

PROBE 172 June 2017

Published by: Science Fiction and Fantasy South Africa (SFFSA)

P.O. Box 781401 Sandton 2146 South Africa

www.sffsa.org.za

Twitter address: - http://twitter.com/SciFiZa

Facebook address: - search under groups as Science Fiction & Fantasy

South Africa (www.facebook.com/group.ph7p?gid=7967222257)

Probe is supplied to all SFFSA members and is for sale or exchange. Contributions of all types are very welcome.

Electronic transmission is preferred, but all text should be typed. There are no longer any limitations on the artwork supplied for *Probe* Photographs are accepted but will be converted to grey scale.

Email: gailjamieson@gmail.com

Probe is typed by Gail Jamieson and other contributors.

Cover Art. "Family Outing" by Gary Kuyper

"PROBOT Kai Bosse



Layout is by Gail Jamieson and Ian Jamieson

Created in MS Word

Probe © 2017. All rights reserved.

PROBE 172

June 2017

- 3. Editorial
- 4. Chairman's Note Andrew Jamieson
- 6. Magazines Received
- 6. Books Received
- 7. Nova 2016 finalist. The New Neighbours. Gary Kuyper
- 27. L.O.C. Lloyd Penny
- 28. Book Reviews
- 34. Nova 2016 Finalist. The Silent Pool. Sharon Angus
- 39. Blast from the Past. Nova 1980 Winner. A Piece of Rope

W.G. Lipsett

- 39. PROBOT Abroad
- 49. From the Daily Galaxy. The Milky Way's Spherical Halo

Cover Art: "Family Outing" by Gary Kuyper

Editorial

Gail

I almost thought that PROBE 172 would not make it out on time. I've been in hospital having my gall bladder removed and the side effects of the medicines I had been taking for many years caused far more distress and discomfort that the actual operation, which was done laproscopically and has left me with four tiny almost invisible scars and a drastically changed diet.

As last year's short story competition received rather fewer stories than we would have hoped I have fewer stories to publish, but as I was reading



through past issues of PROBE to decide on copy for the "Blast from the past" I came across the winner of the 1980 Nova competition "A piece of rope" by the writer of many stories which either won or placed in earlier short story competitions; W.G. Lipsett. I'd forgotten how much I enjoyed his stories and I might publish a few more of them at some later stage. I also found the second placed story written by a previous club member, Elaine Momsen (later Coetzee) and I think I will treat you with this in another issue of PROBE.

I was also amused to see how the production of PROBE has changed. Lots of "cut and paste" with real glue, uneven typewriter printing and handwritten titles. And review book prices ranging at around R15.00. That's inflation for you.

SFFSA will again this year have hosted a stall at ICON - South Africa's longest running comics, gaming and popular culture convention, this year having celebrated its 25th Anniversary at the Convention centre at Gallagher Estate in Midrand in June. Each year, ICON provides the best in pop culture and experiences, board gaming & table top warfare, cosplay competitions, national tournaments, educational panels, and, most of all, loads of fun. Not to mention the place to stock up on books and games and all sorts of other more or less fantasy items. Last year there were many really clever and interesting costumes on show and we were treated to a talk by special guest Raymond E. Feist, who also stopped by our stall to have a chat. Mostly about the aging of the SF community and the dinner we hosted him at a couple of years ago. Interesting to see how down to earth very famous authors can be. We hope you popped in this year to say hello.

Chairman's Note Andrew Jamieson

The Internet: Good or Bad? What do you think? An absolute wealth of knowledge and information... and potentially just as much misinformation. I think pretty much everyone nowadays, from toddlers to old age pensioners uses the internet in some form or other. School kids and college students you can bet are getting most of their information from the internet these days. Pretty much gone are the days when we used to sit at the desk at home, pouring over our encyclopedia volumes doing research for that school project (ours were the World Book encyclopedia, and they did well... long ago).



As adults any time we want to know something like the weather, a foreign exchange rate, the length of a piece of string, we just pop over to Google, Bing, Yahoo, Dogpile, DuckDuckGo, take your pick of a search engine, type in a search query and hey presto, results! (Just so you know, Google gave me "About 10 900 000 results" for that last one).

Of course, just because the internet says so, doesn't make it true. Wikipedia is big on trying to be as accurate as possible, but when any user can edit a page and update it with just about anything, even something as well thought of and respected as Wikipedia is not completely accurate. And they have a body of people trying to keep it accurate, so who does this for the rest of internet, where anybody can spout anything they wish and claim it to be true? With the amount of information now floating around, it is just not possible to ensure things are kept sane and safe everywhere.

How about social media? Do you use Facebook, Twitter, Instagram, SnapChat, Skype, WhatsApp, Line, etc. etc. to keep in contact with your friends and family? I couldn't really say, but after research, or perhaps even before it, people mostly use the internet for social media... a LOT of people. Facebook apparently has almost 2 billion users, that's staggering! Almost a quarter of the world's population uses Facebook. So if you bind in the rest of the different networks available, you can be pretty sure that almost all the world's population is doing something social on the internet.

Nowadays the internet is everywhere! It is right at your fingertips, I mean how many of us quickly whip out our smartphones, bring up a browser and quickly look up

something? It is that easy. Or what about using your smart watch? Or how about your new Hi-Def TV which can now also connect to the internet if you want. Heck they are even adding this sort of thing to household appliances, like your fridge, your washing machine, even your cooking pot!

All of this technology, all of this online connectivity, where is the security behind it? I mean what if someone hacks into your TV and starts watching you at home, then waits for the house to be quiet to break in? How about someone maliciously damaging your fridge or washer? There is a lot of concern about all the newly connected devices in the world, and how secure they may or may not be. I mean even just this week (2017/05/16) there was a world-wide scare where thousands of computers were held to ransom as their files were encrypted and the users asked to spend money to get them unencrypted: No money, lost files!

Even social media is not exactly secure either, I mean, you can find out a lot of information about someone... just from their Facebook or Twitter posts. Heard about the guy who boasted he was going to have a great time away for the weekend, and when he came back he found he was robbed... because they knew where he lived, and that he wouldn't be home! Whether or true or not, it does make you think. I am not a social media person, I don't use Facebook (I have an account... and last updated it probably more than 2 years ago), and I don't do Twitter. So you would think that my online social presence would be small? Think again, just because YOU don't do these things, doesn't mean that your friends and family don't. Those pictures you took on vacation you sent your girlfriend? Well, she posted them on Facebook for her friends and family, who forwarded them to their friends and family, and so on and so on and suddenly you have a much larger social footprint than you might have thought! Just something to think about.

The Internet: Love it or hate it, does not matter, it is not going anywhere and will be around for a very long time, so get used to it. Just be careful and smart out there, not everyone is who they say they are, or all information is easy to find and correct. Besides that, it is still one of the most useful things of the modern age, and I for one do not want to be without it!

Cheers Andrew

Magazines Received

Middle Tennessee Science Fiction Society (aka the Nashville sf club).

Reece Moorhead skywise@bellsouth.net

172 March 2017

173 April 2017

174 May 2017

Ansible

David Langford

352 March 2017 http://news.ansible.uk/a352.html

353 April 2017 http://news.ansible.uk/a353.html

354 May 2017 http://news.ansible.uk/a354.html

Montreal SFFA's club zine, WARP 97, is available for reading pleasure! http://www.monsffa.ca/wp-content/uploads/2017/02/WARP-97-LR.pdf

Cathy Palmer-Lister Ste. Julie, Quebec, Canada cathypl@sympatico.ca http://www.monsffa.ca

Books Received

JonathanBall Publishers

Brandon Sanderson - Arcanum Unbounded Orion UK R295

Stephen Ayran – Chaosmage Little Brown R200

Brent Weeks – The Blood Mirror Little Brown R315

James Islington- - The Shadow of What was Lost Little Brown R295

Alastair Reynolds – Slow Bullets Orion UK R275

Tom Toner – The Weight of the World Orion UK R315

Finalist Nova 2016

The New Neighbours

Gary Kuyper

"Helloo, we just moved in next door and thought we'd pop over to say, "Hi!"

President Mary C. Bush who was sipping her unsweetened chamomile from a delicate teacup stared in shock and awe at the seven tall reptilian figures that had materialized with a flash and a Whoosh in the Oval Office.

"What the hell?" she sputtered. "Security!"

"No need for alarm, Madam President. We-come-in-peace." The words had been enunciated for clarity. "Darn, I love saying that line. No matter how many times or in

Whatever language it always seems so cool." Two dark-suited men entered with their weapons drawn. "Wow, it's just like in your movies."

The president held up her hand towards the men. "Hold your fire! For the moment anyway." Then she glared furiously at the strange scaly green creatures. "Who the hell are you? What the hell are you?"

The Seven, it would seem, had a Spokesperson, although he was clearly not a person. The same creature in the centre that had spoken before spoke again. "Xyrians or Cerrellians. Take your pick."

"Or? What the hell is it? Cerrellians or ZeezOWhatsians?"

"It's like a choice between humans and Earthlings. We are Cerrellians from the planet Xyr in the Cryn Nebula. Hence we are also Xyrians. Although expect you'll be calling us Martians."

"Is this an invasion?"

"Heavens to Betsy, no! As I said, "We come in peace.' We bring pie and potato

Salad - metaphorically speaking, of course. We were hoping to establish diplomatic relations with the interesting, if somewhat backward, races of your planet. We all felt that it would be best to go straight to the top. Hence our materialization here in your august presence."

Diplomatic relations? How diplomatic is it to appear out of thin air and scare the Hell out of me?"

"Scare the hell out of you? Does fear cause a stimulus-response so that you involuntarily utter the word hell? That particular reaction does not appear to be documented." The being's eyelids on his protruding chameleon-like eyes fluttered. "Hell - exclamation - used to express annoyance or surprise or for emphasis. Hell - noun – a place regarded in various religions as..."

