

OPUNTIA 376



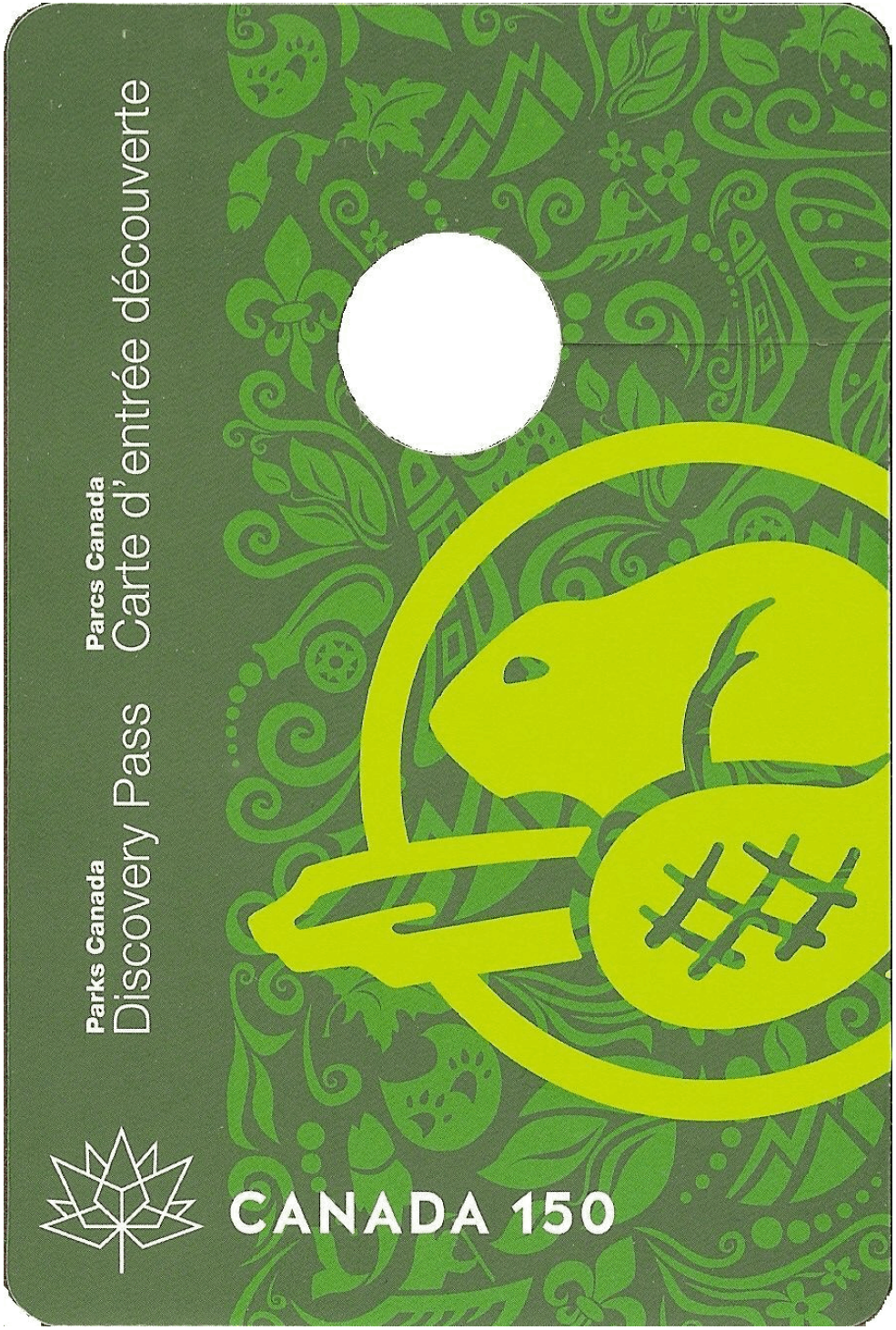
Opuntia is published by Dale Speirs, Calgary, Alberta. It is posted on www.efanzines.com and www.fanac.org. My e-mail address is: opuntia57@hotmail.com When sending me an emailed letter of comment, please include your name and town in the message.

