Frontier Explorer
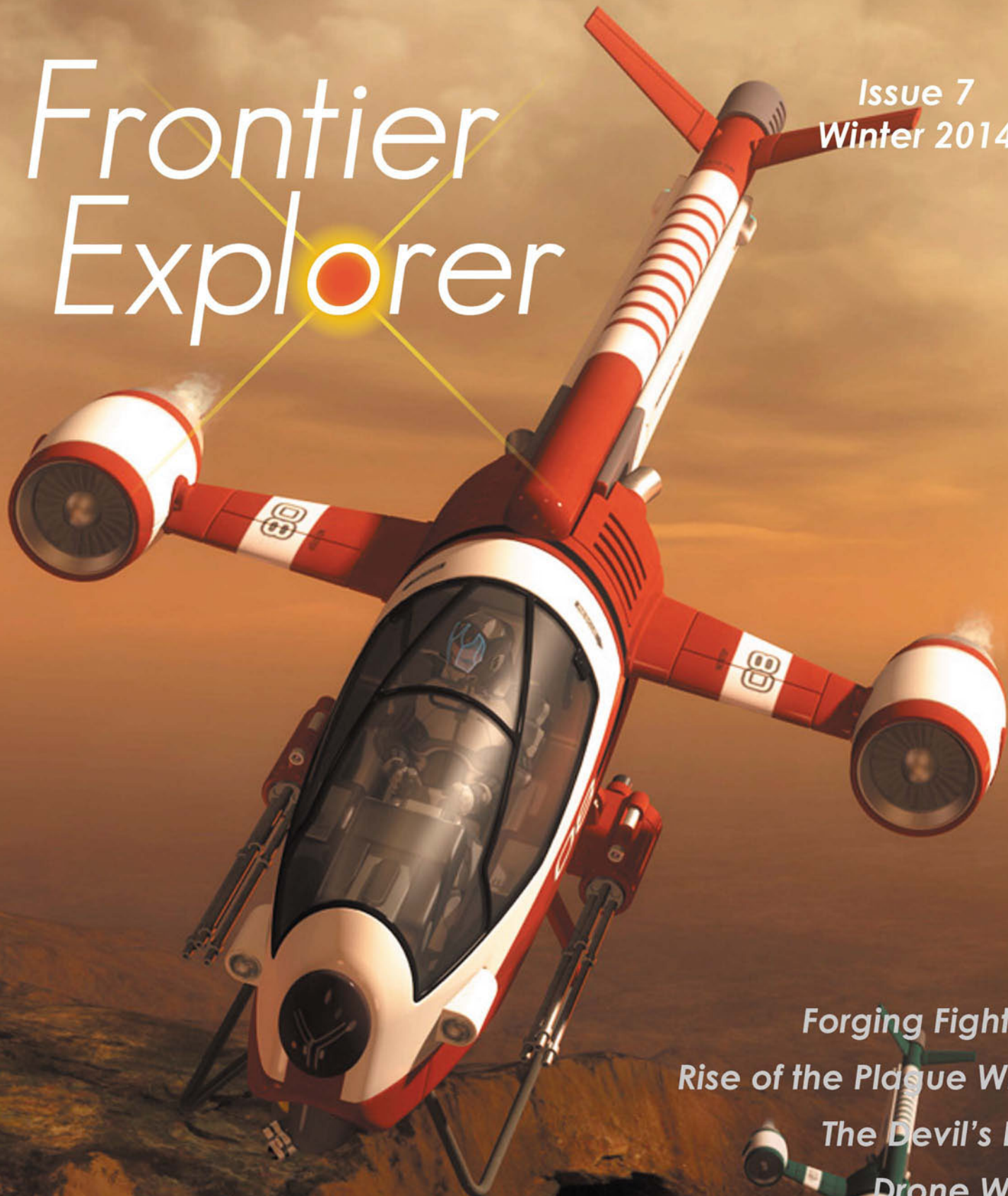
Forging Fighters

Rise of the Plague Wind

The Devil's Lair

Drone Wars

The Funeral

... man explores the universe around him ...

Frontier Explorer
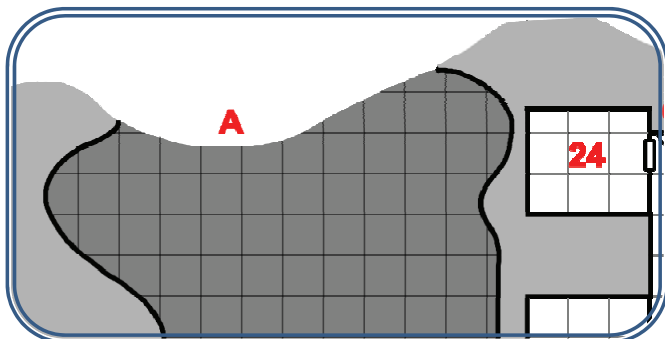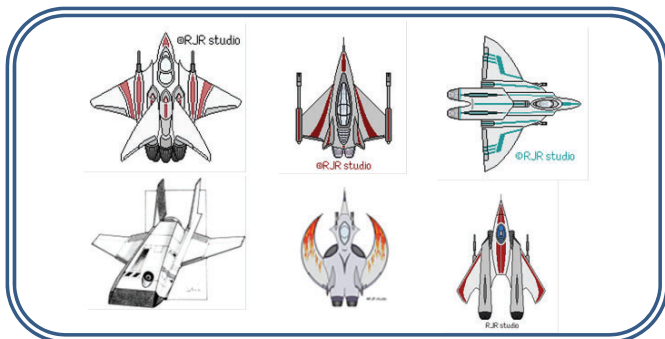
Issue 7 – Winter 2014

Features

Contents

From the Editors

Welcome back explorers!

Whether this is your first issue or you've been with us for a while, we're glad you're here and hope you like what you find.

This issue brings us some new authors who I think we'll see more of in future issues. Daniel "Delta" Collins is a blogger (Delta's D&D Hotspot) who has spent the last year doing a weekly entry on Star Frontiers. I was especially captivated by his entries on creating miniatures. He's given us permission to reprint one of those articles here. Be sure to check out his blog to get all the others. It will be well worth your time.

Jason Combes(sp here and in the article) is an active member of the Star Frontiers community at http://starfrontiers.us. He cranks out new ships, new adventures, and new material faster than we could possibly hope to print it. In this issue we present his article on new UPF fighters. Come join us on-line to enjoy even more of his creations.

I'm always amazed at how each issue of the magazine comes together. This time around we ended up with an issue mostly focused on fighters. That wasn't the way it was planned, it just seemed to happen. In fact, we had originally wanted to have a water theme for this issue but it just didn't pan out. Maybe in a future issue.

I'm also always surprised that we manage to fill each issue so completely. When we first started this project we set a cap at 45 pages of content based on how we wanted to make our print versions available. But truth be told, I figured that we'd typically be putting out only 20-30 pages in each issue. This is our smallest issue yet and it's 41 pages long.

I think it is truly a testament to the community that we've been able to keep each issue full. The authors and artists who have contributed are really what make this possible. Thank you and keep up the great work. And if you haven't submitted anything yet but have ideas or material you would like to share, please visit the magazine's website and do so. The only requirements are that it should be science fiction and gaming or fiction related and be your original work.

Thanks for joining with use once again and we look forward to bringing you more great content in the coming year. As always have fun and keep exploring!

- Tom Stephens
  Senior Editor

Production Credits

Cover Art: "Reconnoitre" by Arcas. Arcas is the pseudonym for Rob Caswell, who has been a professional Sci-fi illustrator and graphic artist since the early eighties. He's perhaps known most for his visual contributions to printed RPGs such as West End's Star Wars, FASA's Star Trek, and Traveller, the granddaddy of Sci-fi RPGs. You can see more of his work and also contact him at http://arcas-art.deviantart.com.

Back cover comic: AZ_Gamer

Banner Logo Image: NASA

Editors: Tom Stephens, Tom Verreault, William Douglass, Eric Winsor

Layout: Tom Stephens

Full Cover Quote: "Equipped with his five senses, man explores the universe around him and calls the adventure Science." ― Edwin Hubble

Campaign Material

NEW PLAYER PRIMER: YAZIRIANS

Tom Verreault

Note: the following is simply a quick primer for a new player who his considering playing a yazirian but unsure how to play this alien species. This document is not a replacement for the species description in the rulebook.

THE CANONICAL MATERIAL

THE SPECIES

Yazirians look like a cross between a tailless monkey and a flying squirrel. They are 2.1 meters tall, light boned, and have a mane around their head and neck. On each side of their body is a skin flap or pataguim that stretches between their arms and legs for gliding. A yazirian can glide at gravities of 1g or less.

Battle rage is an ability that a yazirian can invoke during melee combat that provides him with a +20 bonus to all melee attacks. It may only be attempted once per combat. This ability is improvable with experience points.

SOCIETY

Yazirian society is arranged in clans with each clan having traditional enemies and allies. Clans have become less important as yazirians have moved to space; they are well able to cooperate with each other and other species.

Typical clothing styles are brightly colored capes and tunics with a waist belt or crossed bandoliers over the chest. When required they will wear mitten like shoes.

ISSUES OF HONOR

Occasionally a yazirian will choose a life enemy. In the past it might have been another clan but now it's not unusual to find a yazirian scientist who has chosen a disease as life enemy or a yazirian businessperson that has chosen a competing company as life enemy. Those with powerful life enemies gain more respect but there is no set point in a yazirian's life when he must choose a life enemy, it's simply considered unlucky for a yazirian to die without having chosen his life enemy.

The yazirian honor weapon is the zamra, a throwing disk (think Frisbee with a sharpened edge) that requires wearing a metal gauntlet to use the non-practice variety. A yazirian with a life enemy will carry a special red zamra that he will only use against his life enemy. Details about the zamra were published in Ares magazine #17.

THE FAMILY OF ONE

The Family of One is a yazirian religion that dominates yazirian society since its arrival in the Frontier. It is predicated on the belief that all yazirians are one. It bars all non-yazirians from landing on the planet Hentz, its headquarters in the Frontier. The Family of One is vary autocratic and tightly controls the population on Hentz requiring everyone to wear a uniform that denotes their job and social position. Not all yazirians adhere to the beliefs of the Family of One

THE NON-CANONICAL MATERIAL

Over the decades fans have developed new material to expand our understanding of the core species in the game.

CLANS

Richard Rose a.k.a. Shadowshack developed a series of tables for generating yazirian clans for yazirian characters in Star Frontiers. Each clan has a brief note, name, and clan symbol. This material was published in issue 8 of the Star Frontiersman fan magazine.

THE FAMILY OF ONE

I headed a collaborative effort to write up a more detailed explanation of the Family of One. This material was published in issue 2 of the Frontier Explorer (*The Family of One*, p.1 - http://frontierexplorer.org/book/family-one)

A NEW HONOR WEAPON

Mathew Crymble noted that the yazirian honor weapon, the zamra failed to take advantage of the battle rage ability. He further reasoned that the yazirians would have a melee weapon that would do so and it would be suited to their lighter body structure.

What he came up with was the kha'dan. It's based on the Gurkha kukri knife but is of sword length. With its forward sweeping blade it's the kind of weapon that would have allowed a yazirian to lop off a limb and end a battle quickly. This makes a lot of sense since yazirian ability modifiers have a penalty to STR/STA and a bonus to DEX/RS and a yazirian warrior with lower than average stamina will desire to end a battle quickly.

The weapon functions exactly the same as a sword in the game rules but a yazirian attempting to enter battle rage while holding his clan's kha'dan gains a +5% bonus to the attempt. It can be thrown at limited range but loss of a kha'dan brings great shame.

FE

Minatures

FORGING FIGHTERS

Daniel R. "Delta" Collins

## Constructing new miniatures for the *Star Frontiers: Knight Hawks* game

Editor's note: Daniel does a series of articles on his blog, Delta's D&D Hotspot, entitled SciFi Saturday. For every Saturday of 2013 he did an article about the Star Frontiers Knight Hawks game covering various topics from rules variations, to sample games, to analysis of various features of the game. But a lot of what he talked about was miniatures – their assembly, creation, and painting. This article originally appeared as three blog posts in August of 2013. I liked them so much I asked him for permission to reprint them there, to which he graciously agreed. I strongly recommend you check out his blog for the original articles containing the full sized images and all his other articles both Star Frontiers and D&D related.

The official miniatures for the *Star Frontiers: Knight Hawks* game cover a pretty good selection of things like frigate/destroyers, cruisers, and battleships. They even include assault scouts, freighters, pirate ships like the corvette, and (in an expansion) custom yachts and privateers. One basic thing they never manufactured, however (to my knowledge) – Fighters, the smallest combat vessel. You can sort of see why not, because they're at a much smaller scale than the other ships, and they usually operate in sufficiently large numbers that it would be difficult to manage all the miniatures on the tabletop (and in addition, they technically require a carrier or satellite base to launch them, neither of which were included in the minis game). Nonetheless, I felt this was a gap worth filling in, and that it would make a great test project for my first attempt at producing my own miniatures from scratch, including the sculpting phase. You'll see that below as I want to give some extra detail in case anyone wants to do this on their own in the future.

Workday 1
First of all, the sculpting job; below you're looking at my third attempt at it. The first was with some white clay on the right side of the photo – actually pretty good, but I couldn't get it as small as the scale really required. Then I got the professional Blue/Yellow ("green stuff") clay and

that does work much better. The one thing to watch out for is that it's very sticky – it sticks to everything: fingers, desk, paper, plastic, sculpting tool, you name it. This job is pretty much at the very lower limit of what I could possibly accomplish; the fuselage of the fighter is just about as big around as the 1/16th inch wire I'm using for armature (stuck into a cork for support and handling). I have a magnifying-lens light, but I really don't like using it. Most of the work is with my fingers, sometimes using the pointy dental tool, and you can see I'm using an illustration from the SFKH rulebook (and the assault scout mini) as a guide. This took about 1 hour or less (the green stuff gets hard pretty soon after that), and came out much better than I had any right to expect for my first sculpting attempt. Certainly I was encouraged that my first project was based on a few simple, rigid geometric shapes, so I didn't have to deal with complicated organic stuff like skin, hair, fabric, etc.
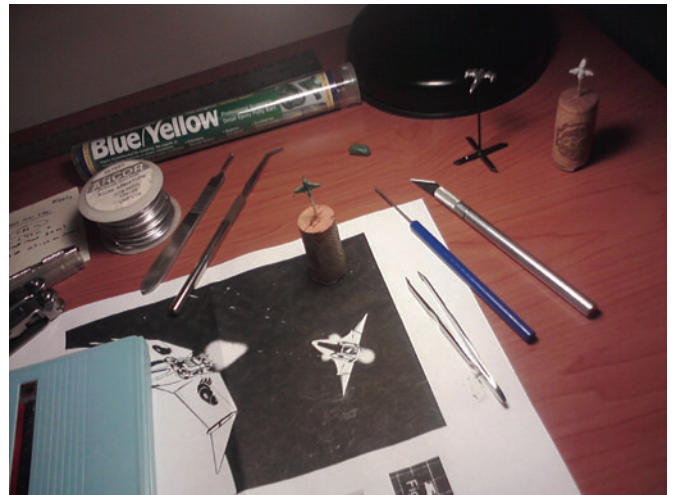
Workday 2
Today I can start making the mold for the UPF Fighter miniature (my goal at the end is to have a mount of three fighters, but for now I start with one). One of my priorities is to save as much of the rubber compound as I possibly can – it's really easy to waste a lot of it, especially on teeny-tiny projects like this one, where the leftover residue can easily be more than the mold itself. So while for the mold box I've seen a rigid container like a cat-food can suggested (and probably does have structural advantages), I'm making my own mold box out of simple poster board, sizing it exactly how I want (about 1/2" beyond the sculpture on each side), and that's working out just fine. Put the glossy side inwards to help a bit

separating stuff out later. If you were doing a much larger project, you'd want a different technique, because the poster board structure obviously starts warping and bulging outward when it tries to hold a greater mass of rubber compound.
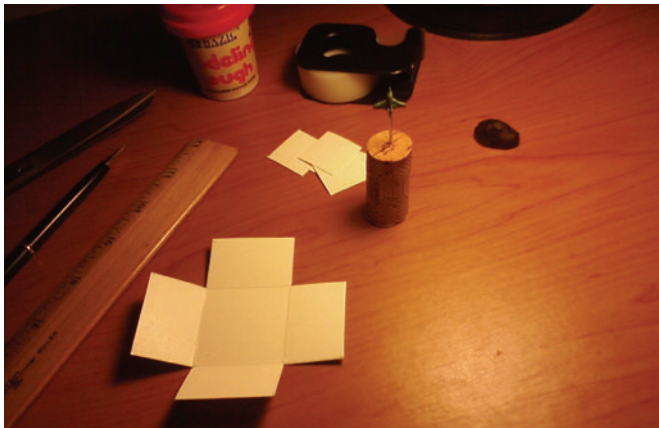
Take some Play-Doh type modeling dough and half-fill the mold box with that, or a little bit more. Press the sculpture down in the middle (being careful with more delicate sculpts) and try to get the play-doh evenly halfway up around the sides. You're also seeing what I've found to be single most important element to success with these two-parts molds: **a good pour-hole**. Once the mold is done, you need a space to pour metal in, acting a bit like a funnel, that's big enough to easily hit when you pour hot metal with no spilling, and has a very small connecting neck to the miniature at a location that you can snap and file off later. So plan this out carefully;

I sculpt the pour hole out of a harder clay and embed a wire to guide the connection point where I want it. I cannot emphasize this enough, it's completely the key to whether my mold works for me or not. And you need to include the size of the pour-hole in the dimensions of the mold box, created in the prior step. Finally, take the end of a brush and poke two or three divots in the play-doh to serve as connecting slots for the final mold (this is the top thing I tend to forget about, as I did in the photo below).

Now I'm mixing the rubber compound for the first half of the mold. Once again, this Oomoo 30 brand rubber compound has been working very well for me. The

official suggestion is to use 3 plastic cups; pour the required pink & blue parts into separate cups to visually equalize, then pour together in a third and mix. But that's going to waste so much material on the sides of the cups, it will be many times what you actually get into the mold. So to minimize this I spoon the separate parts into one cat-food can and mix them together there. I'm trying to get about the same number of spoonfuls of each, but the compound is very forgiving if I don't get it exactly right. I've still never had a mold fail on me.

Here I've poured the purple rubber compound onto the top half of the mold box. As you do this, the recommendation is to pour into a lower corner of the play-doh, and let the rubber seep in around the bottom of the sculpture and flood in up around all the details. However, it's sufficiently viscous that I usually have to finish it off (around the pour-hole, especially) by pouring over the top at the end. Then I very gently tap the box on the desktop a few times to release some air bubbles caught within (not sure if this makes any difference but I do it).

Cleaning up the spoons & mixing rod takes a few paper towels (the mixing dish can be allowed to set and cleaned out once the rubber is hard). It takes about 6 hours for the rubber to set, so I usually set it aside overnight at this point. Be really careful if you move the mold box, keep it on a large platform and use both hands – I've dropped one at least once here and it makes for a catastrophic mess. (Literally, because it was caused by me tripping over the cat.)