"Explain to me why you thought it appropriate to...beam yourselves directly into my Office?"

"Apologies, it was never our desire to cause you anxiety, we merely felt that it would be far more efficient than going to some redneck hick at his moonshine still and saying, "Take me to your leader" All ten beings emitted a strange popping sound from their rears. There was an even stranger odour in the air - a mixture of cinnamon and burned electric plugs.

"What the h...What Was that?"

"What?"

That sound and...that smell?"

"Ah, yes, delightful isn't it? It is our way of reacting to a humorous situation or anecdote. We release gas from our..."

"Are you telling me you fart whenever you find something to be funny?

"That is pretty much the gist of it. Flatulence is our quaint little result to most situations comical or amusing. It's mostly involuntary of Course. In Our language it is called nagga-ta-takka. Roughly translated - perfume of pleasure, or more likely – Scent of joy. The gas is produced in a gland separate from our digestive tract and when released is pleasing to both the auditory as well as the olfactory..."

"Pleasing?" interrupted the president with a grimace of disgust. "I find both the sound and smell to be...Offensive."

Being unfamiliar with Cerrellian anatomy or body language the president was unable to determine that the aliens were highly offended, even though they had all noticeably changed hue from olive green to a rather bright shade of violet.

"Offensive" blurted the purple-faced spokesperson. "Oh, you think that the strange noises that your species emits to express their joviality is a more acceptable response?"

It put its head back, opened its mouth to reveal a serrated row of dentures and mimicked laughter. "Ha, ha, he, he, haw, haw, ho, ho, ho. Sounds like the mating call of the badda-bak-doopah - roughly translated - red-throated treeleech." There were more popping Sounds from the group.

The president was unshaken. "I would appreciate it if you would all refrain from...laughing. As another great leader once declared, "We are not amused."

The alien spokesperson's eyelids fluttered again. "Ah, yes. The British monarch,

Queen Victoria. It is believed to have been her response to a rather risqué anecdote about..."

"For a first contact you already seem to know an awful lot about us?"

"We know everything, and we do mean everything, that there is to know about you and your species. In fact we know everything about every Species on this planet - well, at least as much as you know."

"How is that possible?"

"We simply downloaded every last bit and bite of information from your internet as well as all your other independent data facilities."

"What? Would you not consider that to be an invasion...an invasion of privacy?"

"He, he, ho, ho, now that is definitely the pot calling the kettle black. But then again hypocrisy runs rife in your society. Still it's not as overwhelmingly evident as your obsessive fascination in procreation, breeding techniques and the naked female form."

"What?"

"Almost forty percent of the data we downloaded, or should that be uploaded seeing as we did it from space (There were a couple of pops), deals with those very subjects. No wonder your planet is suffering from chronic overpopulation. Your prolific breeding habits are second only to the Whog."

"When did you do this data retrieval, this...unauthorized thievery?"

"At precisely nine twenty-two and twelve seconds - your Eastern Standard Time."

"This morning?"

"Correcto mundo, oh Dominant Dudess."

"And now you already think you know everything about us?"

"That's an affirmative, oh great and glorious Alpha Mama."

"Impossible, it would take years to..."

"Impossible by human standards. For cerrellians the process is immediate. The

Crednak region of our superior brain is capable of storing and sorting a near-infinite amount of information that can be instantaneously accessed when needed. Your primitive binary data was most easy to process. Gomm-tu-sott - A light read." There were two loud pops from the group. "A most pleasant and informative light read."

Another, yet somewhat restrained pop.

"I don't believe you."

"It's quite true. All of the Cerrellians who have taken in the information are quite familiar with all your ways, histories, origins, cultures, languages, inflections, norms, customs, traditions, philosophies, sayings, values, beliefs...oh, hell, you name it, we know it. As I mentioned - everything."

"I don't believe it."

"Test me." He waved a claw at the others. "Test us."

After a quick thought, the President asked, "Who was our twenty-sixth president."

"Theodore Roosevelt," came the swift answer.

"That was too easy...fifteenth?"

"James Buchanan. He was the only president never to marry and the only..."

"Who was my fifth grade English teacher?"

There was a quick flutter of the eyelids. "Elizabeth Taylor, not the actress - obviously. Born tenth May twenty-twelve in..."

"Who won the twenty-ten World Series?" The question had come from one of the suited security men." He pointed to the alien on the far right. "You...you give the answer."

The eyelids of the Cerrellian on the end fluttered for an instant before he methodically answered, "The San Francisco Giants. The Giants won the series four to one to secure their first World Series championship since nineteen fifty-four and their first since relocating to San Francisco from New York City in nineteen fifty-eight."

The president stared inquiringly at the security man. He nodded with a look of dismay. She looked back at the spokesperson. "You're all just goddamned walking computer terminals - cyborgs."

"On the contrary, we're totally carbon-based - no silicon or performance enhancing implants whatsoever."

"We completely understand that you must find us to be rather intimidating, perhaps even daunting, but as mentioned we come in peace. You have absolutely nothing to fear. We're not Whog."

"Whog? Roughly translated?"

"A Warmongering, ruthless race of beings from beyond, way beyond, what you call the Alpha Centauri system."

"What did you mean when you said you've moved in next door? Where next door?"

"The next standard set elliptical orbit furthest from your star." The president winced more than frowned her bewilderment, so the Cerrellian simply stated, "Mars."

"Mars? You plan to...Colonize Mars?"

"I expect our illustrious leader will name it something else. Xan, Xyn or probably Xyr IV.

We've started terraforming, laying down hardy soil-enriching chaka moss and coaxing some ice asteroids to precision-impact with the planet. Once the atmosphere starts to improve and the temperature..."

"Mars? You're going to colonize Mars? Our Mars?

"Your Mars? Just because you gave a planet a name, don't mean it's yours."

"We were there first!" There was an extraordinary amount of popping. "We were!"

The noise that followed could be likened to a New Year's Eve party at the stroke of midnight.

"Alright gang, calm down," reprimanded the Cerrellians' spokesperson. "I know it's difficult but try to keep it in." Then he turned back to the fuming red-faced human behind the large desk. "Your intergalactic traveling capabilities are non-existent and your interplanetary abilities are rudimentary and primitive. A couple of probes in orbit and a few mobile rover units on the surface and then suddenly the planet belongs to you? Get real. Besides, you've been wary of tiny little green men coming from there for ages now."

"Well, we at least got the hue right." The president waited till the last Cerrellian had finished popping before declaring, "We've had plans to terraform it ourselves for some time now.

"Yeah, sure. And monkeys will come flying outta my scaly green butt as well. Our project will see fruition within an earth year."

"That soon?"

"Maybe even sooner."

"What do you plan to do once it's habitable?"

"The usual. Strip mine, stockpile, put up a few hotels in the more scenic areas to improve tourism and trade, establish a..."

"Hang on...stockpile? Stockpile what?"

"Our WMDS"

"You're going to be stockpiling weapons of mass destruction on Mars?"

"We prefer to call them weapons of mass deterrent. We'll most likely use one of the satellites as a storage facility."

"Satellites?"

Moons. Phobos seems the most likely choice."

"Why?"

"It's bigger and much closer to the planet."

"No, I mean why the need to stockpile."

"Sic vis pacis, para bellum."

"Roughly translated?"

"That is Earth language."

"It is? Hmm, sounds Latin. Similar to "Sic semper tyrannis."

"Ah, yes. The phrase apparently used at the assassinations of both Julius Caesar and your sixteenth president, Abraham Lincoln. "Thus always to tyrants."

"Right, so what does "Sick fish patty...whatever mean?"

"Sic vis pacis, para bellum. The adage was adapted from a statement found in

Book 3 of Latin author Publius Flavius Vegetius Renatus' tract De Re Militari — fourth or fifth century.

"Fourth or fifth? You're not sure? Ah, ha!"

"I'm not sure because the source of the information was not sure. I can tell you though that we have a similar wise saying that dates back eighteen millenia and is attributed to the great thinker, Navros-Talli the twelfth."

"Fine. Well, I'm not planning on starting a debate on who said it first. Especially since I have no idea what it means."

"Apologies, we failed to realize that a person of your stature would not be familiar with all the tongues or sayings of your planet."

"So, you are fallible after all."

"We never claimed to be otherwise. "If you want peace prepare for war."

"What?"

"The adage, "Sic vis pacis, para bellum," is Latin for, "If you want peace prepare for war. It is also believed to have been used by the great French general Napoleon Bonaparte. The difference being that he..."

"Hell, no! It's like the goddamned Cuban Missile Crises all over again. Only this time we got aliens on..."

"No, no, nooo, you have absolutely nothing to concern yourselves about."

"Yeah, sure, Fidel."

"The weapons are in the event of an attack by Whog."

"Whog - even their name sounds pretty scary."

"As indeed they are. Heaven help you if they should ever chance to find your little solar system tucked away here in this obscure part of the universe."

"You mentioned establishing diplomatic relations?"

"Correct."

"If this were done, would we be obliged to aid each other in the event of a Whog invasion?"

"I'm afraid not. In the event of Whog finding us, humans and Cerrellians, in this sector, we, the Cerrellians, will be making all haste to get our scaly green butts back to Xyr or to one of our other colonies. To confront Whog is suicide."

"What about the WMDS?"

"We only deploy those as a means to gain the time necessary to skedaddle."

"Well, so much for diplomatic relations?"

"We were hoping, more in the lines, for some sort of friendly trade agreements as opposed to any sort of alliances in the event of war."

"Your race sounds kind of yellow."

"Pregnant? Why would you think us pregnant?"

"Eh? I never..."

A flutter of eyelids. "Ah, you refer to cowardice and not our hue during periods of egg formation."

"Why Mars? Why not somewhere further away. What about...Mercury?"

"Too hot."

"I would think your kind would like the heat?"

"You refer, of Course, to our reptilian appearance."

"Precisely!"

"We, like humans, are Warm-blooded."

"What about Venus?"

