

# Satellite 4



Souvenir Book

## From the Chair

Writing an introduction for a Souvenir Book naturally forces a reflective view of Satellite 4. Looking back, the one thing that strikes me most is how calm and quiet the behind-the-scenes organisation was. This is in strong contrast to my own feelings just before the convention when it seemed, although we had hopefully provided all the bits and pieces needed, there was still a huge amount of work needed to get everything set up. However, on Thursday and Friday a fantastic group of fans appeared who calmly got their areas set up and quietly ran them throughout the convention. These truly were our Satellite 4 Trojans and a huge "Thank You" to them for all their work.

I am sure every Eastercon committee wants to bring its own identity and innovations to its Eastercon, and we were no different. Our identity can be summed up on the Satellite Convention motto: 'Science Fiction, Science Fact, Science Fun'. I feel we truly lived up to that spirit.

Fiction came from Juliet McKenna, Jim Burns and John Meaney – all outstanding guests – plus panels, readings, book launches and talks covering the breadth of SFF, along with workshops, masterclasses, and discussions about the business of writing and publishing.

Fact came from our Science GoH Dame Jocelyn Bell Burnell, Clydespace, the Science Fact meets Science Fiction Seminar sponsored by the University of Strathclyde as part of its Golden Jubilee Celebration, and a host of other professional scientist contributors, both from within our community and beyond.

Fun was a constant throughout the event – our fan guests were Steve and Alice Lawson after all! The party atmosphere was aided by many games and quizzes, workshops and tastings and top notch social events with our ceilidh, swing band and disco, all topped off with a side-splitting performance by the Scottish Falsetto Sock Puppet Theatre.

We tried to be innovative on several fronts, described later in a separate article. It is always hard to judge how these were received but I guess fandom will decide for itself by including them in future events or not – over to you!

Other abiding memories will be the amount of media interest in Satellite 4 – I certainly did not expect to be interviewed live on Radio Scotland when I got up on Thursday morning, or have TV cameras thrust in my face! However, when I read the extensive and very positive reports in the national press about the convention, it made me realise that SFF can now certainly claim to be mainstream. By working with our partners in Glasgow City Marketing Bureau we



certainly caught the attention of a larger audience than we would have achieved on our own.

However, whoever was looking at us – media, visitors, fans and members – I am sure they saw a well organised, professionally presented event. This is entirely due to the efforts of the Satellite 4 committee, a small group of friends who have given great amounts of effort and enthusiasm over a long period of time to bring the whole convention together. So my deepest thanks must go to them, Carolyn, Christine, Fran, Mad Elf and Mark – the Satellite 4 Oort Crowd. They should be proud of their efforts and I hope you enjoyed the fruits of all their labours at Satellite 4. I know I did!

*Michael (Bringer of Peace)*

### Contents

From the Chair.....	2
Photo Album: The Oort Crowd.....	3
Our Sponsors.....	3
Interim Financial Statement.....	4
Photo Album: Outer Space.....	4
Photo Album: The Stations of the Con.....	5
Do You Want to Believe in Magic?.....	6
Photo Album: Costumes.....	10
Photo Album: Fans Being Fans.....	11
Innovations and Experiments.....	12
Jonquil's Ray.....	14
Photo Album: Evening Extravaganzas.....	21
Photo Album: Silly Games.....	22
Programming Eastercon: a novice's tale.....	22
Photo Album: Arts and Crafts.....	24
Satellite 4 Organogram.....	24
Photo Album: Opening and Closing Ceremonies.....	25
A Word from Alice and Steve.....	25
Photo Album: The Guests.....	28
Photo Album: Traditional Programme Items.....	29
Astronomy – amazing subject, amazing universe.....	30
Photo Album: Other Attractions.....	32
Membership.....	33

*Cover art by Jim Burns. Incidental art by Neil McChrystal. Material by Michael Davidson, Christine Davidson, Mad Elf, Carolyn Sleith, Juliet E McKenna, John Meaney, Dame Jocelyn Bell Burnell, Alice & Steve Lawson. Photography by Al Johnston, Andrew Patton, Carolyn Sleith, David Carlile, Eira, Jaap Boekestein, Phil Willis, Sara Messenger, Simon Bradshaw, Simon King, Smuzz, Steve Rogerson, Vincent Docherty, Zoe Sumra. All data accurate as of 05/11/2014*

## Photo Album: The Oort Crowd

Some shots of the Committee at work and play...



**Michael Davidson** (Chair / Bringer of Peace) opening the convention.



**Fran Dowd** (Vice-Chair / Bringer of Wisdom) juggling her DCM duties, the Fish-Slice of Power, and a drink.



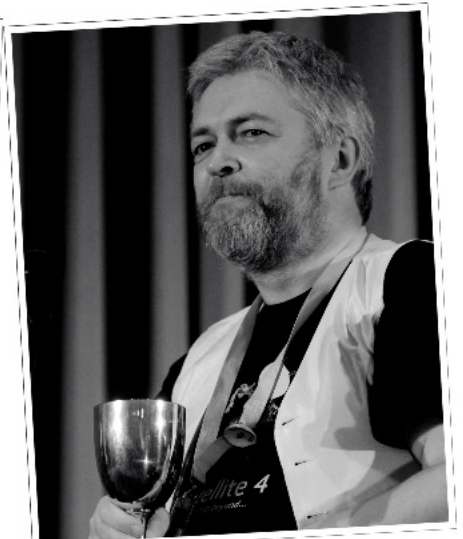
**Christine Davidson** (Programme & Guest Liaison / Bringer of Jollity) going about her DCM business.



**Carolyn Sleith** (Treasurer & Membership / Bringer of Wealth), pushing some paper.



**Mad Elf** (Publicity & Website / The Winged Messenger) in conference.



**Mark Meenan** (Hotel Liaison & Logistics / Bringer of Dreams), with a happy Doc Weir Award Winner smile.

## Our Sponsors

Satellite 4 couldn't have happened without the help of our sponsors:

**Jo Fletcher Books:** Lanyards for members' badges.

**Starburst Magazine:** Support with advertising for the convention.

**Glasgow City Marketing Bureau:** Hotel negotiations and booking process.

**Glasgow City Council:** A Civic Reception to officially open our convention and Art Show.

**Genki Gear:** Bankrolling the munchies for our Gopher Hole.

**The University of Strathclyde:** Our Monday Mini-Symposium.

**Spider Online:** Computing hardware for Newsletter and Games Room.

**Web Glasgow:** Web hosting and email services since the beginning of the Satellite series.

# Interim Financial Statement

Figures are correct at time of going to press.

<b>Income</b>	<b>£</b>
Membership	38,562
At con (Art show, dealers' room, etc.)	1,240
Pass along received	15,000
Merchandising	595
Advertising and sponsorship	275
<b>Total Income</b>	<b>55,672</b>

<b>Expenditure</b>	<b>£</b>
--------------------	----------

*Closed Items*

Hotel	5,000
Guests	5,858
Publications	1,638
Promotion	1,300
Tech	5,501
Green Room	1,368
Gopher Hole	145
Groats	1,374
Beer Bar (fixtures and fittings)	552
Ops	165
Registration	2,155
Evening Events	2,580
Programme	512
Crèche	2,293
Logistics	1,322
Administration	230
Bank charges and PayPal fees	763
Insurance	1,175
Charity	1,190

*Estimated Items*

Pass along	11,500
Bursaries and fan funds	2,000
Unclaimed expenses	550
Souvenir Book	6,500

<b>Total expenditure</b>	<b>55,672</b>
--------------------------	---------------

# Photo Album: Outer Space

We were very fortunate with the weather over the course of the convention. Some of our members went boldly into the strange environment Outside, and brought back these images...



# Photo Album: The Stations of the Con

Some glimpses behind the scenes at the parts of the con that make it all work. In no particular order:

## Green Room and Prog Ops



Keeping the programme running like a well-oiled machine requires the oversight of the Prog Ops team, but also needs the Green Room staff to ensure that the participants are on time, briefed, and properly lubricated.

## Gopher Hole

Organising the volunteers and giving them somewhere to relax when off duty, Gopher Hole is one of the most populated and busiest areas of the convention (no, really).



## Ops

Ops: the bustling nerve-centre of the convention, dealing with services of all kinds, such as giving space for ballot boxes, taking care of lost and found, and basically doing any required trouble-shooting and fielding of any questions that the members may ask. (Also, some people find it a nice place to hang out.)



## Tech

The Tech crew are a ghostly bunch, only glimpsed in dark corners behind sound desks and lighting equipment. So elusive are they that only one picture was captured to prove their existence.



## Newsletter

Honesty, integrity and a dedication to the truth are journalistic traditions the newsletter team have definitely heard of. However, we preferred their creative and imaginative reporting of the convention.



## Registration

Last but by no means least (they are after all the first con staff that most members will come across at the event), the Registration Team, like well organised murder investigators, soon had everyone bagged and tagged.



## Do You Want to Believe in Magic?

Gold is the Sun Goddess's gift. It's the colour of her bounty ensuring we all thrive. Grain from the southern wheat fields, reaching to the horizon. North of the great rivers' union, dairy women make golden butter and cheese from the creamy milk of tan cows roaming the hill country. All this and more brings in the gold coin that's made our city more prosperous than any town upriver or down. Such wealth signifies the Goddess's favour as she guards and guides us all, from the Paramount King on his throne down to the humblest urchin.

Silver is the Moon God's metal. Keeper of secrets, he hides it mingled with lead and other ores. Only those with the patience to study learn the secrets of extracting it from the darkness of the mines. Even so, hidden hazards still trip the arrogant or unwary. But those with the relevant knowledge can cure deadly maladies with those poisons bound to silver. Silver is the physician's metal in so many ways. As his priests in their schools and hospitals often remark; every coin has two sides.

So the poets and pious say, Ruvon reflected. But the men at this table had no time for such fancies. Gold



or silver, all coin was for spending.

'My purse is as empty as a marsh trader's promises,' Scop grouched. 'Anyone got a proposition to fill it?'

A proposition. No one would say it outright, not even among friends. The truth was, if Scop wanted coin to spend, he'd have to steal it, or steal goods that could be sold quick and without questions. He wasn't alone in that. Ruvon reckoned the men and women who did an honest day's work for a

fair day's pay could be counted on the fingers of one hand in this crowded and noisy tavern.

He wasn't one. Ruvon didn't lie to himself, whatever falsehoods he told the constables prowling these wharfs, whenever some merchant went bleating to the Justiciary about cargo pilfered from some barge or a warehouse where it was stowed.

At least he'd had no choice. He'd been born to this life, in this narrow spear-point of land where the great river Tane tumbled down from the hills to join the mighty flood of the Dore winding its way across the plains. Where the perpetual flow could wash away the blood and stink of tanneries, slaughter houses and

dye works, so all those upstream could enjoy sweet water and fresh air.