**ROCKY MOUNTAIN WAY:
MOUNT STONEY SQUAW AND LAKE LOUISE**
photos by Dale Speirs

As part of Canada’s sesquicentennial celebrations, the federal government is giving away free admission passes, good for the full year 2017 at any national park in the country. (Campground and other fees still apply.) Anyone may get one, including outlanders, so if you are interested, go to www.parkscanada.ca to apply for one. I sent off for mine (scan shown at right) as soon as I read the announcement. You can expect lots of photos in the next few OPUNTIA issues of majestic mountains and such.

On May 4, I drove out to Banff National Park for the day. My first stop was to go up to the top of Mount Stoney Squaw, on the north side of the Banff townsite. The cover photo looks due south over the townsite. Mount Rundle is at left, Sulphur Mountain at right, and the Goat Ranges further up the valley. A bit of the Bow River can be seen along the right edge.

It was early morning when I got up to the summit, so the alpine meadows were still covered in frost. The herd of bighorn sheep are grazing on fresh grass underneath, but they also get their water from the frost without having to trek down to the river. A few hours later the meadow was green after the frost melted. Sheep may safely graze.



Right: A telephoto shot of the Goat Ranges.

On the forested slope is a road and cutout area where the Banff Upper Hot Springs are located.



The eastern slope of Mount Norquay, which is adjacent to Mount Stoney Squaw.



Left: Looking southwest from Mount Stoney Squaw, up the Bow River valley. The Vermilion Lakes along the bottomlands will fill up once the snowmelt begins in June. Look closely at the bottom edge of the photo and you will see bighorn sheep grazing.



Cascade Mountain, eastern slope, as seen from the entrance into the park along the Trans-Canada Highway.

After coming back down from Mount Stoney Squaw, I headed up the Trans-Canada Highway to Lake Louise, which is about 50 km northwest of Banff. The lake is in a valley high up in the mountains, so it was still wintery there.



Chateau Lake Louise is a stately pile more than a century old. The hotel caters to well-to-do Japanese and European tourists. It's the kind of place where if you have to ask what the room rates are, you can't afford it.



At the far end of the lake is Mount Victoria and its associated glacier. It was named after Queen Victoria, and the lake after her daughter.

From the opposite end of the lake, I cranked my telephoto lens full out to get this shot.





Mount Fairview on the southeast corner of the lake. You can't see it in this shot but the avalanche chute makes a right-angle turn behind the spruce trees and comes out onto the lake. The tourists ignoring the Thin Ice and Avalanche Warning signs are about two-thirds Japanese who can't read English, and one-third white folk who figure the signs don't apply to them. And to think that creationists don't believe in natural selection.

Below is the eastern slope of Mount Fairview as seen from down in the Bow River valley. The lake is out of sight behind the spruce trees to the right of the photo. Taken with a telephoto from Lake Louise village, which is not on the lake but down below on the bottomlands.



I took this telephoto from further south in the Bow River valley, showing typical avalanche activity on mountain slopes.



LORD DUNSANY

by Dale Speirs

Although not entirely forgotten, and still in print, the fantasy and weird fiction of Lord Dunsany deserves renewed attention from time to time, especially to bring him to notice of the younger generation, assuming anyone under 30 years of age reads this zine.

Edward John Moreton Drax Plunkett (1878-1957) was the 18th Baron Dunsany, of Castle Dunsany, County Meath, Ireland. His stories were published in a variety of American and British magazines during the first half of the 1900s. He was a noted playwright on both sides of the Atlantic.

As an ordinary nobleman, he would be forgotten now like all the others of his ilk, but he was renowned in his lifetime for his fantasy stories. Although Irish enough to be elected to their academies, he was a Unionist, which was enough for the Irish to deny him being part of their history. Dunsany served with the British Army during World War One, and was wounded in action while suppressing the rebels during the 1916 Easter Rising.

His stories have been reprinted in many collections since his passing. He wrote hundreds of stories; I only mention a few here.

The Pegana Mythology.

“The Gods Of Pegana” (1904) was Dunsany’s first published work. It sets up a remarkable pantheon of gods and cosmogony. In it, the Creator god, Mana-Yood-Sushai dreams the universe into existence. One day MYS will awaken, and the universe will cease to exist at that moment. Small gods do the chores of running the universe, but they too will cease to exist when MYS awakens. Time personified is the hound of the gods, and will eventually devour all things.