"Hotter than Mercury."

"Pluto?"

"Too Cold?"

"Jupiter?"

"The gravity would crush our scaly green butts to micron-thick..."

"Uranus?"

"Yes, actually every single last cell in our bodies would be squashed into a green stain on the planet's surface."

The president was both amazed and proud of her recollection of the planets' names. "What about Saturn or Nep..."

"There are only two friendly planets in this solar system - Earth and Mars. By friendly mean environmentally hospitable as opposed to the amiable or aggressive natures of the creatures that may dwell upon them. Earth is already spoken for – you will be pleased to note that We do acknowledge that it belongs to you - the human race that is."

"Darn tootin"

"Mars' gravity is pretty much the same as Xyr. Its orbit is also in what we term a comfort zone. Although cold, we will be able to raise the temperature enough to have

"Couldn't you use that same advanced knowledge and technology of yours to make one of those further away planets more hospitable...habitable...friendlier for

Cerrellians?"

"Granted, we're good at what we do, but not that good."

"Aren't there other solar systems with even friendlier planets than..."

"I was hoping not to mention this, but as you seem very persistent to continue on this line of thought, perhaps you should be aware that we have predicted with a ninety two percent chance of accuracy that your world will suffer a major cataclysm before you become capable of proper interplanetary travel, let alone interstellar..."

"Cataclysm? What sort of cataclysm?"

"I am not at liberty to disclose that information, except to say that it will be a self-induced extinction that not even your hardy Cockroach will survive. We will have a major task of getting it back up to scratch once it becomes ours."

"Yours?"

"I presume you were listening when I mentioned that..."

"So, you're gonna be sitting there on Mars like a bunch of hungry vultures, rubbing your...claws together in evil anticipation of our demise?"

"I wouldn't quite use that phraseology, but that about sums it up."

"You could prevent it. You could..."

"We have a non-interference policy regarding the planets of other species. Apart from some harmless trading or..."

"That's just goddamned inhumane."

"That's because we're not..."

"Yeah, not humans. Well you claim to be warm-blooded like us. But by human standards your blood is ice cold. Anyone any...species who would allow another one to destroy itself either through ignorance or..."

"Just as you did not take kindly to our downloading of information, you would not welcome our interference in preventing the cataclysm. Your species is too proud and stubborn to accept help from outsiders."

"Well at least we're superior to you in areas where it matters. If it were in our means we would not only be empathetic, but also helpful to anyone that needed our assistance. Whether they want it or not."

"Whaddever."

"What's that supposed to mean?"

"History has proven that you rarely help someone else unless there is something to be gained in return."

"That's a goddamned lie!"

"Whaddever. Anyway, as the song goes, 'So while there's a chance, let's face the music and dance."

"Hmm!" The president's reaction was more a growl than an expression of agreement.

"We would, however, be willing to help you with your global Warming problem or, at least, with one of its symptoms."

"Oh, yeah, which one?"

"Your rising oceans. If you allow us, we would be willing to take some of your Water off your hands. Without trying to sound like a hypocrite, it would be mutually beneficial we would both gain something."

"Now you're asking for permission to take something of ours?"

"Water is a physical quantity, information is not."

"Hmm. So, you want permission to trade?"

"Yes, we would love to trade our shiny beads with the Indians – metaphorically speaking of Course."

"Of course. Obviously meaning that your shiny beads would not be items of advanced technology?"

"Of Course."

"Hmm..."

"Well?"

"That decision is not mine alone to make. I need to call a meeting of the joint chiefs Of Staff."

"Understandable. In the meantime take this." The Cerrellian placed a serrated coin like object on the desk."

The president took a step backwards. "What's that?"

"A beeg-buum."

The president swallowed nervously. "A big boom?"

"Beeg-buum. Roughly translated - a comm disc."

"Oh, thank God."

"Beep me when you've come to a decision."

"Beep?"

The Cerrellian passed a claw over the disc. It made a beeping sound. "Beep me."

"Right, got it! Do you have a name?"

"I am Xen the five thousandth and sixth, chairman of the Eighth Committee Sector

Forty-Four for Terraforming and Colonization, and recently-appointed, with a unanimous vote may add, ambassador to this, what we've designated the Mannakk solar system."

"Xen the five thousandth and...uh...erm..."

"Sixth"

"Could just call you Xen?"

"Certainly not. That would be both disrespectful as well as confusing."

"Right. Of course. Well, I'll get back to you on the trade agreement thing...situation asap."

"In the meantime you can expect to receive a gift from us."

"A bribe to Curry favour with the big boss lady?"

"Think of it more as a gesture of good will."

"A non-technologically advanced gift, of course?"

"Of course. Children do love to play with fire, don't they? Oh, and don't attempt to reverse engineer the beeg-buum. It may cause a big boom."

There were copious amounts of popping.

"Ha, ha! Yeah, very funny, uh...Xen the five thousandth and...uh...erm..."

"Sixth"

"Sixth...sixth, right, got it."

"And now we must be off to our new home Sweet home. Still so much to do before any colonization can take place in earnest. Once we can throw down the welcome mats. We'll be sure to have you over for a house-warming party."

"Whoopee-doo."

"Was that sarcasm?"

"You tell me, you're the expert on human behaviour."

"Hmm, well, till we chat again - toodles."

With a flash and a whoosh the Seven Vanished.

A week later, President Mary C. Bush was having a most serious conversation with her personal assistant when the item arrived.

"Prevention is better than cure," said the PA using his pinkie to move his large fringe away from his eyes. "Trimming is not an option for me. That's why I do a hot oil treatment every other week. I kid you not when I say that once had ulcers and sleepless nights from split-ends."

"Is there a specific brand of oil that you would recommend?"

He gave a wry smile. "And would Madam President pass some of the royalties my way should she chose to endorse the product?"

The president chuckled. "That won't happen...the endorsement that is."

"The next election is only nine months away. You need all the funds you can garner."

"It would not sit well with the general public having their president promote hair products."

He flapped a limp Wrist at her. "Oh, I know. I was just pulling your leg. You need a good giggle. You've been more pensive and serious than usual since those aliens appeared. Thank goodness wasn't in here at the time. I would probably have dropped my ovaries. Steve's a tough ess oh bee and even he tells me he was shakin' in his shoes when he rushed in here and saw those lizard things."

"We wouldn't be...human if we..."

A blinding flash and a wooshing noise from beneath the coffee table caused them both to jump from their seats. And if the PA had any ovaries he would surely have dropped them.

"Oh, my Gawd! It's them again... isn't it?"

"Calm yourself, René. They claimed to be friendly."

They both stared at the strange Cube-shaped object that had materialized beneath the dark-wood antique. It appeared to be made of metal, had blinking lights and hummed ominously.

"What is it?" asked the PA who had now turned a ghastly pallor.

"Relax, this must be the gift the Cerrellians spoke about."

"Gift?" He moved swiftly behind the desk and latched onto the president's elbow.

"Beware of Geeks bearing gifts."

"Greeks."

"Whatever."

"Hmm, they did emphasize that it would not be something of advanced technological..."

"It's a goddamned planet-buster! We're all doomed"

"A What?"

"A planet-buster. I saw one on this show on the Sci-Fi Channel. It can blow up an entire planet."

There was a hissing sound from the object as a panel slowly lowered to reveal a dark aperture.

"This is it!" squeaked René closing his eyes and placing his fingers in his ears.

"Give my regards to Broadway." For what seemed like an eternity nothing more happened. René opened one eye and blinked erratically. "This is Worse - much worse! I know what just happened."

"What?"

"That devilish device has just released a deadly virus into our atmosphere. Any second now we're gonna turn green and crumble into piles of dust. I saw it on a show

On the..."

"On the Sci-Fi Channel? Haven't you got anything better to do with your free time than watch the Sci-Fi Channel??"

"Yes...my hair. Oh em big Gee, if you get me out of this alive promise never to Watch the..."

A pastel-pink furry face with large ears and eyes peeked out from the opening.

"What the hell?" frowned the president as the rabbit-like creature hopped out onto the rug with the embroidered eagle symbol, It was soon followed by a second Smaller yet similar-looking critter. The President and René Watched as the pink pair looked about curiously, their whiskered snouts twitching frantically. The president pulled her face askew and indicated palms-up towards them. "There's your non-technologically advanced gift for you. A pair of pet...uh thingamabunnies."

"Oh, they're adorable," declared René regaining his composure. "What do you suppose they are?"

"I'm guessing the rough translation would probably be a Xyrian rabbit or marsupial.

They do appear to be mammalian."

"Oh, dearest dear!" exclaimed René slapping his cheeks.

"What OWP"

"I just thought of something."

"What."

"Snakes eat mice. Reptiles eat mammals."

"So?"

"So, maybe this is a Cerrellian delicacy. Maybe they're meant to be cuisine and not pets." He was about to say that he had seen a similar situation on the Sci-Fi Channel but decided it best to keep it to himself.

"Well no one is going to be eating them, okay?"

"Of course. It was only a thought. What do you suppose they, the bunnies, eat? If you're planning on keeping them you'll have to know how to look after them properly."

"Of course I'll be keeping them. It's bad diplomacy to refuse a gift. Hmm, I'll have to ask Xen...the five thousandth and sixth about their diet. I guess it's time to try out this comm disc of theirs." She moved the disc into the centre of her desk and passed her hand over it. There was a single beep and nothing more. Several more swipes produced the same result. She pushed the disc back to the side. "I'll try again later." It was then that the rabbit-like creatures decided to spring up onto the desk.

"Oh, well, they're certainly not shy," observed René. The larger of the two had taken a keen interest in the Comm disc. "And Curious too."

"Still, we can't have them jumping onto the furniture and fiddling about. That won't do - not at all. I just hope you can be trained?" said the president stroking the smaller One on the head who then looked up at her all doe-eyed and gave a wide, beautiful Smile that puffed up the Corner of its cheeks and revealed a perfect set of pearly white teeth."