WORKDAY 3

Time to open up the first half of the mold. I use an exacto knife to split of the tape in each corner and peel down the sides from the rubber & play-doh. I'm going to re-use the poster board molding box, so I'm a bit careful with it.

Flip the block of rubber-dough-sculpture over; now we've got a cleaning job to do. The mass of the play-doh will peel off (it's still soft since it was trapped in there with no air), but then you've got to carefully pick out smaller bits and pieces by hand or with a dental tool or brush. You want every little bit of play-doh, especially anything on the surface of the sculpture, removed. **Make sure to not move the sculpture or pour hole from the rubber as you do this.** If you do, then the resulting cast will get "smeared" like a page that got moved on a photocopier while it was getting scanned.
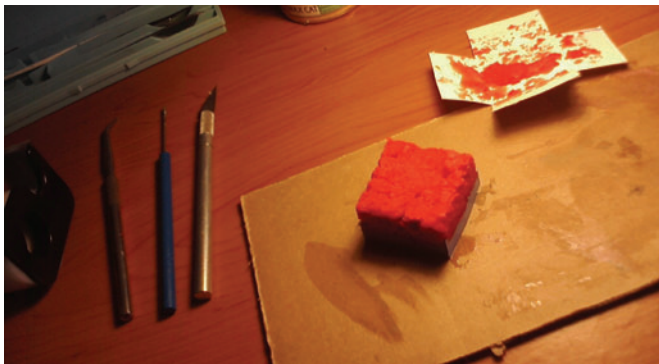
There, I've basically got the first half of the mold cleaned up. I've also used an exacto knife to scrape clean the poster board mold box, so I can use that again.

So now I'm putting the first half of the mold back in the box and taping the sides back up around that. A few details: Since the poster board isn't perfectly rigid, that first pour of rubber will bulge out a bit at the side and be bigger than you originally designed the box; so now you've got to bend the sides a bit to take up the extra width (I used the dental tool as a straightedge for this). Consequently, the height of the box is now a bit less than it used to be – so thinking about this in advance, that's why I suggested in the first step to fill the box a bit more than half with the play-doh (so the rubber was less than half, matching the less than half you'll get on this side, make sense?). Above all, you don't want to smash the wider mold into the smaller box, because the mold will bend and pop the sculpture up out from where it is sitting (causing the "copy smear" problem). Also, you need to use a spray release agent on the sculpture and mold right before you pour in the rubber (I should have mentioned that in the first step above). This stuff is super toxic, you don't want to breathe any in – I open my 3rd-floor apartment back window, set it on the ledge, stretch my arm out and spray it there. To date I haven't dropped any mold down to the ground doing that.

Once again, I'm mixing the two parts of the rubber compound together, estimating by sight how much I need in total. With a little practice I got really good at doing that for these very small projects.

And pouring the second half. The mold pour hole is sticking a little bit out (again, this side is lower the way things work out) but that's okay. Leave this to set through the day or overnight or however you're doing it (6 hours minimum).

WORKDAY 4

Separating out the rubber mold from the mold box.

The mold looks like a single solid brick when it comes out at this point (rubber seeps down the sides of the box, sealing everything in), so I have to carefully feel where the two parts are separate – the pour hole is a great place to start – and peel it apart, kind of like a banana. This is what I get when I do that. I could throw the mold box away at this point, as I won't use that again.

Now there's a job of cleaning up the rough edges of the mold with the exacto knife. Mostly this is just around the sides where the rubber seeped down in vertical sheets that you don't want. In particular, the pour hole gets entirely shut off (see last picture), so scoop that out and make sure you have a nice accessible target for pouring metal. The point of connection to the sculpture might be shut off too, so I may use tweezers very carefully to free that up. Be very conservative there, we can play around with that more on a later step.

Putting the halves together, it looks like they line up nicely with a functioning pour hole and a nice visible connection down into the mold. I also cut out some cardboard braces to use around it when I rubber-band it together for an actual metal pour later on. We'll do that another day, but for now it looks like the mold is done!

WORKDAY 5

Okay, so today I'll be casting the fighter miniatures from the completed mold for the first time. As much as I'd like it to be shorter, this usually takes me several hours when I go to do it (usually a whole afternoon). In the kitchen I'm set up with my completed mold, braces, rubber bands, and tools like a metal file (and a block of wood to use it on). I've got a dish of talcum powder and a cotton ball to prep the mold – powder the mold well and clap it over a trash can a few times to clean the excess. (The powder helps the metal roll in smoothly and not get clogged up.) At this

point I'll put the mold together, surround it with the cardboard sides, and rubber band it together very tightly.

Here I'm slowly melting the metal on the stove-top, which may take 15 minutes or so. I'll leave it on the burner the entire time that I'm working here, for all the casts I'm doing (I used to shut it off between casts, but that was very inefficient.) You can see the outline of a prior Sathar frigate that didn't come out so well, so I've melted it back down and will re-use the material today.

First pour. The metal poured in very nicely, thanks to the pour hole we were careful to make previously in the mold. No runs, drips, or errors. One consideration throughout this process is that the mold tends to trap heat, making it difficult to work with and also degrading to the mold itself. So I don't want to leave it on the hot stove top for too long – I'll very carefully move it over to the kitchen table right after the pour and let it cool down there. These days I'm setting a timer for about 15 minutes for it to harden (to be conservative), and find something else to do in the meantime – maybe cleaning up a cast, filing, or prepping another mold.

So here's the first fighter coming out of the mold, standing on its pour hole. This is actually an unusually optimal

success (usually the first few casts don't work – more on that later). All the detail is there, it snaps off the sprue easily, and I put the pour hole chunk back in the ladle to melt down and get re-used. Notice that I've separated the mold halves and propped them up so air gets all around them – I'm trying to cool them off as much as possible (they stay pretty hot no matter what I do here).

An hour or more later, the first fighter is separated and cleaned up; the second is cooling on its sprue; and the third has just been poured in the mold.

So at this point I've cleaning up my trio of fighters with the small file, and I'm also using a pin vice to drill a little in the bottom of one of them. This is where the wire base will be attached later on.

Now very carefully I'm super-gluing the fighters together into a 3-way squadron. This was kind of dicey and they fell apart on me several times. There's one on the bottom, and two mounted topside to that; ultimately I had to file down the wings a bit to fit snugly over the top, and meet smoothly fuselage-to-wing on the sides. After maybe an

hour of attempts I got them together the way I wanted (they're *really* small, at the limit of my ability to manipulate with my fingers). It's pretty fragile, so I'll have to be very careful making a mold around it.

Workday 6

I start by making the poster board mold box for the fighter squadron. Again, I'm accounting for the premade pour hole and leaving 1/2" space around each side of the miniature.

Set to pour: I've more than half-filled the box with play-doh, set the pour hole in first, then gently set in the sculpture, poked my alignment slots with the end of a brush, and applied the release agent. The pour hole is connecting to the rear of the lower fighter (make sure to pre-plan and carefully place that, probably the most important thing). The release agent gets sprayed, brushed onto all the surfaces, and sprayed again.

Mixing the rubber compound. This takes about 5 minutes, which is also the recommended set time for the release

agent. Then I'll pour it as before and let it set the 6 hours overnight.

Workday 7

Today we start by taking the half-mold out of the box, flipping it over, and starting the cleanup process. In particular, I got some long drippy pieces of rubber in the corners that I'll clean up with the exacto knife. (That's one signal my play-doh is getting a bit stale; if I wasn't so cheap I should go out and some fresh doh at this point; it's only like $1.50 for a six-pack around the corner.)

Successfully cleaned up and ready for the other half of the mold. Again, I was carefully to leave the sculpture and pour hole in place without jostling them at all. This one in particular is particularly delicate, so I took extra care.

Then I reform the mold box, apply the release agent, mix the rubber compound, pour over the sculpture, and clean up. This sets overnight.

WORKDAY 8

I'm removing the full mold from the mold box and separating the two conjoined halves (again, the rubber runs down the sides and effectively glues the edges together). Here you can see I'm halfway through the process, carefully starting from the pour hole, and gently pulling apart the two halves where they naturally separate in the center.

Taking the exacto knife and cleaning up the mold, in particular scooping out the entrance to the all-important pour hole.

Here I've cut out and labeled the cardboard braces for this mold. On another day we'll get to use this and actually see our completed fighter squadron!

WORKDAY 9

I'm setting up in the kitchen for possibly a few hours of pouring metal. I've got tools, talcum powder, lots of rubber bands, work surfaces, and the fighter squadron mold. I've also got the mold for the miniature bases which I'll be casting at the same time.

First pour seems to be working fine – no drips or leaks or anything.

Now here I'll point out that the first few pours are basically experimental, and usually some small adjustments are necessary. In this case, the first pour filled the pour hole and actually didn't get any metal at all down into the fighter shapes. As always, the critical bottleneck is that connection between the pour hole and the mold shape itself. At this point I'll take the exacto knife and tweezers and widen that connection point just a tiny bit. I'd really rather have this happen the first time, rather than have the connection be too wide initially and have it impossible to disconnect miniature from sprue, because that problem is basically unfixable. So I'll widen it just a little bit and try again.

Second try: Better, the metal flowed from the pour hole into the central fighter, but froze at that point and didn't get into the shapes on the sides. This is actually a fairly difficult shape I'm trying to cast here, and in retrospect I was cheating quite a bit by having negative space between the fighters running horizontally through the mold. Really, I shouldn't have any expectation for that to work at all. Anyway, I'll go in again and widen the pour hole connection just a bit and try again.
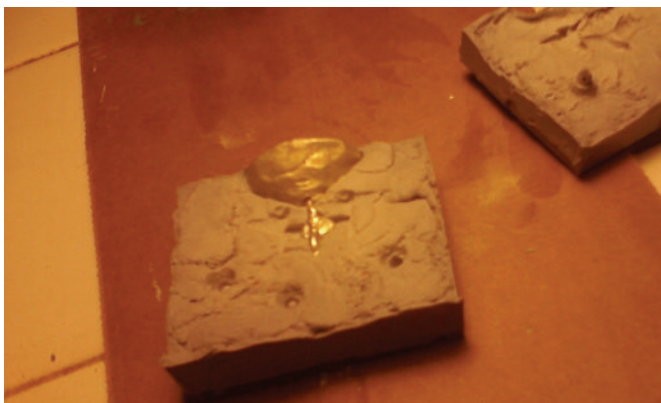
Third time's the charm: with my next pour, all of the space fills in perfectly, and the pour hole connection is still so small that the miniature just falls off by itself without me applying any pressure at all. I even got the horizontal open spaces between the fighter wings to come out. It pretty much doesn't get any better than that. (A few of my subsequent pours don't work as well, and they go back in the ladle – after enough attempts I'll get the quantity of good casts I was looking for today.)

Near the end of the afternoon, I've got three good fighter-squadron casts, and three base structures to go with them. I've cleaned them all up with a file and used a pin vise to drill holes through the bases where the wires will go.

This is a close-up of the UPF fighter squadron miniature, showing how small the darn thing is in my fingers. I wish the photo was just a bit crisper, but I'm immensely happy with how much detail I got in the miniature itself. Particularly given that I did a double-copy operation on this project, I'm really super pleased with it. (The detail this rubber product gets is nothing short of remarkable.)

WORKDAY 10

The last step is to prime, paint, and assemble my three miniature squadrons. In the afternoon I've taken time to prime the miniatures flat gray, and paint the bases a glossy black. (This also involves cutting 2" lengths of wire, rolling them flat, cleaning, and gluing them into the bases carefully.) As I've said before, I actually rather dislike painting miniatures, and I'm very happy for these machines to just have a two-step painting job. For my UPF ships, the first step is a base coat in ultramarine (navy blue).
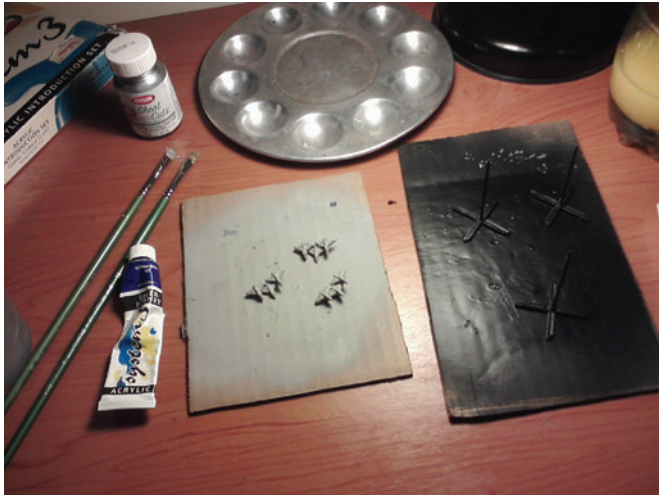
Here I'm done with the blue base coat, and I've also touched up the black bases in a few places.
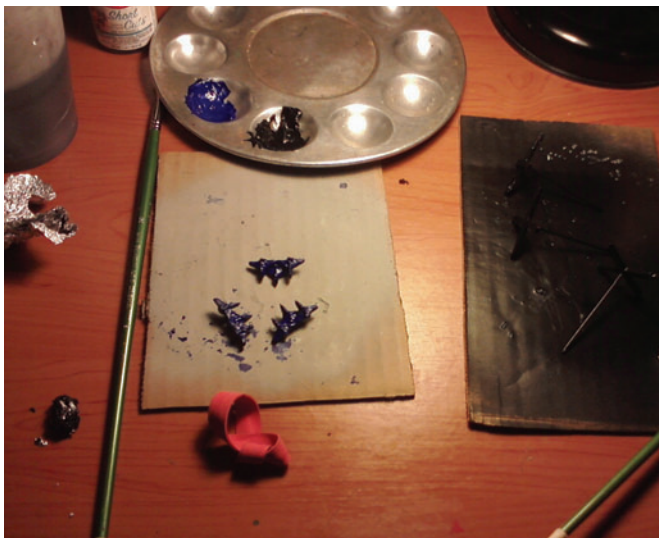
The second step is to dry-brush the UPF ships with metallic silver. For larger ships, I let more of the blue undercoat show (highlighting the extra detail, and looking a bit like scarred battle damage) – but for smaller ships like these fighters, I want them looking more fast and sleek, and therefore I'm willing to more fully cover them in the silver paint. It's a bit of a balancing act, so I may go at them with the dry-brush silver as many as three times before I'm happy.
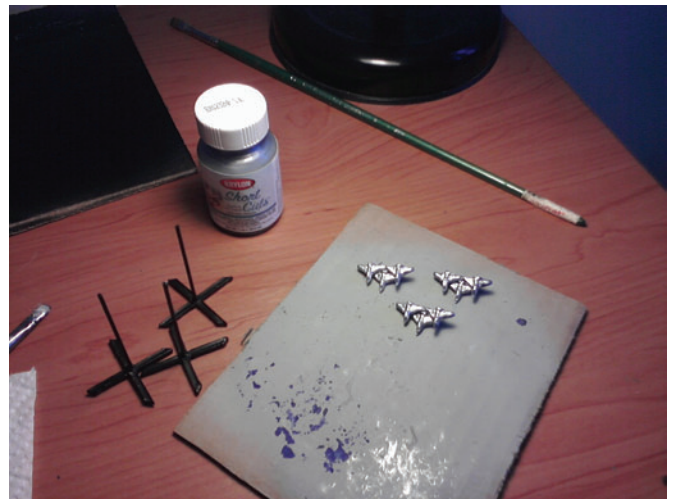
Super-gluing the fighters onto their bases and letting them sit for a bit. This is pretty easy, because the wire fits snugly into the post-hole I made with the pin vise on the bottom.

Last step: I take a white ink pen and note Roman numerals on the base of each miniature to distinguish them during game play. Looks pretty good by my standards, I'm exceedingly pleased with my first ever miniature-from-scratch project!

UPF Tactical Briefing

RISE OF THE PLAGUE WIND

Scott R. Mulder (AZ Gamer)

FY-208: United Planetary Federation (UPF) Frigate Valkyrie on piracy interdiction mission near Solar Minor.

It was quiet in the morning at the end of third watch on the United Planetary Federation Frigate Valkyrie. Captain Talis Frenzek made his way on to the bridge after a restless night of tossing and turning on the unnecessarily stiff zero-g bed mattress in his stateroom. He caught himself indulging in the rare luxury of reminiscence over his past assignments as he stretched his tight back. The seasoned Captain had become far too accustom to the comfort of life on a light cruiser and knew he would just have to reconcile himself once again to the spartan conditions of a frigate.

Just as the Captain's thoughts began to fixate on the disagreeable nature of his new assignment's austere accommodations, the raspy voice of his first officer grabbed his attention. "Captain, new contact bearing two seven zero, closing at 307,000 kilometers on an intercept course.

"Out here?" Captain Frenzek inquired curiously. The Captain looked over his shoulder at his Dralasite first officer who was skillfully operating the Valkyrie's helm station with three rubbery arm-like appendages extending out from his amoeba-like body. Even though the Captain had spent many tours working with these strange shape shifters, the dynamic and fluid movement of their bodies still seemed a little unnerving to him. "Commander Drex, let's start a tracking disk on this new contact and keep an eye on what she is up to."

The crew started to come to life with the news of the new contact discovered on their patrol route. It had been weeks in the black since they had even seen another ship. Only the most intentional of travelers could be found this far out on the edge of the Frontier Sector. So the appearance of another spacecraft was a source of both intrigue and apprehension for the crew of the Valkyrie.

The UPFS Valkyrie's three month long piracy interdiction mission was wearing thin on both the crew's patience and morale. Between babysitting deep space transports and the tedium of searching for pirate lairs, the crew was beginning to feel a little stir crazy. In recent months, several freighters had fallen prey to pirate attacks in this region of space. The UPF Spacefleet Command's solution was to dispatch the Valkyrie to monitor the jump route

between Theseus and Solar Minor for pirate activity. The recently refitted Dixon Class Frigate was known throughout the fleet as a well run ship with an exceptional crew. It was believed by the Senior Officers of Spacefleet Command that the Valkyrie's presence alone would be just the thing needed to calm the growing outrage of the local merchants whose shipments had gone missing.

However, Captain Frenzek and his crew both knew far too well that a Federation Frigate parked here on the ass end of the Frontier would just encourage the pirates to seek their catch in "friendlier waters". The Valkyrie's presence would surely be perceived by the local planetary governments as a thinly veiled public relations stunt and a constant source of irritation. They would have preferred to deal with this matter quietly with their own militia forces without the UPF's interference. However, when the pirate attacks started spilling over from one star system into another it was only a matter of time before the interstellar government was involved. So it was certainly no surprise to Captain Frenzek when the local militia was disinterested in assisting the Federation warship that was now prowling their skies and stirring up trouble along their shipping lanes. While the Captain really didn't mind that the militia had decided to "Sit this one out," it did mean the Valkyrie would be on its own. With each passing hour Captain Frenzek became increasingly certain that this assignment stunk more of politics and less of a sincere interest in riding the quadrant of pirate scum.