'I have a notion.' Alinar paused. Of course. He wouldn't share his scheme without sufficient entreaty. Alinar had a choice. Ruvon studied him over the rim of his tankard as he drank. Alinar hadn't been born to a rag-picker; scavenging washer-women's leavings for linen to sell to paper makers. Ruvon had been sent to steal shirts and chemises as soon as he was big enough to climb garden walls in the fine broad streets upstream. He'd done so willingly, once he'd realised the alternative was his mother bringing barge-hands back to their meagre home, to do whatever they wanted from her, as long as they left coin to pay the rent.

Scop rubbed filthy hands together with gleeful anticipation. 'This'll be worth hearing, lads.'

'You've not steered us wrong yet,' Haspel agreed, obsequious.

As every other man nodded, Ruvon forced himself to bend his neck in a show of assent. Haspel was right. Alinar was clever and he'd learned all manner of things from the Moon God's priests, at one of their schools for the sons and daughters of those houses Ruvon stole from. Alinar could name all the towns upstream and down, within and beyond the Paramount King's rule and list all the nobles who swore him fealty.

Ruvon had learned his numbers and letters from a man once crushed between a laden barge and a wharf's wooden pilings, never to walk again but still with children to feed. Those lessons had ended as soon as he could write his own name and read a notice posted by the constables, in case the description of a man sought might match him.

Ruvon only needed enough reckoning to be sure of his fair share from a night's thieving. So his father had said, redaiming him from his mother once he grew too big to escape with a thrashing for stealing clothes. Like the priests said, every coin has two sides. That meant Ruvon was old and strong enough to join his father's gang. Until the constables caught Erzet and the Justiciar hanged him.

Why hadn't Alinar joined his father's business? Ruvon longed to ask. The man bred and sold horses and that was a lucrative trade with the Paramount King's cavalry and garrisons always needing new mounts. Why had Alinar abandoned his comfortable life to play cock of the dunghill among the Spearhead's depraved and desperate?

He didn't ask. He never did. Besides, Alinar was now sufficiently flattered to share his new scheme with the table.

'The new moon rises to shine on the last month before midsummer. Everyone wants their books balanced before the Goddess's shrines update their ledgers and the Golden Temple sends out writs for the

King's taxes—'

'Everyone knows that.' Ruvon was tired of Alinar treating them all like halfwits.

Alinar slid him a narrow-eyed look before continuing as though no one had spoken. 'That's just as true for the money-changers. They'll be sending plateau coin upriver and marsh coin downstream to their partners who trade beyond the Paramount King's suzerainty.'

Ruvon watched everyone nodding sagely, even though they had no more idea than he did, what holding outlandish coin would mean when the Goddess's auditors assessed a man's taxes. No one hereabouts ever banked coin with a shrine, not with the King's head stamped on it or the heraldic beasts that signified towns beyond his majesty's reach.

'A goodly number of strong boxes will be loaded on barges these next few nights,' Alinar went on.

'Aye, and locked up tight in the holds with guards armed with bows and hand-cannons up top,' Ruvon objected.

Alinar glared at him. 'So we hit them before they reach the wharfs, in the streets after they've left the money-changers.'

'With an escort of constables?' Ruvon challenged. 'We've all seen them shepherding such chests.'

But Alinar shook his head. 'Not those who don't want any Justiciar's men seeing how much coin they're dealing, in case some whisper finds a priestess's ear. Especially not Pallot Usenain.'

Ruvon didn't have an answer for that. Though everyone looked much less eager at the thought of robbing Pallot. Money-lender as well as money-changer, he paid brutal men to deter undue interest in his affairs.

Not even Alinar's honeyed tongue would persuade them to risk crossing Pallot, Ruvon thought with sour satisfaction.

Then Scop cleared his throat. 'Just supposing — we did snatch such a strongbox, what do we do then?'

'Take the coin to a money-changer?' Ruvon scoffed. 'You don't think they talk to each other, to fix their rates and swap news from plateau towns and the marsh?'

Alinar smiled, smug. 'We take the strongbox to a tinsmith I know. He'll melt every last penny down, for a tenth share of the weight,' he allowed. 'We sell our share to craftsmen making brooches and rings for the nobility.'

'When they ask where you got this gold and silver?' Ruvon demanded stubbornly.

Alinar waved him away. 'Once coin is melted and cast into ingots, no one will ever be able to say where such bullion came from.'

'A priestess will, or a priest.' Ruvon spoke before he could stop himself.

Alinar crowed with laughter. 'Bless the boy! You truly

believe your grandmother's stories of their magical powers?'

Ruvon ground his teeth. 'You try telling lies to a priestess, to convince her you're entitled to withdraw money from your mother's deposits at her shrine. See how far that gets you.'

Alinar stared at him with ostentatious wonder. 'You do! You honestly believe those tales! That the Golden Mother can really see into a man's heart and judge his honesty? That the Moon God truly tells his priests when a man's burdened by dark secrets?'

Such open derision for the divinities prompted shivers of unease round the table. Alinar spoke quickly before he lost them. 'I'll grant priests and priestesses alike can read the faintest hints in a man's expression. They pick up all manner of news from folk visiting their shrines and sanctuaries. True, only a fool would try to deceive them, but we won't be doing any such thing.'

He laughed and the rest laughed with him. Only Ruvon sat stony-faced.

'Do you want to believe in magic?' Alinar challenged 'To give you an excuse for not playing your part? So no one can call you a coward?'

'I'm no craven,' spat Ruvon.

'Good, then you're in.' Alinar leaned forward, elbows on the sticky table. 'Now, here's the plan...'

It was a good plan, much as it galled Ruvon to admit it. He scouted ahead down the narrow alley, cudgel in hand and Beasel at his shoulder. Pausing at the far end, he glanced back.

Scop and Pinse lugged a strongbox between them and Cheffe and Narrias followed with another. Alinar brought up the rear with Vulse and Toka, armed with daggers and clubs in case Pallot's men recovered from their beating to follow.

'All clear,' Ruvon murmured to Beasel. They stepped out to guard the alley mouth as the men carrying the strongboxes emerged. They crossed the street together to duck down another dark entry. No one knew the Spearhead's shortcuts better than Ruvon.

This one opened into a cobbled yard overlooked by crowded tenements. Beasel looked up warily but Ruvon knew these folk wouldn't open a shutter whatever they heard out back.

He skidded to a halt all the same, seeing movement in the gloom ahead. 'Clear out,' he growled, 'if you know what's good for you!'

Something growled back. The bestial snarl sent a shiver down his spine. Ruvon readied his cudgel. Heavy and copper-banded, it was barely the legal handspan shorter than a constable's iron-shod ash stave.

'Ruv?' Beasel quavered. 'What's that?'

As the man tugged at his sleeve, Ruvon realised he wasn't looking at the snarling thing. Beasel had seen

a long, sinuous shape in the muck to their right.

'What is it?' Alinar demanded.

'Not sure,' Ruvon shot back before he realised no one was talking to him.

'It's getting closer!' Vulse's voice cracked with apprehension.

Before Ruvon could ask what was going on, Scop and Pinse barged into him and Beasel. With Alinar and the others following, they all staggered into the cobbled yard, strongboxes scraping on the ground.

'Watch—' Ruvon's rebuke died on his lips as the growling thing stepped into the starlight. It was akin to a giant cat though walking on its hind legs as steadily as any man. Its feathery pelt was edged with eerie golden light.

Ruvon gripped his cudgel in both hands. The creature's ruby red eyes fixed on him and its spread forepaws tipped with ebony talons.

'Ruv!' Beasel pressed close.

Ruvon snatched a frantic glance and saw a snake as thick as a man's thigh. Sickly, silvery light outlined every lurid green scale. As it opened its mouth and hissed, its fangs were as long as his forefinger.

'That's a gryphon.' As Alinar spoke, Ruvon heard a hunting bird's cry behind them and the rattle of bating wings.

He wanted to turn, not to see what a gryphon was, but to seize Alinar and shake loose some answers. Where had these creatures come from and what did they want? But that would mean turning his back and that giant cat was edging closer.

As he kept his gaze fixed on the creature, rainbow mist shimmered beside it. Another nightmare solidified, with a rooster's head and scaled, spurred feet. Only it stood as tall as Ruvon's waist and he'd never heard of any fowl so large. Besides, its body was scaled like the snake and it flapped bat wings, lashing a serpent's tail.

Beasel yelped. 'What's that?'

If there was truly no such thing as magic, what was this madness?

'What do we do?' rasped Scop.

'They tell tales of gryphons in plateau towns,' Alinar remarked, 'and that's a cockatrice. They're a marsh myth, I believe.'

Ruvon couldn't help looking round. He found himself staring at Alinar. The fool had turned to see what he and Beasel faced. The man might have been scoring casual points in tavern conversation, proving he was the best-educated as well as the quickest-witted.

Not tonight, he wasn't. Ruvon watched, disbelieving, as the fool turned back to face the advancing gryphon. The beast was as big as a dray horse, though it had paws rather than hooves at the rear and a long tufted tail besides. More incredible, it had the head and wings of a bird of prey, and taloned fore-



feet as massive as the rest. How could such a creature exist except through magic?

Vulse and Toka shrank away from Alinar. Scop and the rest huddled closer to the strong boxes, seeking the reassurance of standing shoulder to shoulder over their loot.

Ruvon snatched a glance at the cat-man. The creature was standing still, its glowing red eyes fixed on the gryphon. The cockatrice stood beside it, leathery wings folded, while the snake slithered back and forth behind them.

'This is just some dream.' Alinar waved a scornful hand at the gryphon.

The beast's head darted forward and bit clean through his wrist. Alinar's scream echoed back from the buildings as the gryphon tossed back its head to drop the morsel down its gullet.

Ruvon was deafened as chaos erupted all around.

Alinar fell to his knees, screeching and clutching his spurting stump. The gryphon sprang at Scop and the others who yelled defiance and terror alike.

Their flailing blows didn't leave a mark on the beast but its quick beak and claws inflicted ghastly wounds. Narrias reeled away, pressing bloody hands to his ruined face. 'I'm blind! I'm blind!'

Vulse darted forward, dagger drawn, to stab the beast in the flank. His blade barely grazed its hide before a clawed hind foot raked his belly. His entrails spilled onto the cobbles.

Beasel yelled as the giant snake slid between his feet, intent on Toka or Cheffe. The cockatrice took flight, flapping high enough to rake Beasel's face with his claws. He smashed at it with his cudgel. The creature pecked viciously at his weapon hand. As it tore at his scalp, hair and skin tangled around its feet.

Ruvon wasn't fighting. He locked gazes with the red-eyed cat-man. The creature stood poised for him to make the first move.

'I won't fight you.' Ruvon extended his hand, cudgel loose in his fingertips. 'Not unless you fight me. Then I'll do my best to kill you, the Horned God is my witness. But leave me be and I'll let this fall and walk away, leaving every penny in those boxes.'

The cat-man retreated, lowering its taloned hands, still eyeing him intently.

Ruvon took a step away from the mêlée and dropped his weapon. None of the beasts paid any heed. If any of the gang condemned him for a coward, Ruvon didn't hear their voices in the uproar.

He walked across the courtyard and went on his way without a backward glance.

The gang's remnants soon scattered, leaving Vulse and Cheffe dead on the cobbles. The cockatrice capered on the blood-spattered strongboxes while the

giant snake's maw gaped to swallow Cheffe's booted feet.