"Oh, how delightful, it can Smile!" exclaimed René, "Amazing! As a kid I once had a Dalmatian that could grin. This is an extremely rare trait amongst animals."

"Hmm, I think it's just a ploy so that I won't shoo them off the desk."

"Oh, I want one as well. If you can get them to breed, please tell me you'll give me a...what the hell is a baby rabbit called?"

"I think it's a kit or a kitten."

"Oh, please tell me you'll let me have one from the first litter then?"

"We don't even know if these are male and female."

René lifted the larger one above his head and gazed between its long lanky legs.

"Too much fur to tell. Maybe it needs to be...aroused to show something."

"Wow, look at that." The creature had changed hue to a pastel blue. "That must mean something?"

René replaced it on the desk where it smiled magnificently as it gradually returned to pastel-pink.

"I think it may be a reaction similar to that of a cat's purr." He proceeded to scratch the cute little critter under its chin. In no time at all the blue and the smile were back bigger and brighter than ever. "It is Wonderful! Smiling rabbits that can change colour.

You could make a fortune if they can breed. If only we knew more about them?"

"Check the...planet-buster. Maybe it came with instructions or information."

René moved swiftly to the blinking box beneath the coffee table and stuck his hand inside and felt about. "Nothing!" he declared.

"Oh, look" said the President pointing to the fluffy pair. "They've suddenly both turned blue now."

The creatures started to make chattering sounds.

"That is really so amazing," said René moving back towards the desk. "They seem to be communicating. That would indicate a high intelligence-factor, and therefore it would be easy to train them. Fantastic! I would name the big fella Bugs and the other one Honey or Lola."

"Not Jessica?"

"Hmm? Nah. 'Cause then you'd have to call the other one Roger."

The creatures hopped off the desk and then onto the long couch beside the coffee table where they continued to make their high-pitched sounds to each other.

"Yep, they certainly need training all right. I'll leave the naming as well as the training to my daughters. I've decided to give them each one. They've both been pestering me for a puppy. I think a smiling bunny that changes colour when petted will be even better."

"Chloe and Megan are gonna go absolutely bezerko when they see them.

Especially Chloe, I just know it."

Just then a full-figure, although miniature, hologram of Xen the five thousandth and sixth sparkled into view above the comm disc.

"I apologize most profusely for my retarded response, Madam Main Spanner. I was in the turbo-shower when you beeped. This Martian dust can get into the strangest places." He leaned his head over and gave it a smack on the earhole before enquiring,

"How may be of assistance? Have you reached a decision yet?"

"No, the jury's still out on establishing trading relationships with the Cerrellians. Just called...beeped to say thank you for the Wonderful gift, ambassador. I just wish you

Would have given me prior notification that you would be...sending it...them over. My personal assistant nearly dropped his...nearly had a cadenza."

"Ah, your PA has become musically competent since our last encounter. That is quite remarkable considering. I must say that some of us find your music rather enjoyable. Panntodd the eight hundredth and fifty second, my personal assistant, hasn't Stopped playing Mozart since our return here, although it sounds very much to me like primitive jungle music."

The president flushed red. "Is it your intention to constantly degrade us? We..."

"Merciful heavens, no! It's just that your culture seems to thrive somewhat on bragging and boasting. I thought it simply quaint to utilize some of your more prominent mannerisms to create an amiable atmosphere. It would appear that I have done just the opposite. My humblest apologies."

"Hmm?"

"Your reaction would seem to imply that you are thinking me to be somewhat untrue - a liar?"

"Let's just forget it."

"That, I'm afraid is impossible, especially since we eradicated Tyryn the Ninety

Third's Syndrome nine millennia ago."

"Fine, well just...file it somewhere...obscure then."

"And where would that be?"

Although Xen the five thousandth and sixth had thrice referred to his scaly green butt in their previous encounter, Mary C. Bush resisted the urge to give the suggestion that had jumped into her primitive brain. She had no desire to be the first president in human history to cause an alien interspecies diplomatic incident. "Ah, the goddamned restrictions of proper political etiquette," she thought. "I've had too many people tell me to trust them when, in fact, I knew exactly what they were really saying.' She said, "Let's change the subject. The gift ...what do I feed them?"

"The gift. Ah, yes! Well, we were planning on returning one of your mobile rover units to you as soon as we located one. Unfortunately we have not had any luck in finding any. I guess our technology is just as fallible as we are."

"Was that... sarcasm?"

"That would be telling."

"I may not be able to smell you through this device, but I definitely heard you."

"Oops, as mentioned our reaction is mostly involuntary. It is what you humans refer to as a stimulus-response. At times it is impossible to control, just as much as you would find it impossible not to withdraw your hand rapidly from a hot object that has caused you pain."

"Hmm, so what did you send then?"

"Nothing yet."

"Nothing?"

"Nadda. Please be patient we will..."

"Can you see my office through this comm disc holothingamajig of yours?"

"Clearly."

"What would you call that under the coffee table?"

The hologram turned to look in the direction the president had pointed.

The shimmering image of Xen the five thousandth and sixth changed from green to red.

"Oh, hell that's...a Whog jump-shuttle!"

That was the first time the president had noticed a hesitation in the Cerrellians speech. Instinctively she knew that it was from anxiety and not uncertainty.

"What? Are you telling me that is a Whog device?"

"I'm afraid so."

"Well if the Whog are the terrible beings you make them out to be. Why would they send us a gift of a pet rabbits?"

"Pet rabbits?"

The president indicated towards the furry Critters still chattering away on the couch.

"What would you call those?"

The hologram turned bright red before quietly announcing, "Whog."

"What?"

He enunciated for clarity. "Those-are-Whog."

"Those...them...they are the Whog?"

"Yesss," hissed Xen the five thousandth and sixth seemingly trying to lower his voice into a whisper.

"Ah, you're just having me on? A bit of Cerrellian humour?"

"No."

"Come on, those friendly guys are your..." She made quote signs in the air.

"...'Ruthless' Whog?"

"Friendly? Why on earth, literally, would you think them friendly?"

"Maybe since they haven't stopped smiling since they arrived."

"Smi...smiling? Whog don't smile. They show their teeth as a sign of aggression.

Tell me you never smiled back at them?"

The president was now also whispering when she nervously confessed, "Uh... erm... think I may have...several times in fact. Well it's difficult not to. It's sort of

a...Stimulus-response...difficult to avoid doing. You...you should be knowing that?"

A flutter of eyelids was followed by, "Shit, yes! Well, whatever else you do, try not to make them blue."

"Blue?"

"If they turn blue it means you've really pissed them off something bad."

"Oh...hell," choked René covering his mouth as he stared at the Whog who, between their frenetic chattering to each other, took turns to smile at the trio by the desk.

The president and Xen the five thousandth and sixth responded in perfect unison,

"I couldn't have said it better myself."

L.O.C.

1706-24 Eva Rd. Etobicoke, ON CANADA M9C 2B2

March 04, 2017

Dear SFFSA Members:

Thank you for Probe 170...as always, there's lots to see and read, and lots to make comment on. It's a quiet Saturday night, so I suspect I should be able to write a good letter. No guarantees, though, so let's go.

I hated to pass along bad news about any Worldcon, but better that you know. I would have loved to have gone to the Finnish Worldcon, but we did go to England for two weeks last year, and the money isn't there, and probably won't be for some time.

Andrew, I understand what you mean with time. There's never enough to do/read/watch all you want to. I admit there's little I want to watch on television these days, and I simply can't keep up with SF, and haven't even tried for a few years now. That allows me to write hundreds of letters like this one every year, but also allows me to make steampunk jewelry for sale at conventions. Science fiction fans won the battle for respect, and now, we have become mainstream, and we have simply too much to choose from. We won, but in some ways, it doesn't feel like it.

In a totally computerized society, Error 451 means you are recorded as dead? Looks like Limbo needs a serious upgrade. If only we could control time the way this group does. If we only could see our role in time the way John is shown, we could choose the most interesting path. There's an occupation of the future: timeline editor.

My letter...well, I am still job hunting. There is so much competition for the kind of job I do...editorial work for publications. Right now, though, I have many resumes out, so I am still hopeful after so long.

There's been so many SF stories about God; I may have written one myself. This story seems somewhat fresh. He comes across more like a magician than anything else. Here, God seems more human than any of us, performs miracles on request, with the full knowledge that happiness doesn't simply spring forth when you get your wish, no matter how extreme it might be. Has anyone checked to see if God really is on Facebook? These days, it would appear to be the best way to contact us. It's where we seem to be watching and listening, and paying the most attention.

It is getting late here, so I will thank you all for continuing to support my Probe habit. Keep sending them to me; they are a reminder that fandom is truly a worldwide phenomenon, in spite of my waning interests. See you all with the next issue.

Yours, Lloyd Penney

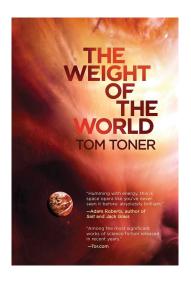
Book Reviews

The Jamiesons

Tom Toner The Weight of the World

Jonathan Ball R315

Vol. Two of the Amaranthine Spectrum



In the 147th century, mankind has fractured into some strange and bizarre sections; Prism, descended from original man; Bult, cannibalistic Prism; Melius, giants; Amaranthine, immortals thousands of years old; and many more.

In the old world, the war of liberation has reached an impasse. In the Firmament, the Prism have arrived to hunt, destroy and scavenge. In the Investiture lies an unimaginable and deadly treasure. Heroes and villains pursue various quests across many planets, some whose stories connect, others seemingly not.

