

40 Years in the Desert

Volume 3
Number 1

The Further Adventures of Matthew Saroff, Itinerant Engineer¹

Coming to you once again from beautiful Erie³, Pennsylvania: yet another in my continuing series copyright infringements masquerading as insightful examinations of the human condition.TM In this issue, we discuss the greater significance of the parsley garnish, and the perverse British fascination with overcooked Brussel Sprouts⁴.

I've been married for 9 months now, and this reminds me of the story of the man who jumped off a 40 story building. At the 20th floor, this man was heard to say, "So far, so good." Sharon and I are very happy, though Sharon desperately wants to get out of Erie³.

I think that it has something to do with a general atmosphere in Erie³ very close to Chetchnya. Pennsylvania policy⁷ regarding special education, along with the generally depressed nature of Erie³, does not lend itself to much in the way of professional challenges for my Sweet Baboo[®].

I am currently engaged in a rigorous exploration of the jelly bean theory of marriage.⁸ It's a dirty job, but someone has to do it. You should have seen the grant application. **Please do not ask for copies of the proposal.**

Life with the 4 cats⁹ is going ok. Three of the four are enjoying each other's company and, well, being cats. I have a much more laissez-faire attitude about the cats than Sharon. I figure if they are, for example, going after food on the counter tops, this is because the food is there, and it's **our** fault. Sharon, on the other hand, attempts to discipline the cats. The phrase, "Pissing into the wind" comes to mind. I support her valiant, though futile, efforts to civilize the cats in the name of *Shalom Biet*¹¹.

Of course, the mere fact that she puts up with me more than makes up for the fact that she is deluded enough to believe that cats

are something other than an irresistible elemental force of nature¹², cute fuzzy gods, or an evil alien invasion force that has **already** taken over the world.

You may have noticed that I have expanded *40 Years in the Desert* again. I am being a little bit more sophisticated in how I set this up. I am now using a Postscript laser printer for my proofs, and I am then having the final mechanicals done on a Linotronic photo-typesetter. I have now gone to 4 pages (sort of). I have also gone from end-noting to foot noting. Hopefully all this should improve the general readability of this piece of foolscap. However, I make no guarantees as to the quality of either the writing or the thinking present here.

Of course, the most important change in this *40 Years in the Desert* is the fact that I am not ranting about something stupid going on with *Arisia*. I have been following comings and goings with *Arisia*, and there are still a myriad structural and personnel problems, but I have developed a better perspective. Getting married has mellowed me out a bit.



"We can imagine no reason why, with ordinary care, human toes could not be left out of chewing tobacco, and if toes are found in chewing tobacco, it seems to us that somebody has been very careless."

Mississippi Supreme Court, Pillars v. R.J. Reynolds Tobacco Co., 1918.²

What We Did on Our Vacation

Over July 4th Weekend, Sharon and I spent a few days in Toronto, Canada, so I thought that I give you a (mercifully) brief rundown of what happened.

We stayed in Mississagua, about 30 miles from Toronto, in the Glen Erin Inn. It's a small (roughly 20 room) place that was converted

1.Also sometime truck driver and minor scofflaw.

2. Thanks to A. Joseph Ross, J.D for supplying this quote. Truth is indeed stranger than fiction.

3.AKA, "The Mistake by the Lake"

4.There is **NO** greater significance of the parsley garnish, and the perverse British fascination with overcooked Brussel Sprouts.⁵ Discussion over.

5.Actually, there is a theory that the infamous British mole Kim Philby defected because of British cuisine. Most people would kill their own parents to escape overdone Brussel Sprouts in mint sauce⁶. Ok, so I lied. The discussion is **really** over now.

6.Oh, I give up. The purpose of overdone British Cuisine in general, Brussel Sprouts in mint sauce in particular, and British food in general is to remind all cat owners that there are worse things in this world than cleaning the cat box. Yet again, inescapable logic has shown that any discussion of humanity inevitably, when taken to its logical conclusion, will conclusively demonstrate that the true purpose of humanity is to serve our cats. **OK!!!** I've admitted it now!! **Will you please get off my keyboard now Tudza? I cyn't tpuye wit u oom te kyebd.**

7.Which defines "Inclusion" as a process by which money is saved by putting special needs children in a closet in the back of the class while being tended by a 19 year-old who is being paid minimum wage.