'No,' a woman chided, emerging from a doorway. 'It's back to the Unseen Realm for you.'

She wore a hooded cloak and the gleam of a sunburst amulet illuminated the lower half of her face. The snake retreated in a sullen coil. As she gestured, it vanished in a sparkling mist.

A tall man in black followed the priestess. Starlight shone on his silver mask. He turned to the gryphon. 'Thank you.'

The beast preened for a moment and sprang into the air. By the time it reached the rooftops it had faded to transparency. With the next beat of its wings, it disappeared. The cockatrice and the lion rampant had already returned to wherever they dwelled.

The priest contemplated the strong boxes. 'What will Pallot Usenain say when we return his property?'

The priestess snorted. 'How will he explain such discrepancies in his ledgers?'

The priest looked towards the alley Ruvon had taken. 'Why do you suppose he was so desperate to believe in magic?'

The priestess shrugged. 'Just be grateful that he was. It drew the creatures to him. We'd never have got wind of this plot otherwise.'

The priest cocked his masked head. 'You know him?' 'I knew his mother.' The priestess hesitated. 'Can you see to this?'

As the priest nodded, she ran after Ruvon, light-footed in her billowing cloak.

He didn't know where to go or what to do. He couldn't say how long he wandered through the dark streets. After the night's shocks, it was hardly a surprise when he saw a spark of light ahead blossom into a white dove. He halted as the bird hovered in front of his face.

A woman's kindly voice whispered in his ears. 'Break free. Seek a new home and a fresh start. Go, tonight.'

Ruvon couldn't see who was speaking. He didn't look. He simply watched the bird circle upwards and fly away. Then he turned to head for the wharfs. He'd take the first barge to hire him, whether it was heading upstream or down. He'd go as far as he could, way beyond the Paramount King's rule.

He'd often longed to leave his sordid life and the Spearhead behind. He'd never dared to try. But after everything he had seen tonight?

Now Ruvon knew he could believe in magic. Now anything was possible.

© Juliet E McKenna 2014

# Photo Album: Costumes

We had two main costume events: the Hall Costume Day, and the Ambassadors' Ball.



# Photo Album: Fans Being Fans



## Innovations and Experiments

Satellite 4 tried out a few relatively unusual – in some cases even unique – things to try and enhance the convention for members. Did they work? Only time will tell when we see if other Eastercons adopt any of the same approaches.

### Pre-con charity

Even before Satellite 4 began, we wanted to try something new – a pre-convention charity appeal to bring the whole SFF community together for the year leading up to the convention. We asked members to collect stamps for the Royal Society for the Protection of Birds' *Save the albatross* campaign. Many of you took to this like... well... albatrosses to water, resulting in a terrific contribution to the appeal. A great example of how we can all do a little individually but collectively achieve a lot.



### Close partnership with the host city

In 2014 Glasgow hosted a large number of high-profile events, most visibly the 20<sup>th</sup> Commonwealth Games. Luckily these huge undertakings didn't prevent the good folk of Glasgow City Marketing Bureau (GCMB) from providing Satellite 4 with excellent support. When we still hadn't secured an affordable venue just two weeks before Olympus 2012, and faced a very real possibility of having to defer our Bid to Easter 2013, GCMB stepped in to assure the hotel that SFF fans really would eat and drink enough to make it feasible for them to offer us a sizeable discount on function space hire for the weekend. Having professional event organisers



handle hotel room booking through their website was of huge benefit (though there was still plenty of work for Mark to do). We are also grateful to Glasgow City Council for providing a Civic Reception following our Opening Ceremony, and of course to the inimitable Bailie Phil Greene, who officially opened the convention with tales of a childhood reading Asimov and more recent experiences negotiating zombie hordes during the filming of WWZ in the streets around Glasgow City Chambers.

### Neo-mum & -dad

How to make people feel welcome at their first Eastercon is a perennial issue in fandom. The event can seem large, daunting and even intimidating to a new fan, with everyone else seeming to know what is going on and comfortable using language – filk, gopher, DCM – incomprehensible to those outside the community. Most Eastercons have a welcome/ orientation talk for new fans near the beginning of the convention. However, at Satellite 4 we decided to do more and provide support throughout the whole event. We appointed two knowledgeable and approachable fans to serve as Neo-Mum and Neo-Dad. They not only hosted daily briefing sessions but generally made themselves available over the weekend to help new fans unsure of any aspect of the event. We also included a glossary of fannish terms in the Programme Book.

### Scientist Guest of Honour

Eastercon has rarely had an official Scientist Guest of Honour, and almost never someone from outside the SFF community. However, as a convention series strongly emphasising the links between science and SF, we wanted to. And, if you're going to do something new, you may as well start at the top and invite one of the most respected astrophysicists of her generation. Dame Jocelyn Bell Burnell had never been to an SF convention before and we were delighted that she was willing to give up her Easter holiday to be with us. Her GoH talk drew one of the biggest audiences of the entire weekend.

### ...and more guests

As well as our fabulous GoH line-up, Satellite 4 featured as Special Guest Sir Terry Pratchett. Although, by April 2014, he was sadly too ill to travel to Glasgow in person, we were pleased still to honour his work and outstanding contribution to the genre. The short video message he recorded for the Opening Ceremony was appreciated and moving. Satellite 4 also featured several Day Guests – local

experts who came along to gave talks on topics as diverse as The Historic Thesaurus of English, Theology, and Doctor Who, and Nanosatellites and CubeSat Constellations (the latter from ClydeSpace, a West of Scotland-based company who successfully launched their first satellite later in 2014). We also featured an interactive science demonstration lecture from Jon Davies, our Science Guest from Satellite 3 in 2012.



## Retro-gaming computer

Satellite 4 decided to add a new dimension to the Games Room concept by providing a retro-gaming computer. We initially approached the idea with some trepidation. Would the noise be too distracting for everyone else using the room? Would one or two people monopolise it for the whole weekend, leading to disputes? However, in the end, all went well. The idea was popular, everyone who wanted got a turn, and it allowed us to introduce some classic games to a new generation of fans. So we felt it was a very successful experiment.



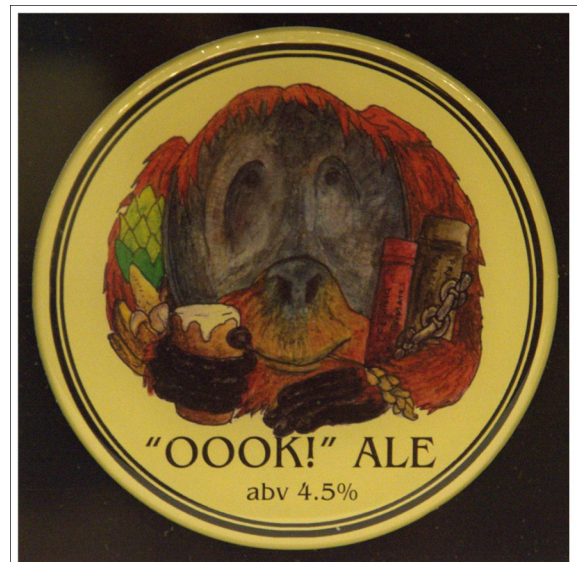
## Early bird sign-up sheets

Eastercons typically feature a few programme items with limited capacity – kaffeklatches, tastings, etc. – for which advance sign-up is required. A source of complaints in the past has been that members arriving early would sign up for multiple items leaving those

arriving later with little or no chance of a place. Our solution was the Early Bird Token Scheme: each member was issued one token allowing them to sign up for just one limited capacity item on the Friday of the convention (leading to an impressive queue outside Ops at 3pm, when the sheets opened!) From Saturday morning anyone could add themselves to as many additional items as there were spaces. We hope this at least helped to spread attendance at limited capacity items a little more fairly around the membership.

## Mini beer festival

Ok. We admit that having your staff member in charge of Brewery Liaison actually work for the brewery in question is something not every Eastercon can aspire too – so we were fortunate in that respect – but it is still important to acknowledge the contribution of Kelburn Brewery to Satellite 4. Not only did they provide an unparalleled selection of real ales over the week-end, and source us a wide range of ciders, and create Oook Ale (a dark beer with banana overtones)



especially for the event, they did it all at a very reasonable cost. Kudos too to the Crowne Plaza, who agreed to pass on the savings to members, allowing us to provide quality beer at a substantially lower price than recent Eastercons.



## Jonquil's Ray

On the day her father was arrested, Jonquil Blackstone was at the zoo. Unaware of what was going to happen, she'd gone happily with Anita and twenty other classmates, including the odd-looking new boy, Erlin. Mr Sheltrane was in charge. He bumbled a lot. Jonquil liked him.

Five tendays ago, if you'd asked Jonquil who Anita was, she'd have said Anita was her best friend. Lately she wasn't so sure.

They arrived at the zoo, the largest in New Vane, at mid-morning. Earlier, Mum had said goodbye as usual outside the school, but Dad had been away all night: staying in Schaum City for an early person-to-person meeting. Waking in the middle of the night, Jonquil had stared out at the fiery orange sky, because of course Molsin's orbit bore little resemblance to the diurnal rhythms of species that evolved on other worlds, Earth included.

And the quickglass sky-cities kept out the noxious atmosphere, while deep below the lower cloud layers, the oceans swirled with hydrofluoric acid currents, where even the native life-forms could not flourish.

"Everyone stay together," said Mr Sheltrane. "Or stay linked in active-monitor state."

"Who does he think we are?" muttered Anita. "Children?"

*Well, yes,* thought Jonquil, but Anita was talking to Falco, who said: "The old fart doesn't think. He *burbles*."

Anita giggled. Jonquil turned away.

"All right, I've paid for all of us." Mr Sheltrane double-blinked, clearing his contact-lens displays. "Let's go inside."

They trooped in below a glowing holo banner:

**\* \* \* WELCOME TO ECOGLOBE ZOO \* \* \***  
**See SPECIES FROM**  
**AROUND THE COSMOS**  
**Amazing!!!**

A girl called Kiko sniffed. "I don't think we should be here. Aren't the animals *prisoners*?"

Jonquil supposed she had a point. But most people in her class ignored Kiko whenever possible.

"Maybe someone should exhibit Kiko," said Falco, just quiet enough so that Mr Sheltrane couldn't hear.

"Nah." Anita sniggered. "Who'd pay to look at *her*?"

And that really wasn't like Anita... or not as Anita had been before Falco took an interest in her.

In the zoo's long hallways they were free to wander by themselves or to join one of the tour-groups, their links webbed together for audioholo commentary.

Anita and Falco went with Falco's cronies, whose major talent lay in sneering.

*I don't care.*



Beside her, the new boy, Erlin, shook his head. His neck was thick and muscular, unusual for a fourteen-year-old. With his wide shoulders, and being two or three centimetres shorter than Jonquil, he looked a bit ape-like. He had unruly hair and disconcerting eyes, each a different—

"Are you OK, Jonquil?" he asked.

—colour, one blue and the other green.

"Why wouldn't I be?" The words were out before Jonquil could think.

Erlin's shoulders bunched up. "Sorry."