A richly layered book, and exceptionally well-written, but I have not read Book One and found this totally confusing

Make sure you read Book One first, and then read this at one or possibly two sittings

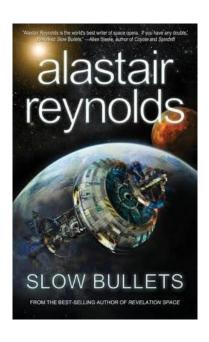
2/5

lan

Alastair Reynolds Slow Bullets

A vast conflict covering hundreds of systems and planets has finally come to an end but, Scur, a conscripted soldier, has been captured and tortured. She wakes up in a sleep ship with hundreds of others having reached the planet of their destination, but thousands of years in the future. The planet is covered in ice with no sign of life, at first, Later they discover that it has a population of over fifty million but living at an agricultural level and there seems to be no way to get down or back from the planet.

Jonathan Ball R275



Scur discovers that the man who had tortured her is also on the ship and a lot of the "action" involves her desire for revenge on him.

The bullets of the title are inserted in each person and seem to be their collected memories. The final solution to the problems encountered seems rather facile.

The book is called a novella and is a hard cover. It is very poorly written, as if it was knocked out in a hurry, and is very juvenile.

I have read most of Reynolds's books and this is by far his worst. Disappointing

1/5

lan



The town of Voechenka is being held in thrall by and unknown evil entity. All living things, with the exception of a few surviving enclaves of humans and a few semi-human characters, are dead. There are no birds or insects or plants. There are of course, The Forsaken, zombies who come out at night and attack the human strongholds. The Forsaken, unless they are decapitated, come back to life each night and are seeming numberless. Each one is controlled by an internal parasite, which in turn is controlled by a massive sea creature. Their aim is to eventually take

over the whole planet.

Into the arena come the three saviours: Tammy, who has been sent to investigate; Balfruss, who arrives with her and is a wizard and Battlemage of extreme powers, and Zannah, a female warrior of a different species, who fought on the opposite side in the previous war, who is seeking penance. Together they must defeat the Forsaken or die.

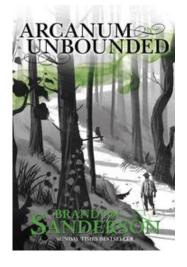
I did not realise until I had completed the book that this is actually the third novel of a Trilogy and then some of the references began to make sense.

Aryan writes well and the first four fifths of the book are interesting and entertaining, but then the author lets everything slide and the ending is rather poor. He mentions in an afterword that he needed to try to complete the trilogy and this detracts from the story.

2/5

lan

Brandon Sanderson Arcanum Unbounded Jonathan Ball R295



I've said it before and I probably will say it again;
Brandon Sanderson has a magic touch when it comes
to storytelling. He draws you into what may at times be
a very simple story but you are so involved that the
world around you disappears and you become part of
the action. These ten long short stories (his own words)
take place in seven of the worlds that Sanderson has
created. He writes a forward that lets you know that if
you read them before you read his other novels there

there may be "spoilers" but I did not find that these detracted in any way from the tales.

"The Emperor's Soul" relates the story of Shai who escapes execution by having to recreate a forgery of the soul that the Emperor has lost to assassins, so that he may continue to hold his country together. The only problem is that she has no idea of how to accomplish this.

In "Edgedancer" a story from "Worlds of Radiance" Lift, ornery, hungry, a little strange, but noble to a fault, is thrust headlong into a city she doesn't understand, with abilities she's still figuring out, and with her worrisome magical chaperone, Wyndle, constantly fretting the entire time. She is contradictory sort of character and Lift is always on the verge of turning tail or giving it all up for something easier, and yet something always stops her, and makes her head into the fray. And when her time in Tashikk turns up a certain adversary of hers, she and Wyndle dive headfirst, hoping to stop something dreadful from happening. Sanderson not only reveals new aspects of Lift and Wyndle, but also the world, and the strange things that live there, and the odd way it can operate.

The stories from the *Mistborn* world definitely shed a lot of light, and might be seen as somewhat self-indulgent – but I rather enjoyed getting to see Gemmel and Kelsier's relationship in *The Eleventh Metal*. However for me, the best story of the

entire book was *Mistborn: Secret History*, which most definitely sits in the self-indulgent category, but which I really enjoyed.

Other pieces focus on non-series worlds: for example, in "Sixth of the Dusk," competing uses of magical ecology fuse into a determination to save a planet from the dangerous "gifts" of advanced aliens.

And a graphic novel!

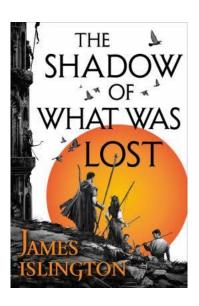
What can I say, I'm a Sanderson fan. Read and enjoy.

5/5

Gail

James Islington The Shadow of what was Lost Jonathan Ball R295

The Licanius Trilogy Book One



In a school for the Gifted, for those who are supposed to be able to use "Essence" are three young students about to undergo trials. But Davian cannot use Essence and faces expulsion. But on the night before these trials Davian decides to abscond. Co-incidentally he is given a secret mission and Wirr, who just happens to be a prince in "mufti goes with him. Asha awakes the next morning to discover that she is the only person in the school who has not been slaughtered. To "protect" her, her ability to use

Essence is removed and she becomes a Shadow. She is sent away and the boys meet up with various mysterious strangers on their journey. It takes most of the very long book before they meet up again. I found this novel to long and convoluted with the introduction of too many characters with secret agendas, who are not what they

seem to be at all.

I found it difficult to keep track of who was who and why. And this is just Book 1

There is so much to read out there. I don't think I will bother with Book 2

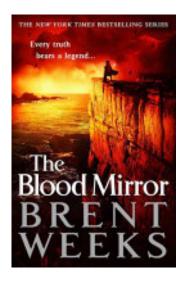
2/5

Gail

Brent Weeks The Blood Mirror

Johnathan Ball R315

Lightbringer: Book 4



This being Book 4 there is fortunately a series recap at the beginning which does help to fill in some of the blanks. Book 3 "The Broken Eye " was reviewed in PROBE 169 leaving Kip married, the Mighty have left the Chromeria, Karris has become The White, Teia has joined an assassins guild and Gavin is imprisoned by his own father.

We now find out why Gavin is imprisoned but there are still unexplained ramifications. Karris does not.

find it easy to step into her role as The White.

Kip develops into a fuller character even if it is not easy to fit into an arranged marriage. Teia must remain behind while Kip and his new wife Tisis go to the front lines of the war in her country. Teia struggles being a double agent between the Chromeria and the assassin's guild and her life is in peril.

Just a pity that this book is a bridge between Book 3 and the one we hope with tie up all the loose ends. The characterisation improves as we learn to know the people better.

Guess I'll keep reading.

4/5 Gail

Finalist Nova 2016

The Silent Pool Sharon Angus

The waterfall was a precious secret, hidden in a deep cleft of the mountain. Malcolm liked to pretend that it was his secret, and his alone, although common sense told him that other hikers and climbers must pass this way occasionally, treading the various paths that criss-crossed the mountains.

It was a beautiful place. The sun slanted through the trees and dappled the leafstrewn ground; the waterfall was white lace against the dark rocks. All was calm and peaceful, the silence broken only by the ceaseless roar of the falls and the cheerful song of the birds.

Yet it could be eerie too. Even late in the day, mists sometimes lingered here, and in the grey silence Malcolm had felt that something was watching him, and the hairs on the back of his neck had prickled. Few animals ventured here, and although the river downstream was alive with fish, none seemed to live here. The pool at the base of the falls was deep and dark and still, holding secrets beneath its calm surface. Malcolm had never dared to swim in it.

But the years-long drought had changed all that. The trees were dead and brown, the ground sandy dust, and the river a trickle. The waterfall was little more than a dripping tap, and the pool shallow enough that all its secrets seemed revealed and Malcolm could see the rounded, water-smoothed pebbles at the bottom. The day was hot, and Malcolm was tempted by the apparently harmless, inviting water. He shed his backpack and clothes, and dived in.

The water was bitter cold, as only water straight off the mountains can be, even in the heat of summer. He gasped at the shock, and could only stand a few minutes in

the freezing pool before scrambling out onto the surrounding rocks to defrost in the sun. Still, he dived, and dived again, enjoying the refreshing bite of the water, kicking and splashing. It was as he surfaced from one such dive, treading water that the sun pierced through the water like a spear and something among the pebbles flashed and glinted.

Intrigued, Malcolm dived again, wishing he had goggles to more clearly see what lay among the pebbles at the bottom of the pool. He came up gasping for breath, and this time it was not from the cold of the water. He swam to the side and scrambled out, shivering from shock. Standing at the edge of the pool, he saw it clearly, now that he knew where to look and what he would see.

Half-hidden among the pebbles lay a human skull, teeth grinning as if in sardonic amusement at his horror, eye sockets dark caves. Here and there were visible the smooth white bones of the rest of the skeleton. Malcolm knew he should return to base camp immediately and report what he had found, but as he moved something sparked in the water, at the base of the skull. He squinted, and saw half-concealed something that was not bone, something that sparkled and flashed in the shafts of sunlight.

Reluctantly, as if pulled by a force, he dived into the silent pool again. Down, down, until he reached the bottom. He reached out, felt something rough beneath his fingers, something that was neither smooth bone nor rounded pebble. He grabbed, and held tight, and kicked his way back to the surface, his lungs burning. Treading water, he examined his find. Excitement was a fire in his veins — what he held sparkled and glittered in the sunlight. It was a necklace, intricately carved and decorated and set with precious gems, the metal still untarnished after years underwater. It looked as if a king had just taken it off. He held it to the sun and watched it splinter the light like a diamond. Unwillingly, yet unable to stop himself, he placed the necklace around his neck and fastened the clasp.

There was a sense of disorientation, of falling, and a roar in his ears as if the waterfall had suddenly overflowed. He forced his eyes open against the vertigo, and

found that he no longer swam in the cold water of the pool. Instead he stood at the centre of an arena of scuffed sand, surrounded by a crowd of people risen to their feet and cheering him. In front of him stood a tall woman in a red robe, and at his feet a man lay dead with a spear through his heart. The necklace was heavy about his neck, and his hands were red with blood.