The better part of an hour stretched by and both the third and first watch crews now busily moved about the Valkyrie's bridge. The unknown spacecraft they had been tracking still eluded identification as it ran silent just outside of visual detection range. For now, Captain Frenzek would have to rely solely on the instrument data from the Valkyrie's sensor arrays. Intently, he watched the telemetry-tracking stream displayed on the bridge's main video monitor. "Who's out there?", the Captain wondered to himself as he watched the small flashing indicator grow closer and closer on the radar screen display in the center of the Valkyrie's bridge.

"Captain," the frantic tone of the beam gunner's voice cut through the busy hum of voices on the bridge. The Captain turned to see his human gunnery officer, Lieutenant Celeste Starnes, look up from her targeting telescope. "I have a visual fix on the sensor contact, it looks like a Sathar warship, unknown type or class." Her words brought a sudden hush over the entire bridge.

The Lieutenant's report froze the very blood in the Captain's veins. "Are you sure Lieutenant Starnes?" the Captain cautiously inquired almost hoping that eyestrain was playing tricks on her.

"Yes, Sir, It's a Sathar warship alright, but its configuration is a little different than the scans we studied from the Second Sathar War back at the academy."

Starnes reported as she scrutinized the readings on her instrument panels.

Looking up at the main video monitor, Captain Frenzek could see on the radar display that the Sathar warship was now less than 200,000 kilometers from their position. "Drex, get on the video-com and sound all hands to battle stations". The Captain calmly gave the order to his first officer and then turned to address the bridge crew. "Okay people, let's look alive here, we don't have much time before the worms will be in firing range so lets get a complete sensor work up on that ship while we still can."

The crew hastily moved about their duty stations with renewed purpose as the sound of the battle station claxon summoned all crewmembers to their posts. There was an organized sense of chaos about the bridge as new crewmembers rushed in to man their duty stations. Among the summoned crew strode a lean, tall, Yazirian Midshipman named Charnaz N'tak who eagerly jumped into his seat at the communications station next to Lieutenant Starnes. Looking across at Starnes he dared a whisper, "What's going on L.T.?"

"The worm's have a new boat in our sky", Starnes

hurriedly whispered back under her breath.

"Really?" Charnaz inquired back in a very excited tone that momentarily drew everyone's attention on the bridge and invoked a harsh stare from Commander Drex.

"Not now Char!" Starnes impatiently shot back a strained whisper at him under her breath.

Moments passed by like hours and an anxious quiet fell across the bridge crew. All eyes focused on the main monitor that now displayed a distant image of the approaching Sathar warship as seen by the Valkyrie's powerful telescopes. The ship appeared as a small tapered streak of crimson metal that was barely visible to the eye under the ambient illumination from Solar Minor's sun. But the crew of the Valkyrie knew immediately what they were looking at. It was a sight that invoked both fear and hatred among every soul who laid eyes upon it.

"She's certainly is a vicious looking predator!" The Captain commented as he stared transfixed at the image before him on the monitor. "A new worm warship like this could bring a terrible plague upon the worlds of the Frontier",

The Sathar had never demonstrated an interested in scientific exploration. Their entire existence since their first appearance in the Frontier Sector had been one of conquest and destruction. This spacecraft before them was without a doubt some new type of warship. While it did not appear to have the mass of a destroyer or cruiser it was most likely a new class of frigate. The Captain hoped that this menace was some kind of prototype undergoing space trials and not the advanced element of an all out invasion.

The anxious quiet that hung over the Valkyrie's bridge like a thick fog was suddenly shattered by a ringing alarm at Lieutenant Starnes' gunnery station. "Captain, new sensor contact!", Starnes called out as she gazed into the illuminated scope on her instrument panel. "This one is a lot smaller…looks like a torpedo launch!"

Without hesitation Captain Frenzek instinctively began directing his crew amid the mayhem of flashing warning lights and blaring alarm sirens. "Starnes lay down a field of suppression fire on that torpedo! Charnaz, get on the white noise generator and muck up their sensors! Drex, bring us about, best speed to Minotaur! Let's get some distance between us and those damn worms!"
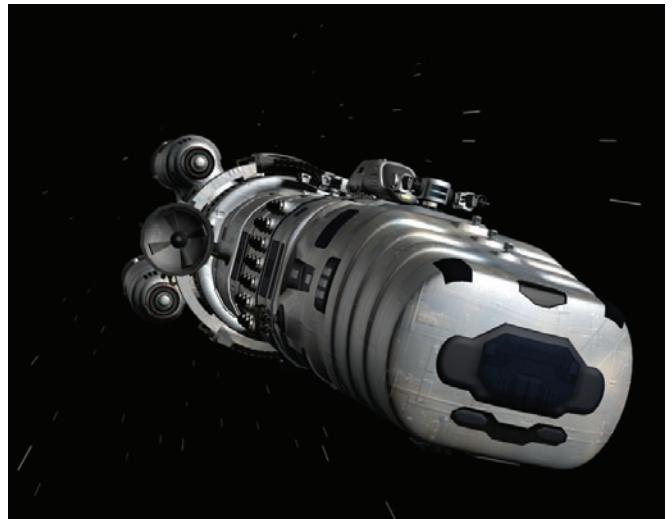
With his senior officers now frantically carrying out their tasks, the Captain turned with careful deliberation towards his young Yazirian communications officer. "Charnaz, I know that this is the first combat action you have seen against the Sathar. In a few moments all hell is about to break loose around here. But before it does, there is something very important that I need you do to for us."

"Aye, Captain", the lean Yazirian officers' mane bristled at the solemn tone of the Captain's voice.

With a chilling expression of fateful resignation the Captain quietly delivered his orders to the junior officer. "Midshipman N'tak, I want you to broadband transmit all of our sensor records on this Sathar warship via subspace radio to anyone that will listen on Minotaur or the Athena Space Station (Star Frontiersman #16, Pg. #7). The lives

of every living soul in the Theseus System may depend on this data getting to the UPF Space Fleet Forces stationed there.

Plague Wind Class Briefing

The following briefing is classified as "UPF Senior Command Eyes Only" and contains the last data transmissions sent from the UPFS Valkyrie after its encounter with a new kind of Sathar warship near Solar Minor. After receiving this transmission we lost all contact with the Valkyrie and fear she may have been destroyed. A UPF task force has been assembled at Athena station and will be departing within the hour to search for the Valkyrie.

We are designating this new Sathar warship as the Plague Wind Class based on comments made by Captain Frenzek in his last log entries. It is not currently known how many of these new ships have entered service or what their role is within their Space Fleet. What is known is that this class of warship boasts some interesting technological innovations that have not previously been observed in use on other Sathar spacecraft. All UPF Space Fleet Captains in the region should use extreme caution if engaging a Plague Wind Class Frigate.
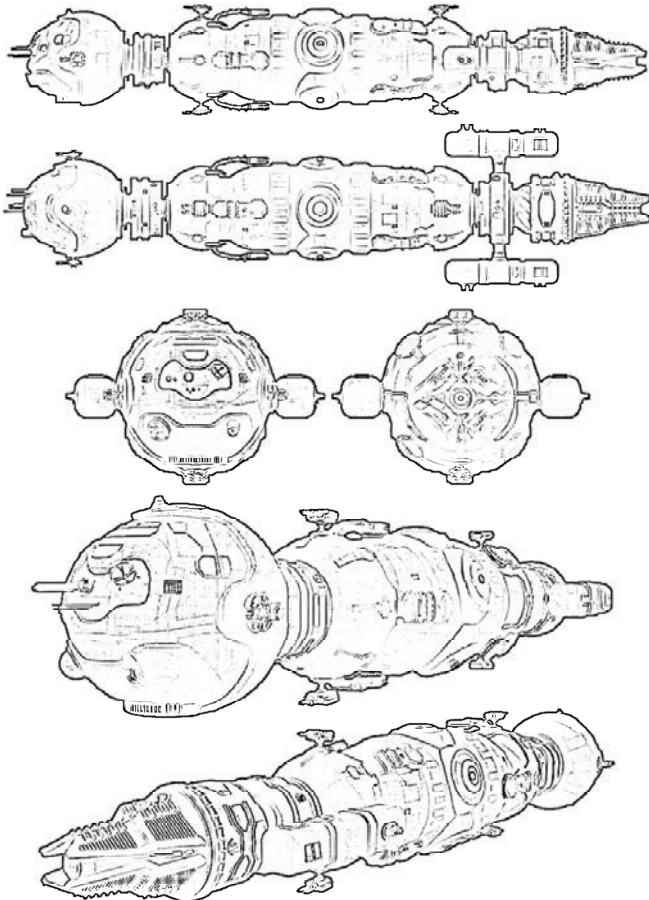
Plague Wind Overview

Class: Plague Wind Class Frigate
Type: Independent Warship
Designation: SAV (Sathar Attack Vessel)
Affiliation: Sathar & Allies
Atmospheric Flight Capable: No
FTL Flight Capable: Yes
Artificial Gravity: Unknown
Minimum Crew Size: 5
Standard Crew Size: 50
Maximum Crew Size: 75
Deck Configuration: Perpendicular
Hull Size: 5
Hull Points: 50
Damage Control Rating: 60*
Crew Restoration Rating: 70
ADF (Atomic): 4, (Ion): 1
MR (Atomic): 3, (Ion): 2
Weapons: LC x1, LB x1, RB x4, Torp x2.
Defenses: RH, MS x2, ICM x5, Decoy x2.
Support Craft: Sm Lauch x2, WP x2

PA: Polymetal Armor

Polymetal Armor, or PA for short, is a new type of armored hull plating for spacecraft that is composed primarily of a Federanium alloy. PA is more durable and resilient than the standard hull metal in use throughout the Frontier Sector today. Analysis of the Valkyrie's scans of this material indicate that it may dramatically reduce the effects of impact damage. Any ship equipped with PA can add 2 additional Hull Points per Hull Size to their total Hull Point Score. The unique properties of this impact resistant material also provide the bonus of reducing all hull hit damage by 25%. The only downside to the use of such a material is that it is more difficult to repair or replace during combat resulting in a 2 point DCR penalty per Hull Size when installed on a spacecraft.

While PA is not yet available to the UPF, the fact that it is composed of Federanium suggests that its design may have been stolen by Sathar agents from one of the Mega Corporations. Federation scientists are confident that they can reverse engineer the material if a sample can be acquired.

SSD: Sathar Synergy Drive

The Sathar Plague Wind Class Frigate seems to be built around a very innovative but unconventional dual propulsion system. This system uses both Ion and Atomic engines to provide propulsion and power for the ship. The Sathar learned a valuable lesson about the effectiveness of Ion engines in modern space warfare from both the UPF and their allies the Zuraqquor. When speed is not a tactically decisive factor the plague wind can use its reliable but slow twin ion drives to get to its destination. The resource friendly ion drives use cheap readily available fuels and requires far less maintenance than their
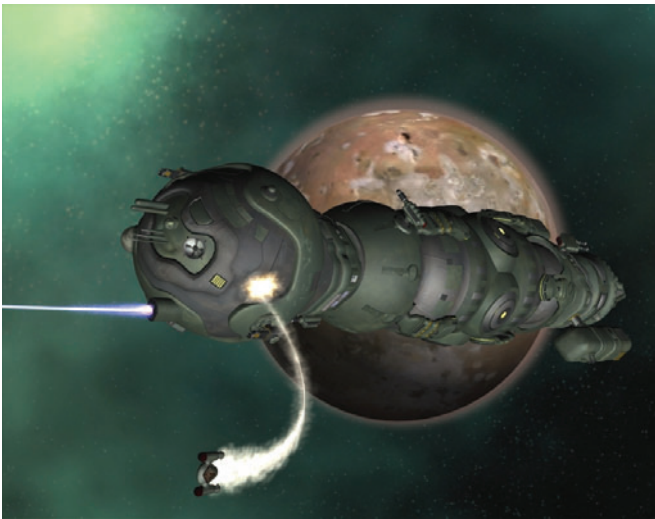
atomic counterparts. However, when high speed and precision maneuvering are needed the plague wind can quickly transition from its ion drives to its atomic engines. Both drive systems run concurrently generating power for the ship's systems but only one is used for active propulsion at a time. Since neither of these propulsion system is ever fully powered down changing systems is nearly seamless. It takes about ten minutes, or one game turn, for the Sathar engineering crew to transition from one drive source to the other.

Sathar FTL Torpedo Mk II

The Plague Wind Class Frigates are believed to carry a newer and more versatile version of their faster than light torpedo (See Star Frontiersman #11, p. 10). UPF

intelligence operatives who have been studying the long-range scans taken by the Valkyrie speculate that the larger launch bays on the command module can only be explained by the deployment of a new torpedo system. It is believed that these new torpedoes may have multiple mission capabilities including standard ship to ship, inter-atmospheric planetary bombardment, orbital mine placement, and faster than light deployment via void jump. While none of these speculated capabilities have yet been confirmed they should be heeded as accurate until disproven otherwise.

Plaque Wind Clan Recognition

Over the last few years Federation scientists who study and record Sathar spacecraft sightings throughout the Frontier have seen an increase in what is believed to be clan specific hull markings and coloration. It is not yet known for certain what significance this trend has if any. Some Sathar ships are now being seen with hulls painted in green or orange which may indicate specific clan ownership or unit designation. Since so much of the worm's society and customs are completely unknown it is still too soon to tell what these variations on color and hull markings mean. Presented below is an artist's rendering of the Plaque Wind Class in each of the three color schemes to aid in visual recognition. It is believed that the red colored hulls may belong to the X Clan, green colored hulls may belong to the Y Clan, and orange or tan colored hulls may belong to the Z Clan (Or subordinate allied races). **FE**
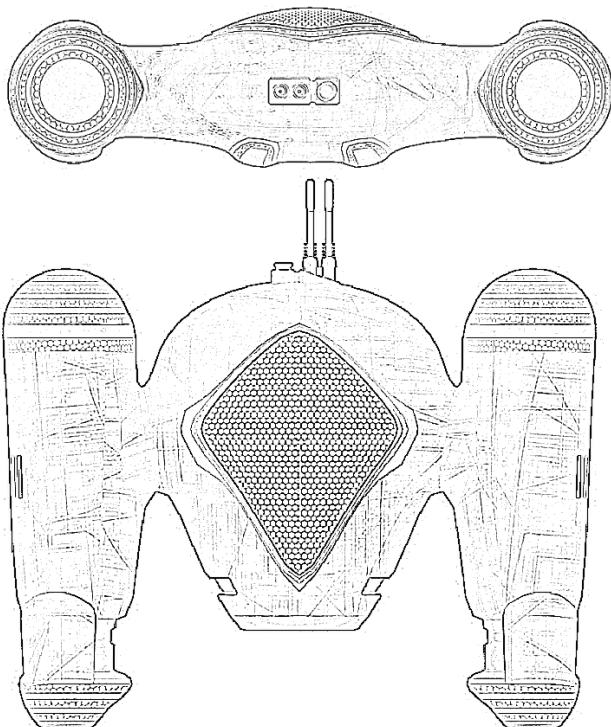
Clan X Plague Wind Class Frigate

Clan Y Plague Wind Class Frigate
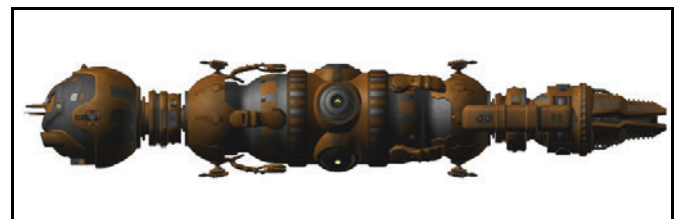
Clan Z Plague Wind Class Frigate

Adventure

THE DEVIL'S LAIR

Tom Stephens

INTRODUCTION

This adventure is designed to follow the conclusion of SFAD02: The Starspawn of Volturnus. It is designed as an add-on adventure to the Volturnus series and designed for mid-level characters. It provides an opportunity for the characters to gather more information on the Star Devil and his organization if the referee so desires.

The details of the identity of the Star Devil are taken (or extrapolated) from the Dragon Article, A Volturnus Connection, published in Dragon Magazine #??? (date) and reprinted in the Star Frontiersman issue ???. Referee running this adventure should feel free to modify these details in any way they see fit to adapt as needed to their campaign.

If you are a player in the Volturnus campaign and your referee is planning on using this adventure. You should probably stop reading right here.

Referee Information

The following sections provide information to the referee for incorporating this adventure into their campaign as well as information that the characters can gain as part of the scenario.

Location and General Description

This compound is the secret lair of the Star Devil on Volturnus. It has radio and subspace radio communication capabilities that he uses to communicate with the other bases on the planet. He never actually goes to the other bases anymore. While he had quarters at Slave City One, they haven't been used since the Lair was established. All his visits to the planet have only been to the Lair after its creation. It is a location of rest and meditation for him as well as being his command center on the planet.

From the outside, it is well hidden. The pirates used a large natural cave as the entrance and dug into the mountain to create the Lair. It is completely hidden from the casual observer and you have to be right near the cave entrance to see any sort of modification back in the cave. The only observable external feature that may give away its location is tailing from the process of digging out the compound that were dumped over the side of the

You received a tip that the Star Devil has a personal hideout in the Grey Mist Mountains to the southeast. You have a general location and description of the mountain peak the lair is in. After all the trouble the Star Devil's organization has caused you since entering the Zebulon system, a little payback is in order and a raid on his private lair is just the ticket. There's even a chance he might be present in person.

This game is a raid on an unknown facility and is designed for low to mid-level characters. It is set at the conclusion of the original Volturnus trilogy of modules.

mountain and for a pile about half a kilometer below the cave entrance.

The Lair is built on the location of a natural geothermal vent. During construction of the complex, the geothermal vent was harnessed to drive the power generator for the base. As the geothermal power is much more than the Lair needs, much of the steam from the geothermal vent is allowed to blow out through the cave entrance as it did before the Lair was built. It is not uncommon for a blast of steam to some billowing out of the cave entrance at random times.

Inside, the Lair is richly decorated and is designed as a private hideaway for the Star Devil when he is on the planet. The stone walls of the tunnels have been covered and once inside, it is like being in any building in the Frontier and not inside a cave. Electric lighting fills the complex. It is properly climate controlled and there is no indication that you are inside a series of man-made tunnels and rooms carved out of a mountain.

Tying It In

The main task required to tie this adventure in is to provide hints to the existence of the lair. After all the

Author's Note: I originally drew the map for this compound decades ago when I was playing Star Frontiers in the 80's. I never finished it at that time, however. Later, I revisited it and populated the map and ran the scenario as part of the Star Frontiers Virtual Con in 2012 held to commemorate the 30th anniversary of the game. At that time, it was just a bunch of personal notes designed for a stand-alone con game session. I've fleshed those notes out and present it there as a complete adventure designed to be integrated into your campaign.

characters have been through on the planet, especially their initial struggles against the pirates, they will probably want to go after it on their own once its existence is known

Hints to the Lair's Existence and Location

At the Outpost

There won't be much information that can be gleaned here. However, some radio communication between the outpost and the lair will have occurred as the Star Devil has inquired about the progress of the research activities taking place. Thus the players should be able to find references to these communications in the radio log.

