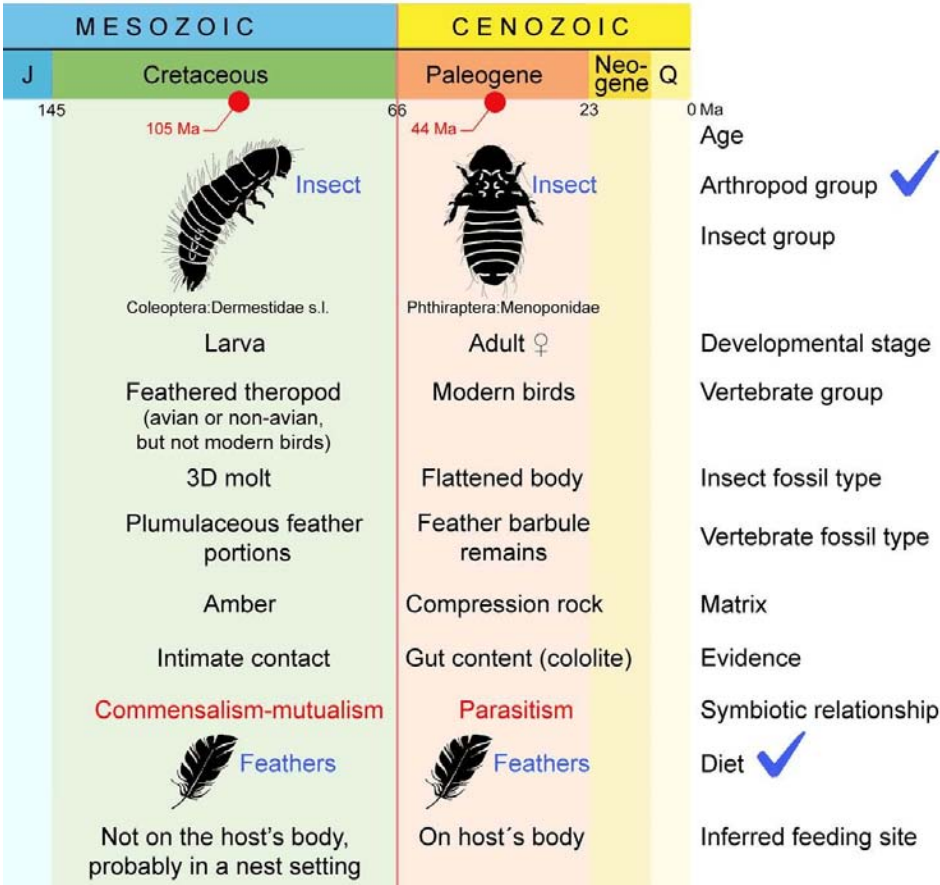
Here, we present direct and indirect evidence demonstrating that beetle larvae fed on feathers from an undetermined theropod host (avian or nonavian) 105 million years ago.

An exceptional amber assemblage is reported of larval molts (exuviae) intimately associated with plumulaceous feather and other remains, as well as three additional amber pieces preserving isolated conspecific exuviae. Samples were found in the roughly coeval Spanish amber deposits of El Soplao, San Just, and Peñacerrada I.

Integration of the morphological, systematic, and taphonomic data shows that the beetle larval exuviae, belonging to three developmental stages, are most consistent with skin/hide beetles (family Dermestidae), an ecologically important group with extant keratophagous species that commonly inhabit bird and mammal nests.

These findings show that a symbiotic relationship involving keratophagy comparable to that of beetles and birds in current ecosystems existed between their Early Cretaceous relatives.

[Images are from this paper.]



Human Prehistory.

Cohen, P., et al (2023) **Ancient DNA from a lost Negev Highlands desert grape reveals a Late Antiquity wine lineage.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 120:doi.org/10.1073/pnas.2213563120 (available as a free pdf)

Authors’ abstract: The modern winemaking industry is heavily reliant on a limited number of European grape cultivars, which are best suited for cultivation in temperate climates.

Global warming emphasizes the need for diversity in this high-impact agricultural crop. Grapevine lineages bred in hot and arid regions, often preserved over centuries, may present an alternative to the classic winemaking grape cultivars.

Our study of a legacy grapevine variety from the Negev Highlands desert of southern Israel sheds light on its genetics, biological properties, and lasting impact. The modern-day close relatives of the archaeological grapes may now provide an exceptional platform for future studies on grapevine resilience to aridity.

Recent excavations of Late Antiquity settlements in the Negev Highlands of southern Israel uncovered a society that established commercial-scale viticulture in an arid environment. We applied target-enriched genome-wide sequencing and radiocarbon dating to examine grapevine pips that were excavated at three of these sites.