He walked away, while Jonquil stood alone amid the crowd of adults and children. She hadn't meant to insult him.

*It's his eyes.*

Using contact lenses to change eye colour or display decorative moving patterns was so old-fashioned it was archaic. So Erlin's odd eyes were natural; and that was a sore point for Jonquil because her own eyes were different, her lenses a disguise.

She wanted to go after Erlin and apologize, but what could she say? That she was touchy but she couldn't tell him why?

*Dumb, dumb, dumb.*

There was only one thing she could do: what you were *supposed* to do in a zoo.

Go look at the animals.

In the first enclosure there was a clan of creatures nicknamed *Furries*, with creamy pelts and octagonal blue eyes. (Well, Jonquil *would* notice the eyes.) The *Furries* were intelligent but not self-aware, according to the holotext.

Jonquil clicked her tongue, and the audio stream sounded inside her skull: "*The so-called Furries are related to the civilized Alikoni of Taxil Federation, much as chimpanzees are related to us.*"

Subvocalizing, Jonquil asked: "Related how?"

The downloaded commentary module, now cached offline inside her link, possessed enough AI to respond directly: "*We differ from chimps by one-point-six percent DNA, but the differences are scattered across important control regions, which means—*"

"I know about DNA," she muttered.

*"The same function, carrying genetic information, is performed in Taxilic species by a group of interacting molecules called CNA-complex. Do you wish details?"*

"Later."

*"This is a feature of emergent properties. Even though CNA-complex is different from DNA, Taxilic life evolved in the usual common modes, such as prey-*

*predator relationships, with intelligence slowly—*

"Enough."

The voice in Jonquil's skull fell silent.

She would have liked to ask questions that the module couldn't answer, such as the name of the Pilot who first took human researchers to Taxil. These days, in the mid-24th century, there were over seventy known worlds with sizeable human settlements, and arguably five with distinct civilizations splitting away from the mainstream.

Since the alien Zajinets had disappeared decades ago (after the Battle of Mandelbrot Nebula, in which Jonquil's grandfather had served), only Pilots could travel through fractal mu-space (with their passengers in protective coma), bypassing lightspeed limitations.

Those Zajinets had been strange. In the recordings that Jonquil had seen, each alien spoke with many voices at once, their minds in multiple overlapping quantum states, thinking many things at the same time. They were *alien*.

And according to the zoo's manifest, one of the specimens here might – just might – belong to a species that the Zajinets used to keep as pets.

She wondered what it was like.

A girl from another school said: "Oh, those Furrries are so cute."

Jonquil shook her head and turned away, while subvocalizing a query: "Did anyone ever see a Zajinet with one of their pets? Show me."

The answer came as a translucent three-dimensional overlay, an image that existed only inside her eyes. Not a picture of the creatures, but a glowing map showing this arm of the galaxy, highlighting the worlds on which the species had been found.

"Understood," she murmured, before the module could start explaining the logic.

It was obvious: if the creatures had been found in different stellar systems, someone must have brought them there. And it was always on worlds where humans had seen Zajinets: Jonquil knew the locations off by heart.

A click preceded Mum's voice sounding: "*We're on crypto channel seven. Can you hear me, sweetheart?*"

It was sound-only because that required a smaller signal.

"I hear you, Mum," said Jonquil silently, deep in her throat. "What's wrong?"

This was a secret channel and her parents were strict in their use of it.

*"Your father's been arrested."*

Relief made Jonquil close her eyes, because for a moment she had thought Dad might be dead.

*"Something's happened in Schaum City,"* Mum went on. *"Check the news. It's probably an accident, but*

*the proctors are checking everyone."*

"Have they...?"

*"No deepscan yet. I think."*

That was the thing. Dad had platinum-level security built into his comms links (plus features the authorities wouldn't know how to detect). On the surface, OK. But if they deepscanned him— Everything was over.

Dad worked hard at his job but you could say it was a sham – the Court AIs would see it that way – because everything he learned went back to Labyrinth, therefore he was a spy and his activities added up to espionage.

Realspace humans relied on and were in awe of Pilots, but made no secret of wanting to keep them out of planetary affairs. Legal systems pretty much everywhere reflected this.

The hard thing was, though Jonquil loved Mum and Dad more than she could say, if they had been realspace folk then she wouldn't lead a life of worry and secrets; while if they were Pilots with more ordinary careers, she'd be living in the glorious (literally infinite) wonders of Labyrinth, the city-world that existed in mu-space where ordinary humans could not live.

She tried Dad's ID. "I can't reach him."

*"He'll be inside a null-cell while they interview him."*

"Oh." Jonquil wanted to cry, but this was not the time. "Shall I come home?"

*"No. Act normal, and if you have to..."*

"What?" she asked, knowing the answer.

*"You go to ground, as we've always practised."*

"I don't want—"

*"Do it. I love you."*

The link went silent.

In the news holos that Jonquil blinked into being, a glowing section of quickglass in Schaum City slid away from the jumbled main mass of the floating city. Luckily the separated section functioned mostly as a warehouse, not a residential district; but when it fell into the orange clouds there were people trapped inside.

Jonquil tried to query further, but the system detected her age and refused.

*"High probability is a femtovirus contagion,"* explained the module inside her head, *"while the question of accidental emergence or deliberate terrorist activity is likely to—"*

"Enough."

Disengaging from her links, Jonquil realized she had been wandering through the zoo's corridors. There was a group nearby, including Erlin, staring at a faint, billowing pastel shape that seemed scarcely to exist.

"What is it, Mummy?" a small boy asked.

"Can't hardly see nothing," muttered one of Falco's friends.

"It's called a wind-ray, dear." The boy's mother glanced at Falco, then away. "Let's take a look in the next enclosure, shall we?"

The air wavered as if in a mirage, and wispy feelings trailed across Jonquil's skin: side-effects of a magnetic containment field. As for the form floating inside the enclosure—

*He's unhappy.*

Faint violet bands passed through the dark-blue waves which currently formed the wind-ray's shape. Gossamer-thin, or perhaps not composed of ordinary matter at all, the diaphanous creature floated and billowed... and formed a pinkish tinge near one edge.

*So you'd almost think—No.*

That hardly seemed likely.

*You can't be sensing me.*

Even as she had that thought, the wind-ray drifted closer, up to the invisible shield that penned it in. The pinkness darkened into redness sweeping along the translucent form, and was gone.

"I think it likes you." Erlin's voice.

"He," said Jonquil.

Erlin looked into the enclosure and shrugged. "All right."

Jonquil noted again the muscles of Erlin's shoulders. And saw the way his eyes narrowed as Falco came over.

"Hey, Jonkee." Falco had his own nicknames for people. "Maybe it smells *your* new pet." Meaning Erlin, presumably.

There was no point in talking to him. Jonquil shook her head, while beside her, Erlin did something... strange.

He smiled.

People that Falco confronted usually looked down at the ground and shifted their feet. Confusion swirled in Falco's eyes as he registered Erlin's lack of fear. Then Falco recovered, and reached out as if to poke Erlin in the chest, but Erlin had moved subtly aside and the finger found empty air.

*"Let's go to the cafeteria."* Mr Sheltrane, addressing the entire group.

"Coming sir," Jonquil said aloud.

Falco shook his head then turned away, looking for his cronies. And Anita, no doubt.

The people he knew how to impress.

*"We can take a nice break,"* said Mr Sheltrane through their links, *"before going through last night's homework."*

Falco glanced back over his shoulder, in a silent warning of more to come. But Erlin seemed not to notice. Instead, he nodded towards the captive wind-ray.

"It really likes you."

"Yes." Jonquil waved, and a pulse of turquoise passed through the wind-ray. "But we've homework to—"

*"Two minutes, everyone, if you would."*

"Coming, sir," Erlin sent.

Jonquil walked away, heading for the cafeteria, not waiting for Erlin or Falco or anyone else to catch up with her. What she wanted was to rush out of here and head for home. Rendezvous with Mum and get away.

Behind her she could sense the presence of the floating wind-ray. And she felt the wind-ray watching her right back, if "watching" was the word.

*Dad. What are the proctors doing to you?*

Perhaps the Blackstones' family life was already over.

As she entered the cafeteria, public broadcasts tugged at her. Blinked into visibility, they showed as floating cubic images, the leftmost depicting Schaum City, and the quickglass warehouse shearing away. Text annotations confirmed twenty-three fatalities.

"My parents live there," said Erlin.

Jonquil had half noticed him coming up beside her.

"In Schaum City? Can you contact them?"

The rumour had been that Erlin's parents were dead. Mr Sheltrane had overheard the gossip and closed the discussion down.

Erlin's lips thinned. "Not possible."

Then he went to the table where Mr Sheltrane was waiting, without looking back to see if Jonquil was following. She wondered what she'd said.

Her link had channels that weren't just encrypted but off the normal scale, so no one would even realize transmission was occurring. Even so, she merely clicked her tongue to ping Mum's link, checking its status without sending an actual message.

*"Active."*

That was something. Mum was still OK, or at least not trapped inside a null-cell.

"Miss Blackstone? Jonquil? Are you all right?"

"Um, sorry sir. I'm fine."

"Then what piece of history will you be sharing with us this morning?"

She looked at the pitchers of indigoberry cordial set out at the tables, at her classmates taking their seats. Around them, the cafeteria was almost empty.

"Schrödinger's Cat, sir. I mean, since we're in a zoo, I thought... You know."

"Exotic animals, you mean? So would you like to go first?"

*"Darling?"* sounded in Jonquil's link.

"Um, sir, if you don't mind—"

"I'd like to begin, sir," said Erlin, interrupting. "If that's



OK."

"If you like. What's your subject?"

"Germs, sir."

"Ah." Mr Sheltrane nodded. "Germs it is, then."

"What's happening, Mum?" Jonquil subvocalized.

Trying to keep her throat muscles still so no one would see she was conversing.

*"There are proctors in the surrounding corridors. At the moment they're just keeping watch. But I'm closing down comms."*

Jonquil felt sick. This was a procedure her parents had drilled her in often, but she'd never believed she'd have to carry it out.

"What should I...?"

But she knew what to do.

*"Go to ground. Wait for rescue."*

Meaning an extraction team from Labyrinth.

"Mum, I love—"

But the link was silent.

When she was able to focus on her surroundings again, Erlin's holo images indicated that his talk on germs had gone further afield than she'd anticipated. A small rabbit wearing a blue suit – and standing upright – twitched his nose and announced his name was Peter Rabbit.

A slab of stone spotted with colour occupied another holo.

"This," Erlin said, "is lichen."

Like most of the class, Jonquil used her link to check the word, then looked more closely.

"A forgotten author called Beatrix Potter" – Erlin gestured towards Peter Rabbit – "realized that lichen was two separate species living in *symbiosis*. The scientists of her day rejected the idea and mocked her for being a stupid girl, which is why she became a writer, when she really wanted to be a biologist."

Erlin gestured a pulsing mass of colours into being.

"Six trillion human cells per body, with DNA in every nucleus, and *separate* DNA in the surroundings, in the mitochondria. A woman called Lyn Margolis realized that it meant, in the archaic past, one species of bacteria engulfed another and they continued to live in partnership. Every Earth-derived animal species contains that history."