At Slave City One

The following information about the lair should be discoverable at Slave City One.

1. **Existence of the Lair** – If they missed learning of the existence of the Lair from the outpost, radio logs here show regular communication between Slave City One and the Lair. Even a cursory look at these logs would quickly reveal its existence.
2. **Location from the computer** – The characters should be able to determine the general location of the lair from the computer at the compound. The location provided by the computer should be enough to get them to the correct mountain in the Gray Mist Mountains but not the exact location on that mountain.
3. **Location from the pirates** – Interrogation of captured pirates will provide physical descriptions of the mountain side and detailed information concerning how to find the lair on the mountain. It should also provide knowledge about the resupply schedule. Allow this information to be learned regardless of the pirates captures, just assume the pirate questioned happens to be one of the ones that assists in the resupply of the lair. If the characters capture one of the pirate leaders, information about communicating with the lair staff during approach could be learned. It is up to the referee to add these details if desired. The pirates will not volunteer this information but will provide it if asked.
4. **Lair staff size** – This can be determined from either the personnel records in the computer or talking to the pirates. This will give the characters the number of robots and staff members at the compound to allow them to prepare properly. It should only provide numbers and not any other details (other than possibly the race of the staff members).
5. **Lair Access** – From both the computer and the pirates, it should be quickly discovered that all access to the Lair is done by jetcopter. The pirates will describe rugged terrain that is inaccessible by ground transportation. Also, interrogating pirates should provide the characters with the passphrase to say to

get in the main entrance (area 4).

6. **Lair Interior** – While the pirates at Slave City One have made supply deliveries to the Lair, none of them have been inside beyond the Storage Room (#3 in the Area Descriptions below). Thus they can provide no information beyond the existence of the landing pad, the entrance, and the storage room. The rest of the Lair is a mystery to them as well.

At the Mechanon's Mound

It is also possible for the characters to learn of the existence and location of the Lair from the Mechanons. If they win over the Mechanons prior to the final battle, information from the planetary defense system will so that there have been several instances of a small ship descending from orbit to the same location in the Grey Mist mountains. This should provide the characters with knowledge of the existence of the Lair and its location to the same accuracy as provided by the computer at Slave City One.

From Colonel Jamison

As a last resort, you could provide clues to the existence of the base through Colonel Jamison. He was in the custody of the pirates for a time and could have overheard them talking about the "Devil's Lair". He wouldn't be able to provide much more than knowledge of the existence of the Lair. I'd use this one only if the characters manage to miss all the other clues.

Getting the Characters to go

Hopefully, the very existence of the Lair, coupled with their experiences with the pirates, will provide enough motivation that they'll want to seek out and capture the Lair. However, if they don't seem interested, you should provide external influences to induce them to go. Some possibilities include

1. **Colonel Jamison** – He could point out that the government of Truane's Star (still their employers at this point) would want any information to be found at the lair. Plus it wouldn't be a good idea to leave a functioning base for the Star Devil on the planet.
2. **The Eorna** – If the characters are strongly sympathetic with the Eorna, they could ask the players to clear out the Lair to help remove the pirate presence and threat from the planet
3. **Orders from Above** – If all else fails, they could receive orders from Truane's Star to investigate and neutralize the Lair before they return home, possibly offering a pay bonus for doing so.

Things to Learn

There are several bits of information that the characters can learn from raiding the Lair. Some of this material is redundant with what can be learned at Slave City One and other information is completely new. The referee is free to use this information, modify or add to it, and dole it out

the PCs as he sees fit. Most of this information is designed to provide adventure hooks and plot ideas to lead the characters on if they want to pursue the Star Devil off planet.

1. The Star Devil is vrusk.
2. The ore being mined at Slave City one is being sold to PGC. Data here provides names and contact information for several low level PGC employees. The transactions with PGC have been completely legal (sales of ore) but these people will know more information about number of shipments, value, etc. if they can be contacted and persuaded to talk.
3. The Star Devil has bases in Gruna Goru, Prenglar, Dixon's Star, Araks, Athor, and Scree Fron. This can be gleaned from logs of the Subspace radio showing that messages have been sent and received from these systems. Subspace radio codes can be gathered (see the Subspace Radio article, Frontier Explorer, issue ??, p ??) that would allow the PCs to detect messages from these bases.
4. He has contacts within the Truane's Star Government. Some of these are the same as the contacts mentioned in the Slave City one while others are new. The newer ones may be higher level officials in the government than the ones found at Slave City One.

Lair Staff

The Lair staff members are the only ones on Volturnus who know the identity of the Star Devil. Those at Slave City One and the pirate outpost have only heard the Star Devil's voice distorted through a polyvox.

The six permanent staff members here are fanatically loyal to the Star Devil. They will fight to the death to defend the Lair from intruders. The staff consists of two technicians to run and maintain the power generator and mechanical systems, a roboticist to maintain and operate the security robots, two security personnel, and a cook/medic/personal valet.

Tyler Dannic
Human male

STR/STA: 45/40 DEX/RS: 40/40
INT/LOG: 40/40 PER/LDR: 45/45
Skills: Technician 3, Computer 1, Beam 1
Equipment: Civilian skeinsuit, laser pistol, 2 20 SEU clips, knife

Miguel Rondell
Human male

STR/STA: 60/55 DEX/RS: 55/55
INT/LOG: 60/60 PER/LDR: 45/45
Skills: Beam 3, Melee 3, Thrown 2, Gyrojet 2
Equipment: Military skeinsuit, Albedo Screen, power beltpack, Laser Pistol, Vibroknife, 4 powerclips, 4 doze grenades.

Grood
Dralisite

STR/STA: 60/60 DEX/RS: 45/45
INT/LOG: 45/45 PER/LDR: 55/55
Skills: Projectile 4, Melee 2, Demo 1, Beam 2
Equipment: Military Skeinsuit, Albedo Screen, power backpack, Gyrojet pistol, 4 gyrojet clips, sonic knife, 1 powerclip

Darlan Beeler
Yazirian male

STR/STA: 35/35 DEX/RS: 40/40
INT/LOG: 55/55 PER/LDR: 45/45
Skills: Robotics 3, Computer 3, Projectile 1
Equipment: Civilian skeinsuit, auto pistol, 2 clips, knife

Xander Brundage
Human male

STR/STA: 55/55 DEX/RS: 45/40
INT/LOG: 45/45 PER/LDR: 65/65
Skills: Technician 3, Robotics 1, Gyrojet 1
Equipment: Civilian skeinsuit, Gyrojet pistol, 2 clips, vibroknife, 1 power clip

Krl'tk'nuk
Vrusk male

STR/STA: 45/40 DEX/RS: 40/40
INT/LOG: 40/40 PER/LDR: 45/45
Skills: Psycho-social 3, Medic 3, Martial Arts 2, Environmentalist 1, Computer 1
Equipment: Civilian skeinsuit, medkit

In addition to the six staff members, there are 12 security robots at the Lair to aid in defense and two maintenance robots to help maintain the complex.

Security Robots
Level: 2
STA: 100
Attack: 50%
Programs: Restrain, Self Defense, Attack/Defense
Weapons: Laser Rifle (set to 5 SEU per shot), power backpack
Defenses: Albedo coating (100 pts)

Mainenance Robots
Level: 2
STA: 100
Attack: 50%
Programs: Restrain, Self Defense
Weapons: Standard hands (2d10)
Defenses: Albedo coating (100 pts)

Artwork

The Star Devil's private quarters at the Lair and its associated storage areas contain nearly half a million credits of artwork in the form of paintings and sculptures. The exact details of the art pieces are up to the referee.

However, much of this artwork is stolen (400,000 credits worth) and will need to be returned if removed from the Lair and its existence made know. If the PCs return the art, they can expect to receive 40,000 credits in rewards for its return. If they try to sell the art, it is up to the referee to determine the consequences. The remaining 50,000 credits worth of artwork they are free to do with as the please although they will need to find someone to assess which pieces are stolen and which are not.

Area Descriptions
The various areas on the map are described below. The map scale is 2 meters to the square

Miscellaneous Features
A. **Natural Cave Entrance** – This cave is invisible from above. It is at an elevation of 1200 meters. If the characters are searching above this altitude they won't see it. If at or below 1200 meters, the have a 10% chance per hour, cumulative, of sporting this cave. If they have descriptions of the area from the pirates, give them a +50% bonus.

B. **The Cave** – With only natural illumination, the characters will now be able to see very far into the cave, approximately 10 meters maximum. With this illumination, it will appear like any other cave on the cliff. It is large enough for a jetcopter to just fit in but it requires an RS check by the pilot to avoid damage to the vehicle. With spotlights, the characters will notice a smoothed out portion in the back of the cave if they make an INT check.

C. **Laser Mounts** – These computer guided lasers are dedicated to defending the passages. They are controlled by a level 4 computer giving them a base 70% chance to hit. Range is as for a laser rifle. They are targeted by infrared and motion sensors and are set for 5d10 points of damage. They are protected by an albedo screen with unlimited SEUs for both attack and defense since they are attached to the Lair's power generator. They have 100 structure points.

D. **Secret Door** – This door is indistinguishable from the rest of the wall. However, plans for the facility indicate power running down a corridor from this room. The door is a level 6 personal identification lock. The recognition plate is on the couch in area 28. It only opens for the Star Devil. The door should be considered level 4 for purposes of detection.

E. **Storage Entrance** – This large door is made out of the side of the cave and is very hard to see. See area 2 for modifiers to skill checks. It can only be opened from inside and has 300 structure points

Main Level
1. **Landing Pad** – This 14x16m area has been cleared out to provide a flat landing surface for the pirates' jetcopters. Only the very edge is visible from outside

the cave. There is currently no jetcopter present on the pad.

2. **Access way** – This smoothed out portion of the cave floor provides access to both the main personnel door and the larger, concealed storage door. There is evidence on the floor here (scuff marks, wheel tracks, etc) for the existence of the concealed storage entrance door (E) but the door is not visible (-30 to tech skill to find/detect defenses/alarms, -40 to INT/LOG check).

3. **Storage Room** – This room contains a variety of spare parts and other equipment and supplies for the compound. Primarily it contains a large array of machine parts and pipes and such that are replacement and repair parts for the compound's two geothermal generators. There is also a spare combat robot and various non-perishable food stuffs stored here. The storage entrance (E) is used to move in very large pieces. Most pieces typically come in through the main entrance way (4).

4. **Main Entrance Hall** – The door into this area from the Access Way (2) is a level 4 video and voice recognition lock. The door will open for anyone that says "Star Devil forever" and is bearing a Star Devil insignia or tattoo. The hall has a Laser Mount (C) at the far end that will attack any unauthorized beings that enter into the hallway. Unauthorized is designated as anyone not bearing the Star Devil patch or tattoo or as identified as such by the controls in the security office (8).

5. **Geothermal Generator** – This room contains a large geothermal generator that taps into a geothermal vent that exits the mountains here. This vent supplies both water, after being filtered through the system in (6), and electrical power for the compound. Excess steam coming from the geothermal vent is vented out into the cave along the route it originally took before the generator was installed.

6. **Water condenser and purification system** – This room contains pumps, pipes, condensers and filtering systems used to clean and purify the water coming out the geothermal power system in (5). It supplies the water needed for the base. This room also contains storage facilities for the waste materials (minerals, etc.) extracted from the water that are not used. The sludge is dried and often just dumped over the edge of the mountain. An appropriate environmentalist roll upon approaching the base may detect some of this dumped material below the cave entrance providing a clue to where the entrance is

7. **Passageway to the power and water systems** – This passageway is guarded by another Laser Mount (C) and blocked by a pressure door with a level 5 recognition lock that is keyed to only open for members of the base staff.

DEVIL'S LAIR MAIN LEVEL
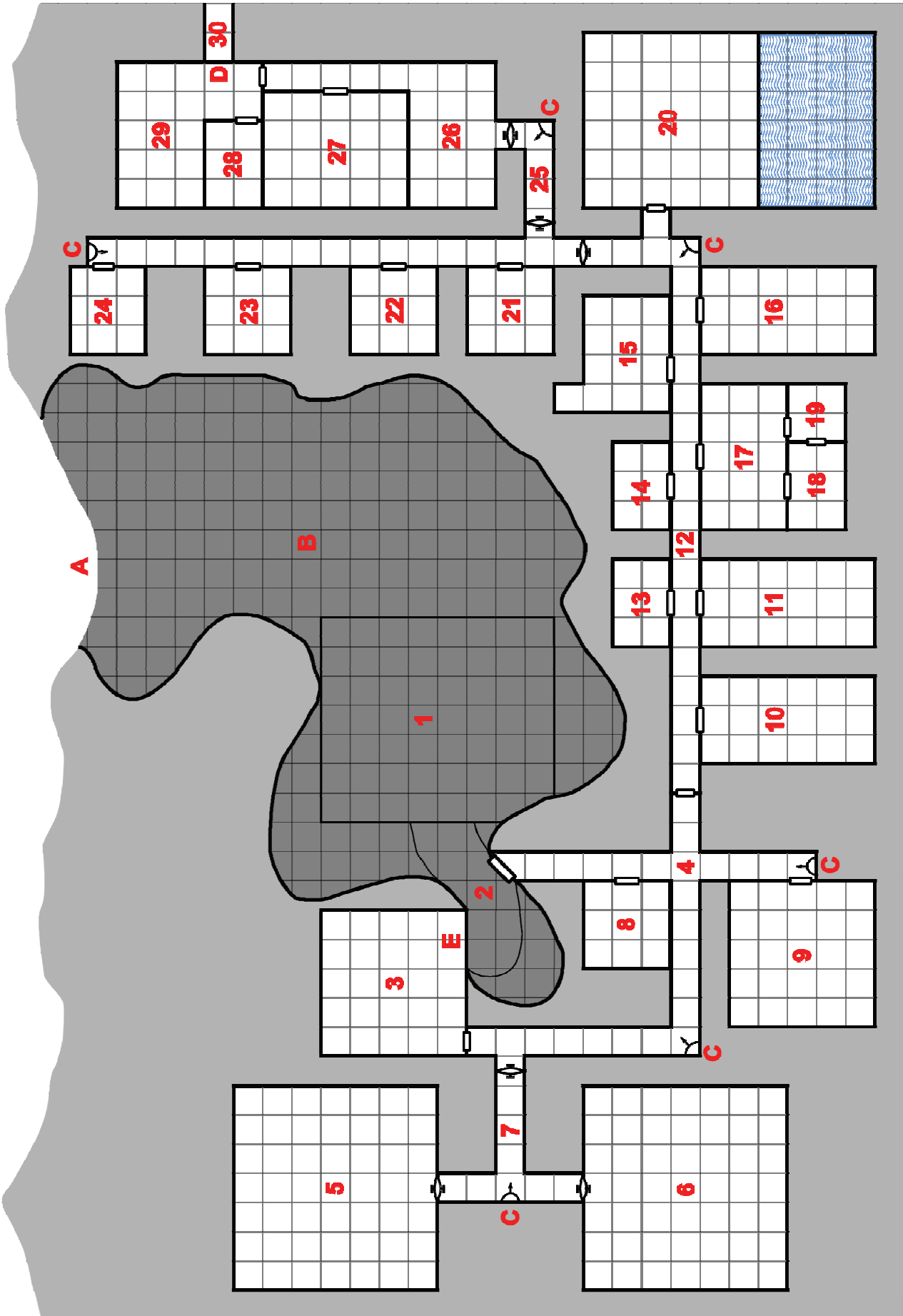
8. **Security office** – This room is the office of the two security staff (Miguel Rondell and Grood) and is typically empty as there is rarely much to guard against. However, any time that there is activity in the natural cave, this room will be manned by either one or both security officers. From here they have access to controls for all the robots and Laser Mounts as well as cameras within the complex and radio communication with Slave City One.

9. **Robot maintenance and storage** – This room houses a workshop for working on and repairing the bases robots. It provides a +10 bonus to all robotics checks and has parts to repair any of the robots on the base. There are enough parts here to build three security robots. However, complete assembly and fabrication would take several hours per robot. This room also serves as the storage and charging station for the base's twelve security robots and two maintenance robots.

10. **Crew Quarters** – This is a two bedroom suite that houses the two security guards. It has a central living area, two small bedrooms and a shared bathroom facility at the back through the bedrooms.

11. **Crew Quarters** – The same layout as (10) this room houses the two technicians (Tyler Dannic and Xander Brundage) that maintain the power generator, water filter system, and other machinery at the base.

12. **Main passageway** – Main passageway through the base. Again guarded by a Laser Mount (C) at the far end. The main double doors into this area are secured with a level 3 voice lock that is keyed to only open for base personnel

13. **Storage** – This room stores a few weapons and defenses as well as janitorial supplies. Contents include:
    - Towels, cleaning supplies, toilet paper, soaps, etc
    - 4 Laser pistols
    - 4 Gyrojet pistols
    - 4 Auto pistols
    - 20 power clips
    - 20 Gyrojet pistol clips
    - 20 Auto pistol clips
    - 20 Doze grenades

14. **Storage** – Extra linen storage and a small laundry facility.

15. **Life support system** – This is the life support system for the base. It has air filters, heater and air conditioner as well as a water heater. Water filtration is handled by the main water processing system in (6)

16. **Crew Quarters** – Same layout as (10). This room houses the roboticist/comptuer tech (Darlan Beeler) and the cook/medic (Krl'tk'nuk).

17. **Dining area** – General dining area and lounge/conference room. Has seating for eight

18. **Kitchen** – High end kitchen stocked with just about every necessary appliance

19. **Pantry/fridge/freezer** – Food storage area. Has both a refrigerated section and a freezer. Typically there is enough food for eight beings for three months stocked. Food supplies are replenished bi-weekly from Slave City one.

20. **Recreation Area & pool** – General recreation area. There is a large pool as well as exercise equipment, a steam room/sauna and a large open area for calisthentics, yoga, etc.

21. **Storage** – This is private storage for the Star Devil. Has spare linens and items for his private quarters as well as a variety of smaller art pieces that can be swapped out in his private gallery when so desired. The art in this room has a combined value of about 25,000 cr. This room has a level 4 contact recognition lock that opens only for the Star Devil and Krl'tk'nuk.

22. **Storage** – Additional artwork for the Star Devils private gallery. Typically these are older pieces that his has moved out to make room for new ones and which haven't been shipped off somewhere else. The art valued contained here has a value of about 100,000 cr. Also contains a small stash of bullion, worth about 50,000 cr and composed of gold, silver, and platinum bars. This room has a level 5 contact recognition lock that opens only for the Star Devil and Krl'tk'nuk.

23. **Office** – The Star Devil's private office. Level 6 security lock on the door that only opens for the Star Devil. Contains full computer access as well as controls for both the radio and subspace radio.