That last aspect of the Pegana mythology is taken further in the 1906 story “Time And The Gods”. Sardathrion is the city of the gods, a place of gleaming marble spires and spectacular vistas. It eventually falls to the ravages of Time. The gods send for the one they thought was their servant and demand to know why the city was destroyed. In silent reply, Time lifts up a sword. The gods suddenly realize that someday Time will kill them all, no matter how powerful they think they may be.

“A Legend Of The Dawn” (1906) is about Inzana, the child of the gods. She had a golden ball she liked to play with. She tossed it into the sky above Pegana and made the sun of the first day. It kept going and went underneath the world after only a day, causing Inzana to cry. The gods hustled about trying to find it and make her happy again.

The process happens repeatedly, and it seems the story will be about the girl who cried wolf too often. The narrative suddenly makes a right-angle turn, saying that someday the gods will not be able to find the golden ball. When that happens, humans will cease to worship the gods and they will fade away.

H.P. Lovecraft wrote that he drew some of the inspiration for his mythos from Dunsany. Although I haven’t read any specific acknowledgment of Pegana by Terry Pratchett, his Discworld series also has Dunsany-like elements. Indeed, the novel SMALL GODS deals specifically with the idea that gods fade away and die without believers (reviewed in OPUNTIA #297).

“In The Land Of Time” (1906) is about a young king who has just inherited the throne. As he tours his kingdom, he sees ancient ruins and asks how they came to fall. The locals tell him Time did it. He meets elderly people hobbling about, who blame Time for their condition. Summoning his armies, the king leads them on a long journey across the continent until they come to a distant shore. There they lose their battle against Time, and return home as old men. Worse yet, they find their cities in ruins, for while they were chasing after Time, it circled around behind them and destroyed the city. A remarkable story well told.

“The Relenting Of Sarnidac” (1906) is the story of all the small gods walking out of a city because the residents take them for granted and do not pray to them much anymore. The citizens see them leaving and panic. In a neat twist, a dwarf shepherd inadvertently becomes a substitute god.

“The Fall Of Babbulkund” (1907) switches to a first-person narrative by a man traveling in a camel caravan across the Arabian desert. They are bound for the fabled city of Babbulkund. Along the way, they meet with other travelers who tell them fabulous stories of the great city, although the closer they get to Babbulkund, the more the travelers hedge about it. When the caravan reaches the location, no trace of Babbulkund can be found. The city vanished so long ago that even the foundations and rubble have gone.

Tales Of Wonder.

Dunsany wrote conventional fantasy, the kind that Ivy League women with triple-barreled names churn out today in poor imitation.

“The Sword Of Welleran” (1908) chronicles the city of Merimna, once great but now slumbering in its stronghold and living off its reputation from the past. Barbarian nations surround it and will come for it someday. The heroes of Merimna, led by Welleran, have been dead for a century. The ghosts of those men are helpless to warn the citizens that they will fall to the barbarians.

Finally, all on that day, the barbarians arrive. The ghosts manage to arouse the sleeping defenders of the city by entering their dreams and disturbing them into wakefulness. A successor to Welleran arises during the battle, and Merimna is saved.

This story reminded me of the Book of Amos (see OPUNTIA #68), wherein the Israelites were complacent while surrounded by hostile kingdoms. That turned out differently of course, because the prophet Amos of Tekoa was not a ghost who could enter dreams but only a farmer whose sermons failed to reach the people who needed to hear it most.

“The Kith Of The Elf-Folk” (1908) is about a Wild Thing, kin to the elf folk. She lives in a marsh next to a cathedral, and often watches the services from a hiding place. She wants a soul so that she can worship God. The elves make one for her but warn that it will make her mortal. The deal is done and she goes to live with humans. She eventually regrets it, but cannot return to her previous life until she gives her soul to someone who needs it.

“The Ghosts” (1908) demonstrates once again Dunsany’s ability to write original stories that the vast majority of modern fantasy writers could never create. A man stays up late in a manor house to disprove the existence of ghosts. He finds himself wrong, as a parade of Jacobean ghosts appears and settle themselves in the drawing room. Each of them, though, is accompanied by a slobbering hound that represents their sins and will not let them enjoy peace. Then the hounds notice the man.