Anita was looking fascinated. Falco, beside her, was annoyed.

"And you know," Erlin said to Anita, "that your bodyweight is ten percent bacteria?"

"Ew, gross."

"But accurate," Kiko said. "Symbiosis again?"

"At a different level, yeah." Erlin waved the holos into stillness. "You could say, we're just huge colonies of bacteria. With emergent properties."

Falco snorted.

"Very good," said Mr Sheltrane.

Jonquil thought about emergent properties, how a failure of quickglass could be caused by runaway smartbacteria, the tiny artificial nanoforms and femtostructures that made the glass intelligent and able to change its shape. Complex systems can show emergent simplicity, but their internal complexity also makes them prone to phase transitions: massive changes in properties. Changes characterised by sudden speed.

Just as a life can shift in an instant.

*Dad...*

She pinged Mum's link again. No reply.

"What—?"

Erlin was tapping her shoulder.

"It's your turn next."

Translucent orange sheets, curved like a skyball-player's shin-pads, pulsed out from a thin vertical line that represented a slit in a barrier. The curved sheets were wavefronts.

"With two slits," Jonquil said, "everyone knows what happens. Waves cancel or reinforce, right?"

Falco yawned.

Jonquil pointed at the far wall, where the interference pattern manifested as alternating bands of light and dark. Though an earlier discovery, it formed a foundation for quantum mechanics, a theory formed in 1926, when flappers were dancing the Charleston and karate came to mainland Japan from Okinawa, as Jonquil's subsidiary holos showed.

She gestured, and the light became pulses – representing photons – that hit the flat wall with a burst of brightness that stayed in place. The fluorescent spots built up to form the pattern of bright and dark bands.

"If light were really a particle, like a ball, it would go through either one slit or the other. But see the dark bands, where a ball can never end up? It obeys the interference pattern, as if it knew about both slits *or existed in two universes at the same time* until it hit the wall and retrospectively 'decided' which path it *had* followed."

"That's nuts," muttered Falco.

"Yes," said Mr Sheltrane, "it is. And can you explain *why* it's nuts?"

Falco folded his arms, shaking his head.

"I'm not surprised," continued Mr Sheltrane. "It kept humanity's brightest minds in a state of confusion for well over a hundred Standard Years. So carry on, Jonquil. Please."

Jonquil cleared away the images and formed a new one.

"Oh," said Anita. "He's pretty."

The white cat in the open-topped box had one blue eye and one green. Jonquil made sure not to look in Erlin's direction.

*What was I thinking of?*

Inside the box, the white cat winked. He looked unperturbed by the sudden addition of a glowing yellow bottle beside him. The bottle's label bore a skull-and-crossbones.

"That's poison," said Jonquil.

"Well, duh." Kiko.

A weird little apparatus including a small hammer popped into being.

"The details are irrelevant," Jonquil pointed. "It's just a mechanism that will trip at a random time and smash the bottle, releasing the poison."

Kiko shook her head.

"Anyway," added Jonquil, "it's time to seal him in."

She gestured a lid into being, and caused the box to be sealed, hiding cat and poison from sight.

"Now... Is the cat alive or dead? Has the poison bottle smashed yet?"

Even Falco looked interested. Morbidly interested.

"Schrödinger," Jonquil went on, "was a world-famous scientist who said the cat must be alive *and* dead, until we open the box. It's not just that we don't know the truth: there *is* no truth until someone looks."

Falco snorted. Amazingly, so did Erlin.

"Sorry." Erlin shrugged. "But that is daft, right?"

Kiko glared. "Schrödinger practically invented quantum physics, didn't you know?"

"Now, now," said Mr Sheltrane.

"But that's my point." Jonquil pointed again.

The lid disappeared and the cat leaped out, grinned at Kiko, then faded out of existence.

"Tell us." Mr Sheltrane was smiling.

"The point is," Jonquil said, "that Kiko's right. This was the Schrödinger's Cat *Paradox*, and most people missed the point. As in, why did he call it a paradox?"

"Ah," said Erlin.

Kiko blinked. "Because it wasn't true?"

"Sort of. Because a cat or a human being *is* either alive or dead, not both. But we're all made up of zillions of subatomic particles that act just like the photons, that *can* be in two states at the same time, until someone looks. So why can't...?"

She choked up.

"Jonquil?" Mr Sheltrane half rose from his seat. "Are you all right?"

"If you don't know whether someone's alive or dead," she made herself say, "you do know they're one or the other, you just have no way of—"

That was when she lost it, and stumbled away from the table, heading for the refresher chambers, leaving

Mr Sheltrane to delete her simulation. She pushed her way through the quickglass before it completely softened. Once inside the cubicle – bathroom and tiny lounge combined – she hardened the walls with a gesture.

And tried the covert channels in her link.

"Dad?"

Switching channels.

"Mum?"

Nothing.

Alive? Dead?

In the simulation, her cat had looked happy. But this was reality, where death was a hard fact that no one could escape.

She slumped to the quickglass floor, trying not to cry.

Failing.

A soft knock sounded in Jonquil's ear, but not in reality: the sealed refresher was soundproof. It was from her private channel with Anita.

*"You all right in there?"*

After a moment, Jonquil sent: "Yeah... Is everyone laughing out there?"

She felt heat in her face, as though embarrassing herself could possibly matter when Mum and Dad were in trouble.

*"No... Falco started to, but I put him straight."*

"Is he there now?"

*"You're joking. He's going back with those idiot pals of his."*

"To school?"

*"Where else? Old Shelly is worried about you, but I said we'd go together in a shuttle. There's one outside."*

Jonquil thought.

"I'm going home," she told Anita. "I'm not well. Tell Mr Sheltrane I'll start a monitor."

The software agent would follow her through the quickglass tunnels and walkways, informing Mr Sheltrane of her position and progress.

*"All right. I'll... see you."*

"Yeah."

And Anita was gone.

Jonquil triple-blinked to open her covert libraries and frameworks, and constructed an agent, just as she had told Anita she would. The difference was, every image and tuple the agent sent to Mr Sheltrane would be a fake.

She hated to trick him. But she remembered the silence from Dad's link, and Mum's. Not to mention Mum's order.

*Go to ground.*

She passed the day in meditation, or attempted

meditation. The refresher chamber was large enough for her to exercise in, so she worked her way through the movements her parents had taught her – *Dad, what are they doing to you?* – reinforcing the patterns of crouching and lunging, spinning and thrusting, that went beyond physical health.

There was no danger of someone trying to enter the refresher room to find out why it was occupied for hours on end. Visitors would see this chamber as occupied; the admin systems would see it as free.

Her clothes were smartfabric, but after exercising, she cleansed herself with smartgel anyway. She felt relaxed, smelling of oranges and honey.

*Mum, I'm sorry. I've only done half of what you told me.*

Jonquil had gone to ground, but without sending an activation signal to the hidden mu-space beacon. There was a small chance the transmission would be detected, the spillover radiation recognized for what it was. Which meant that someone might think to deepscan current prisoners, just in case they'd captured a Pilot – or two.

She waited, until eight Standard Hours had passed and the system informed her that the zoo was closed. Empty, apart from the specimens inside the enclosures.

*Now what?*

She tried her links once more. No acknowledgement.

*I'm frightened.*

She gestured, and the wall flowed viscously open. She stepped out into the hollow spookiness of a half-lit zoo without people, feeling very much alone.

The wind-ray still floated in his enclosure, beyond the containment field. In the semi-darkness, his wispy, gossamer form glimmered softly. Currently it was bluish and tinged with silver.

Jonquil gestured to the nearest wall, commanding the local system: "Tell me about Zajinets."

Her parents had told stories of the strange aliens that had been gone from this universe for so long. Mum and Dad knew things about Zajinets that realspace folk would not; but still, they were just old stories. She had paid no particular attention.

Inside her contact lenses, images of Zajinets moved: glowing frameworks of energy, clothed typically in eclectic styles, predominantly pebbles and larger stones, so that they looked living sculptures. Trolls, perhaps.

The core of each Zajinet was a three dimensional maze of glowing light: the physical manifestation of "superposed" minds: quantum behaviour at levels of being that should by all rights have collapsed to classical reality. And there was a faint sound, scraping... But it didn't come from the system. She blinked the holos out of existence.

*There can't be anyone here.*

The wind-ray still hung billowing in the centre of his enclosure, but his colours were shifting towards violet. Jonquil knew – somehow – that meant he had sensed something.

*Now!*

She spun, whipping her elbow back to thump the intruder, and continuing into the throw that he somehow twisted out of – *he's fast* – but it left his throat exposed so she hammered down to kill – *no!* – but pulled back and deflected, no time to stop the blow but enough to redirect to the collarbone, hitting it hard but not enough to break it.

Erlin's face twisted in pain, then cleared.

"Hell's teeth, Jonquil... That *hurt*."

"You sneaked up behind me."

"Yeah, but—" Erlin rubbed his chest. "You're not supposed to be here."

"What, and you *are*?"

His pale, mismatched eyes reminded her of the cat. Schrödinger's cat.

"You're in trouble," he said. "I decided to hang around."

He gestured towards the cafeteria. There was a balcony beyond.

What had he done? Hung outside from the exterior?

"Didn't Mr Sheltrane notice you didn't return to school?"

"He thought my guardian picked me up. I presume you pulled a similar trick."

Jonquil thought about the beacon she had yet to activate, and the extraction team that would come when it called.

"I'm not sure it matters," she said. "I doubt... I doubt I'll ever be going back to school."

"Oh," said Erlin.

Neither said anything for a moment. Jonquil turned to the enclosure, where the wind-ray had drifted close to the containment barrier. His wispy form shone stronger than before.

"Whatever happens," Jonquil said, "I'm not leaving without you."

A pulse of pinkness passed through the wind-ray.

"The wind-ray understood what you said." Erlin stared. "I could swear it did."

"*He did.*"

Erlin continued to stare. Then he blinked fast, calling up some virtual display. "The enclosure is secured at alpha level. I can't go that high."

"How would you even know that?"

Or be able to discover it.

"My legal guardian is a senior proctor. I managed to figure some things out."

Great. She was alone at night in a zoo, illegally, with a boy she hardly knew, whose guardian was a proctor. A

senior proctor.

Dad. Mum.

She made herself ask: "Why a guardian?"

"My parents—" Erlin stared towards the enclosure, but he wasn't really seeing the wind-ray. "I divorced them."

"Oh," said Jonquil. "Why did you do that?"

"Are you kidding?" Erlin turned back to her. "My mother believes in *astrology*."

"What? No."

"Well, she does." Then Erlin laughed. "That was the final straw for the Court AI."

After a minute, Jonquil said: "Do you think we could get the system to dispense some food? Without setting off alarms?"

She knew how to do it herself, but only by revealing her covert system toolkit.

"Yeah." Erlin gestured low-level interfaces into place. "I think we can manage that."

They shared the small meal together – neither had eaten for over eight hours – and it was pleasant, even without talking. Then it was time for Jonquil to do what she had to do.

First, free the wind-ray. Second, activate the mu-space beacon.