8.Just what the jelly bean theory of marriage might be is none of your business, but it's a **lot** more scientific than most of the work done by Pons and Fleishman.

9.Lavi (Young Lion), Tudza (Rabbit), Bronwyn (White Breast), and Elyn (The Red¹⁰). They are black, tortoise shell, Jellico (tuxedo cat), and ginger respectively.

10.Elyn is not so named because she is a ginger cat. Rather it is the fact that she has the temperament of Joseph Stalin. Make sure that you never confuse this cat with a teddy bear named after Leon Trotsky.

11.Hebrew, meaning peace in the house or family. The Sephardic pronunciation was given above, the Ashkenaz pronunciation is "Shalom Bies".

12.In fact, I have on fairly good authority (Tudza), that cats are, in fact, the *Great Old Ones* responsible for imprisoning *Chulhu* beneath *R'lyeh*¹³.

13.To be completely honest, Tudza did not claim to be a *Great Old One*, but rather he claimed that cats were their masters. I almost believed him, but he laid it on a bit too thick. I think that it was the bit about *Yog Sothoth* meekly cleaning the cat box that overstrained my credulity.

from a wealthy businessman's 30 room summer house. Before it was an inn, was a girls' school, a corporate rest home, a novitiate, and a synagogue.

Luckily for us, they had a special on rates for Canada Day. It's fairly dear otherwise.

The Hockey Hall of Fame is located in Toronto, and as Sharon is a die hard hockey fan, we went to see the place. The Hall of fame is located in an old bank building on the corner of a block that has been converted into a mall. They were filming a mini-series when we were there called *Degree of Guilt*. We watched them film for about 45 minutes.

As I really don't care about hockey, it wasn't that interesting, but it has a much nicer layout than that of the pro football hall of fame. I was hoping to see **Gordie Howe's teeth** on display, but there was no such excitement, but on the top floor of the museum, where the bank lobby used to be, there was a marvelous stained glass dome. It was almost worth the price of admission.

We also visited the only commercial brewery still operating in Toronto, Upper Canada¹⁴ Breweries. They make both lagers and true¹⁵ ales. We went on the tour, and I sampled some of their brews¹⁶. I have the addresses of some of the distributors if you are interested.

My general sense of Toronto is that it very much a major international city. I also find it very similar to San Francisco. There is a fairly large Chinatown and a number of very good museums.

We went to the Royal Ontario Museum. It has a fairly extensive historical collection.

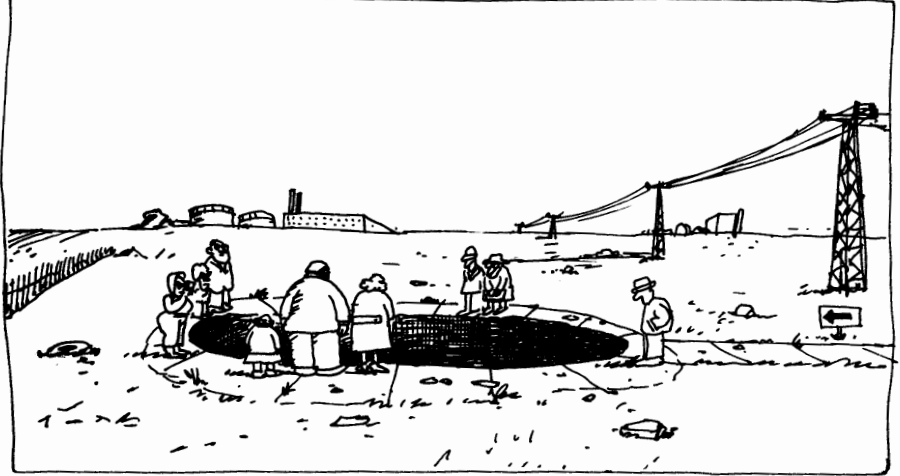
We also went to *Casa Loma*, which was at one point the residence of a wealthy financier in Toronto. I noticed something when I was oing and ahing over the elevator, the marble inlaid floors, viewing towers, and extensive garden: **intense disgust bordering on repulsion**. It was the most wretched excess that I have **ever** seen in my life. One of the goals of the man that built this place was to be able to host the king of England, and have him feel perfectly at home.