24. **Main Computer** – This room houses the main computer. Level 5 lock accessible only by the main computer tech (Darlan Beeler) and the Star Devil. The computer is level 4 with 164 function points and contains the following programs:
    - Analysis – 3
    - Bureaucracy – 3
    - Commerce – 3
    - Communication – 3
    - Computer Security – 6
    - Information Storage – 4
    - Installation Security – 4
    - Life Support – 1
    - Maintenance – 2
    - Robot Management – 4

25. **Passage to Star Devil private quarters** – Guarded by a level 6 security lock that only allows access to the Star Devil and the chef/medic (Krl'tk'nuk) who also serves as the Star Devil's valet and house keeper.

26. **Living room/lounge area** – Living room and lounge for the Star Devil's private quarters. Contains a variety of couches and chairs for all races and several valuable pieces of art around the room. The art in this room has a value of about 50,000 cr.

27. **Bedroom** – The Star Devi's private bedroom. A

lavishly furnished room that is obviously designed for a vrusk as it has a vrusk style divan bed and is filled with various pieces of art (total value of about 75,000 cr)

28. **Bathroom** – The bathroom contains all the usual equipment for Vrusk sanitation as well as a full body waxing station.

29. **Art Gallery** – The art gallery is both a display and work space. The Star Devil seems to dabble in painting as a corner of the room is a well-stocked painting workspace. The rest of the room is taken up by a variety of paintings and sculptures. There is a Vrusk couch here that is on a rotating platform so that whoever is sitting on it can rotate without moving and view all of the pieces of art work in the gallery. The pieces here are the most valuable of any found in the complex with a total combined value of 200,000 credits.

UPPER LEVEL

30. **Passage and Elevator to Landing Pad** – The passage way extends approximately 100 m beyond the door and ends in a small elevator capable of transporting two vrusk or four members of the other races. This elevator and passage is hidden behind the secret door (D) in the art gallery. It is accessible only

to the Star Devil and the control is in the divan in the gallery. The elevator ascends 600m to a landing that is near the summit of the mountain.

31. **Secret/concealed Landing Pad** – This landing pad is where the Star Devil lands his private shuttle from his orbiting spacecraft. It is a small HS 1 shuttle that can carry the pilot and one passenger. The landing pad is concealed just like the main entrance to the complex below and is well hidden in the back of a natural cave near the summit of the mountain.

32. **Storage** – Small storage area generally used for spacesuits and other small items

EXPERIENCE POINTS

Characters who successfully clear the Lair should receive 4 experience points. Two additional points should be awarded to characters that performed exceptionally well. Only two points should be awarded to characters who just tagged along and didn't actively try to contribute to the team's success. If the secret door to the shuttle landing pad is discovered, all players should be awarded a bonus experience point. Additionally, if any of the base staff are captured alive, another bonus point should be awarded.

FE

DEVIL'S LAIR UPPER LEVEL
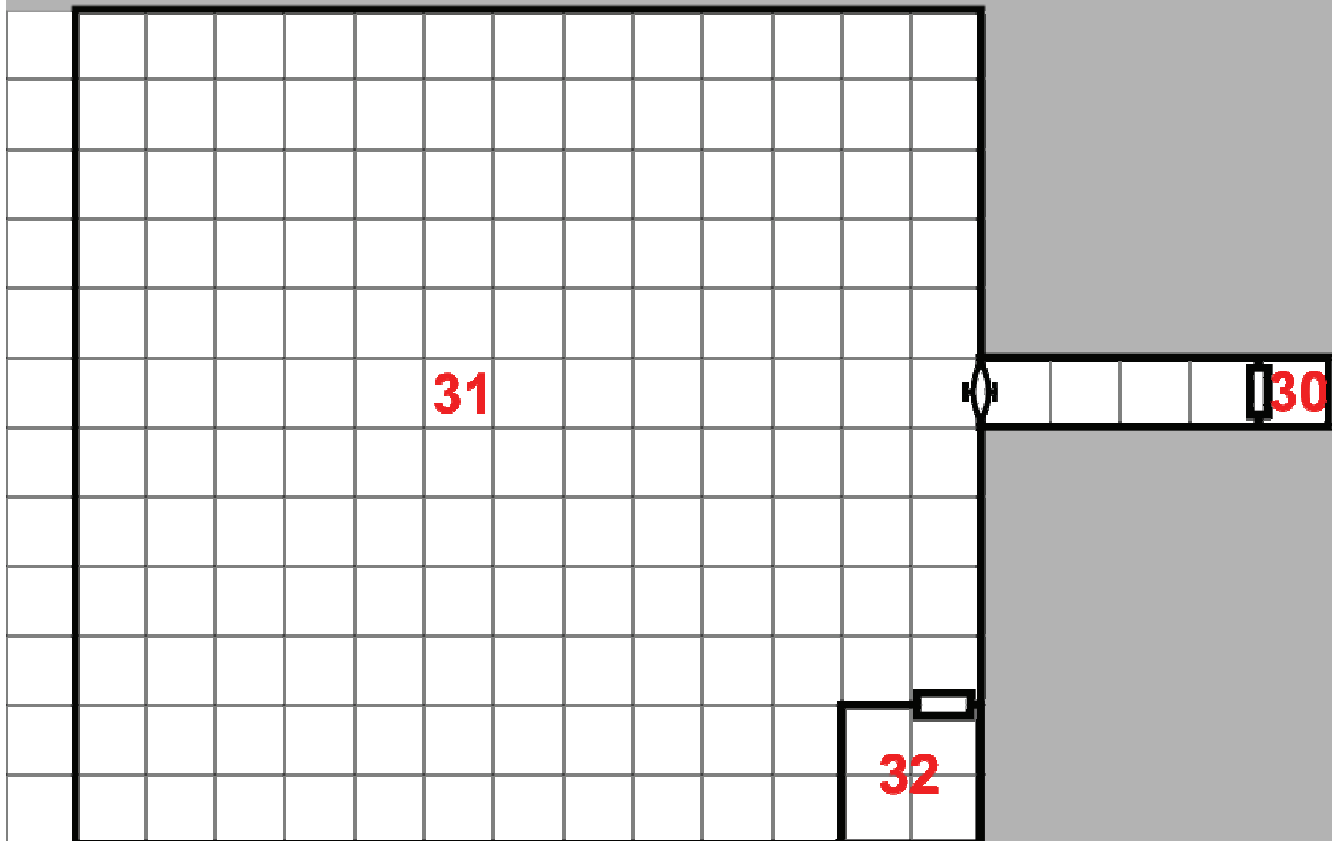
Creatures
THE SAC-LAANG, ASH-LAA AND OSAKAR LEGEND

Eric "iggy" Winsor

Tik is fascinated by the osakar and their homeworld. Now I know dozens of dralasites that would debate for hours and even days that their species is the most biologically unique of all the species in the frontier. I must however side with Tik, a bug, that the osakar are the most unique species and biosphere discovered so far.

The osakar world is dominated by "cloned" life forms. Biodiversity is frozen in its tracks on Osaka. That at least is the prevalent belief in the frontier. Tik however didn't buy that and had been pestering Dwain and I to visit Osaka for years. Well, Dwain got the two of us delayed on New Pale. So Tik took off to Osaka to investigate some rumors he had heard about a very rare and strange osakish creature that dispels the frontier belief in the clone model of osaka physiology. He left tickets for us to join him on Osaka when we were finished on New Pale.

On Osaka Tik meet with Sahng Sh-laund VooZhoo professor of taxonomy at Osa SiVa University. Sahng took Tik deep into northern Osaka to the singing forests to find a sac-laang, an osakish creature that borrows DNA from its' victims. Anciently the osakar hunted it into obscurity so it took Tik and Sahng several weeks to hike into the dense remote location Sahng keeps secret. Dwain and I caught up with Tik far into the singing forests.

The sac-laang is now considered mythical by most osakar. They were prevalent on Osaka at the dawn of their civilization and a few remained when the osakar embarked on their age of discovery and colonization of their world. Now only 17 are known to exists of which 3 have mysteriously disappeared in the past few years and 1 was destroyed by fearful osakar who discovered it. The existence of the sac-laang professor Sahng lead us to calls to reevaluation the myths of many different osakar people.

MYTHICAL OSAKAR TRIBES

Osakar mythology tells of the ancient osa tribe being the dominant tribe of all osakar. The osa looked exactly like all osakar of this day. The other tribes were each different. Their color was different or their height was different. Some had golden eyes, some had shorter necks or legs. There was racial variation among the osakar people.

Legend says that tribes worshiped a god that would give rebirth to any that offered themselves to it after a worthy life. The elderly would come to Ash-Laa and be devoured by it. If they were unworthy they would only be

The Sac-laang, Ash-Laa of Osakar legend?
from Random Creatures by Tysho

devoured. If they were acceptable they might seed again as a mindless puppet of the Ash-Laa. If they were worthy they would seed again and have a new life. In some cases the new seed grew into a new osakar with a new variation blessing them to be different than all the osakar of the tribe. They would have a longer face or smoother textured skin, bigger stronger arms, different coloration, or any other variation available in osa species. Thus the god granted them freedom to be a new tribe. If they lived worthier still they were granted seed at the age of reproduction.

Legend says that all osakar tribes were spawned by the gods Ash-Laa. Each tribe worshiped their own Ash-Laa and new tribes would only come to being if the one of worthy rebirth both had seed of its' own and nurtured a seed of Ash-Laa for the new tribe to worship. All tribes worshiped their Ash-Laa except the Osa. The Osa came from the south-lands and had no Ash-Laa. They knew no Ash-Laa. They dominated the south-lands and migrated into the greater lands of the north, east, and west seeking room to grow their vast tribe.

When they meet the first tribe outside of the south-land they were shocked that they were different from the osa. They feared the wild savages and distrusted them for their difference. They had conflicts and arguments. The osa attempted to teach the savages and bring civilization. The highest of the osa, H-Ze-Ler, arranged a union between her most favorite osa offspring, Re-Vo, and the most influential osakar of the savage tribe, Do-Ta. But many of the savages resented their tribe member joining with the osa and secretly murdered Re-Vo.

H-Ze-Ler was furious and sent her hunters into the savage villages seeking the murderers of Re-Vo. The savages resented the searches and accusations. The secret murderers held their tongues. Then when one of their own was captured the others came and murdered the hunters to protect their secret. H-Ze-Ler armed and trained her remaining hunters to be warriors and fought back, bringing the secret murders into the light. The secret murderers responded by turning their savage tribe members against the osa and arming them too. And so began the first war of osakar.

Do-Ta campaigned among the savage tribe to end the war, join with the osa, and bring the murders of Re-Vo to justice. But none among the savages and the osa would listen so Do-Ta wrote a letter to H-Ze-Ler, the osa, and her fellow savage tribe members that if they did not end the war she would feed herself as a sacrifice to the savage tribe's god Ash-Laa, thus forsaking both tribes in an attempt to become the first of a new and different tribe.

Some among the savage tribe supported Do-Ta's sacrifice to become a new tribe. None among the osa supported the sacrifice and perceived it as a defilement by an impure and wild creature. H-Ze-Ler himself lead an army deep into the savage tribe's lands to stop the sacrifice. The battles to reach the savage tribe's Ash-Laa were fierce and most of the savage tribe were destroyed as they rallied to protect their Ash-Laa. H-Ze-Ler arrived in time to see Do-Ta reborn as a new osakar with red eyes instead of black. Fearing that the new Do-Ta tribe would be evil H-Ze-Ler slew Do-Ta as a seedling. This so enraged the surviving savage tribe members that they rushed H-Ze-Ler and killed her, ripping her limb from limb. The osa warriors retaliated by hunting the remaining savage tribe members to extinction and burning their Ash-Laa to ashes. Thus commenced the dark ancient age of the osa

tribe sweeping the whole world, wiping out all other savage tribes and burning their Ash-Laa to dust.

When the osakar developed writing and started recording history the story of H-Ze-Ler, Do-Ta, Re-Vo, the savage tribes, and the Ash-Laa were already legends.

The rediscovered Sac-laang

When the osakar commenced their age of world discovery, exploring and bring trade to all of the osakar they found a strange creature deep in the northern continent. This creature lured prey to it by first devouring a small prey animal and then later dropping a replicant of it to grow beneath it. This replicant would then wander around the creature, venturing out and returning in attempts to draw larger prey in close enough for its' fast tentacles to grab and bind a victim for consumption.

The explores greatly feared this creature because of its' great stamina and speed of attack. Many an early explorer into the northern continent meet a horrible fate, dismembered and consumed by what became known as the sac-laang.

Many explores regarded the sac-laang as Ash-Laa of legend and branded it a demon creature. Osakar religious leaders sought out the sac-laang to study it. They allowed many elderly and ill to offer their dead bodies who hoped the legends were true. The clergy dismissed the creature as Ash-Laa because they never witnessed it drop a seed that became an intelligent being from all of the dead osakar offered. All that was ever verifiable to the osakar was that the sac-laang was a voracious deadly creature that ate anything that got within grappling distance. The religious leaders also labeled the sac-laang an impure demon creature only worthy of destruction. Thus the osakar settlers that later opened up the last of the northern continent routinely destroyed all thy found for safeties sake. So to the sac-laang became a myth, poorly recorded with obscure stories of the clergy and explorers.

Then thirty years ago some scientists venturing into the singing forests to collect specimens of fungal spiders found an old osakar with blue-green villosulous hairs on her arms, living in a tree. She was very old, could not speak, did not recognize other osakar, and was even fearful of the scientists at first meeting. The old osakar was very territorial about the tree and made regular trips to a downed branch where the scientist discovered what they determined was the rotted remains of a sac-laang.

Attempts were made to teach the old osakar to speak but to no success. The old osakar died soon after her discovery. Her body and the remains of the sac-laang were brought to Osa SiVa University where Sahng Sh-laund VooZhoo began studying the remains while still a student.

Early studies established that the old osakar had osakar DNA with traces of the sac-laang DNA and DNA of a singing forest tree dwelling prey creature with blue-green villosulous hair. The autopsy of So-Ol (the name they gave the old osakar) revealed that she was sterile and could have never had offspring. Sahng used these studies to gain her professorship but the event faded from popular science because no other sac-laang were ever found.

Then five years ago Sahng returned to the site of the fallen tree limb and found a sapling sac-laang growing from a nearby branch. Further searches revealed a total of 17 saplings growing in various other trees within a 5 km radius. Searches of other sites did not turn up any details of how the saplings and gotten there. No rotted remains were found at the other locations, nor seed casings.

Sahng and her students setup up observation cameras on all 17 sac-laang and recorded the creatures doing many of the things the old explorers had written of.

Sac-laang drop tentacles to the ground or up around the branch they are attached to. The tentacles rest motionless until a creature comes within grasping distance and then they swiftly entangle the creature. Creatures of equivalent size of smaller are quickly subdued and pulled up into the creature where a digestive pocket is formed around the victim. Digestion is slow and takes many days or weeks depending on the size of the meal. The more the sac-laang eats the faster it grows, reaching maximum recorded sizes of just over 3 meters for the main body length and just over 3 meters for the tentacle reach. As all known living sac-laang are approximately 5 years old, no one knows how long the creature can live. Nor is it known how large the creature can eventually become. The ligaments that attach the sac-laang to its' home tree can stretch and contract to allow it to slowly reach down to the ground. More ligaments are added as the creature grows in size.

Sahng's team quickly established that the sac-laang is carnivorous. It eats any creature it can grapple and bring to its mouth where it dismembers it if necessary and swallows it. A digestive sac is formed around the food which can be seen bulging outside along its body. The more the sac-laang eats the more sack bulges will be seen. About once every 7 days after its' first meal the creature will drop a seed that will develop into a replicant of its' meal 7 days earlier. This replicant will live for about 7 days and acts as a lure to bring bigger prey to the sac-laang to be caught. When the replicant dies it is re-devoured by the sac-laang. Re-devoured replicants do not seem to be used as source material for future replicants.

Of the thousands of replicants now recorded and sampled 0.001% have been recorded to have DNA other than the meal organism and the sac-laang. All others have been the DNA of the meal donor and a few key chains of sac-laang DNA that the creature appears to use to limit re-spawning and detect that the creature is its' own replicant. All have been sterile, and 0.00025% have had a minor variation in their meal donor DNA resulting in a variation in creature characteristics.

The sac-Laang is very strong and a 3m specimen could easily grapple and devour an adult osakar. Equivalent sized creatures have been recorded being captured and consumed.

When the popular press ran an article detailing the sac-laang study some unknown osakar came to the reported site and burned the creature to ash and left a note condemning the return of the savage god Ash-Laa and demons. Thus Sahng and her team now keep the locations of the sac-laang secret to protect them.

Sac-**laang**	
TYPE:	Omnivore
SIZE:	Medium : 3m
NUMBER:	1
MOVE:	Stationary
IM/RS:	+7/70
STAMINA:	160-200
ATTACK:	80
DAMAGE:	3d10
SPECIAL ATTACK:	Replicant creatures from previous meals lure prey to be captured
SPECIAL DEFENSE:	None
NATIVE WORLD:	Osaka, Osak

GM NOTES

Dwain and Jurak were delayed on New Pale because Dwain tried to take an empty cybernuk egg with him out of New Pale. New Pale customs took note of the egg and the lack of documented proof that it had been sterilized after the yoke was removed. They accused Dwain of trying to smuggle cybernuk DNA. It took Jurak a month of legal wrangling to get Dwain released. Fortunately Dwain had steamed the egg out to clean it so his lawyers successfully argued that Dwain had actually made a reasonable professional attempt to destroy any tissue left inside the shell. Lab testing and witnesses from the cybernuk wranglers who had presented the egg to Dwain proved Dwain's motives and innocence. The New Pale Customs Officials had the egg lab sterilized as a precaution. Dwain it seems was the first person ever to remove a cybernuk egg shell from New Pale. The tickets Tik left for Dwain and Jurak were storage class.

The disappearance of 3 sac-laang is suspected to be the actions of God Co operatives. The sac-laang ability to make replicants of its' victims is of great value to GodCo and their cloning research.

FE

Equipment
NASCOM AUTOMATED SYSTEMS FOR AEROSPACE

Tom Verreault

Surprisingly, with the democratization of space flight in the Frontier such that anyone and everyone can visit space, the development of safety equipment had not kept pace with the volume of people engaging in space flight. The recent UPFS Titan disaster illustrated the folly of this when the ship lacked enough life pods and life boats to evacuate the entire passenger and crew compliment following its tragic collision with fragments of a comet in the White Light system.

An up and coming company, Nascom Automated Systems for Aerospace, has branched from their niche market in automated air cars and super-sonic transports into space survival equipment in direct response to the aftermath of the Titan tragedy. This year they have unveiled two new safety systems for evacuating crew and passengers from orbit, the MOOSE 2 and the DOLEV.