It might be days before the extraction team arrived. It might be sooner. She ought to fire off the beacon before anything else, but there was always a chance that someone was nearby in congruent mu-space, and if they entered realspace to rescue a fellow Pilot in distress – her – then they wouldn't hang around to free a caged specimen that might once have been a pet to an alien species that Pilots had fought against in war.

*What if they won't let me take him along?*

Either way, Erlin would have to be left behind. Not that he'd want to go with her, but the point was he was an ordinary human and she wasn't, not quite. Erlin could not survive in Labyrinth, or anywhere in the mu-space continuum.

Too much to think about.

She stopped.

"Erlin..."

"What?"

"I'm not like you."

"Um. Right."

"Look, I'm—Hell, just *look*."

She dabbed at her eyes.

"Bloody hell," said Erlin.

Obsidian eyes without whites. Black orbs that revealed exactly what she was: Pilot-born.

"Stand back," she said.

Satanin began to build up at the back of her eyes.

The pulse blast from the satanin-satanase reaction would blow out the containment field, releasing the wind-ray. There was nothing sophisticated about this. Golden lightning, and a freed wind-ray, and alarms blaring everywhere.

*Then we'll see.*

Pressure increasing inside her head, needing to burst free.

"Stop!" said Erlin.

It swirled inside, the need to let the energies rip out of her; but then a second interruption came: a ping from Mum along a covert channel.

Jonquil acknowledged, teeth clenched, trying not to loose the pent-up energy.

Mum's voice came through: "*Darling, are you all right? Have you activated the beacon?*"

"No. Just... No. "

*"Then that's good. The proctors took your father in, but he persuaded them to let him help them. He was able to analyse the smartvirus. It was a naturally evolved thing, not a... Are you all right?"*

"Yes." Jonquil spoke aloud, close to sobbing but trying to hide it. "I'm with a friend. I'm fine."

"Then I'll come and get you. You're not with Anita?"

"No." Jonquil looked at Erlin. "A new friend. You'll like him, Mum."

Silence for a moment, then: "Well. I expect I shall."

Erlin looked surprised.

"See you soon," Jonquil added.

*"Yes. Out."*

The pressure was subsiding now.

"Um," said Erlin.

"What is it?"

"I, er, know how to get the wind-ray out. Without setting off the alarms."

"You do? "

"I think so. Because of the cat. Schrödinger's Cat. It's your idea, really."

"Excuse me?" said Jonquil.

"Although a wind-ray," Erlin said, "isn't much like a cat at all."

For a long time she thought it wouldn't work. Erlin stood beside her as she concentrated her thoughts, making the wind-ray understand. As she did so, the wind-ray merely floated and billowed, glimmering softly.

"I don't think he—"

And then it began to happen.

"Look at him," said Erlin. "Just look."

The wind-ray began to fade.

*It can't be possible.*

But it was, and soon the wind-ray that remained inside the enclosure was a faint thing, drifting, dearly without the energy to sustain itself. Within days it would sicken and fade, and since no one understood wind-rays, the zoo system would be unable to save the thing.

It would dissipate into non-existence, and be gone forever.

"He did it." Erlin whooped, and for a second he looked like a ten-year-old. "I can't believe he managed it."

Even though it was his idea. Call it quantum replication.

Because the *second* wind-ray was growing brighter above Jonquil's right shoulder, as the wind-ray's alternative quantum state, its physical coordinates different in macroscopic term, became stronger than the first. Both wind-rays were one, coexisting for as long as necessary.

Long enough for Jonquil to take him home, after which he could allow his captive state to lessen all the way down to zero probability.

"Come on," Jonquil said to Erlin. "My mother's coming to get us. All three of us."

"All right."

Two humans – one of them sort of human – and a floating wind-ray made their way to the external quickglass balcony, protected from the glowing orange skies by the thinnest of quickglass membranes, entranced by the beauty of a world that was not their ancestral homeland, not for any of them.

Together in silence, like a single composite unit, they waited.

It was going to be fine.

© John Meaney 2014

## Photo Album: Evening Extravaganzas

From the disco to the ceilidh, the Hugo Shortlist to the Ambassadors' Ball, the play to the Scottish Falsetto Sock Puppet Theatre, we filled each evening with something everyone could enjoy.



## Photo Album: Silly Games

The less-serious games are a cornerstone of the Satellite experience; we're glad to see that the Eastercon crowd enjoyed them too!



## Programming Eastercon: a novice's tale

How many people realise that, when we won the bid to host the 64th Eastercon, half of our committee had been involved in running just 4 or 5 previous days' worth of conventions? Michael and I worked on all three previous Satellite conventions, whilst Carolyn came on board for Satellite 2. This meant I had previously organised about 75 programme items in total, over three different events. For an Eastercon we were going to need between 150 and 200. Quite a big step up!

And what sort of programme did we want to run? Previous Satellite conventions always had a strong science theme, but also with an emphasis on fun. We

definitely wanted to play to these strengths, but also to cover the breadth of SFF and to deliver on all the set pieces – GoH talks, BSFA Award Ceremony, Hay and BSFA lectures – expected of an Eastercon.

We primarily see Eastercon as an opportunity for the SFF community to come together and celebrate a shared interest in the many, varied and wonderful aspects of speculative fiction. Of course there should be room in the programme for serious debate on important topics such as gender, identity, the impact of technology etc. – but not to the point where discussion becomes divisive and people forget that we are all fellow fans. Satellite 4 also had the Worldcon

factor to contend with: Loncon 3 was just four months away and almost the entirety of UK fandom had been mobilised to help with that. So we were keen to spread the load and not overburden anyone with too many programme duties. Finally, we wanted to give new people the chance to be heard. Given that we received just 72 programme volunteer forms this led to a lot of time and effort seeking out extra contributors.

Huge thanks are due to the very many people who, in the two years leading to the event, came up with so many great suggestions for programme items – all of which ended up in my 'Special Little Black Book of Programme'. Having that resource to build from was incredibly helpful. I am also indebted to various long-standing fans who, when asked to suggest possible additional programme participants in particular areas, came up with excellent recommendations. The same must be said about those superb people who received emails along the lines of either (a) 'You may not remember this but you mentioned to me in passing, one late night in the bar, over 6 months ago, that you knew something about X – so could you run a workshop for us please?' or (b) 'You didn't actually volunteer to be on the Satellite 4 programme at all but I'm told you're very knowledgeable about Y, so would you consider being on a panel about it?'. You almost invariably said 'yes', and are officially stars! It would have been impossible to put a quality programme together without you all.

In the end, I hope that we came up with something that was interesting, enjoyable, and well balanced. One memory I will treasure is of Sunday morning's feedback sessions when someone said 'I've been to more programme items in the past two days than at the past two Eastercons, and I've still missed things I wanted to see'. If that was the general experience, then the time spent putting it all together was more than worthwhile.

## On gender

Everyone agrees that there is a need to encourage more women actively to participate in conventions. Where there is debate it is over the best mechanism to achieve this. When we bid to host Eastercon 2014 we made it clear that our aim was to achieve balanced programme participation overall, in line with the gender ratio of our membership, but that we would not adopt a strict gender parity system where each individual panel was obliged to have two female and two male participants. Creating an Eastercon programme is hard enough, and always constrained by the composition of the volunteer pool. Further, such quota systems e.g. female-only research fellowships, have been tried in the sciences and are widely agreed to have generated little real cultural change. Those who disagreed with us were welcome

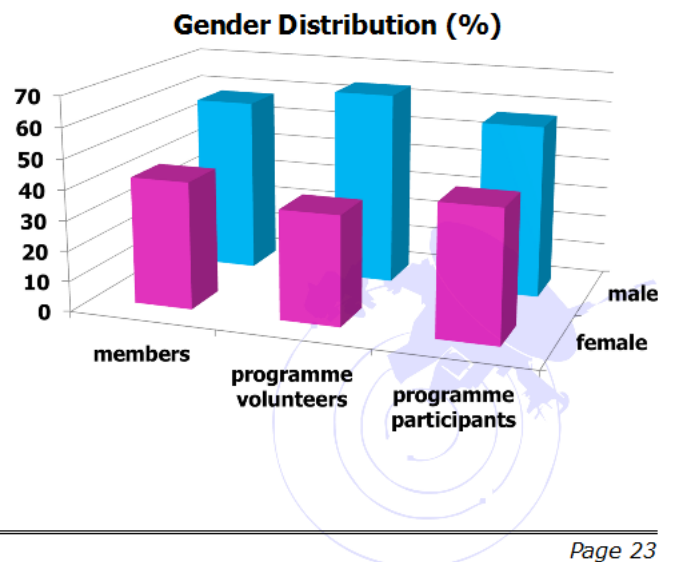
to vote against our Bid, in accordance with their personal principles. A few did. This was entirely appropriate.

Rather less appropriate was the volume of abuse we received by email in the following weeks, all from anonymous sources, of which comments such as 'anti-women' and 'traitor to your own gender' were milder examples. Although the committee decided not to discuss this in public until Satellite 4 was over, it soured the experience of winning the Bid for us all and would certainly make this particular woman think hard before participating in another Eastercon committee!

For those who like statistics, Satellite 4's are below. Our membership was 42% female and 58% male. Of our 72 programme volunteers 26 (36%) were female and 46 (64%) male. Of these 26 women, just 5 indicated interest and expertise in science, which represented a considerable challenge in terms of running an overall gender balanced, science-rich programme! However, using a combination of personal recommendations and mentoring we were able to encourage more women to come forward. In the end we had 199 programme participants, of which 85 (43%) were female and 114 (57%) male, almost exactly the same balance as our membership and a substantial uplift in female participation relative to our initial volunteer pool. So we achieved what we set out to do. There were a few single-sex panels (both all-female and all-male) but only where no suitable participants of the unrepresented gender could be found or where we made a deliberate decision because of the nature of the topic (e.g. the all-female 'Women in Science and SFF Panel').

Satellite 4 was the 3<sup>rd</sup> Eastercon since 1948 to have a gender balanced committee (and the first since 1960). It was the 4<sup>th</sup> Eastercon to have a gender balanced GoH list. It was the first ever Eastercon to have both.