“The Fortress Unvanquishable, Save For Sacnoth” (1908) is a more conventional tale of a hero who fought with a magical sword against an evil spirit. It may have happened as described, or it may have been a delusion of the

hero and his people. Dunsany concludes the story by remarking that legends are like the fallen autumn leaves raked up by a gardener and burned, leaving no proof they were ever there.

“Blagdaross” (1908) comprises the reminiscences of several inanimate objects on a junk pile, telling where they came from and how they were abandoned. A strangely moving story, but not to be read when you are feeling depressed.

The Yann.

Dunsany wrote a series of stories about a medieval country on the River Yann, reached through the back door of a curiosity shop on Go-by Street just off the Strand in London, England. The passage of time in that world was not necessarily the passage of time in this one, a relativistic effect of stepping back and forth between the two frames of reference.

“Idle Days On The Yann” (1910) begins the series with a mood piece about a man sailing down the Yann river, a tourist seeing the sights of mystical cities. Dunsany had a knack for description, and this story illustrates it well. There is the dust-covered city of Mandaroon, whose inhabitants sleep and cannot be woken because then the gods will die. Further down river is Astahahn, whose citizens have manacled Time, and worship all the gods that Time had not yet slain.

The next city is Perondaris, where the ship’s captain negotiates a deal to sell his cargo, the bartering of which is well told. The narrator later explores the city and comes upon a newly-installed gate in the wall carved from a single piece of ivory. When he thinks about it, he realizes the size of the animal from which the tusk was taken to carve the gate. Because it is recent, and there must be other such animals seeking revenge, he confers with the captain. They decide to depart before another such beast returns. Nen is the final city of the Yann, at the mouth of the river, and so the story ends.

“A Shop In Go-by Street” (1912) is the sequel to the above story. The narrator wants to return to Yann but can’t remember the way. He goes to a curiosity shop on Go-by Street, just off the Strand but only if you know what to look for. The shopkeeper lets him out the back door, which opens onto the banks of the Yann. Time moves swifter in Yann though. Only two years have passed for the narrator but on the Yann generations have come and gone.

The third part of the Yann series is “The Avenger Of Perdondaris” (1912). Once more the narrator goes out the back door of the shop on Go-by Street. This time he makes a wrong turning across the relativistic dimensions and winds up in a different kingdom. He discovers that he is still in London but millennia in the future when little trace of the city remains. With some difficulty, he manages to find the shop and return to his own era.

These three stories are an episodic whole rather than a unified work. The richness of Dunsany’s prose helps unify the texts.

Fantasy And Reality.

Many of Dunsany’s stories are about the intersection between reality and fantasy, and the problems that some people have in separating the two. “The Wonderful Window” (1911), begins when a man buys a small window from a street vendor, who installs it in the customer’s kitchen cupboard.

Through the window, the man sees an unknown ancient city and observes its daily life. It becomes a focus of his life, as he watches the citizens go about their business. One day, he sees the city being invaded. They are losing to the barbarians. In his anguish at the sight, he tries to force the window open so that he can join the fight and help. The glass is broken and the city vanishes. Nothing is left but a cupboard.

“The Coronation Of Mr Thomas Shap” (1911) is about a shopkeeper whose dull life starts him daydreaming about being a king in a fantasy land. The dreams take over his life, he neglects his shop, and ends up in an insane asylum.

The story reminded me of some people I have known, let’s call them nerds, who squandered their lives playing RPGs, cosplaying, and blogging instead of using their intellectual gifts to earn a good living. Like Shap, they gave up their lives to daydreams and, while not committed to asylums, live in basement suites and clerk in menial jobs.

“The Bureau D’Echange De Maux” (1915) is one of Dunsany’s more famous stories, about a place where people exchange their old sins or fears for new ones. The broker charges a flat commission of 20 francs. The narrator thinks he can get the best of the deal with someone else but fails. When he goes back to the shop, it is gone, as if it had never been there.

Ghost Stories.

“The Exiles’ Club” (1915) was for dethroned kings, a Georgian manor in London whose associates require proof of royal descent and loss of their kingdom. A more common thing when this story was written during World War One than it is now. At the banqueting table in the basement, members sit in thrones and guests in ordinary chairs. A guest asks what is upstairs on the top floor and only then learns that the ex-kings are just staff. Who do they wait upon? Well, it isn’t just kings who fall. Gods who were once mighty have fallen as well, after they lost their believers.