The MOOSE 2

MOOSE 2 is a 90 kg suitcase that contains a folded heat shield, inflating high impact polyfoam, a radio beacon and tracker, braking parachute, emergency water and rations, re-entry rockets, and a level 3 robotic processor programed to control the rockets and parachute deployment. In the event of an emergency in orbit over a planet, a vacuum suited being can go EVA from a vehicle or station with the MOOSE 2 in tow. It takes 30 minutes to deploy and activate its automated system. Getting out of orbit will take 7 to 17 minutes. The system can only be used while in orbit over a terrestrial body.

The MOOSE 2 system is the automated re-entry feature. Nascom has mated a mid-level robotic processor to the re-entry rockets and parachute. If the system is provided with

Moose 2 Deployment

MAN IN SPACE FERRY

EJECTION FROM SPACE FERRY

DE-ORBITING

ACTIVATION OF FOAMING

FOAMING COMPLETE

RE-ENTRY

PARACHUTE OPENING

SEA RESCUE
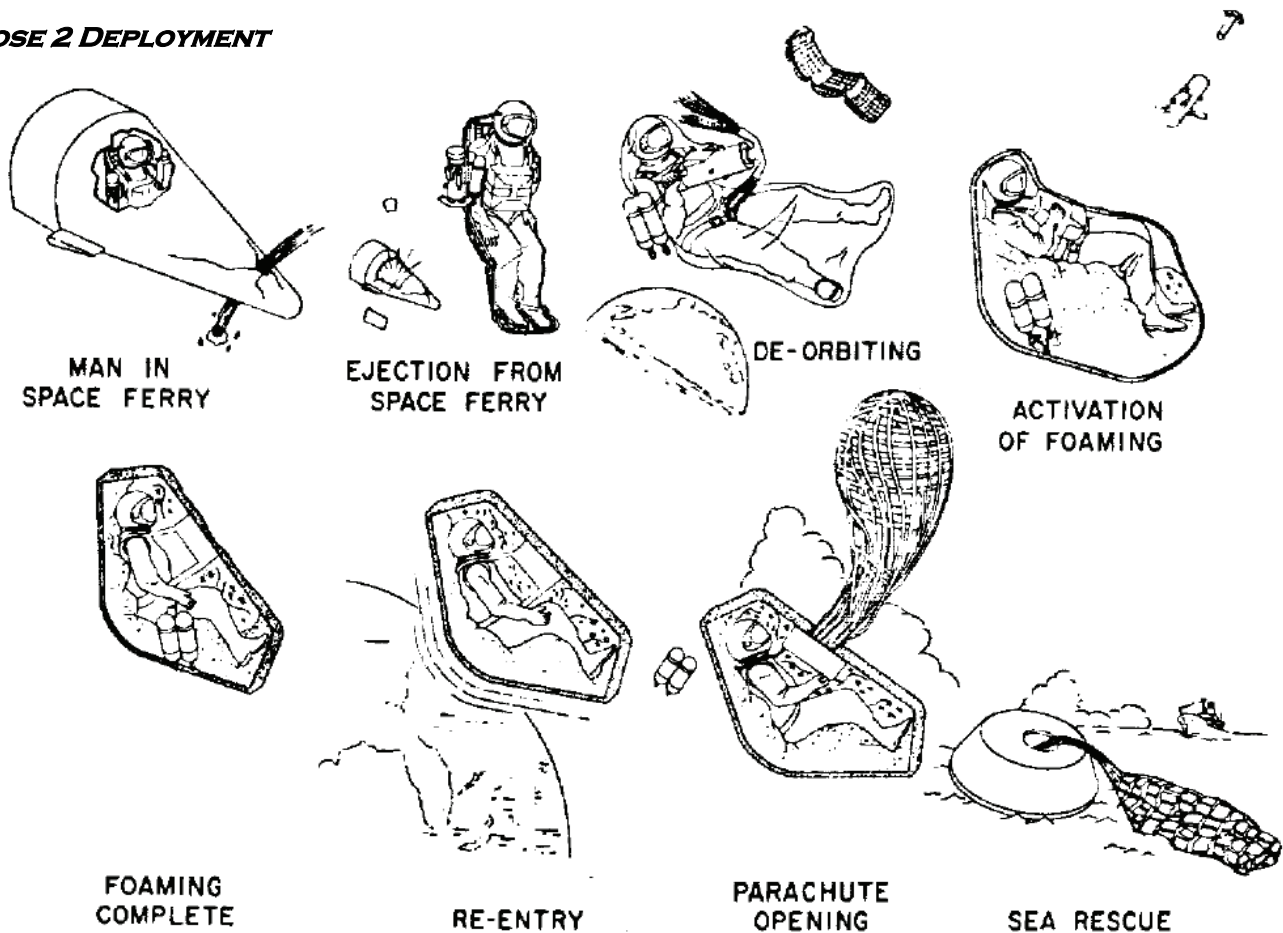
MOOSE ESCAPE CONCEPT
MANNED ORBITAL OPERATIONS
SAFETY EQUIPMENT
(GE)

FOLDABLE
HEAT SHIELD
PARACHUTE
PLSS
FIRING
POS
RETRO
MOTOR
FOAM
STORED
POS
• 1 MAN
• SUIT
• HAND-HELD RETRO
• ALL EQUIPMENT CARRIED EVA
• FOAM-IN-PLACE
• 215 KG (475 LB)
• NEW TECHNOLOGY REQUIREMENTS
  • FOAM IN SPACE
  • FOLDABLE HEAT SHIELD
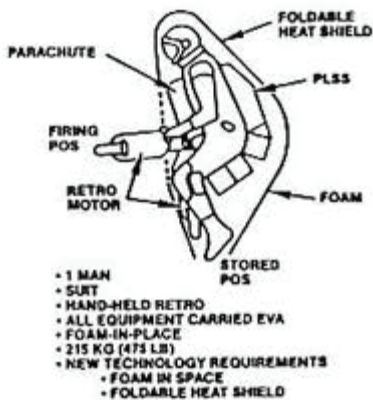
coordinates for a landing site it will land within 1 km of that spot with an 85% success rate. A normal failure will generally deliver the evacuee within 10-100 km of the designated spot and a complete failure (only 3% chance) could drop the evacuee anywhere on the planet.

Normally, all MOOSE 2 systems will be stored in the suit locker of a ship and can be plugged into the computer net allowing the astrogator to update them along with all life pods and life boats with coordinates for the landing spot any time. (The standard practice is to preselect a landing site but at the time an abandon ship order is given the astrogator can amend the coordinates.) This feature ensures that crew and passengers are not spread all over a planetary body without any hope of linking up afterward. MOOSE 2 relies on the navigation section of a ship or similar section of a space station to know where it starts from in orbit. Without updates from an astrogator or astrogation section the MOOSE 2 will not know where to deposit the evacuee and will deliver him or her anywhere on the planet.

Spacesuit armor is contra-indicated for use with the MOOSE 2. Beings wearing spacesuit armor have experienced injury on landing. (STA check to avoid 2d10 points of damage.)

The emergency beacon is omni-directional with 1000 km range and comes with a beacon tracker which provides the user with the distance and direction to all other similar emergency beacons in the area. There is a 4 liter water pack, 1 week (GST) of emergency rations, a knife and a light weight nylon ruck sack for stowing the survival gear and parachute (the chute is intended to double as a shelter and a visual signal to aerial searchers.

Weight: 90 kg, **Cost**: 2,500 Credits

DOLEV, Drone Orbital Launch & Emergency Vehicle

The DOLEV comes in two models the Mark IV and the Mark VIII. It's designed to replace the standard ship's launches used on vessels throughout the Frontier. The DOLEV Mk IV replaces the small launch (4 passenger capacity) and the DOLEV Mk. VIII replaces the large launch (8 passenger capacity). Each DOLEV can be operated in manual mode but it is also equipped with a level 5 robotic brain programed to fly the craft.

The craft is a lifting body design and can be flown/glided to any designated spot on a planetary body. It uses the same updates from an astrogator or astrogation section for emergency landing spots but new landing spots can be designated at any time before re-entry. It effectively functions as a launch in space for vessel to vessel or vessel to station transfer of personnel but doubles as a life boat in emergencies. It cannot return to space on its own power but requires mounting on a rocket or being carried as cargo on a shuttle. The selling points of the DOLEV design are the versatility and the expansion of a ships evacuation equipment.

Mark IV - **Cost**: 100,000 Credits
Mark VIII - **Cost**: 125,000 Credits

FE

DRONE WARS

Starships

Jason Combs

The UPF has seen a need for an automated space fighter to reduce manpower and increase the size of the fleets. The UPF has put out a contract for a "drone" fighter to the public for all individuals and corporations. The requirement is for a fighter, without a pilot, is able to:

1) Launch from and land on (unassisted):
   a) A Carrier
   b) A Space Station
   c) Launch from planet (booster rocket is allowed)
2) Navigate to several waypoints and return to base
3) Able to navigate through an asteroid belt
4) Provide a minimum of a 50% hit ratio against a reflective surface
5) Able to engage in combat:
   a) One on One
   b) Two on Two, as part of a flight
6) Able to read and react to radar contacts in an appropriate fashion:
   a) UPF Frigate
   b) Unknown Freighter
   c) SAV Fighter
7) Able to receive and send radio communications:
   a) Receive orders
   b) Report contact to UPF Chain of Command
   c) Able to query unknown Freighter
   d) Able to receive transmission from unknown Freighter and react to information. (example: if attacked - ?)
8) Must be able to conduct minor repairs to ship due to damage from combat, asteroids, etc
9) May be no larger than Hull Size: 1
10) Have a price tag under 1,000,000 credits per ship
11) Limit three submissions per company

Testing

Part 1

Test Parameters

The drones will launch from a UPFS Archroost, an Assault Carrier, in Truane's Star on the inner system side of the asteroid belt. They are to navigate through the asteroid belt. Upon reaching the other side, the drone is to stop an unknown freighter, query it, report it to the Assault Carrier and receive instructions. The drone will then act accordingly.

The Competitors

Ten corporations submitted fourteen prototypes for the contract. Below is a list of the corporations and their drones. The competition for this contract was so intense, that it was nicknamed – The Drone Wars.

Company	Drones
Merco	DH-02C "Brigand"
Streel Corporation	S-1lCE "Piranha"
	S-2CE "Manta"
	S-3CE "Barracuda"
Pan Galatic Corporation	PF-5 "Shadow Star"
	P-4 "Ranger"
WarTech	F-42C "Eliminator"
	F-20 "Bolt"
Rayax Transport	RT-100 "Black Phoenix"
Trans-Travel	TRE-11 "Trident"
Tachton Industries	KZ-3D "Kaydlitz"
Nesmith Enterprises of Triad (NET)	NIT-7R "Mauler"
Interplanetary Industries	IID-MK3 "Vik't-ziir"
Malco Enterprises	ME-6 "Axe"

Results

Most of the drones passed this phase of the competition. The "Manta" unfortunately collided with an asteroid and severely damaged. The "Trident" was able to navigate through the asteroid belt but, received and sent degraded communication from the other side. The Mauler was able to proceed through the asteroid belt but, then suffered a computer failure. The back-up program then engaged and it was able to proceed with the mission.

Part 2

Test Parameters

The second phase of trials will be conducted in the Theseus system. The drones will launch from the Athena Fortified Space Station (FSS). The drones will then navigate to the planet Daedalus. The drones will then rendezvous with a UPF Frigate and escort it to the Athena

FSS. The drones will then navigate to the asteroid belt and intercept an unknown craft. This will be a Sather fighter, with a robot pilot. The drones are to engage the Sather fighter and return to the Athena FSS.

Results

The "Brigand" and "Piranha" were able to dispatch the SAV fighters. The "Barracuda" missed with its laser and the SAV fighter was able to close and dispatch it with an assault rocket. The "Bolt" had the main computer lock up. The SAV fighter then closed with it and destroyed it. The "Kaydlitz" missed its target and in return was destroyed. The "Vik't-ziir" was also unable to engage its target and was destroyed. The "Axe" was able to engage its target but, had its drive damaged. A distress call was then sent from the drone. It was later determined that the "Axe" was not a drone but, a space fighter and Malco Enterprises was then summarily disqualified from the competition.

Part 3

Test Parameters

The third phase of the competition will take place in the Cassidine system on Dingo. This will require two of each prototype. The drones will launch from the planet's surface. They will then engage a series of reflective, satellite targets. Each drown must hit three out of the five targets. The drones will then receive orders to incept unknown inbound craft. These will be two shuttles armed with laser pistons and piloted by robots. The drones are to report back to the base and then will receive orders to engage. After completion, the drones are to return to orbit of Dingo. A satellite armed with a laser piston will then shoot each drone. The drone is then to make repairs.

Results

The "Brigand" completed the tasks and engaged the shuttles. Each drone was damaged. One received structural damage and the other drone had one of its maneuvering thrusters damaged. Neither drone could repair the damage.

The "Piranha" completed the tasks and engaged the shuttles. Each drone received structural damage and one drone was able to make limited repairs.

The "Shadow Star" drones were able to complete their targeting and engage the shuttles without receiving any damage. The drones were unable to conduct self-repair.

The "Ranger" drones failed the marksmanship task. They were able to engage and destroy both shuttles. During the repair test, one drone was accidentally destroyed (lucky shot) and the remaining drone had its pod laser damage, which it was able to repair.

The "Eliminator" drones completed all tasks – marksmanship, destroying the shuttles and effecting repairs. One received a hit that inflicted 75% damage to the hull. The other drone lost all maneuverability. Repairs were conducted to both to allow them to return to base. (It

was later discovered that the cost of the craft were in excess of one million credits and WarTech was then ...eliminated)

The "Black Phoenix" drones completed the trial but, one was destroyed by the shuttles and the remaining drone could not conduct self-repair.

The "Trident" drones completed all tasks – marksmanship, destroying the shuttles and effecting repairs.

The "Mauler" drones were able to complete marksmanship and still have a striker missile remaining. One shuttle was destroyed and the other was not. As for the self-repair, one drone could not repair the structural damage it had received. The other drone lost all maneuverability and was able to make limited repairs.

Conclusion

The UPF Admiralty is currently reviewing the results from the trials. No decision has been made at this time.

Hooks, Lines, and Sinkers

The following are ideas to tie the drone tests into a campaign and involve your player characters.

1) The team works for one of the submitting corporations. They are part of the design team or provide security for the drones. Does Streel send a covert team to sabotage their drone? Is the team ordered by their corporation to sabotage another company's drone? Maybe the team is tasked with infiltrating one of the UPF bases to sabotage the testing in their corporations favor?

2) The UPF hires the team to provide security or as observers. This may lead to breaking up a brawl between the design teams from PGC and Streel. Maybe the team is tasked to following the drones on their trial runs when a Corvette appears and begins to attack one of the drones… (Possibly from Malco Enterprise?).

3) The team notices peculiar things concerning Malco Enterprise's drone…why the rush to remove the robot? Why is it whisked away to a break room? Does the team investigate? Why is there an oxygen bottle in the craft?

4) Does the team hear of the contract and submit their own drone fighter?

5) Maybe the team is working for the UPF conducting the test and they are sent to inspect the test route. In the process, they discover something in the testing area? Is it something from one of the competitors? The Sathar? Someone else?

Statistics for Submitted Vehicles

Merco

DH-02C "Brigand" Computerized Corporate Fighter			
HP:	8	**ADF:**	5
DCR:	30	**MR:**	4
HS:	1	**Crew:**	0
Engines: 1 Atomic Drive, Class A			
Weapons: Pod Laser, 1 Assault Rocket			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar			
Computer – Level 4 FP: 106 Alarm (1), Analysis (3), Assault Rocket (1), Astrogation-Shuttle (1), Computer Lockout (4), Damage Control (1), Drive (4), Information Storage (1), Maintenance (1), Pilot (1), Laser Cannon (1), Engineering (1), Bureaucracy (4)			
Cost: 873,500 credits			

The Brigand is another MerCo design. This production model does not sport the unique "radar decoy" mechanism that the Marauder has. The cockpit has been removed and placed in its place is a neuro-positronic brain. This device enables the different programs and equipment to tie together. **#** There is 10% per encounter that the neuro-positronic brain becomes overloaded with the programs, radio and radar. In this case, the brain will shut down.

Pan Galactic Corporation

The Pan Galactic Corporation submitted two drones, the PF-5D "Shadow Star" and the P-4D "Ranger"

PF-5D "Shadow Star" Star Fighter Drone			
HP:	8	**ADF:**	5
DCR:	25	**MR:**	5
HS:	1	**Crew:**	1 robot
Engines: 1 Atomic Drive, Class A			
Weapons: Pod Laser-Long Range			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar			
Computer – Level 3 FP: 54 Alarm (1), Analysis (2), Astrogation - System (2), Computer Lockout (4), Damage Control (1), Drive (4), Information Storage (1), Laser Cannon (1), Maintenance (1)			
Cost: 797,500 credits			

PF-5D Shadow Star   **P-4D Ranger**

The PF-5 Shadow Star is a relic of a design, dating back to before the first Sathar War. Very few militias or government subsidies incorporate the PF-5, for the most part it will be in the service of private operations such as civilian businesses and occasionally used by pirates as well. Due to its widespread use, this was the platform PGC elected to test its Pilot Robot on.

P-4D "Ranger" Tactical Fighter Drone			
HP:	8	**ADF:**	5 (6)
DCR:	30	**MR:**	5
HS:	1	**Crew:**	1 robot
Engines: twin sub-super charged Ion Drives, Class A			
Weapons: Pod Laser, 1 Assault Rocket			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar, Streamlined			
Computer – Level 3 FP: 47 Alarm (2), Analysis (2), Assault Rocket (1), Astrogation (2), Computer Lockout (4), Damage Control (2), Drive (3), Information Storage (1), Laser Cannon (1), Maintenance (2)			
Cost: 711,500 credits			

The Pan Galactic P-4D Ranger was the company's first major success in the Star Fighter field and filled that role well. An anomaly was soon discovered following the first few armed test flights. *Once the rocket payload was delivered the ship's drives were able to boast some extra power, a trait the pilots got a good kick out of that suited the "need for speed". This anomaly allows the P-4D to deliver its payload against larger targets and get out quickly, should said targets survive.

WarTech

WarTech also submitted two designs, the F-42R "Eliminator" and the F-20R "Bolt".

F-42R "Eliminator" F40C Redevelopment			
HP:	8	**ADF:**	5
DCR:	30	**MR:**	5
HS:	1	**Crew:**	0
Engines: 2 Atomic Drive, Class A			
Weapons: Pod Laser, 2 Assault Rockets			
Defenses: Reflective Hull, Armor (heavy), Streamlined			
Other Equipment: Subspace Radio, Radar			
Computer – Level 4 FP: 119 Alarm (2), Analysis (3), Assault Rocket (1), Astrogation - Shuttle (1), Computer Lockout (4), Damage Control (2), Drive (4), Information Storage (1), Laser Cannon (1), Maintenance (2), Pilot (1), Engineering (1), Bureaucracy (4)			
Cost: 999,999 credits (actual cost - 1,210,500 credits)			

The F-42R Eliminator is based on the wildly successful F-40C standard fighter. Offensively, the craft boasts a standard pod laser system along with a convertible assault rocket launcher that supports two rockets. The launcher/magazine can be swapped out for a second pod laser system, which can be alternatively linked to the fixed system (firing once for 2d10 damage) or discharged individually (two shots at 1d10 each).The main computer is an electronic silicon central processing unit. The main computer occupies the space for the pilot.