I think that my family history (on my mother's side at least) of socialist labor activists might have a bit to do with my feelings, but there is a point where opulence crosses a line and becomes gross.

We also took the elevator ride up the CN Tower, the tallest man made structure in the world. At the intermediate level (1300 feet!) there is a glass floor that can stand on and look down from. I found it a rather unpleasant vertigo-inducing experience. Sharon, having a fear of heights decided not to experience this at all, which seems to indicate that, except for marrying me, she is a wise woman.

The tour guides told us that the glass floor could accommodate up to four elephants. When I asked them, "How many heavyset women with spike heels is that?", they had no answer.

The Nixon Monument



Surfing the 'Net and Other Weirdness

Please note my new internet address: msaroff@moose.erie.net. Sharon can be reached at sindara@moose.erie.net. The old address will work for the moment, but this one is for a commercial service provider in Erie. It's about thirty dollars a month for Sharon and me, and that includes SLIP¹⁷ access. Yes, now I can browse the net and come across an anarchist tract published in the early 1900s called *Sabotage*, browse the White House web page (and see a picture of Socks), and look up a list of the worst web pages on the net. The Internet seems dedicated to validating Sturgeon's law¹⁹

By the way²⁰, if you are beginning to think that the Internet is everywhere, it is. I just saw an article posted to the Usenet²¹ group [misc.jobs.offered](#) for **A Cow Milker**. Needless to say, the image of a cow having its udder fondled by a computer nerd, complete with complexion problem, belt calculator, and plastic pocket protector is bizarre. **I am very certain that there is at least one cow in this world that not even the most determined optimist could possibly define as "contented"**.

Of course, there is a **brighter** side to this. Milking a cow is likely to be closer to a nipple than this individual has ever gotten before.

And Now to Yet Another Place with all the Excitement and Social Development of the Internet

I am, of course, referring to the Society for Creative Anachronism (SCA), and more specifically it's largest event the Pennsic War. Presented

14. For those of you not up on Canadian history, before the British conquered French Canada, English speaking Canada was known as Upper Canada, and French speaking Canada was known as Lower Canada. The name **could** be considered a bit of a political statement.

15. A lager is brewed with a bottom brewing yeast at a cold temperature (1°C), and an ale is brewed at a higher temperature (5°-8°C) with a top brewing yeast. There are a lot of "phony" ales marked in the US that are made from the lager process, with the recipe just tweaked a bit to give an ale-like flavor.

16. Since they only allow 4 samples for a person, I can only review 4 of the brews. The wheat beer was the least disgusting that I have ever drunk, (I don't like wheat beer); their pale ale was pretty good; their bitter ale, Publican, was ok, but I'm not a big fan of bitter ales; their malt liquor, Rebellion, was excellent, I rate it as a must drink.

17.SLIP is a protocol that allows a modem to mimic a TCP/IP¹⁸ connection directly on the Internet. This allows one to use graphical World Wide Web browsers, like Netscape and Mosaic, via modem. It also allows one to multitask after a fashion.

18.If you are at a cocktail party, and you use the terms SLIP and TCP/IP without either blushing or feeling silly, **GET A LIFE. DON'T WAIT FOR THE NEXT STAR TREK SERIES, DO IT NOW!!!**

19.Sturgeon's law states that 90% of everything is crap. This law was created by the noted science fiction author Theodore Sturgeon, not the fish.

20.Stated as "BTW" in Internet jargon.

21.Usenet is a messaging system where public postings are distributed across the Internet. It uses far less network resources, or *bandwidth*, and storage space than using a mailing list which post letters individually to users. Essentially it allows users on the same system to view one file with a message, as opposed to having each subscriber receive an individual file. It works like a bulletin board, in which many people read a single notice. Mailing lists work like a direct mail campaign.

for your consideration: 9000 people living in close proximity to each other with marginal sanitation facilities in tents. This is a relatively accurate simulation of the horror and privation that occurred during prolonged sieges. Luckily, there is a **lot** of beer.

Of course, there will be a **Greater Horror** at Pennsic this year. Sharon and I will be renewing our vows in a period (Basra c1500) Sephardic wedding. At this point, it seems like my side of the wedding party will be outnumbered by her side by at **least** 10 to 1²².

What Exactly Does He Do at Work?

I am lead structural engineer for the **blower cab** for the GE **AC6000** locomotive, GE's new advanced technology, high power locomotive.