Our analyses revealed centuries long and continuous grape cultivation in the Southern Levant. The genetically diverse pips also provided clues to ancient cultivation strategies aimed at improving agricultural productivity and ensuring food security. Applying genomic prediction analysis, a pip dated to the eighth century CE was determined to likely be from a white grape, to date the oldest to be identified.

In a kinship analysis, another pip was found to be descendant from a modern Greek cultivar and was thus linked with several popular historic wines that were once traded across the Byzantine Empire. These findings shed light on historical Byzantine trading networks and on the genetic contribution of Levantine varieties to the classic Aegean landscape.

Hermann, A., et al (2023) **Artifact geochemistry demonstrates long-distance voyaging in the Polynesian Outliers.** SCIENCE ADVANCES 9:doi.org/10.1126/sciadv.adf4487 (available as a free pdf)

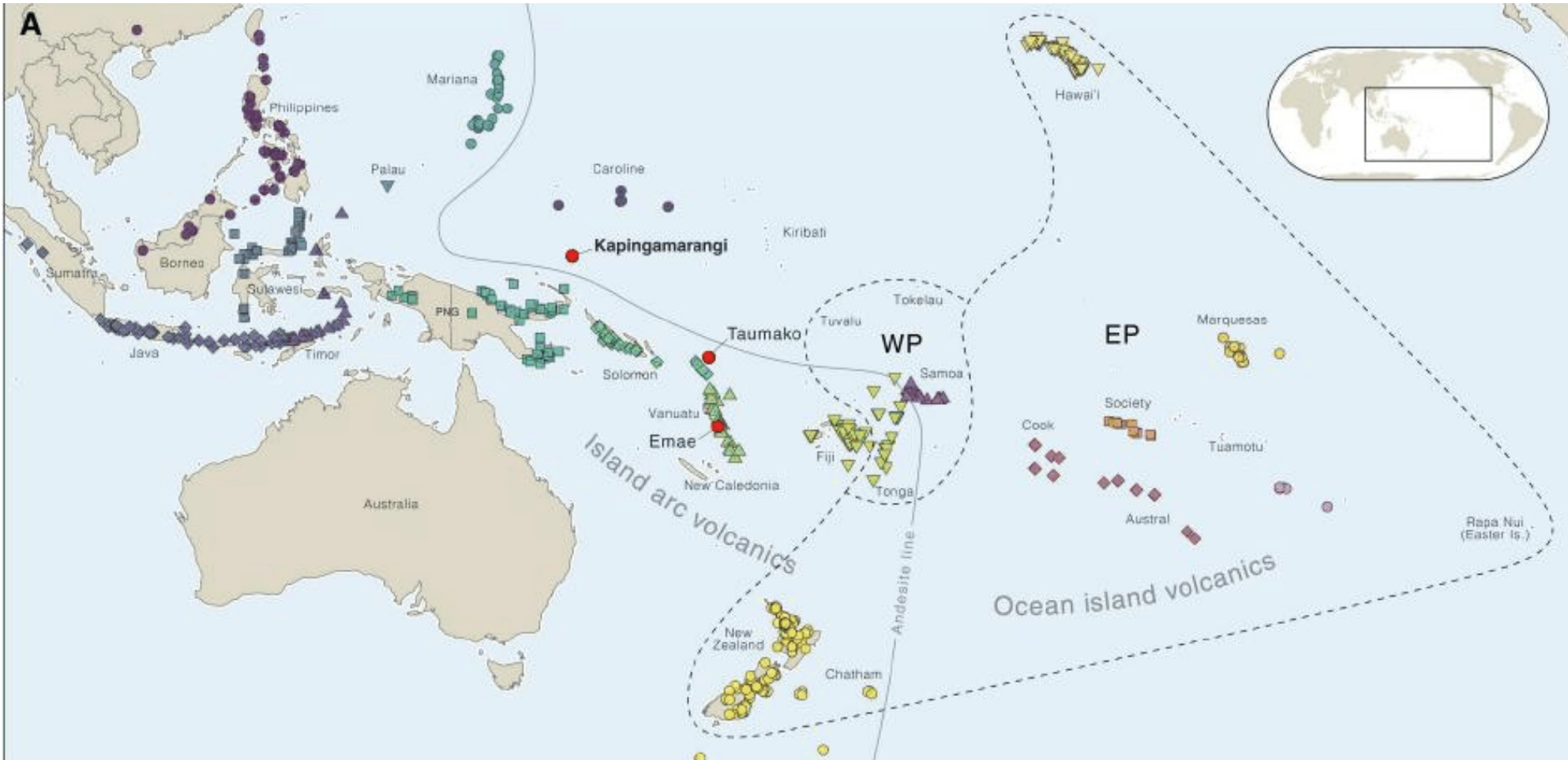
Authors’ abstract: *Although the peopling of Remote Oceania is well-documented as a general process of eastward migrations from Island Southeast Asia and Near Oceania toward the archipelagos of Remote Oceania, the origin and the development of Polynesian societies in the Western Pacific (Polynesian Outliers), far away from the Polynesian triangle, remain unclear.*

Here, we present a large-scale geochemical sourcing study of stone artifacts excavated from archeological sites in central Vanuatu, the Solomon Islands, and the Caroline Islands and provide unambiguous evidence of multiple long-distance voyages, with exotic stone materials being transported up to 2,500 kilometers from their source.