“Thirteen At Table” (1916) is an after-dinner story about a traveler who stayed the night at a decrepit manor house occupied only by the owner, Sir Richard Arlen, and his butler. The table is set for fourteen guests, but the traveler sees only himself and his host. Sir Richard introduces twelve imaginary women, regretting the harm he caused them, and has them seated at the table.

The narrator feigns conversation with them to humour his host. He inadvertently says something that offends the ghosts, who then leave the house permanently. Sir Richard is quite pleased to have been rid of their ghosts.

“The Last Dream Of Bwona Khubla” (1919) is set in a Kenyan waterhole where a shikari died many long years ago. His name and home town have long been forgotten by the natives, but they still remember him as Bwona Khubla. In his final delirium, he impressed his Kiyuyu bearers with his description of his home city, a place of manor houses and palaces, where everything and everyone was prosperous.

Decades later, two English hunters camp at the same waterhole, and hear the legend from their bearers. At night, they see a vision of London as Bwona Khubla remembered it in his imagination, suffused with nostalgia, not as it really was. Those of us who haven’t been back to our birthplace in decades can understand this.

“The Ghosts Of The Heavside Layer” (1955) is about a wealthy businessman Jan Nietjens, who restores a ruined castle in Kent as his house and then becomes worried about its ghosts. The local vicar says they can be exorcized but he is half-hearted about it. Nietjens hires an engineer who has a device that will blast spirits up into the sky, on the principle that they are electromagnetic beings and can be dealt with by science.

The device works too well. It blows all the castle ghosts up to the Heavyside layer, but the layer then reflects them back down to the ground. It transpires that the Heavyside layer is made of ghosts, who all eventually float up there and can go no further. Not only do the original castle ghosts return, but they bring with them a flood of others.

Jorkens.

Dunsany wrote more than 150 short stories of the clubman Joseph Jorkens, who, for the price of a Scotch and soda, would tell a plausible tall tale. This trope is one of the most widely imitated forms of fiction, particularly among mystery and science fiction authors. Arthur C. Clarke, who corresponded with Dunsany, based his White Hart stories on Jorkens.

The first Jorkens story, dated 1925, is “The Tale Of The Abu Laheeb”. As Jorkens relates, the story began somewhere in the papyrus swamps where the Nile Rivers rise, and the cryptic animal known as the abu laheeb lives. It looks something like a sloth, walks on its hind legs, and has the ability to create fire. Jorkens goes hunting for it but doesn’t have the heart to shoot when he sees it warming its hands over a fire like any human.

“The Development Of The Rillswood Estate” (1938) follows the consequences of a wooded area being destroyed by suburban development. Jorkens tells it about his friends, Meddin and sister Lucy, who lived next door to the estate. What once lived in the woods then migrates onto their adjacent property.

Eventually they discover it is a satyr, left homeless when the forest was cut down. They tame it and use him as a house servant. They disguise him as best they can, because what would the neighbours think? They are eventually found out but there is a twist ending and all turns out well.

The undertone of the story is the regret by Dunsany at the wholesale destruction of natural areas by suburbanization. It cannot be stopped, but most of those who preach about environmentalism live in cities and are not without sin.

Jorkens tells a story “A Life’s Work” (1945) about a remarkable man who didn’t like a low hill blocking a scenic view. Taking matters into his own hands, he spent thirty years shoveling it out of the way by hand. Then he regretted what he had done, and spent the next thirty years shoveling it back in. Does this not seem like many of our working lives?

The Mundane World.

“The Policeman’s Prophecy” (1930) was written by Dunsany after a casual remark by a traffic constable chastising his careless taxi driver: “*You’ll kill yourself and everybody else.*” Dunsany imagined London’s population suddenly disappearing.

The rat population would explode, feeding off all the food left behind. Packs of dogs would roam the streets, hunting rats. Feral cats slink about. Weeds grow in the streets, and over the years are followed by shrubs and trees. With street lighting gone, the stars brighten. The only noise is the wind and bird chatter, with the occasional howl of dogs.

“The Two Bottles Of Relish” (1932) is a clever and macabre murder mystery, about a suspect who was believed by police to have killed his girlfriend for her money. They can’t find any evidence, and the girl has vanished into thin air. She apparently never left his house, yet her body was not found hidden or buried.