To explain how this technology developed, we'll begin with a little history of the locomotive: **In the beginning, there was steam.** The original steam locomotives, while a great improvement over the horse, have some problems. The first is that a steam engine, is only about 5% efficient. The technology also requires that you have a crew operating each locomotive. You only get about 7% tractive effort ($\frac{\text{pull}}{\text{weight}}$). Steam locomotives have a short range. They must tank up and add water every few hundred miles²³.

In the 1930s, the first Diesel-Electric locomotive was marketed by the Elector-Motive Division (EMD) of GM. These locomotives provided higher tractive effort (20-25%), higher fuel economy (25-30% efficient), and lower maintenance. In addition, you could have one crew run a string of engines from the lead locomotive.

At first, these locomotives used a DC-DC system, with a direct current generator which was driven by a 2-stroke Diesel engine and the DC motors on the axles converted the power back to forward motion. At this time, GE supplied the control electronics, generator, and traction motor, and the only locomotive that it made were externally powered (from a catenary or third rail) locomotives and transit cars.

The problem with a DC-DC system is that you have brushes which wear out, go out of balance, and short out. This problem was solved with the development of compact rectifiers in the early 1950s. This eliminates generator brushes, which now becomes an **alternator**, and efficiency and reliability improves markedly.

By this point, there are only two serious players in the Locomotive market, EMD and ALCO²⁴ (American Locomotive Company, the final survivor of the old steam locomotive manufacturers), which, like GE, used a 4-stroke diesel. GE was doing good business supplying electronic controls, alternators, and traction motors to both companies.

In 1959, GE came out with its first domestic Diesel-Electric locomotive, the **U-25**. The **U-boats**, as they were known, quickly became a major player in the locomotive industry. This eventually forced ALCO out of the locomotive field in the early 1970s. It was purchased by Bombardier Corp, and became its transit division. The development of AC traction motors had to wait for the development of improved control electronics in the late 1980s. DC motors are easy to control, simply needing to control current. In a variable speed AC motor, one has to control current, voltage, frequency, and phase.

Until the late 1980s the technology available for high power solid-state inverters did not exist. The inverters capable of the job were big, expensive, and unreliable.



“Remember me, Mr. Schneider? Kenya. 1947. If you're going to shoot at an elephant, Mr. Schneider, you better be prepared to finish the job.”

The obvious question then is, “why bother developing AC traction motors at all?” The answer comes down to the basic properties inherent in DC motors. Because DC motors use brushes, they are easily controlled, but the brushes wear out, short out (it's called “flash over”), and require maintenance (swapping out brushes on traction motors is one of the less pleasant maintenance tasks for a railroad). A DC motor is also speed limited and heat limited at maximum torque. Above a certain speed wear on the brushes becomes excessive, and at high torque, the commutator will heat unevenly and shave chunks off the brushes.

AC motors, in addition to being more reliable, develop more traction. Wheel slip is controlled because motor speed is controlled by frequency (when a DC motor begins to slip, it runs away²⁵), a lower ratio gearing can be used (because the motor can run faster), and the motor has more low speed continuous torque. This all translates to more **tractive effort** which means fewer engines can be used for a train. GE developed the **AC4400** in answer to EMD's **SD60MAC** 2 years ago. But the increased tractive effort led to a demand for more power.

For the **AC6000**, a new engine was developed, since the current engine, the **7FDL**, was nearly 50 years old, and it could not be pushed any more. Working with Deutz/MWM, the **7HDL**, was developed. This engine delivers 6000 HP, faster throttle response, and greater growth potential in the same size as the **7FDL**.

Whew!! Now that we have the locomotive primer done, we can discuss what **I** do, the **blower cab**. Remember it? I mentioned it about **2 pages ago**. It sits on top of the **alternator**. It holds the blower and ducting necessary to cool the electronics and alternator.

22. Like our REAL wedding

23. In the early 1900s, there was a technique developed to allow steam locomotives to tank up with water on the move. Every so often, there would be a trough between the tracks, and the tank would be filled by a scoop on the bottom of the engine. It worked a lot like the way water-bombers pick up water off a lake today.

If you are wondering why the railroads don't use condensers to recirculate the water, it's because it takes up too much space and weight. The South African RR had locomotives with condensers, and these were so large that they had to be mounted on a separate tender with motor driven blowers.