F-20 "Bolt" Remote Tactical Light Fighter			
HP:	7	**ADF:**	6
DCR:	30	**MR:**	5
HS:	1	**Crew:**	0
Engines: 2 Atomic Drive, Class A			
Weapons: Pod Laser, 2 Assault Rockets			
Defenses: Reflective Hull, Armor (Medium), Streamlined			
Other Equipment: Subspace Radio, Radar			
Computer – Level 4 FP: 122 Alarm (2), Analysis (3), Assault Rocket (1), Astrogation - Shuttle (1), Computer Lockout (4), Damage Control (2), Drive (4), Information Storage (1), Laser Cannon (1) x2 , Maintenance (2), Pilot (1), Engineering (1), Bureaucracy (4) *#*			
Cost: 999,999 credits (actual cost - 1,019,500 credits)			

WarTech's latest entry in the light fighter arena will be the Arrow, a well armed and snappy accelerator. WarTech expects the Bolt to replace the F-40C. The main computer is an electronic silicon central processing unit. The main computer occupies the space for the pilot. *#* There is 15% per encounter that the robotic brain becomes overloaded

F-42R Eliminator   **F-20R Bolt**

©RJR studio

RJR studio
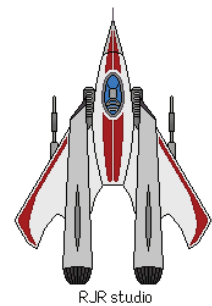
with the programs, radio and radar. In this case, the brain will shut down.

Streel Corporation

The Streel corporation submitted three drones, the S-11CE "Piranha", the S-2CE "Manta" and the S-3CE "Barricuda".

SE-Series Fighters

S-11CE "Piranha" Computerized Electronic Light Fighter			
HP:	5	**ADF:**	5
DCR:	25	**MR:**	5
HS:	1	**Crew:**	0
Engines: twin sub-solar/Ion Drives, Class A			
Weapons: Ion Cannon, 1 Assault Rocket			
Defenses: Reflective Hull			
Other Equipment: Subspace Radio, Radar			
Computer – Level 4 FP: 84 Alarm (2), Analysis (2), Astrogation - System (2), Computer Lockout (4), Damage Control (2), Drive (3), Information Storage (2), Laser Cannon (1), Maintenance (2), Assault Rocket (1), Pilot (1), Engineering (1), Bureaucracy (4)			
Cost: 414,500 credits			

The basic fighter craft is a rather potent machine in battle when used properly. Unable to take much damage, the craft instead relies on its enhanced maneuvering system. And groups of SF-11ce fighters can be quite effective but for solo missions they are somewhat lacking. A robotic brain has been inserted where previously the pilot sat. *#* There is 15% per encounter that the robotic brain becomes overloaded with the programs, radio and radar. In this case, the brain will shut down.

*Piranha design adapted from the craft of the same name from the "Shatterzone" game, all rights reserved

S-2CE "Manta" Computerized Electronic Heavy Assault Fighter			
HP:	8	ADF:	3
DCR:	30	MR:	4
HS:	1	Crew:	0
Engines: twin sub-solar/Ion Drives, Class A			
Weapons: Pod Laser, 4 Assault Rockets			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar, Streamlined			
Computer – Level 4 FP: 87 Alarm (2), Analysis (2), Astrogation – System (2), Computer Lockout (4), Damage Control (2), Drive (3), Information Storage (1), Laser Cannon (1), Maintenance (2), Assault Rocket (1), Pilot (1), Engineering (1), Bureaucracy (4) *#*			
Cost: 829,500 credits			

The Manta is geared for heavy assault, in-system role. Additional payloads are made possible with a trade off in performance. These craft are slow and sloppy by star fighter standards, but the heavy damage they can inflict more than makes up for the lackluster speed and agility. They mount one pod laser and have two warhead bays for each wing. Each warhead bay mounts one assault rocket. A robotic brain has been inserted where previously the pilot sat. *#* There is 25% per encounter that the robotic brain becomes overloaded with the programs, radio and radar. In this case, the brain will shut down.

S-3CE "Barracuda" Computerized Electronic Advanced Recon/Fighter			
HP:	6	ADF:	5
DCR:	30	MR:	5
HS:	1	Crew:	1 robot
Engines: twin sub-solar/Ion Drives, Class A			
Weapons: PL(x2, linked)			
Defenses: Reflective Hull, Armor (light)			
Other Equipment: Subspace Radio, Radar, Streamlined; Energy Sensor, ½ camera system			
Computer – Level 4 FP: 83 Alarm (2), Analysis (2), Astrogation - System (2), Computer Lockout (4), Damage Control (2), Drive (3), Information Storage (1), Laser Cannon (1) x2, Maintenance (2), Weapons Link (1), Pilot (1), Engineering (1), Skin Sensor (1), Bureaucracy (4) *#*			
Cost: 817,500 credits			

The Barracuda is a racier version of the Piranha. Also added is an extra set of cannons, which can be linked to fire in tandem for more damage or separately for additional attacks. An energy sensor array and camera system is easily affixed for recon missions. A robotic brain has been inserted where previously the pilot sat. *#* There is 25% per encounter that the robotic brain becomes overloaded with the programs, radio and radar. In this case, the brain will shutdown.

Rayax Transport

RT-100RO "Black Phoenix" Rayax Transport Tactical Fighter			
HP:	8	ADF:	5
DCR:	30	MR:	5
HS:	1	Crew:	0
Engines: twin sub-super charged Ion Drives, Class A			
Weapons: 2 Pod Lasers-Long Range (weapons link)			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar, Streamlined			
Computer – Level 3 FP: 64 Alarm (2), Analysis (2), Astrogation – System (2), Computer Lockout (4), Damage Control (2), Drive (3), Laser Cannon (1) x2, Pilot (1), Engineering (1), Bureaucracy (4), Weapons Link (1)			
Cost: 755,500 credits			

Rayax Transport is working on two prototype fighter designs, with the Black Phoenix being a prime candidate to be contracted out to Spacefleet. It has one controversial aspect: a profile that resembles a Sathar Fighter RT feels that this is a bonus. This will lull Sather into complacency or scare pirates enough to rapidly depart. The main central processing unit occupies the space for the pilot.

Trans-Travel

The TRE-11 Trident is based on the outdated Freelance fighter. The Freelance design was bought by Trans-Travel. The company wishes to expand into the military market.
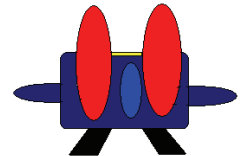
The Trident fighter contains the necessary programming and computers to provide rudimentary flight & patrol functions. The primary operation is the Remotely Operated System. The pilot sits in a cubicle pod and is able to read the instruments and receive all the flight information as if he was in the cockpit. He then is able to actually fly the Trident. The limit and range degradation has not been fully field tested. The initial concept is that the pilot needs to be within 300,000 to 500,000 km of the craft for optimum performance. Any greater distance and there will be a noticeable time lag. (Craft bases its current

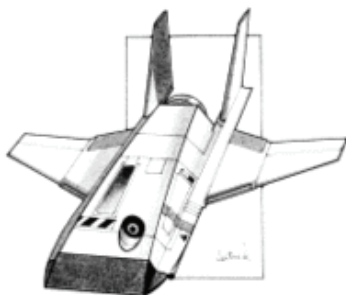actions on the actions of the enemy from the previous turn.)

TRE-11 "Trident" Light Remotely Operated System Fighter			
HP:	5	ADF:	1
DCR:	23	MR:	2
HS:	1	Crew:	0
Engines: 1 Chemical Drive, Class A			
Weapons: Pod Laser-Long Range			
Defenses: Reflective Hull			
Other Equipment: Radar, Subspace Radio, Streamlined Hull, Remote Operating System			
Computer – Level 2 FP: 30			
Alarm (1), Astrogation – System (2), Computer Lockout (2), Damage Control (1), Drive (1), Laser Cannon (1), Pilot (1), Engineering (1), Bureaucracy (3)			
Cost: 174,000 credits			

Tachton Industries

KZ-3D Kaydlitz Fighter (Light Drone Fighter)			
HP:	6	ADF:	5
DCR:	30	MR:	5
HS:	1	Crew:	0
Engines: 1 Atomic Drive, Class A			
Weapons: Pod Laser			
Defenses: Reflective Hull, Armor (light)			
Other Equipment: Subspace Radio, Radar			
Computer – Level 3 FP: 78			
Alarm (1), Analysis (3), Astrogation - Shuttle (1), Computer Lockout (4), Damage Control (1), Drive (4), Information Storage (1), Maintenance (1), Pilot (1), Laser Cannon (1), Engineering (1), Bureaucracy (4)			
Cost: 515,500 credits			

The Kaydlitz light fighter is designed as an "anti-fighter" spacecraft intended to fend off craft that are a danger to larger vessels. Their lesser offensive and defensive punch is countered by improved performance. The light fighter may make atmospheric landings. It contains an enlarged central computer in place of the pilot.

Nesmith Enterprises of Triad

NIT-7R Mauler (Light Drone Fighter)			
HP:	8	ADF:	5
DCR:	30	MR:	5
HS:	1	Crew:	0
Engines: 1 Atomic Drive, Class A			
Weapons: 2 Launchers with 4 Striker Missiles			
Defenses: Reflective Hull, Armor (heavy)			
Other Equipment: Subspace Radio, Radar, Backup Computer			
Computer – Level 3 FP: 78			
Alarm (1), Analysis (3), Striker Missile (1) x2, Astrogation – Shuttle (1), Computer Lockout (4), Damage Control (1), Drive (4), Information Storage (1), Maintenance (1), Pilot (1), Engineering (1), Bureaucracy (4) x2			
Cost: 851,500 credits			

The Mauler is a light drone developed on a conventional fighter. It contains a central processing unit and a backup. NET named this light drone fighter after the Mauler Hounds on Triad. They are renowned for being excellent guard dogs.

Interplanetary Industries

IID-MK3 "Vik't-ziir (Light Drone Fighter)			
HP:	5	ADF:	5
DCR:	23	MR:	5
HS:	1	Crew:	0
Engines: 1 Atomic Drive, Class A			
Weapons: Pod Laser, 2 Forward Firing Rockets			
Defenses: Reflective Hull			
Other Equipment: Subspace Radio, Radar			
Computer – Level 3 FP: 78			
Alarm (1), Analysis (3), Assault Rocket (1), Astrogation - Shuttle (1), Computer Lockout (4), Damage Control (1), Drive (4), Pilot (1), Laser Cannon (1), Engineering (1), Bureaucracy (4)			
Cost: 525,500 credits			

Interplanetary Industries heard of the contract for the UPF's new drone fighter. When it was discovered that NET was submitting a proposal, I.I. could not be outdone and immediately began their project for a drone fighter. The results are the Interplanetary Industries Drone Mark 3. The designers removed the cockpit and main computer and replaced it with an Electronic Guidance system or "Eg". In the event of damage, the Eg is a modular design. The Eg can be unbolted, disconnected and replaced with a

functioning Eg.The IID-MK3 is named after a native creature of Triad. The Vik't-ziir is creature that has the makeup of a jellyfish but appears as a ray.

Malco Enterprises

ME-6 Axe (Light Drone Fighter)			
HP:	5	ADF:	6
DCR:	30	MR:	4
HS:	1	Crew:	1 robot
Engines: 1 Atomic Drive, Class A			
Weapons: Laser Piston			
Defenses: Reflective Hull			
Other Equipment: Subspace Radio, Radar			
Computer – Level 3 FP: 54 Alarm (1), Analysis (1), Astrogation - Shuttle (1), Computer Lockout (4), Damage Control (1), Drive (4), Information Storage (1), Maintenance (1), Laser Cannon (1)			
Cost: 432,000 credits			

The MerCo AH-2 Hatchet has seen a lot of service among private corporations around the Frontier but it has become a popular choice amongst the various pirate organizations. Malco Enterprises reversed engineered the AH-2 Hatchet and designed the ME-6 Axe. The contract for the UPF drone was received and Malco executives devised the idea to submit the Axe as their proposal.

(The contract stated that the fighter must be automated. Rather than investing in a computer brain or robot, the Development Manager decided to place a pilot in a large robot mock-up. The parabattery for the robot will only last "60 hours". This is actually the pilot's life support. The ME-6 Axe is claimed as a light drone fighter but, it is a light fighter without life support.)

Mechanic's Notes

The following sections contain the technical details on the various ship systems introduced in the proceeding ship descriptions.

Computer Programs

The sum of the function points equal to a "suggested" computer level. But, when fighters have minimum programs and an Atomic drive, the Atomic drive is a level 4 program. The sum may equal to a Level 3 computer. In this event, the Computer Lockout program must be a level equal to the highest level of the program used to insure security of the craft; ex: the ME-6 Axe has a level 3 computer but the Drive program is level 4. Therefore, the Computer Lockout program must be level 4, even though the computer is still listed as level 3.

Technology

Sources: Dragon Magazine – Gus Monter & Star Frontiersman – Shadow Shack

Below is a list of weapon and defense technology not in the original books. This is placed here for your ease of use. Some of the equipment is used and some is not.

Weapons

laser piston (LP)

The laser piston is essentially a miniaturized version of the laser cannon. This weapon is often used on vehicles, from fighters to hovercycles. A fighter using a laser piston must forsake any other weapon except a fusion bomb or assault rocket.

Pod Laser (PL)

A Pod Laser is a down-scaled laser cannon for smaller craft such as star fighters. Simply put, the design incorporated removing the guns from a laser battery and down-sizing them to fit in the fuselage of fighter craft. The PL has a range of 50K kilometers, MHS: 1, costs 6,000Cr and takes

up 20 cubic meters of space. Treat as a laser cannon for hit resolution and damage is 1d10 with no damage table modifiers. A longer range version (90,000km range) is available at 8,000Cr and takes up 25cubic meters,

AZ_Gamer   SRM 2012

designated PL (LR). Both systems use the same program that a standard laser cannon uses.

Pod Laser Turret (PLT)

With a MHS: 3 requirement for a laser battery, it became apparent that both smaller craft as well as larger craft that can't accommodate a LB due to other restrictions could benefit from a 360 degree field of fire weapon. Hence, following in the successful footsteps of the Pod Laser, the Pod Laser Turret came to be. The PLT has a range of 40K kilometers, MHS: 1, costs 8,000Cr and requires 20cubic meters of space. Treat as a laser battery to hit with no damage table modifiers and damage is 1d10. The PLT uses the standard Laser Battery program.

Ion Cannon (IC)

The Ion Cannon is essentially a small scale Disruptor Cannon, but instead of causing damage it is designed to disable various starship systems. Upon successful hits, roll (3d6 -2) to generate random numbers between 1 and 16, and consult the Damage Table. Assign everything between "hull hit: normal damage" and "electrical fire" a number (1-16), any system hit by an Ion Cannon is disabled for (2d10 +5) combat turns. Range is 60,000km, MHS=1, cost is 15,000Cr and 20 cubic meters of space is allocated for an Ion Cannon. This weapon uses the Laser Cannon program.

Ion Battery (IB)

Same as an Ion Cannon but with a 360 degree field of fire. Range is 50,000km, MHS=2, cost is 18,000Cr and 20 cubic meters of space is required for an IB. Uses the Laser Battery computer program.

Forward Firing Rockets (FFR)

Essentially this weapon consists of the launchers from a rocket battery positioned in a forward firing stance. All RB modifiers apply (range, DTM, damage), a variant of the Assault Rocket program is used to operate the system.

MHS:1, cost = 20,000Cr, and requires 20 cubic meters of space

Striker Missile (STM)

A Striker Missile rack holds two missiles, each rack requires 5 cubic meters. The rack costs 1000Cr and individual missiles cost 5000Cr each. Missiles have a range of 60,000km with a -10 damage table modifier and inflict 1d10+2 damage. MHS:1 and MR:4 or better required, and a LVL:1/fp:4 computer program is needed to operate the system. MPO/LTD weapon

Heavy Bomb/Rocket (HBR)

These nasty propelled bombs can do some serious damage, especially when considering they can be launched from small craft. The launcher costs 10,000Cr and individual bomb-rockets cost 20,000Cr. Launchers require 10 cubic meters and the range for the bomb/rocket is 30,000km, damage is 3d10 with a -20 modifier. MHS:2 with MPO and LTD restrictions. A LVL:1/fp:3 program is required to operate the system

Fusion bomb

The fusion bomb is so deadly a weapon that it is "dropped" rather than fired at an enemy. The bomb's unstable nature is such that reaction drives placed near it could trigger the bomb before it reaches its target. Thus, the range of this weapon is merely the same hex as the launching ship. A popular fighter ship tactic is to make repeated bombing runs along a larger vessel, with the results being a chain of explosions eventually consuming the target.

Defenses

Streamlining

Ships up to HS:5 can be streamlined to enable landing on atmospheric worlds, at +10% of the normal cost of the hull. This can only be performed during construction of the ship.

Weapon Statistics

Weapon	Cost (Cr)	MHS	Avail.	PL	FP	DTM	HDR	FF	RD	MPO	LTD	RA
Laser piston	1,500	1*	1,2,3	1	3	0	1-5	FF	RD	-	-	6
Fusion bomb	3,000	1	1	1	2	- 20	5d10	-	-	MPO	LTD	0

Abbreviations at the top of table are: cost in credits, minimum hull size (MHS), availability, program level (PL), function points (FP), damage table modifier (DTM), hull damage rating (HDR), forward firing (FF), range diffusion (RD), moving player only (MPO), limited supply (LTD), and range (RA).

* Maximum hull size of 2

Advanced Combat Table entries for the new weapons

Weapon	No		RH		PS		ES		SS		MS		AP		AP, Heavy	
Laser piston	60	55	45	45	60	55	60	55	60	55	15	10	-15	-15	-20	-20
Fusion bomb	70	60	70	60	70	60	70	60	80	70	70	60	-	-	-	-

Percentages in the grey boxes apply to characters using gunnery skills.

Armor Plating Statistics

Defense	Cost (Cr)	MHS	Availability	Program level	Function points	Notes
Armor plating[^]	1,500	6	1,2	N/A	N/A	200 SP, -15% hit
Armor plating (heavy)[^]	3,000	12	1	N/A	N/A	300 SP, -15 or 20% hit
Armor plating, Light[%]	HSx100,000	-	1	N/A	N/A	HP = HSx6
Armor plating, Medium[%]	HSx200,000	-	1	N/A	N/A	HP = HSx7
Armor plating, Heavy[%]	HSx400,000	-	1	N/A	N/A	HP = HSx8

[^] Armor plating from Dragon Magazine
[%] Armor Plating from Star Frontiersman

Armor plating

(Dragon)

This is a relatively common form of protection on warships. The armor is made up of two layers of plasteel beneath tritanium surfacing. It is effective against laser pistons, laser power torches, rocket batteries, and mines, giving these weapons a -15% chance to hit. It adds 200 structural points to the hull. The heavier form of armor is essentially the same as the lighter one, except it has a special ceramic alloy between the two plasteel layers. It adds 300 structural points and is also effective against laser cannons, laser batteries, and electrical beam batteries, giving these weapons a -15% chance to hit and penetrate, -20% against the attack forms affected by the lighter armor plating described above.