The thrill of an unknown triumph ran through him, and he raised his arms and shouted in victory. The roar of the crowd grew louder. His arms were muscular, powerful and when he looked down the rest of his body was the same – the body of a warrior, not an occasional gym-visitor. He wore no clothing, and his skin was marked with old scars and new wounds seeping blood. Sweat stung them, and he shouted again, wordlessly, revelling in the adrenalin rush.

The woman in red took him by the elbow, firmly, and led him away from the arena towards a white tent decorated with strange drawings and images. Giddy, stumbling as if he'd had too much to drink, Malcolm did not speak to the woman, nor did she speak to him.

The inside of the tent was cool relief after the blazing sun of the arena, and the noise of the crowd faded into a distant murmur. Luxurious thick carpets lay on the ground, and a chair of carved and polished wood waited. What appeared to be a banquet of food and drink lay ready on a table carved of wood like the chair, and also inlaid with gold and gemstones. The woman in red released Malcolm's arm and left the tent, still without having spoken to him.

The adrenalin rush from whatever fight had taken place was fading, and Malcolm's strange body ached with exhaustion. Disorientated, he stared at his surroundings and did not see them. Somewhere in the back of his mind he was screaming, horrified and terrified, unable to reconcile this place with what he knew of reality. But it felt somehow as if his previous life was the dream, and this the truth.

The tent flap lifted, heralding the return of the woman in the red robe. She carried a basket now, and gestured that he should sit in the single chair. Malcolm wondered vaguely if she were mute, or if he was, for although he opened his mouth to speak, nothing emerged. When he tried again, she shook her head and firmly placed a hand across his mouth, clearly indicating silence. She knelt at his feet, and began to tend his wounds, cleaning them and bandaging those that required it. When she left, Malcolm studied the food laid out before him. It seemed similar to the fruit and meat of his previous, dream-like normality, and cautiously he tasted it. It proved flavoursome and delicious, and eagerly he devoured it. The fight he had apparently won had left him rayenous.

There was a clear liquid tasting like wine to accompany the meal, and Malcolm drank it freely. Satiated, sleepy, ignoring the chaos at the back of his mind, he relaxed in the chair and dozed.

Twilight brought candles, carried in by men in white. Behind them came two more men carrying a large hipbath made of what appeared to be gold. Precious stones winked at him from its sides, brilliant in the candlelight. It seemed only the best was to be used for him, and calmly he accepted this as nothing more then his due. More men followed with buckets of steaming water. His bath was scented with herbs and spices, and afterwards he was dried with soft towels and his skin rubbed with ointments. Left alone, he wondered if, in this existence, he was a prince or a king. He had a vague idea he should be afraid, but somehow everything seemed to be right and correct – what he deserved. Smoke from the candles swirled across his sleepy mind and once more he dozed.

Sometime later the tent flap lifted again and another woman entered. She too wore red, but was completely different to the previous woman. While the first woman was stern and somewhat forbidding, reminding Malcolm of a teacher, this woman was younger, prettier. Her gown was diaphanous, both revealing and concealing her body as she moved. Malcolm was still naked, and quickly he covered himself with a

towel. The woman smiled, and gestured that he should remove it. Her own gown soon followed, to form a puddle of blood-red on the thick carpets.

Malcolm was awakened in the half-light just before dawn. The woman of the night was gone, and the first woman in red stood before him. Again she took him by the arm and led him outside. He was reluctant to go, wanting to carry on sleeping, but her grip on his arm was firm. As before, she did not speak to him. In fact, he realised, since his arrival in this place, wherever it was and whoever he was, no-one had spoken to him. Would he even understand their language, he wondered.

Outside, a sedan chair awaited him, and four carriers. The other Malcolm, the Malcolm who still gibbered and screamed at the back of his mind, would have been embarrassed to have someone carry him when he could perfectly well walk, but noone here seemed to find it at all strange. Malcolm seated himself, and the carriers lifted their load to their shoulders. They carried him smoothly along a narrow but well-trodden path, into the forests that Malcolm now saw on the far side of the arena of sand, where the fight had taken place. The woman in red followed, her robe swishing against the grass as she walked.

They came to a clearing, and the four men lowered the chair. The crowd was waiting here, in tense silence, standing absolutely still. With a jolt, Malcolm recognised his surroundings – here was the waterfall, cascading powerfully, and the deep silent pool, full now. Something, some instinct of unease stirred in his gut. But somehow the drowsiness, the unconcern that had clung to him throughout still drowned his fear. He wondered vaguely if he were drugged, but when the woman in red began to walk a small, steep path to the top of the falls, he followed obediently.

The sun was just clearing the horizon as he stood at the top of the waterfall, and for the first time he realised that it faced east. The crowd waiting below watched, still silent. It was eerie – Malcolm had never before seen so many people standing so still. Even the birds were quiet in the surrounding trees. The woman in red made an obeisance to Malcolm, and - pushed him over the precipice.

The shock of the icy water cleared his head of the cobwebs that had blurred his thinking. He struggled and tried to shout, but the people only watched calmly, making no move to come to his rescue. Only the best, he thought bitterly, gasping for breath, not for a king but for a sacrifice!

He was a good swimmer, but the weight of the necklace and of his muscular body dragged him down, still fighting. Down to the pebbled bottom of the dark, silent pool.



Nova 2017 The Science Fiction and Fantasy Short Story Competition

Are you one of the elite/pedantic/smug SF&F fans, who knows the difference between "A Game of Thrones" and "A Song of Ice and Fire"? Did you spot the literary omissions from the screenplay of "Lord of the Rings"? Do you enjoy reading SF&F as much, or more, than viewing it? After all, you are reading Probe now. Well, have you tried your hand at writing? Do you sometimes think you can do a better job than some of the authors that you read? Take a look at some of the stories written by our winners in this and recent issues of Probe. Download older copies of Probe from our website (for free!) if you don't have them in your possession. Can you do better? Of course you can! So, prove it! Enter our short story competition and face judgement day.

Prizes to the value of R3500 are up for grabs. AND your story could get published in this world-famous fanzine. Stories must be in the SF&F genre, between 2000 and 8000 words. There are a few other rules as well - we want original, unpublished short stories. Download all the rules, and an entry form, from our website at www.sffsa.org.za/Nova.html. email the organiser at nova.sffsa@gmail.com if anything is unclear.

Blast from the past.....

Nova 1980 Winner

W.G. Lipsett A piece of rope

Ī

Van der Merwe propped his FN against the gnarled trunk of the stunted thorn tree and sat down on the flat rock. Sweat trickled into his eyes burning them with its saltiness: it trickled into the corner of his mouth and was bitter to the taste.

He looked again at the Ratel - how the fools had driven it there was beyond belief! It lay at a crazy angle in a jumble of sharp rocks, its long 20 mm cannon pointing absurdly at the dry river bed below. He looked away in disgust and wiped the sweat from his eyes. He cursed he heat and the terrorists and the bush – and his sergeant in particular. Yesterday, the two of them had stood on the only high ground within a radius of a hundred kilometres and had looked out over the unending stretch of grass and bush and thorn trees. The wide, dry river bed had zigzagged its way across the landscape from their left to right and was the only real feature in a land of dreary sameness. Of course, it and it was all quite simple to the Sergeant! Some clots had had got their Ratel stuck in the river bank during their contact with the terrorists some days ago. The area was now clear of terrorists and it would be simple and safe enough to go down and have a look at it - see if it could be recovered and what equipment they would need. After all, Corporal Van der Merwe was the expert in putting Ratels back on their feet (here her Sergeant broke off to laugh at his own feeble joke). There were problems enough for the recovery unit in other areas: no one else could be spared to help: besides the Ratel was only three K's away. "Connors will fill I the details. And, corporal, report back to me personally".

All quite simple and easy! But it had taken him two hours to work his way silently and carefully through the thick bush and dry grass and thorn three to the steep-banked river bed which stretched away from him on either side like a wide gash in the drab dusty ground

It had been a stressful two hours and his finger had not strayed far from the trigger. Perhaps it was just the silence which made him nervous – a silence here, where not so long ago FN's and AK's had chattered to each other and men had dies.

Well, better go and examine the vehicle. He got up, picked up his rifle and stepped out into the open stretch of ground which bordered the steep river bank.

It was then that he felt, rather than heard, the humming sound. It filled the sky, the ground beneath his feet, even his own body vibrated in sympathy with it. Suddenly it died away and things became blurred ad hazy. The grass and trees and the rocks were no longer were harshly outlined in the glaring sunlight. It was as if a shimmering transparent curtain had fallen in front of him. At first, he could not be sure in what way things had changed, or were changing but even as he looked, the images of objects beyond the curtain took on a wholly different form. Tall, spiky-branched bushes had replaced the grass and stunted thorn trees. There were drifts of fine, grey sand piled into steep sided dunes. The river was a shallow, wide depression filled with yellow sand. The Ratel had lost its angular shape and large tyres and had changed into an oval, wheel less vehicle. The slender 20 mm cannon was now a bulky, metal-ribbed tube which glinted slightly in the sun- a a sun which burnt down on that strange land beyond the flickering curtain with a harsh intensity.

Gradually, the elongated blob opposite him, resolved itself into the figure of a man. He carried a weapon in his hand, stubby barrelled and connected to a backpack by a lurid orange umbilical cord. The backpack looked much like the portable life-support system which the Lunar astronauts had carried.

In fact, the figure looked much like an astronaut except that his suit was not as bulky and it shone brightly in the September sun as if made from a fluorescent material. The helmet of his suit was round, the visor a black, faceless plate of glass or plastic. His whole appearance was alien – futuristic.

Van der Merwe released the safety and casually, almost involuntarily pressed the trigger......