24. ALCO's Diesel locomotives have been described as follows, “They didn't so much idle as they **smoldered**.”

25. In fact during some traction testing of a unit a few years back, the traction control on a DC locomotive was mistakenly disconnected during a pull test, and **all six wheels** cut through the rails in less than ten seconds.

The ducting is fairly complex. Most of the air is used to cool **both** the alternator and inverters. EMD uses liquid cooled inverters with an air-to-air heat exchanger. GE uses a **series flow** system in which the air first goes through the inverters, then is passed through the alternator. Parallel flow requires two (expensive) blowers.

The **AC6000 blower cab** improves on the **AC4400 cab**. There is about a 40% decrease in parts and a 30% decrease in costs²⁶

I also see neat stuff, like watch **train wrecks**. As part of durability testing, we smash locomotives together to see how things survive²⁸.

The Very Latest in Stupid Matthew Tricks

When the prototype blower cab was finished, we sent it down the street to an outside vendor to be painted (The paint shop in the factory was too busy with production work). The plan was to use a truck from plant transport to take the blower cab steel to the paint shop.

We needed to get it to paint shop, but plant transport was busy (I bet some of you can already see where this is going), and there was a GE truck on site to carry the cab (a **monster** of a pickup flatbed), so we put it on the truck, and strapped it down.

I looked around, but I was the only one who wasn't busy, so I figured that I could manage to drive the cab the 1-1/2 mile to the paint shop. Well, about a mile from the plant, **right in front of the Pennsylvania State Police Barracks**, the straps holding the blower cab to the truck broke depositing 2800 pounds of metal on the median strip (after **bouncing** off the asphalt) on Iroquois Avenue.

Luckily, we managed to get a crane over there and get it back on the truck. A police officer showed up and directed traffic, and I was amazed when he **didn't** write me a ticket. **It arrived 3 days later in the mail.** As I did not want this to screw up my insurance

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²⁶That sound that you hear is me **patting myself on the back**. It's so hard to be humble when you are just too perfect for words.²⁷

²⁷Actually, the words conceited loud do come to mind. I don't understand why I'm having this problem though. I have been zealously watching our cats to learn the secrets of humility.

²⁸The reason that we do this is because the railroads are **unbelievably** brutal on their locomotives. For example: cars are frequently put into a string for a train by a procedure called **humping**. The cars are moved by a switcher to the top of a shallow grade, then allowed to coast into the car or locomotive at the **bottom** of the hill to couple.

²⁹Actually, **MY** Icon was Diana Rigg, who played Mrs. Emma Peel on *The Avengers*. She is now somewhere in her 50s, and I'd **still** drink her bathwater any day. I find her presence on the PBS series *Mystery* to be far more aesthetically pleasing than the late Vincent Price.

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Address Correction Requested

rates for the next 5 years, I got a lawyer and went to court. We agreed on a plea bargain, I received a summary judgement for **disturbing the peace** which is a pretty good description of what happens when one drops a 9' x 8' x 7' structure in the middle of the road. The paperwork should never leave the constable's office.

For those of you who think that it couldn't get any **weirder**, 2 months after this, my lawyer was sentenced to **9 months in jail** for violating a restraining order against his ex-girlfriend.

Really, Erie³ Is a Happening Place!

I came across an ad in the weekend section of *The Erie³ Morning News* (Actually someone pointed this out to me). On June 11, Erie³ hosted a stripper act by Tina Louise, a name that we all associate with the actress who played Ginger on *Gilligan's Island*. I think that it is highly unlikely that this is going on anywhere else in the world. At least not on the evening of June 11.

It turns out that the answer was much more ordinary. It turns out that this is Tina Louise's **Daughter**, who also goes by the name Tina Louise. Then again realizing that one of the icons of the baby boom generation²⁹ has a daughter old enough to be a stripper does give one cause to pause.

I did not see her show, I spend my time on much more noble and erudite tasks, like **trying to find a copy of the Czech art film in which Mira Furlan has a nude scene** (She plays Ambassador DeLenn on the TV show *Babylon 5*). It's just so wonderful that I am so cultured and delicate (*belch, scratch*).

That's about it for now, but stay tuned for the further adventures of **Matthew Saroff, Itinerant Engineer**.