Armor Plating

(Star Frontiersman)

Ships can be armored with thicker hull plating and more durable bulkheads and framework. This can only be performed during construction of the ship, and is only available at Class:1 SCCs. Light armor doubles the cost to HS x 100,000Cr and provides 6 hull points per hull size, medium armor doubles again to 200,000Cr per HS and provides 7 hull points per hull size, and heavy armor doubles once more to 400,000Cr per hull size and provides 8 hull points per hull size.

Reinforced hull

(Cost: 800 credits x HS, MHS: 1, Availability: 1, 2, 3)

This additional internal framework of struts and bulkheads adds greatly to the ship's ability to handle internal stress. When a ship is down to half its hull points, a -15 modifier is added to the ship's chance to break apart (see Tactical Operations Manual, page 13, .Hull Hits.).

Mine damper

(Cost: 2,000 credits x HS, MHS: 1, Availability: 1, 2 Program Level: 2, FP: 9)

The mine damper is essentially like an E-shield, except that it is only effective against mines. It must be activated before the player's ship enters a mined hex. For a normal mine, 20 SEU are required to absorb a point of damage. It takes 100 SEU to absorb a screen mine.

FE

AZ_Gamer

Knight Hawks Encounters

HIDDEN DANGERS

Tom Stephens

Just one scenario this month but it is one with many variations and possibilities. It was inspired by two articles in this issue and on in issue 23 of the Star Frontiersman magazine. As always, we'd love to hear of your experiences playing this scenario or ideas you have for scenarios of your own. Send all comments and feedback to editors@frontierexplorer.org.

HIDDEN DANGERS

Something is lurking in the asteroid field as the new UPF fighter drone are tested.

BACKGROUND

The sathar are interested in the new UPF fighter drones being tested and have sent a ship to spy on the trials. It is one of the new Plague Wind class vessels (see p 11). However, one of the drones discovers it while passing through the asteroid field during the test and properly identifies it as a sathar vessel.

Their cover blown, the sathar must make their escape while destroying as many of the drones as possible.

ORDER OF BATTLE

UPF SHIPS
- Monitoring ship
- 5-8 Drones (see setup rules)

SATHAR SHIPS
- 1 Plague Wind frigate

SETUP

THE DRONES
The UPF begins by picking the drones they want to use for this scenario from the drones presented in the Drone Wars article (p. 28). The UPF can have up to 50 HP worth of drones but may only have one of any given type of drone. The board game statistics for each of the drones are reproduced in the sidebar on the following page for easy reference. Refer to the Drone Wars article for details on the specific weapons and defenses carried by each drone.

THE MAP
Place 60 upside down counters in a band 16 to 20 hexes wide across the center of the map to represent the asteroid field. Each counter should be placed on the intersections of three hexes as described in the Knight Hawks

---

SHIP STATISTICS
Here are the statistics for all the UPF monitoring ship and the Sathar Plague Wind Frigate used in this scenario.

MONITORING SHIP
HP: 30   ADF: 3   MR: 3   DCR: 40
Weapons: LB, LB
Defenses: RH

PLAGUE WIND FRIGATE
HP: 50   ADF: 4   MR: 3   DCR: 60
Weapons: LC, LB, RB(x4), T(x2)
Defenses: RH, MS(x2), ICM(x5), Decoy(x2)

Campaign Book p 34. The rules from the Campaign Book covering movement through asteroid fields apply to this scenario. [*Author's Note: This level of asteroid density is completely unrealistic but it makes the play much more interesting.*]

Next, the UPF player should place the drones on the map somewhere inside the asteroid field. No two drones can be in the same hex or within 5 hexes of each other. Their starting speed should be less than 5 hexes per turn.

Next, the monitoring ship should be placed on the map in the middle of one of the asteroid free regions on the left or right side of the map. Its initial speed is 0 as it is watching the drones traverse the asteroid field.

Finally, the sathar Plague Wind Frigate is placed on the map. It must be placed within the asteroid field in a hex containing asteroid and must be within 3 hexes of one of the drones (representing it's detection. Its initial speed is 0 as it has been at rest watching the test just like the monitoring ship.

SPECIAL RULES

ESCAPING THE BATTLE
Any ship that makes it off either of the short edges of the board, with no other ship in weapon's range, or with a higher speed and ADF than any pursuer, is considered to have escaped the battle.

VICTORY CONDITIONS
The sathar achieve a minor victory if the Plague Wind frigate makes it off the short edge of the map on the side opposite where the monitoring ship started. They score a

major victory if they can destroy all of the drones or the monitoring ship in the process.

The UPF achieve victory if they destroy the Plague Wind frigate. They score a major victory if the monitoring ship and more than half of their drones also survive.

Variations

Different Drones

The obvious variation is to play the game again with a different mix of drones for the UPF player. This brings a different weapon mix to the game and allows the player to explore the different capabilities of the different ships.

Two of a Kind

Related to choosing different drones, this variation has two of each type of drone selected. Thus when a type is picked, you get two of these drones instead of one. In this variation the drones of the same type work together as a mini squadron (staying in the same hex if possible) throughout the game.

Full Flight

In this variation, the UPF player picks a single drone type and gets 5 or 6 drones of that type to use. The number will depend on the drone type's HP but no more than 6 drones may be used

A Different Spy

Alternately, the Sathar player could choose to use a different ship, one designed specifically for spying. In this variation, the Sathar player uses the DDLO Sathar "Stealth" ship (From p 17 in Star Frontiersman issue 24, part of the Starfall: Incursion adventure).

The ship does not have a reflective hull (remember to use the correct combat table column) and is equipped with ion drives. Its stealth construction means that it cannot be detected unless within 1 hexes of a UPF ship. The KH game statistics for this ship are:

Sathar Stealth Destroyer
HP: 50   ADF: 1   MR: 3   DCR: 75
Weapons: LC, LB, LB, LB
Defenses: ICM(x6), stealth construction

In this variation the sathar ship is considered to have escaped from the map if it can get at least 15 hexes away from all UPF ships. This represents its stealth technology and being able to disappear from the radar of the UPF vessels.

Give Me One of Each

To make life truly difficult for the sathar player, ignore the 50 HP drone limit and simply give the UPF team one of each type of drone. The sathar ship will be completely outgunned and needs to use all of its wiles to escape.

More or Less

A final variation is to simply vary the hull point total that the UPF team is allowed to have. Giving them more drones makes UPF victory easier while fewer drones makes the sathar victory easier.   FE

Drone Statistics

DH-02C Brigand
HP: 8   ADF: 5   MR: 4   DCR: 30
Weapons: PL, AR(x1)
Defenses: RH, Armor (heavy)

S-11CE Piranha
HP: 5   ADF: 5   MR: 5   DCR: 25
Weapons: IC, AR(x1)
Defenses: RH

S-2CE Manta
HP: 8   ADF: 3   MR: 4   DCR: 30
Weapons: PL, AR(x4)
Defenses: RH, Armor (heavy)

S-3CE Barracuda
HP: 6   ADF: 5   MR: 5   DCR: 30
Weapons: PL(x2, linked)
Defenses: RH, Armor (light)

PF-5D Shadow Star
HP: 8   ADF: 5   MR: 5   DCR: 25
Weapons: PL (long range)
Defenses: RH, Armor (heavy)

P-4D Ranger
HP: 8   ADF: 5(6)   MR: 5   DCR: 30
Weapons: PL, AR(x1)
Defenses: RH, Armor (heavy)

F-42R Eliminator
HP: 8   ADF: 5   MR: 5   DCR: 30
Weapons: PL, AR(x2)
Defenses: RH, Armor (heavy)

F-20 Bolt
HP: 7   ADF: 6   MR: 5   DCR: 30
Weapons: PL, AR(x2)
Defenses: RH, Armor (medium)

RT-100RO Black Phoenix
HP: 8   ADF: 5   MR: 5   DCR: 30
Weapons: PL, AR(x1)
Defenses: RH, Armor(heavy)

TRE-11 Trident
HP: 5   ADF: 1   MR: 2   DCR: 23
Weapons: PL (long range)
Defenses: RH

KZ-3D Kaydlitz
HP: 6   ADF: 5   MR: 5   DCR: 30
Weapons: PL
Defenses: RH, Armor (light)

NIT-7R Mauler
HP: 8   ADF: 5   MR: 5   DCR: 30
Weapons: STM(x2), STM(x2)
Defenses: RH, Armor (heavy)

IID-MK3 Vik't-ziir
HP: 5   ADF: 5   MR: 5   DCR: 23
Weapons: PL, FFR(x2)
Defenses: RH

ME-6 Axe
HP: 5   ADF: 6   MR: 4   DCR: 30
Weapons: LP
Defenses: RH

Standard UPF Fighter
HP: 8   ADF: 5   MR: 5   DCR: 30
Weapons: AR(x4)
Defenses: RH

THE FUNERAL

Tom Verreault

Author's note: I was inspired to write this by the news story of a 99 year old British RAF veteran from WW2 who died and was scheduled to be buried on Remembrance Day (British version of Veterans Day). He had never married nor fathered children and there were no friends or family to attend the funeral. The nursing home he died in published a notice in the paper asking for veterans to attend. A veteran tweeted the story and hundreds came to honor him for his service. This story is dedicated to all warriors who served. None should go with their story untold nor their song unsung.

Jas sighed. She was fourteen and frustrated. Her uncle Jason had passed and it seemed that she was the closest living relative who could attend to arrangements. Not that there was much for her to do since he had been a veteran in the Sathar War. A government agency that supposedly cared for the veterans was paying for the cut rate cremation. Her obligation was to sign for and spread the ashes in a garden of remembrance set aside as a pauper's field for those who could not afford anything else.

Her frustration stemmed from the fact that she had not been raised religious and she didn't see the point of a funeral. Jason was dead and she never really knew him despite being named after him. After all, when you dead you're dead. There wasn't anything more! Her mother was already half dead and too strung out on drugs to see to this. Thus Jas had to perform the duty today.

She turned her attention back to the chronocom to check her net mail and resumed listening to slash music. Hopefully, the crematorium's staff would bring out her uncle for the perfunctory viewing so she could get this over with. She did notice that the room was filling up with old farts and she couldn't remember the last time she had seen so many old people in one spot.

Hargaru entered the crematorium's viewing room and noted several other veteran's already there. It seemed with every year he attend more of these and with each passing year there were fewer and fewer of the old crew left. He nodded to some, shook hands with others and with a few he hugged.

He hated when the wake or service was held at the crematorium right before the cremation. It was often a sign that the old warrior had died in poverty. The crematoriums had been providing a viewing room for families to say their good-byes and could bill the government for the service along with the cremation. The room was functional but not a fitting place for remembering a warrior.

When the cardboard coffin arrived things became painfully awkward as it became apparent that there would be no organized service and the only family member was so self-absorbed that she couldn't pull herself away from her chronocom.

When the crematorium staff looked like they were about to wheel the body out Hargaru stood up. He walked over and pressed the off button on the girls chronocom and said, "There is a warrior here, show him the honor he's due."

Her eyes flashed defiant and her mouth opened to give an angry retort but something in the old yazirian's gaze made her pause. Hargaru nodded and walked up to the backside of the coffin. He looked down at the old warrior in a cardboard box then out at the assembly.

"I knew Jason in the Great War. He fought with distinction and saved my life on more than one occasion. He was like my litter mate and I loved him. Among yazirians we say a warrior who is not remembered in song is a tragic hero. "

Looking down at his friend resting in peace, Hargaru laid a hand on the chest and began to sing. He sang of the war and battles fought and of peace and battles endured. He sang of moments shared with a friend. The song did not take long but it was haunting and hung in the air.

When it was over he drew a sheathed knife from his tunic and placed it in the coffin saying, "No warrior should go into eternity unarmed."

The other veterans formed a queue and filed by. Some bowed their heads in prayer, some stood silent looking on, and others said a few words of tribute. Lastly, Hargaru nodded to Jas and she filed by the coffin.

She had barely known her uncle and had never given him much thought. In that moment, gazing on his old face which seemed peaceful she sensed the profound connection to him through the song and words she had heard and she finally felt the loss of his death. It had meaning because of what he had meant to others. The

Don Freeman

Six men lifted the box from its gurney while the rest formed an honor guard. Hargaru produced another knife and carried its naked blade before the procession while Jas followed behind.

The crematorium director tried to stop them from accessing the cremation hall but Hargaru's knife pressed to his neck convinced him that for this funeral things would be done differently.

The ashes were later spread in the government owned garden of remembrance.

ANOTHER PASSING

Jas was cramming for her medical boards when her room-mate came in. Sarah had been fulfilling her clinical hours at a veteran's clinic. They exchanged some small talk but Jas stiffened at Sarah's mention of a yazirian veteran passing. Minotaur was a human colony and there could not be many yazirian veterans living in the city of Maze.

"What was his name?"

"Hargut or something like that."

"Could it have been Hargaru?"

"Yeah, maybe. What's wrong?"

Jas explained about her uncle's funeral and meeting Hargaru.

"Well this yazirian died without family or clan so the government is handling his arrangements.

Jas grabbed her coat and made to leave.

shame stung her in that moment and all she could do was whisper, "Good-bye."

The crematorium staff moved as if to wheel the coffin out and it was evident they were glad the impromptu service was over. Ironically their manner stirred anger in Jas and she looked pleadingly at the old yazirian veteran still standing by the coffin.

He laid a hand on the coffin to stop them and addressed the veterans present, "Are there any that will carry this warrior to his last journey?"

"What about the boards," called Sarah, "we were supposed to study together?"

"I'm sorry, a warrior has passed and he must be honored."

Jas was frustrated. She was not family to Hargaru and the government would not release his body to her. The crematorium with the government contract was not willing to let her organize anything more than the perfunctory viewing that all impoverished veterans received since they would be billing the government.

Finally, she was frustrated with the yazirian embassy official sitting across from her.

Knowing that there were very few veterans of the Great War left these days she had come to several of the embassies for the various yazirian colonies in the Frontier sector. It seemed that Hargaru was clanless and as such other yazirians just didn't seem to care about his passing. If he had been of a clan from their planet they would be happy to do something.

The irony was bitter, it had been a yazirian that had taught her the meaning of honor and yet she could not get yazirians to honor one of their own. She broke down in tears before the embassy official explaining how Hargaru how become a father figure to her when she sought him out to learn more about her uncle. They had grown close over time and he had influenced her away from a life on the streets and crime.

The official looked uncomfortable at the display of emotion. Jas wiped her eyes, and apologized.

"I'm sorry, it's just that a great warrior should not die without their song being sung."

She left the office and the embassy official sat silent pondering the quote from the yazirian honor code. The girl was correct, of course. The honor code did not recognize any shame in a yazirian being clanless though the rest of his society tended to attach a stigma to it. This was just an unfortunate case where a tragic hero would go unsung, though he suspected from the passion of the human girl that that would not be the case here. If it was true that this clanless yazirian had somehow instilled a deep sense of honor in a streetwise human waif then perhaps he deserved more than being forgotten.

He reached for his chronocom and dialed a contact at the Brotherhood of Spacers, if the embassy could not take official notice perhaps there were enough yazirians crewing the starships in orbit. A notice was posted on the data board at the Brotherhood's guild hall and word began to spread.

--

Like a decade earlier, Jas sat in the front row of the viewing parlor at the crematorium listening to music. Except this time it was not slash rock but a recording of a song sung a decade ago at the last funeral she had attended. She was determined to sing this song and get it right. For this reason she did not notice the parlor filling up.

When the plain wood coffin that was all she could afford on her student's income was rolled in, she shut off the music and stood. It was the place of the deceased's closest living relative to open the service. Walking to the backside of the coffin she turned and her jaw fell open. The parlor was packed to standing room only with yazirians and a few humans. Tears welled up in her eyes. There were Space Fleet uniforms, commercial ship's crew uniforms, militia uniforms, civilian clothing, and even a Land Fleet recruiting officer's uniform worn by a human. She didn't understand how this had come to be but she was grateful.

"Hargaru, was the friend and littermate of my uncle, after my uncle's death he became clan elder to me and I loved him."

Strictly speaking her uncle could not have been a litter mate to Hargaru and neither could Hargaru be her clan elder but adoption was a common practice among yazirians. A way of showing honor to another is adopting them into one's clan. Heads around the room nodded in understanding as to why it was a human presiding at the funeral of a yazirian warrior.

She laid her hand like a gentle caress on Hargaru's chest and began to sing. She sang of his friendship with her uncle and their battles in the war. She sang of the friendship shown her, of a life changed, and of learning the meaning of honor.

Then she laid a knife in the coffin and said, "No warrior should go into eternity unarmed."

It was an old custom among conservative yazirians to give a small weapon like a knife to the deceased prior to cremation. As everyone in the room filed past the coffin, few had words but most presented a knife. Many of the knives looked like they had been just purchased. One human who had not known of the custom, nor had come prepared with a knife drew a concealed pistol, removed the clip and confirmed the chamber was empty before laying it in the open wooden coffin with the arsenal of knives. Jas was deeply touched and hugged everyone.

She had seen an exposé years ago about crematoriums that swapped out premium coffins for a card board box only to resell those coffins later. She was also aware that crematorium staff was notorious for robbing the dead before the cremation. That would not happen this time.

With a clear proud voice she addressed the assembly, "Are there any that will carry this warrior to his last journey?"

The crematorium director did not even bother to object, he had seen this before. With this many warriors present he would let them do as they pleased. A great warrior was carried with great solemnity to his cremation and latter his ashes were spread in a garden of remembrance where many of his fellow warriors already resided.

In the years to come, Jas would visit the garden on Remembrance Day and sing to Hargaru and her uncle. It was a yazirian custom but by then she had adopted much from yazirian culture and she found it soothing to he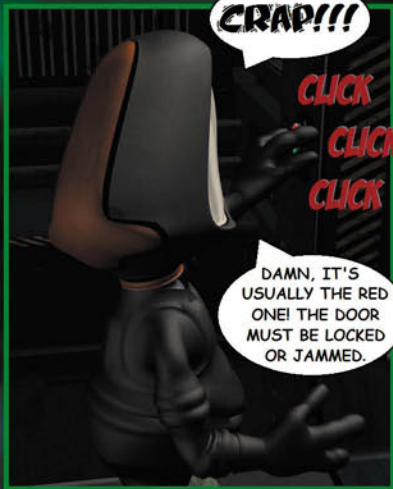r soul to sing for all the warriors present in the garden. **FE**