The suspect did two strange things. He chopped down all the trees in his yard, cut and stacked them for firewood, but never burned them. He also bought two bottles of relish, despite the fact he was a vegetarian. The solution, which is a twist ending, is in the final sentence of the story, and a bizarre snap it is.

Finis.

There are hundreds more stories by Dunsany. You shouldn’t have too much trouble finding a basic collection and, if you like them, searching out additional volumes. Once you’ve read Dunsany, you’ll find the fantasy churned out by New York City publishing houses to be dull and mundane by comparison.

SEEN IN THE LITERATURE

Bahramian, A., et al (2017-02-07) **The ultracompact nature of the black hole candidate X-ray binary 47 Tuc X9.** Preprint at arXiv:1702.02167 [astro-ph.HE], www.arXiv.org

Authors’ abstract: “47 Tuc X9 is a low mass X-ray binary (LMXB) in the globular cluster 47 Tucanae, and was previously thought to be a cataclysmic variable. However, Miller-Jones et al. (2015) recently identified a radio counterpart to X9 (inferring a radio/X-ray luminosity ratio consistent with black hole LMXBs), and suggested that the donor star might be a white dwarf. We report simultaneous observations of X9 performed by Chandra, Nustar and Australia Telescope Compact Array.”

“We find a clear 28.18 ± 0.02 min periodic modulation in the Chandra data, which we identify as the orbital period, confirming this system as an ultracompact X-ray binary. Our X-ray spectral fitting provides evidence for photo-ionized gas having a high oxygen abundance in this system, which indicates a C/O white dwarf donor. We also identify reflection features in the hard X-ray spectrum, making X9 the faintest LMXB to show X-ray reflection.”

“We detect a 6.8 day modulation in the X-ray brightness by a factor of 10, in archival Chandra, Swift, and Rosat data. The simultaneous radio/X-ray flux ratio is consistent with either a black hole primary or a neutron star primary, if the neutron star is a transitional millisecond pulsar. Considering the measured orbital period (with other evidence of a white dwarf donor), and the lack of transitional millisecond pulsar features in the X-ray light curve, we suggest that this could be the first ultracompact black hole X-ray binary identified in our Galaxy.”

Speirs: A white dwarf star orbiting around a black hole once every 28 minutes. The universe is stranger than we imagine.

Malafarina, D. (2017-03-12) **Classical collapse to black holes and white hole quantum bounces: A review.** Preprint in arXiv:1703.04138v1 [gr-qc], www.arXiv.org

Author’s abstract: “In the last four decades different programs have been carried out aiming at understanding the final fate of gravitational collapse of

massive bodies once some prescriptions for the behaviour of gravity in the strong field regime are provided. The general picture arising from most of these scenarios is that the classical singularity at the end of collapse is replaced by a bounce. The most striking consequence of the bounce is that the black hole horizon may live for only a finite time.”

“The possible implications for astrophysics are important since, if these models capture the essence of the collapse of a massive star, an observable signature of quantum gravity may be hiding in astrophysical phenomena. One intriguing idea that is implied by these models is the possible existence of exotic compact objects, of high density and finite size, that may not be covered by an horizon.”

“Our present understanding of the universe and its evolution implies the existence of black holes, bodies whose masses are packed in such small volumes that not even light can escape. We have experimental evidence that such objects do exist from observations of x-ray binaries, which suggests the existence of stellar mass black holes in binary systems, and from the spectral properties of quasars and active galactic nuclei, which suggest that super-massive black holes dwell at the center of most galaxies.”

“From a theoretical point of view, black holes are a direct consequence of the fact that we must use General Relativity (GR) to describe the late stages of gravitational collapse. For collapsing matter sources satisfying standard energy conditions, Einstein’s field equations imply that eventually collapse must lead to the formation of trapped surfaces and a singularity.”

“The generic existence of singularities in solutions of Einstein’s field equations is a troublesome issue for classical GR as their presence signals a regime where predictability breaks down and the theory doesn’t hold. The most conservative view on singularities is that they are a consequence of the application of the theory in a regime where quantum effects become important and thus they should not appear in a full theory of quantum gravity.”

“Astrophysical black holes may possess horizons with a finite lifetime and may turn into white holes towards the end of their lives, possibly leaving behind some remnant of intrinsically quantum nature.”