*Christine (Bringer of Jollity)*



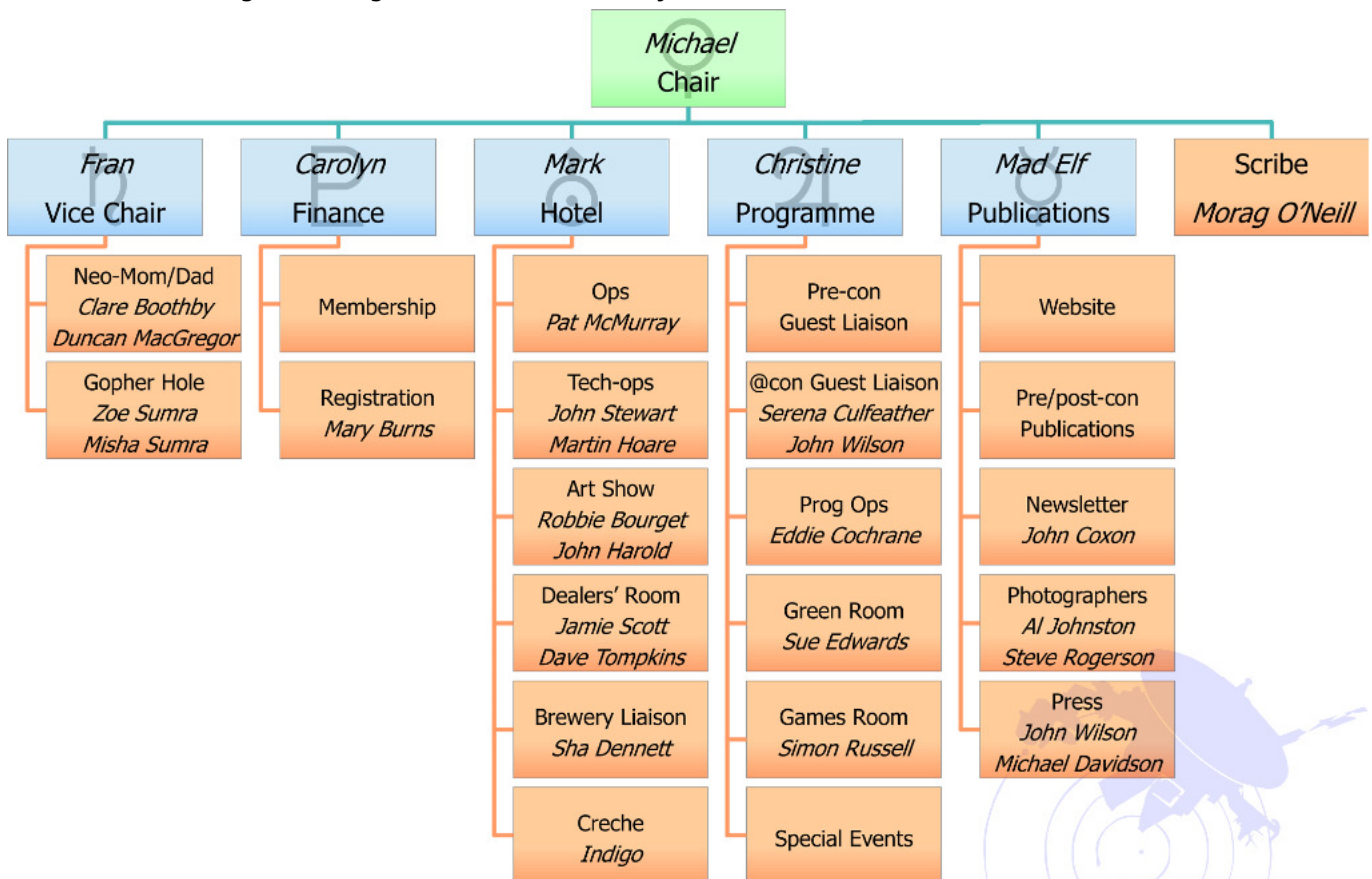
# Photo Album: Arts and Crafts

Craft workshops are another favourite of the Satellite series, and Satellite 4 had several: making pigeons for Loncon, sock puppets, sign painting, knitting, chaos costuming, origami... plenty of fun for fans of all ages!



## Satellite 4 Organogram

We've included our organogram here to give you an idea of how the various chains of responsibility hung together pre-con and at-con, and also as an excuse to display the names and jobs of our senior staff, without whom Satellite 4 would never have got off the ground. Here's to our Trojans!





## Photo Album: Opening and Closing Ceremonies

Some scenes from the Beta and Psi of the convention – hey, stuff happened before and after them, so they can't exactly be the Alpha and Omega!



« Our Guest of Honour Plaque, a unique memento commissioned from Beantighe.

## A Word from Alice and Steve

So, there we were at Novacon and Michael and Christine asked to talk to us. We went off to a corner to have a chat which is when they invited us to be fan guests at Satellite 4. After checking they had not made a mistake and thought they were talking to someone else, we told them we would be more than delighted. After they left we looked at each other and said "did that really happen?"

It was a great honour and we both enjoyed ourselves very much. Being a guest at a convention really gives a different perspective. For us, being on panels meant we went to a lot more programme than normal and that was great. When we looked back we realised that although Steve had attended Eastercons and other conventions before we met, Satellite 4 was actually the 25th Eastercon we had been to together and one we will remember for a long time.

(Steve: *Yorkcon 1 was my first Eastercon in 1979 and I haven't missed one since.*)

Of course after 25 years of attending Eastercon and other conventions we have lots of memories and thought we would share some with you. Some of you might know these stories already and apologies for boring you. Also bear in mind some of these happened a long time ago and our memory might not

be what it was. (At least, that is our excuse ☺)

We started this article by trying to list all the conventions and finding stories for each one, but that did get a bit tedious, so we are just going to tell you some stories in no particular order apart from that first Eastercon we attended together.



Picture the scene early in 1989, we were newly engaged and planning our wedding. "Where are you going on honeymoon" was a frequent question from family. "Jersey" we replied. "Oh that is lovely, but what about somewhere warm

such as Spain or Tenerife?"... "The Eastercon is not happening in Spain or Tenerife". This was met with blank looks from all our family. However we stuck to our guns and Jersey and Contrivance was our honeymoon. It was the first time Eastercon was held in Jersey, and we rented a flat in a block by the sea. If memory serves most, if not all of the other flats were also full of fans. We had a great time at the convention, but most of the memories are around the terrific eating out we did.

(Alice: *It was the first time I had met most fans as I did not really attend conventions before Steve and I got together. So a big memory for me is meeting people who are still friends today.*)

The first Eastercon committee we were on was Illumination in Blackpool in 1992. Not one of the people involved had ever been on an Eastercon committee before, so we made it up as we went along. There are many stories about the Norbreck Castle Hotel, including during one visit asking what the vegetarian option was to be, "*Chicken Korma*" was the response, yes really! But the story people will remember most is the great mushroom scandal. As a dutiful committee we impressed on the hotel that although mushrooms were not normally served at breakfast it was important that they did so when we were there. They agreed and we were happy. For some reason we thought it would be a good idea to have committee breakfast meetings which the hotel delivered to us all. We were all very pleased to see mushrooms were served and patted ourselves on the back for getting the hotel on board. Later that day first day, bumping into some fans we asked how was breakfast and did they enjoy the mushrooms. They looked at us oddly and asked where we had eaten. "*The committee all had breakfast together,*" we replied cheerfully. "*And did you enjoy the mushrooms,*" they said pointedly. "*Oh yes they were lovely.*"

After a second or two we realised there was a problem. It turned out that the only people in the hotel to get mushrooms were the committee, oops... Well you can imagine the field day the newsletter had with that. We raised this with the manager, he later found Alice to tell her he now had a cupboard full of mushrooms and all he needed was a gopher to peel them. All's well then ends well.

During one of our visits we had a good look around and found a door that somehow seemed to urge us to open it. So we did. And found ourselves in what became known as the haunted disco. It was what could only be a leftover from the 70's, designed to look like a glittery cave with lots of glitter balls. Not quite sure it was haunted but certainly looked as though people had left sometime in the mid 70's and just shut the door behind them. Very odd, and such a big unused space which would have been good fun to ask for if not for the fact we were trespassing. Which of course did not stop other fans having trips to have a look around.

Geoff Ryman and the then fairly unknown Paul McAulay were our guests and we remember having to talk them down from wanting to interview each other on a bouncy castle. The firework display which kept setting off all the car alarms in the car park was also fun.

Being in the ops rooms and hearing the radio crackle and then a voice asking how many people wanted Soya sauce was interesting. We often wondered what the takeaway place thought about someone in the queue taking orders over the radio.

Talking of takeaways reminds us of being at the first Incon in Derby 1992. This was a small relaxacon and one of the events at the con was a toga party. Steve decided that as David Cooper had a room in the hotel he would change into his toga there. He then realised that he had left his tankard in our room in the B&B round the corner from the hotel. This being in the dark ages before mobile phones he would have to go to the B&B to collect it. Looking out of the window he could see the our room across the rooftops from where he was in the hotel. After being at a beer tasting earlier that day it seemed to him like the quickest way to get there was straight across the rooftops. So yes, he leapt across the roof in a toga and knocked on our room window. To say Alice was not impressed is an understatement.

Later that night a lot of us decided to go for kebabs. So off we went complete with togas. While we were there Terry Pratchett, who was one of the guests of honour turned up and ordered a kebab. The chap looked at him and said, "*You're Terry Pratchett aren't you?*" to which Terry reply that he was indeed. The chap then said, "*your famous aren't you?*" to which Terry bashfully admitted he might be. "*Right then that's 20p off your kebab*" The look on Terry's face was marvellous. The other guest of honour at that convention was Robert Rankin. We guessed it was probably one of the first times he had been guest when he wandered around telling everyone, and we mean everyone, that there was a room party in his room. I think the hotel forgave the broken jacuzzi bath and that is all we are saying about that one.

Another Incon was held at Scotch Corner. It was called Inconsistent because it was not Scotch and not on a corner and that gives you a flavour of the kind of convention this was. They held all holiday occasions over the one weekend. So there was an hour given to each of the patron Saints and people had to host something with a flavour of their country, for example St Andrews hour had Ian Sorensen reading from *Trainspotting*. He did try to get Alice to read from it as well, but she could not understand it. The Irish Fans had a great big map of Ireland showing where all the different fans groups were. We were also taught an Irish song by James Bacon. This was in Gaelic and we are still not convinced that he wasn't teaching us rude songs. There was also a children's party, complete with jelly and ice cream and of course pass the parcel. So there we all were in a big circle sending the parcel around and Simo became bored and decided he was going to be a human parcel going round the opposite direction. He forgot about James Bacon and friends who were part of the circle. When Simo landed on James lap he was stripped down to his underpants and sent on his way round. His shoe was thrown out the window and landed on a lorry just leaving the car park. When the music next stopped Simo and the parcel both landed on Alice. So dilemma, open the parcel or complete stripping Simo. Sitting next to Alice

was Fran Dowd who had on an amazing Easter Bonnet (*Easter Holiday was earlier that day*). This bonnet was full of Catholic tat, including a holy water container which was full of jam. So rather than stripping Simo, Alice took a scoop of jam and put in down the back of his pants and sent him on his way. Not sure which he was most embarrassed about.



Novacon is a convention close to our hearts as we have served on the committee for 11 and 19 years respectively. After all that time they do tend to meld into one another, but always with affection. It is where we spend time with friends and relax even when being on the committee. Over the years Novacon has been held in many different hotels and

will probably move again at some point, but wherever it is, it is always Novacon. One thing about Novacon, we love and Steve in particular is the opportunity to dress up. This is a photo of us dressed up to support our guest H. G. Wells. AKA Ian Watson.

Another Eastercon memory is Alice as chair of Paragon 1 sitting having a quiet moment late one evening and Chris Bell came and told her she was needed in the foyer urgently. The foyer had a huge statue of Neptune and as she went through Alice wondered why there was a group of people staring at the statue. She looked up, and there on top of his trident was a giant slice of toast. It took a moment to realise what she was looking at then another to think, "*bloody hell someone actually climbed up there*". The next thought was what the hotel would say, then she spotted the hotel manager hiding behind a plant doubled up laughing.