Venath sat on the flat rock and placed is laser across his knees. It was hot here- it was always hot and the orange sun glared down on him from a copper sky. He fidgeted with his helmet control and turned the filter of his visor screen to a darker shade in an effort to lessen the fierce glow of the sun and the harsh reflection from the powdery sand.

He looked again at the Telapod – how the imbeciles had driven it there was beyond belief. It lay at an impossible angle in a jumble of worn rocks at the edge of the shallow river's bank, its laser cannon pointing uselessly at the dry river bed below. He looked away in disgust and turned the comfort control of his life-support system to a higher notch.

He cursed the heat and the mutants and the desolate waste – and his Unit Commander in particular. Yesterday, the two of them had stood on the only high ground within a radius of eighty quens and had looked out over the unending stretch of head-high anna bushes which grew in this semi-desert of stones, crumbling rocks and drifting sand. The trace of a long dead river weaved its way across the landscape from their left to right and was the only real, discernable feature in a land of monotonous sameness.

Of course, the Unit Commander found it all quite simple! Some fools had got their Telapod stuck in the pile of rocks half-hidden in the deep sand of the old river bank during their contact with the mutants some days ago. The Unit Commander had sighed disinterestedly, "Go down and examine I, Venath. It lies only two quens away. You are the expert in such matters, Posteron Venath. See if it is worth recovery. I can detail no-one to assist you – there are problems enough in other sectors. It is a simple and safe task: we have cleared the area of mutants. Klepta will give you all the details. And, Posteron Venath, report back to me."

All quite simple and easy! But it had taken Venath as long as two quatans to work his way silently and carefully from one clump of bushes to another. Shuffling through the deep sand which clung to the boots of his suit like Moon dust or the sticky sands of Mars, was tiring work. But it was the only way: on a hoverpod he would have been a

larger, noisier and much more inviting target for the laser of any mutant who could well be lurking about. It was far safer to cover the two quens on foot. Still, it had been unnerving and his finger had not strayed far from the trigger. He could not keep his protective force-field on all the time for fear of exhausting his power-pack which had to supply power for his life-support system, weapon and energiser. Perhaps it was really just the silence which made him nervous – a tangible silence here, where not so long ago, lasers and pulsars had spat their fiery beams at each other and men and mutants had died.

Well, better go and examine the vehicle. Better go and look it over: try and assess whether his portable energiser would be strong enough to drag it clear of the rocks. Hopefully, then it would still be able to run under its own power. Possibly he would be able to dismantle some of the heavy laser-deflection plates.

He got up, cradled his laser on his hip and stepped out into the open stretch of ground which bordered on the ancient river bank.

It was then that he felt, rather than heard, the humming sound. It filled the sky, the ground beneath his feet, even his own body vibrated in sympathy with it. It echoed hollowly in the confines of his helmet. Suddenly it died away and things became blurred and hazy. The powdery sand seemed to shimmer and dance: the bushes and rocks no longer were harshly outlined in the searing sunlight. He thought at first, that his visor was misting up but a quick look at his wrist meter showed that his support pack was operating normally. It was as if a shimmering, transparent curtain had fallen in front of him. At first he could not be sure in which way things were changing, or had changed, but even as he looked, the images of objects beyond the curtain, took on a wholly different form. Tall grasses and stunted trees had replaced the anna bushes. The steep-sided dunes of grey sand had been replaced by brown sand. The river was a steep-banked gash in the level ground. The Telapod had become a strange, angular shaped vehicle which rested on odd, circular discs. It dull body was bathed the light of a yellow sun: a sun which he sensed, shone down on that strange land beyond the flickering curtain, with a milder, warmer glow. Gradually, the elongated blob resolved itself into the figure of a man. He wore no survival suit: he was bare-faced and clad in some dark uniform which blended with

his surroundings. He carried a crude weapon in his ungloved hands. His whole appearance was alien – primitive.

Venath lowered the barrel of his laser and switched on his immunity shield.......

Ш

The FN rattled itself into silence. For an instant the figure was shrouded in an orange glow as the n stream of bullets shattered themselves into vapour.

A strange feeling of acceptance filled Van der Merwe; it flooded into his mind like a cold rumbling tide. What he had just seen no longer seemed improbable or impossible. He was even less surprised when then figure raised his right hand and spoke.

It was an odd language, full of lisps and lilting tones. Van der Merwe dropped the barrel of his rifle.

"Ek verstaan jou nie!"

The figure straightened and shuffled a step nearer.

"I don't understand you!"

"You talk the English speech!" The voice was loud and clear; it seemed projected from the helmet as if amplified by a microphone.

"You talk the English speech!"

He spoke in a hesitant way as if he struggled to express himself in a language with which he as not familiar.

"You must come then from jh 83rd Era when English was still a spoken language."

"83rdEra?"

"Yes. English is spoken no longer – it is a dead language. Once it was almost a universal language of science – scholars used it and today it is still taught in our centres of learning."

"English a dead language!" mumbled Van der Merwe to himself. "A dead language like Latin and Greek"

But Venath was not listening; he was fiddling with his helmet. He raised his head and once again Van der Merwe found himself looking at that black, faceless visor.

"Today, the whole world – all that is left of Mankind – we all speak Mayon: Mayon the universal language."

"Who are you?"

"I am Venath"

"Venath?"

"I am Venath, Posteron of the Eighteenth Guard. I am a soldier such as you."

"That strange suit you wear – a space suit?"

"I wear a suit of survival."

The voice coming from the helmet was tired, resigned. "I wear a suit of survival." He struck his breast with the flat of his hand. "Without this suit,,,,," he stretched both arms apart in an expressive gesture. "In the world I come from there is little air to breath, there is nothing to screen the fire of the sun. Everything has been tainted by the Maada of Verayath"

"Maada of?"

"Yes! The great fire of the Final War. The Final War which spawned the mutants against which we fight."

Suddenly Van der Merwe was overcome with a ridiculous desire to apologies. "I fired at you", he said.

"Fired?"

Van der Merwe tapped the barrel of the FN. "I used this: I'm sorry."

"It is nothing," said Venath. "Fear filled you and you acted without thought have a shield – you saw that have a shield of force about me – ma shield which is proof against any of your puny weapons."

He pointed to the FN. "You are armed with a primitive weapon. Once we had such weapons in places where we kept old things...."

"Museums," suggested Van der Merwe.

Venath ignored the interruption. ".... In places we kept old things – weapons, artefacts and relics from your culture."

He stroked the triangular barrel of his peculiar gun. "Here, I have a weapon which fires light."

He said that with great pride, even arrogance. He again spread his arms wide. "It can turn all, everything, to dust at the touch of a finger. See! It has the power of a hundred suns!"

Venath swung his laser and pointed it at a clump, of rocks a hundred meters away. A fiery blue beam sizzled from its off barrel and silently, instantaneously, the rocks were turned into a cloud of dust which hung in the still air. "See it turns all to dust!"

The perspiration trickled into Van der Merwe's eyes again. He wiped it away with his forearm. He shifted his weight from one foot to the other: he glanced over his shoulder almost furtively, as if frightened that any sudden movement might annoy his strange companion. He looked behind to reassure himself that his own world was still there: the same ordinary world he had always known. And all the while Venath spoke, his voice an echoing, expressionless monotone.

"This place where we stand is a strange zone," said Venath. "A barrier between yesterday and today. It is a two-way mirror linking past and present: a mirror into which we can both look. It is a gateway to your present which for me is the past, and to my present which for you is the future. We stand and face each other and what you see behind me are things as they will be and what I see behind you are things as they were. Behind each of us lies the reality of our own worlds and times."

The trance-like state left Van der Merwe as suddenly as it had come. Now he was afraid, terrified. He dropped his rifle and stumbled to his knees.

"Where am I then?" he sobbed.

"Where you were before."

"And the time? And the year?"

"You do not understand," said Venath. He sighed. "For you and me, nothing has changed."

Venath was surprised and annoyed to find himself explaining to the figure which grovelled at his feet. He was not prompted by feeling of sorrow or compassion. These would have been emotions foreign to him for man had long since become an efficient, conditioned and insensitive animal. Hate and anger he could experience for he was a soldier: pride and arrogance he could show as well in the presence of such a weak and primitive creature. Perhaps it was really arrogance that prompted him to explain, for had he not 20,000 years of civilization behind him?

He spoke of the realisation of Man's age old dream. How he was discovering the secrets of unlimited energy production: how his fusion power stations were beginning to dot the face of a burnt planet. But there was a strange side-effect, on rare occasions, people who were hours, years or even eons apart but who were in exactly the same place, were performing the same tasks, and had the same aims – perhaps even the same thoughts – could be brought together for an instant or an hour. Merely by the sameness of their mutual behaviour were they brought together as both of them stood within only 100 quintals of such a power plant.

Venath explained all this. He spoke of the theories of periodicity, coincidences: Time he explained how his own culture regarded such new but by no means uncommon 'meetings in time' as being little more than amusing but valueless phenomena. He spoke of these and other things as Van der Merwe knelt before him and nodded his head as if he understood. But really, Van der Merwe did not understand nor ever would or could, for these were ideas and thoughts and realities of an age that was yet to be. When Venath finished speaking, Van der Merwe picked up his rifle and got

to his feet. He turned to face his own world. The terror had left him nd he felt physically and mentally drained as if he had recovered from a long and serious illness.

"So" concluded Venath. "So! Here we stand at the same place, at the same time: both soldiers: both with the same duty to perform. To recover a vehicle which the foolishness of others has rendered unserviceable.

Van der Merwe smiled wanly at that. Those weren't exactly the Sergeant's words. He looked at Venath again. He had slung his laser weapon across his shoulder and held a long transparent tube in his hands. It too, was connected to a pack on his back by an orange umbilical cord. He gestured towards the curtain of haze which separated them and which had started to shimmer again. "See, the time warp alters." He nodded his head from side to side. "Soon I will be alone again in my own world and you will be alone in yours."