Our results emphasize high mobility in the Western Pacific during the last millennium CE and offer insights on the scale and timing of contacts between the Polynesian Outliers, their neighbors in the Western Pacific, and societies of Western Polynesia. Most western and central Pacific islands were first settled during the Lapita period [3300 to 2900 before the present] by seafarers from Island Southeast Asia and Near Oceania.

Two thousand years later, thanks to the development of advanced sailing technology and navigational methods such as the large ocean-going double-hulled sailing canoes and the so-called star and wind compasses, the Polynesians reached islands further east and quickly settled and thrived on the more distant islands of Hawai’i, Rapa Nui (Easter Island), and Aotearoa (New Zealand), the apexes of the “Polynesian triangle”

[Map is from this paper.]



Guthmundsdottir, Lisabet (2023) **Timber imports to Norse Greenland: lifeline or luxury?** ANTIQUITY 97:doi.org/10.15184/aqy.2023.13

Author’s abstract: *The native trees of Greenland are unsuitable for larger construction projects or shipbuilding. Instead, the Norse colonists (AD 985 to 1450) relied on driftwood and imported timber. The provenance and extent of these imports, however, remain understudied.*

Here, the author uses microscopic anatomical analyses to determine the taxa and provenance of wood from five Norse Greenlandic sites. The results show that while the needs of most households were met by local woodlands and driftwood, elite farms had access to timber imports from Northern Europe and North America.

By demonstrating the range of timber sources used by the Greenland Norse, the results illustrate connectivity across the medieval North Atlantic world.

Borreggine, M., et al (2023) **Sea-level rise in Southwest Greenland as a contributor to Viking abandonment.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 120:doi.org/10.1073/pnas.2209615120 (available as a free pdf)

Authors’ abstract: *The first records of Greenland Vikings date to 985 CE. Archaeological evidence yields insight into how Vikings lived, yet drivers of their disappearance in the 15th century remain enigmatic.*

Research suggests a combination of environmental and socioeconomic factors, and the climatic shift from the Medieval Warm Period (~900 to 1250 CE) to the Little Ice Age (~1250 to 1900 CE) may have forced them to abandon Greenland.

Glacial geomorphology and paleoclimate research suggest that the Southern Greenland Ice Sheet readvanced during Viking occupation, peaking in the Little Ice Age. Counterintuitively, the re-advance caused sea-level rise near the ice margin due to increased gravitational attraction toward the ice sheet and crustal subsidence.

We estimate ice growth in Southwestern Greenland using geomorphological indicators and lake core data from previous literature. We calculate the effect of ice growth on regional sea level by applying our ice history to a geophysical

model of sea level with a resolution of ~1 km across Southwestern Greenland and compare the results to archaeological evidence.

The results indicate that sea level rose up to ~3.3 metres outside the glaciation zone during Viking settlement, producing shoreline retreat of hundreds of metres. Sea-level rise was progressive and encompassed the entire Eastern Settlement.

Moreover, pervasive flooding would have forced abandonment of many coastal sites. These processes likely contributed to the suite of vulnerabilities that led to Viking abandonment of Greenland. Sea-level change thus represents an integral, missing element of the Viking story.

Modern Humans.

Skirgård, H., et al (2023) **Grambank reveals the importance of genealogical constraints on linguistic diversity and highlights the impact of language loss.** SCIENCE ADVANCES 9:doi.org/10.1126/sciadv.adg6175 (available as a free pdf)

Authors’ abstract: *While global patterns of human genetic diversity are increasingly well characterized, the diversity of human languages remains less systematically described.*

Here, we outline the Grambank database. With over 400,000 data points and 2,400 languages, Grambank is the largest comparative grammatical database available.

The comprehensiveness of Grambank allows us to quantify the relative effects of genealogical inheritance and geographic proximity on the structural diversity of the world’s languages, evaluate constraints on linguistic diversity, and identify the world’s most unusual languages.

An analysis of the consequences of language loss reveals that the reduction in diversity will be strikingly uneven across the major linguistic regions of the world. Without sustained efforts to document and revitalize endangered languages, our linguistic window into human history, cognition, and culture will be seriously fragmented.

There are approximately 7,000 spoken languages in the world. These languages vary widely in their structural properties. They vary by the order in which they arrange words and the constructions they use to combine segments in higher-order units.