Paragon 2 was held the Easter that the BBC brought Doctor Who back. The tech team had a nightmare trying to get a TV signal so we could watch it. The signal would come and go. However on the night it worked fine and it is a nice memory, watching that first episode with lots of other fans... And to top it all Fran Dowd (*who was a sofa and not a chair that year*) sat in the front which meant we were all hiding behind the sofa. Oh, and there were jelly babies.

Of course for both of us the memory of receiving the Doc Weir award is something we will never forget. When they announced Steve in 2006 he had left the room to sort a problem. And as Kari was describing the winner for 2010, Alice turned to Kate and said "*I must know who this is but I can't put my finger on it*". It was a great honour for both of us and something we are both very proud of.

Another convention that allows us this opportunity to have loads of fun and dress up is the terrific Ploktacons. We thoroughly enjoyed being pirates. We have also been involved in various productions by a certain Mr Sorensen. These are always fun, well at least for us, and something we thoroughly enjoy.



Of course our newest memories are of Loncon 3. For Alice running a Worldcon was an amazing if somewhat exhausting experience. (Alice: *but one I would not change*.) (Steve: *a very exhausting experience*.) Looking at the fan village and seeing many people having fun is a nice memory, as is hearing people rave about the programme. Yes we know we don't go to programme, but it was nice to know the team put together a programme that other people wanted to go to. Meeting Peter Davison and David Tennant of course is going to be a special memory for a long long time.



There are many more conventions and memories, however there too many to write about here. But thinking about it, most of our convention memories are usually tied up with seeing friends and in particular those who we may only see at conventions. We attend occasional programme items, but in the main catching up with friends is what makes our convention. As mentioned at the beginning being guests and being on panels has given us a new fondness for programme and we will be trying to attend more. So thanks again for the great honour. And borrowing words from a wise friend called Eve, we know we have had a good convention when we have caught up with old friends and made a new ones. So thank you to all for making our year's con going fun and we look forward to seeing you all soon.

Alice and Steve Lawson

# Photo Album: The Guests

Some pictures of our Guests around the con: Guests of Honour, Special Guest, Guests Emeritus, and Day Guests.



# Photo Album: Traditional Programme Items

We did our best to bring you a programme packed with a wide variety of serious and humorous items of various kinds.





## Astronomy – amazing subject, amazing universe

### One hundred years ago



One hundred years ago our astronomical understanding was very different from today. We did not know about the Big Bang or the expansion of the Universe, nor about its age and scale. Inflation and dark energy were beyond our imagination, as was the Cosmic Microwave Background radiation. We

barely knew of galaxies beyond the Milky Way and were ignorant of clusters of galaxies and dark matter. Active Galactic Nuclei, black holes and jets were unknown to us. We had not seen neutral hydrogen or Giant Molecular Clouds. Indeed the only astronomy done was in the visual band so the idea that one could observe at other wavelengths was alien to us. Cosmic rays were just being discovered; that we could study the universe through them or through other particles was also a foreign idea. We did not yet know what stars were made of, what their energy source was, or how they evolved. Things like exoplanets, space flight and the exploration of the solar system were only found in science fiction; Pluto had not yet been discovered and trans-Neptunian objects were unknown.

We have come a long way in one hundred years! This has been made possible by funding from our Governments, foundations and private individuals, and the support of industry. Also we have had amongst us some very smart people – astrophysicists, engineers and ICT specialists – and there have been brilliant technical innovations which have opened up the universe to us.

### ‘Astronomical Treasures’

I was asked a few years ago to talk about the things that I felt were ‘treasures of the universe’ or astronomical treasures. Each of us will have our own list of astronomical treasures, but some of the remarkable developments that I believe deserve to be treasured are:

- a) the COBE satellite data showing that the Cosmic Microwave Background radiation perfectly fits a blackbody spectrum (with temperature 2.74K).
- b) the Gehz – Genzel infrared observations over a number of years of the motions of stars within one parsec of the Galactic centre, showing that the stars move in curved tracks because they are diverted from straight lines by the gravity of a black hole at Sagittarius A\*. The black hole has a mass of  $4 \times 10^6$  solar masses; this looks large but actually is quite small for a black hole at the centre of a galaxy. You can see the movie at:

[www.astro.ucla.edu/~gehgzgroup/gc/pictures/orbitsMovie.shtml](http://www.astro.ucla.edu/~gehgzgroup/gc/pictures/orbitsMovie.shtml)

- c) the staggering number of exoplanets now being found. The rate of discovery gets faster and faster! At the time of writing (April 2014) almost a thousand are known, many of them in multiple systems, and when we look at the night sky we need to remind ourselves that there are as many planets up there as there are stars; and finally

- d) the exquisite images now becoming available with wonderful clarity and detail (Figure 1).

### Astronomy in our cultures

Astronomy is not and never has been the preserve of the professionals only; there is great public interest and considerable non-professional participation.

Amateurs have helped find comets and observe variable stars, and now a million people at a time participate in Citizen Science programmes helping us with the flood of data we now experience. So the public help search for pulsars, classify galaxies, identify small craters on the moon and scan Spitzer images (see for example, <https://www.zooniverse.org>) The concept is being extended beyond astronomy to the identification of people or places in old photographs, and the scrutiny of old ships' log books to determine the weather in the past.

Chinese astronomers in previous centuries noted 'guest stars' (supernovae – Figure 2) and their records have been invaluable in identifying historic supernovae.

Our ancestors were much more aware of the night sky and different cultures gave different names to the main objects in the night sky. Some alternative names for the Milky Way are: The Silver Street (Celtic); The Silver River (China); River of Fire (ancient Hebrew); The Backbone of the Night (Kalahari); Silver River Water (Korean); The Long Fish (Maori); The Place where the Lightning Rests (Setswana); Silicon River (Siberia); The Winter Road (Sweden); and The Way of the White Elephant (Thai). Astronomy enters our culture in other ways too – as inspiration for music, painting and poetry, and it is interesting to explore these portrayals of our subject and revealing to us to see what astronomical topics have caught the attention of poets, painters and musicians.

## The next hundred years?

What of the future? The hectic pace will continue, not least because of the telescopes we have operating right now! New telescopes such as ALMA (Atacama Large Millimetre Array) in Chile and the European low frequency radio telescope LOFAR will come fully on line. We look forward to large optical telescopes such as LSST (Large Synoptic Survey Telescope), and at least one thirty metre telescope like E-ELT (European Extremely Large Telescope), both of which will probably also be built in Chile. There will be the large radio telescopes SKA (Square Kilometre Array) in Southern Africa and Australia, and the Chinese FAST (being built in Guizhou province). It is hard to imagine where we will be in terms of astrophysical understanding, but we will have a greater awareness of transient objects, pulsars will have tested Einstein's theory of gravity to destruction (or not) and we will likely have found signs of life on an exoplanet. Understanding dark matter will have brought about a revolution in physics and understanding dark energy will probably have forced a change in the way we think about the universe – a paradigm shift. In a hundred years' time people will look back and be amazed at our naivety!

*Dame Jocelyn Bell Burnell*

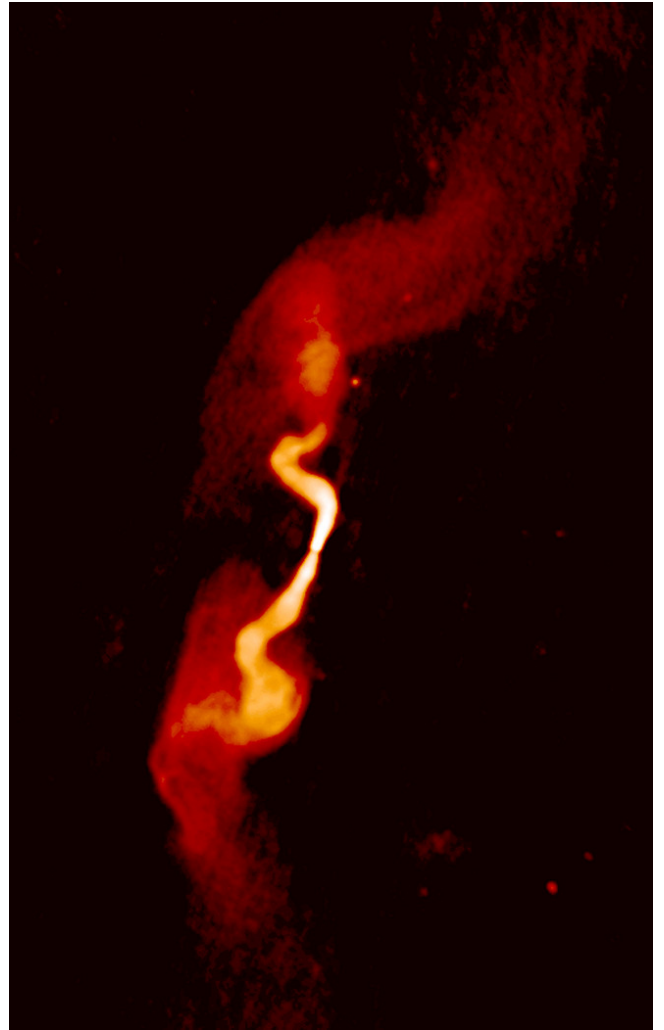


Figure 1: Very Large Array map (1.4GHz) of the radio galaxy 3C31. Image courtesy of NRAO/AUI



Crab Nebula • M1  
Hubble Space Telescope • WFPC2

NASA, ESA, and J. Hester (Arizona State University)

STScI-PRC05-37

Figure 2: Hubble Space Telescope image of the Crab Nebula

# Photo Album: Other Attractions

No Eastercon would be complete without the Art Show, Dealers' Room, Fan Tables, Games Room, and Con Bar.





# Membership

## Membership numbers by type

Type	Pre-con	On the Door					Total
		Full	Fri	Sat	Sun	Mon	
Adult	571	15	9	38	2	3	<b>638</b>
Unwaged	108	6	1	2	2		<b>119</b>
Supporting	7	-1		-2			<b>4</b>
Junior	31		2	7			<b>40</b>
Child	16		2	2			<b>20</b>
Infant	10						<b>10</b>
Guests*	14						<b>14</b>
Apocrypha	22	5					<b>27</b>
<b>Total</b>	<b>779</b>	<b>25</b>	<b>14</b>	<b>47</b>	<b>4</b>	<b>3</b>	<b>872</b>

\* - Including GoHs, Guests Emeritus, Day Guests, etc.

## Membership numbers by country

Country	Num	Country	Num
Belgium	1	Netherlands	7
Czech Republic	1	Norway	10
Finland	3	Russia	1
France	2	Spain	3
Germany	6	Sweden	10
Ireland	9	Switzerland	2
Israel	2	United Kingdom	795
Malaysia	1	United States	19

We had fifty or so no-shows, so the total number of people through the doors was somewhere in the region of **790**, with a likely maximum of **750** on-site on the Saturday.

## Membership List (suppressed for web publication)