Jaupart, E., S. Charnoz, and M. Moreira (2017) **Primordial atmosphere incorporation in planetary embryos and the origin of neon in terrestrial planets.** ICARUS doi:10.1016/j.icarus.2017.04.022

Authors' abstract: *"The presence of neon in terrestrial planet mantles may be attributed to the implantation of solar wind in planetary precursors or to the dissolution of primordial solar gases captured from the accretionary disk into an early magma ocean. This is suggested by the neon isotopic ratio similar to those of the Sun observed in the Earth mantle. Here, we evaluate the second hypothesis. We use general considerations of planetary accretion and atmospheric science. Using current models of terrestrial planet formation, we study the evolution of standard planetary embryos with masses in a range of 0.1 - 0.2 M_{Earth}, where M_{Earth} is the Earth's mass, in an annular region at distances between 0.5 and 1.5 Astronomical Units from the star."*

"We determine the characteristics of atmospheres that can be captured by such embryos for a wide range of parameters and calculate the maximum amount of neon that can be dissolved in the planet. Our calculations may be directly transposed to any other planet. However, we only know of the amount of neon in the Earth's solid mantle. Thus we use Earth to discuss our results. We find that the amount of dissolved neon is too small to account for the present-day neon contents of the Earth's mantle, if the nebular gas disk completely disappears before the largest planetary embryos grow to be ~ 0.2M_{Earth}. This leaves solar irradiation as the most likely source of neon in terrestrial planets for the most standard case of planetary formation models."

Brasser, R., et al (2017-04-01) **The cool and distant formation of Mars.** EARTH AND PLANETARY SCIENCE LETTERS 468:85-93

Authors' abstract: *"With approximately one ninth of Earth's mass, Mars is widely considered to be a stranded planetary embryo that never became a fully-grown planet. A currently popular planet formation theory predicts that Mars formed near Earth and Venus and was subsequently scattered outwards to its present location."*

"In such a scenario, the compositions of the three planets are expected to be similar to each other. However, bulk elemental and isotopic data for martian meteorites demonstrate that key aspects of Mars' composition are markedly different from that of Earth."

"This suggests that Mars formed outside of the terrestrial feeding zone during primary accretion. It is therefore probable that Mars always remained significantly farther from the Sun than Earth; its growth was stunted early and its mass remained relatively low."

"Here we identify a potential dynamical pathway that forms Mars in the asteroid belt and keeps it outside of Earth's accretion zone while at the same time accounting for strict age and compositional constraints, as well as mass differences. Our uncommon pathway (approximately 2% probability) is based on the Grand Tack scenario of terrestrial planet formation, in which the radial migration by Jupiter gravitationally sculpts the planetesimal disc at Mars' current location."

"We conclude that Mars' formation requires a specific dynamical pathway, while this is less valid for Earth and Venus. We further predict that Mars' volatile budget is most likely different from Earth's and that Venus formed close enough to our planet that it is expected to have a nearly identical composition from common building blocks."

Garcia, A.K., et al (2017) **Reconstructed ancestral enzymes suggest long-term cooling of Earth's photic zone since the Archean.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:4619-4624

Authors' abstract: *"Geological evidence suggesting that Earth's oceans cooled from about 55 ° to 85 °C in the Archean (~3,500 Ma) to the present has met with skepticism due to possible geochemical alteration of the rocks analyzed and uncertainties about their depositional environment. Determination of the thermostability of experimentally reconstructed ancestral enzymes provides independent means to assess paleotemperature."*

"Because some previously analyzed taxa may have inhabited atypically high-temperature environments (e.g., deep-sea hydrothermal vents), we have restricted our analyses to ancestral enzymes reconstructed from photic-zone cyanobacteria and land plants. Our findings indicate a cooling of Earth's surface temperature from about 75 °C in the Archean (~3,000 Ma) to about 35 °C in the Devonian (~420 Ma), consistent with previous geological and enzyme-based results."

Clavel, J., and H. Morion (2017) **Accelerated body size evolution during cold climatic periods in the Cenozoic.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:4183-4188

Authors’ abstract: “We show that global temperatures fluctuations through the Cenozoic impacted body size evolution. The evolution of body size was faster during periods of global cooling in most of the groups, challenging the hypothesis that evolution is faster under warm climates.”