They can also differ markedly in how information is grammatically expressed. Some languages always mark categories such as gender, number, case, and tense, while some never or only optionally mark these categories.

Furthermore, sentences that consist of many words in some languages can be translated by a single word in other languages, while the preferred word order varies widely. This linguistic diversity is not randomly distributed. We expect it to be shaped by human cognition, geographical proximity, and genealogical descent.

Al-Rajab, M., et al (2023) **Predicting new crescent moon visibility applying machine learning algorithms.** SCIENTIFIC REPORTS 13:doi.org/10.1038/s41598-023-32807-x (available as a free pdf)

Authors' abstract: *The world's population is projected to grow 32% in the coming years, and the number of Muslims is expected to grow by 70%, from 1.8 billion in 2015 to about 3 billion in 2060.*

Hijri is the Islamic calendar, also known as the lunar Hijri calendar, which consists of 12 lunar months, and it is tied to the Moon phases where a new crescent Moon marks the beginning of each month. Muslims use the Hijri calendar to determine important dates and religious events such as Ramadan, Haj, Muharram, etc.

Till today, there is no consensus on deciding on the beginning of Ramadan month within the Muslim community. This is mainly due to the imprecise observations of the new crescent Moon in different locations. Artificial intelligence and its sub-field machine learning have shown great success in their application in several fields. In this paper, we propose the use of machine learning algorithms to help in determining the start of Ramadan month by predicting the visibility of the new crescent Moon.

The results obtained from our experiments have shown very good accurate prediction and evaluation performance. The Random Forest and Support

Vector Machine classifiers have provided promising results compared to other classifiers considered in this study in predicting the visibility of the new Moon.

Anikin, A., et al (2023) **Do some languages sound more beautiful than others?** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 120:doi.org/10.1073/pnas.2218367120

Authors' abstract: *Italian is sexy, German is rough, but how about Páez or Tamil? Are there universal phonesthetic judgments based purely on the sound of a language, or are preferences attributable to language-external factors such as familiarity and cultural stereotypes?*

We collected 2,125 recordings of 228 languages from 43 language families, including 5 to 11 speakers of each language to control for personal vocal attractiveness, and asked 820 native speakers of English, Chinese, or Semitic languages to indicate how much they liked these languages.

We found a strong preference for languages perceived as familiar, even when they were misidentified, a variety of cultural-geographical biases, and a preference for breathy female voices.

The scores by English, Chinese, and Semitic speakers were weakly correlated, indicating some cross-cultural concordance in phonesthetic judgments, but overall there was little consensus between raters about which languages sounded more beautiful, and average scores per language remained within $\pm 2\%$ after accounting for confounds related to familiarity and voice quality of individual speakers.

None of the tested phonetic features, the presence of specific phonemic classes, the overall size of phonetic repertoire, its typicality and similarity to the listener's first language, were robust predictors of pleasantness ratings, apart from a possible slight preference for nontonal languages.

While population-level phonesthetic preferences may exist, their contribution to perceptual judgments of short speech recordings appears to be minor compared to purely personal preferences, the speaker's voice quality, and perceived resemblance to other languages culturally branded as beautiful or ugly.

Zhang, L., et al (2023) **Successful aging of musicians: Preservation of sensorimotor regions aids audiovisual speech-in-noise perception.** SCIENCE ADVANCES 9:doi.org/10.1126/sciadv.adg7056 (available as a free pdf)

Authors’ abstract: *Musicianship can mitigate age-related declines in audiovisual speech-in-noise perception. We tested whether this benefit originates from functional preservation or functional compensation by comparing fMRI responses of older musicians, older non-musicians, and young non-musicians identifying noise-masked audiovisual syllables.*

Older musicians outperformed older non-musicians and showed comparable performance to young non-musicians. Notably, older musicians retained similar neural specificity of speech representations in sensorimotor areas to young non-musicians, while older non-musicians showed degraded neural representations.

In the same region, older musicians showed higher neural alignment to young non-musicians than older non-musicians, which was associated with their training intensity. In older non-musicians, the degree of neural alignment predicted better performance.

In addition, older musicians showed greater activation in frontal-parietal, speech motor, and visual motion regions and greater deactivation in the angular gyrus than older non-musicians, which predicted higher neural alignment in sensorimotor areas.

Together, these findings suggest that musicianship-related benefit in audiovisual speech-in-noise processing is rooted in preserving youth-like representations in sensorimotor regions.

WORLD WIDE PARTY ON JUNE 21

Founded by Benoit Girard (Quebec) and Franz Miklis (Austria) in 1994, the World Wide Party is held on June 21st every year. 2023 will be the 30th 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 club meeting or more convenient time negates the idea of a wave of celebration by SF fans and zinesters circling the globe.

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

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