Van der Merwe pointed to the transparent tube. "What is that? Another weapon with the power of a thousand suns?"

"It is an energiser," said Venath. "With this, I shall pull my vehicle free of the rocks. It has the power of a thousand men."

Van der Merwe laughed out loud. "A thousand men!"

"Yes, a thousand men!"

"It could never pull my vehicle free from the rocks."

Venath waved the tube above his head. "It has the power of a thousand men, I say! A thousand men."

"Never" said Van der Merwe, in return.

"Look then!"

Venath lowered the tube and pointed it at the Ratel. Presently the tube glowed. Like a flashlight it sent out a beam of light. Venath played the beam on the vehicle and as Van der Merwe watched, the Ratel trembled. There was the sound of metal scraping

and grating on stone: the yellow beam of light shortened and the heavy, armoured vehicle slid clear of the rocks, drawn towards them by the shortening of the light. It stood a metre away from Van der Merwe, rocking on its wheels.

Venath turned off the beam. "You see!" he shouted. "You see! The strength of a thousand men."

"So I see!" smiled Van der Merwe.

Venath turned towards his own vehicle. He pointed the tube at it. Nothing happened. He peered at a gauge strapped to his wrist. He shook the tube then threw it away from himself. It dangled in the dust at the end of its cord. He unslung the laser and pointed it at Van der Merwe.

"You have tricked me!"

He waved the weapon about. "You who are as nothing!. You who are as lowly as the dust beneath my feet – you have tricked me!" He flung the laser from him as well.

"I have stood here and wasted my time in speaking of things which you in your ignorance can never understand. I have shown you the power of my weapon, my energiser. I have saved your primitive vehicle for you."

He tore a long metal cylinder from his back, and with one hand, held it aloft, and still attached to his suit by its green cable. "And now my power pack is almost exhausted. There is barely enough power to operate my life-support system. I have no weapon to defend myself; no protective force-shield about me and my vehicle still lies there among the rocks"

He scuffled about in the dust and mumbled, almost to himself. "I have two quens to cover before my suit fails me."

Suddenly Van der Merwe felt sorry for Venath. Sorry for the man locked up in his 'survival suit', not free to walk about and breathe the fresh air: sorry for someone once so proud of his wonderful weapons and equipment. He found a length of towing hawser in the Ratel and threw one end across to Venath.

"Tie that to your Telapod."

Without question the suited figure shuffled away.

It was simpler than Van der Merwe had imagined. The strange wheel less vehicle slid away from the rocks with ease. He unhitched the cable, climbed back into the Ratel and drove away. He sighed with a deep feeling of satisfaction and he smiled also when he pictured the look on the Sergeant's face when he brought the Ratel back into Camp. He stopped at the crest of a slight rise, got out and looked back.

The curtains of haze shimmered and danced again. Objects had become blurred and indistinct. The haze cleared for a moment. The last view of Venath was of a forlorn, lonely figure which knelt in the sand and peered at the length of ordinary wire rope it held in its gloved hands.

Best of SFSA Volume III

The Best stories from the Nova short story competitions in the 1990's.

If you don't yet have a copy contact the secretary and we will send you

secretary@sffsa.org.za

From the Daily Galaxy

Milky Way's Spherical Halo Reaches 10 to 30 Times Farther Out Than Distance Between the Galactic Centre and the Sun

Sometimes it takes a lot of trees to see the forest. In the case of the latest discovery made by astronomers at the University of Arizona, exactly 732,225. Except that in this case, the "forest" is a veil of diffuse hydrogen gas enshrouding the Milky Way, and each "tree" is another galaxy observed with the 2.5-meter telescope of the Sloan Digital Sky Survey.

After combining this staggering number of spectra—recorded patterns of wavelengths revealing clues about the nature of a cosmic target—UA astronomers Huanian Zhang and Dennis Zaritsky report the first detections of diffuse hydrogen wafting about in a vast halo surrounding the Milky Way. Such a halo had been postulated based on what astronomers knew about other galaxies, but never directly observed.

Astronomers have long known that the most prominent features of a typical spiral galaxy such as our Milky Way—a central bulge surrounded by a disk and spiral arms—account only for the lesser part of its mass. The bulk of the missing mass is suspected to lie in so-called dark matter, a postulated but not yet directly observed form of matter believed to account for the majority of matter in the universe. Dark matter emits no electromagnetic radiation of any kind, nor does it interact with "normal" matter (which astronomers call baryonic matter), and is therefore invisible and undetectable through direct imaging.

The dark matter of a typical galaxy is thought to reside in a more or less spherical halo that extends 10 to 30 times farther out than the distance between the center of our galaxy and the sun, according to Zaritsky, a professor in the UA's Department of Astronomy and deputy director of the UA's Steward Observatory.

"We infer its existence through dynamical simulations of galaxies," Zaritsky explains. "And because the ratio of normal matter to dark matter is now very well known, for example from measuring the cosmic microwave background, we have a pretty good idea of how much baryonic matter should be in the halo. But when we add all the things we can see with our instruments, we get only about half of what we expect, so there has to be a lot of baryonic matter waiting to be detected."

By combining such a large number of spectra, Zaritsky and Zhang, a postdoctoral fellow in the Department of Astronomy/Steward Observatory, covered a large portion of space surrounding the Milky Way and found that diffuse hydrogen gas engulfs the entire galaxy, which would account for a large part of the galaxy's baryonic mass.

"It's like peering through a veil," Zaritsky said. "We see diffuse hydrogen in every direction we look."

He pointed out that this is not the first time gas has been detected in halos around galaxies, but in those instances, the hydrogen is in a different physical state.

"There are cloudlets of hydrogen in the galaxy halo, which we have known about for a long time, called high-velocity clouds," Zaritsky said. "Those have been detected through radio observations, and they're really clouds—you see an edge, and they're moving. But the total mass of those is small, so they couldn't be the dominant form of hydrogen in the halo."

Since observing our own galaxy is a bit like trying to see what an unfamiliar house looks like while being confined to a room inside, astronomers rely on computer simulations and observations of other galaxies to get an idea of what the Milky Way might look like to an alien observer millions of light-years away.

For their study, scheduled for advance online publication on Nature Astronomy's website on Apr. 18, the researchers sifted through the public databases of the Sloan Digital Sky Survey and looked for spectra taken by other scientists of galaxies outside our Milky Way in a narrow spectral line called hydrogen alpha. Seeing this line in a spectrum tells of the presence of a particular state of hydrogen that is different from the vast majority of hydrogen found in the universe.

Unlike on Earth, where hydrogen occurs as a gas consisting of molecules of two hydrogen atoms bound together, hydrogen exists as single atoms in outer space, and those can be positively or negatively charged, or neutral. Neutral hydrogen constitutes a small minority compared to its ionized (positive) form, which constitutes more than 99.99 percent of the gas spanning the intergalactic gulfs of the universe.

Unless neutral hydrogen atoms are being energized by something, they are extremely difficult to detect and therefore remain invisible to most observational approaches, which is why their presence in the Milky Way's halo had eluded astronomers until now. Even in other galaxies, halos are difficult to pin down.

"You don't just see a pretty picture of a halo around a galaxy," Zaritsky said. "We infer the presence of galactic halos from numerical simulations of galaxies and from what we know about how they form and interact."

Zaritsky explained that based on those simulations, scientists would have predicted

the presence of large amounts of hydrogen gas stretching far out from the center of the Milky Way, but remaining associated with the galaxy, and the data collected in this study confirm the presence of just that.

"The gas we detected is not doing anything very noticeable," he said. "It is not spinning so rapidly as to indicate that it's in the process of being flung out of the galaxy, and it does not appear to be falling inwards toward the galactic centre, either."

One of the challenges in this study was to know whether the observed hydrogen was indeed in a halo outside the Milky Way, and not just part of the galactic disk itself, Zaritsky said.

"When you see things everywhere, they could be very close to us, or they could be very far away," he said. "You don't know."

The answer to this question, too, was in the "trees," the more than 700,000 spectral analyses scattered across the galaxy. If the hydrogen gas were confined to the disk of the galaxy, our solar system would be expected to "float" inside of it like a ship in a slowly churning maelstrom, orbiting the galactic centre.

And just like the ship drifting with the current, very little relative movement would be expected between our solar system and the ocean of hydrogen. If, on the other hand, it surrounded the spinning galaxy in a more or less stationary halo, the researchers expected that wherever they looked, they should find a predictable pattern of relative motion with respect to our solar system.

"Indeed, in one direction, we see the gas coming toward us, and the opposite direction, we see it moving away from us," Zaritsky said. "This tells us that the gas is not in the disk of our galaxy, but has to be out in the halo."

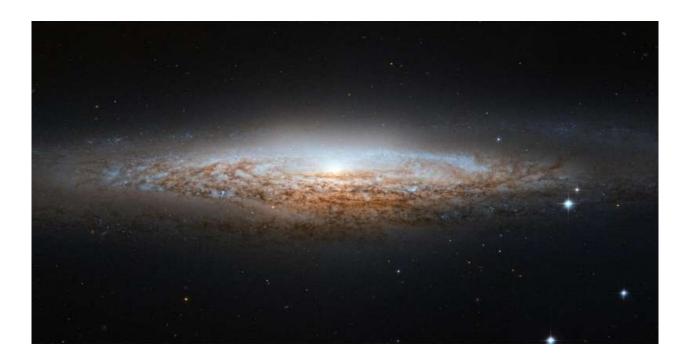
Next, the researchers want to look at even more spectra to better constrain the distribution around the sky and the motions of the gas in the halo. They also plan to search for other spectral lines, which may help better understand the physical state such as temperature and density of the gas.

The Daily Galaxy via University of Arizona

From "The Daily Galaxy"

The Milky Way's Spherical Halo





What our Milky Way might look like to alien astronomers: This image of NGC 2683, a spiral galaxy also known as the 'UFO Galaxy' due to its shape, was taken by the Hubble Space Telescope.