“We apply this approach to comprehensive bird and mammal phylogenies, body size data for 9,465 extant species, and global average temperature trends over the Cenozoic. Across birds and mammals, we find that the rate of body size evolution is primarily driven by past climate. Unexpectedly, evolutionary rates are inferred to be higher during periods of cold rather than warm climates in most groups, suggesting that temperature influences evolutionary rates by modifying selective pressures rather than through its effect on energy availability and metabolism.”

“The effect of climate on the rate of body size evolution seems to be a general feature of endotherm evolution, regardless of wide differences in species’ ecology and evolutionary history. These results suggest that climatic changes played a major role in shaping species’ evolution in the past and could also play a major role in shaping their evolution in the future.”

Holen, S.R., et al (2017) **A 130,000-year-old archaeological site in southern California, USA.** NATURE 544:479-483

Authors’ abstract: “The earliest dispersal of humans into North America is a contentious subject, and proposed early sites are required to meet the following criteria for acceptance: (1) archaeological evidence is found in a clearly defined and undisturbed geologic context; (2) age is determined by reliable radiometric dating; (3) multiple lines of evidence from interdisciplinary studies provide consistent results; and (4) unquestionable artefacts are found in primary context.”

“Here we describe the Cerutti Mastodon (CM) site, an archaeological site from the early late Pleistocene epoch, where in situ hammerstones and stone anvils occur in spatio-temporal association with fragmentary remains of a single mastodon (*Mammuth americanus*). The CM site contains spiral-fractured bone

and molar fragments, indicating that breakage occurred while fresh. Several of these fragments also preserve evidence of percussion. The occurrence and distribution of bone, molar and stone refits suggest that breakage occurred at the site of burial. Five large cobbles (hammerstones and anvils) in the CM bone bed display use-wear and impact marks, and are hydraulically anomalous relative to the low-energy context of the enclosing sandy silt stratum.”

“²³⁰Th/U radiometric analysis of multiple bone specimens using diffusion-adsorption-decay dating models indicates a burial date of 130.7 ± 9.4 thousand years ago. These findings confirm the presence of an unidentified species of *Homo* at the CM site during the last interglacial period (MIS 5e; early late Pleistocene), indicating that humans with manual dexterity and the experiential knowledge to use hammerstones and anvils processed mastodon limb bones for marrow extraction and/or raw material for tool production. Systematic proboscidean bone reduction, evident at the CM site, fits within a broader pattern of Palaeolithic bone percussion technology in Africa, Eurasia, and North America. The CM site is, to our knowledge, the oldest in situ, well-documented archaeological site in North America and, as such, substantially revises the timing of arrival of *Homo* into the Americas.”

WORLD WIDE PARTY ON JUNE 21

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

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

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.

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: Mark Plummer
Croydon, England

2017-05-07

Just looking through several recent OPUNTIAs. I see in #370 you’re writing about “The Court of the Mad King”, a Hilary Bailey story unfamiliar to me. However, from your description it seems clear it’s the novelette better known as “The Fall of Frenchy Steiner”, originally published in NEW WORLDS #143, July-August 1964, and reprinted under that title in Judith Merrill’s SF12 anthology, the Benford/Greenberg HITLER VICTORIOUS anthology and THE PENGUIN BOOK OF MODERN FANTASY BY WOMEN.

It seems the alternative title isn’t widely known. It’s not listed on ISFDB for instance. The only reference source I saw that acknowledged it is Phil Stephensen-Payne’s Galactic Central.

CALGARY UTILITY BOX ART
photo by Dale Speirs

This box is on 17 Avenue SW and 14 Street. The avenue from 14 Street east to its termination at the Stampede grounds is an inner city area of condominium towers, sports bars, coffee shops, and restaurants. Even on Sunday morning, traffic is slow. During peak hour traffic, it is a linear parking lot.

To add to the fun of commuters and delivery truck drivers, almost the entire length will be torn up over the next few years for utility installation and street renovations. The controversy in City Council chambers doubled when they decided that to compensate, 14 and 15 Avenues paralleling the construction work would be turned into one-way routes to take the traffic. Those avenues are lined with condo towers, which immediately had their residents shouting NIMBY. The business owners aren’t too happy either, although they recognize the need for the work. Pedestrian access only, which means, quelle horreur, that citizens will actually have to walk a few blocks, and are denied their constitutional right to drive everywhere and get a parking spot in front of their destination.

