

Issue
23

STAR FRONTIERSMAN

Magazine



Sathar, The Frontiers Greatest Enemy?

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ON THE COVER:

The cover is courtesy Shell Allan Shoemake. You know and love his work already. Thanks for this terrifying image Shell.



OTHER ART CREDITS:

» Artist Credit on images

FOREWORD

Welcome to Issue #23. It has been a long road to getting the issues out this year. Hopefully this issue finds you in the mood to delve into the mind of the Sathar.

Our group of idea people at Starfrontiers.us has been delving into the Sathar year. Issue #6 of the Frontier Explorer has shown us more of the Sathar than we probably wanted to know. Now, thanks to Ben Gorman (a.k.a. Rollo), we have been given another look into the object of the Frontiers nightmares. Starfall; Incursion is the next Sathar plot to take over the Frontier. It also helps that awhile back, Shell created an awesome cover for us without knowing it would tie in so well with the adventure.

Included in the issue also are some articles from Andy Campbell at the SFUnderground group on yahoo.

If you ever wanted to hit your opponent in the eye with your needler, check out the articles on different wound rules for SF.

Please send any feedback you have directly to me or post on the Starfrontiers.us site. Enjoy the read.

In issue #20, the article "There is no Prime Directive", was written by Evan Robertson. He contacted me and so here is his credit for that great look into Star Frontiers.

Raise your dice hand high!
William Douglass
Wdouglass1970@gmail.com

CREATURES OF THE FRONTIER

This article on swamp critters from Firma was stashed on my computer. I acquired it on one of my surfing expeditions looking for new or obscure Star Frontiers stuff. I have no idea where I got it or who created it. Since I cannot find it now on the web, I thought it should be brought to light here. If the author reads this and would like credit, I will be happy to include that in the next issue.-Editor

Firma Swamp Critters

Carrion Frog	
Type	Medium Carnivore
Number	1 – 4
Move	
Water	Fast
Land	Slow
Leap	10 meter leaps, once per turn.
IM/RS	6/55
Stamina	150
Attack	50 (Tongue & Bite)
Damage	Tongue-no damage, but must make Str check each round to escape; 2d10 per bite.
Special Attack	25% chance of having 1 – 4 random physical or mental mutations (if Gamma Dawn rules are used.) Roll d% 01-25 = 1 mutation, 26-50 = 2 mutations, 51 – 75 = 3 mutations, 76 - 00 = 4 mutations. Roll 1d10 for each mutation 1-5 = mental mutation, 6-0 = physical mutation.
Special Defense	Nearly impossible to spot while underwater or mud. The hide is 30% resistant to archaic & melee attacks and 10% resistant to ballistic attacks.
Native Habitat	Firma – swamps.

Description

Carrion frogs were named by the first colonist settlers of Firma, many centuries ago. It is an inaccurate, yet descriptive term for these amphibious carrion eaters, the “carrion frog” is actually closer in evolution to a smooth skinned, super-adhesive tongue flicking,

leaping crocodile with short snouts. They measure up to 2 meters long, & about 1 meter high.

The mouth is filled with hundreds of slender, razor sharp, needle-like teeth, each 5 to 6 cm long. These teeth are used more for holding a prey in it’s mouth as it swallows it whole, and bleeding prey out. They will not render flesh into smaller pieces with their teeth on purpose, but they won’t complain much if this happens during the swallowing whole process.

The eyes have nictating membranes, to protect the eyes from dust or foreign particles, and also used underwater.

Carrion frogs can hold their breath for up to an hour underwater holding relatively still, but generally have to breathe air once they move to attack. While swimming, they can only hold their breath for 15 minutes.

Their diet includes all kinds of dead, rotting flesh, and particularly enjoy submerged meals, their olfactory senses can ‘smell’ dead flesh or blood in the water up to 100 meters away, as long as it is in the same body of water, and the currents (if any) do not flow in the opposite direction. If dead flesh is not available, they will settle for fresh kills, not preferring any form of flesh over another. If they can get their wide, hinged jaw around a thing, they will slowly swallow & digest it as they go.

They will remain just under the surface of water or mud, keeping a watchful eye out for prey or floating carrion to come its way. Wounded animals are susceptible to the beast’s attacks, as it will attack to kill and save it for later, until it has acquired the correct “flavor”.

They attack on 7+ (2d10), or flee on 10+ (2d10).

Mantithopter	
Type	Insect, Flying Hunter
Number	Swarm 2d10
Move	
Fly	Fast
IM/RS	5/50
Stamina	45
Attack	45/35 (Grasping pincers & Mandibles)
Damage	Mandibles-1d10/turn in grasp, Pincers-4d10 (once the prey is in firm grasp for 4 turns)
Special Attack	After 3 turns of firm grasp, the Mantithopter secretes a highly acidic digestive juice that dissolves the prey caught in its grasp that does 3d10 points of damage per turn. A successful strength check is required to escape the Mantithopter's thorny grasp.
Special Defense	-10 to hit due to highly maneuverable flying.
Native Habitat	Firma – swamps.

Description

The Mantithopter is so named by the Colonists because of its resemblance to a Mantis Bug and early renditions of the modern helicopter. The Mantithopter is 3 meters long, and has oversized front limbs that end in grasping pincers. These allow the mantithopter to pick up 75kg of weight & fly at full speed. It can pick up to 100kg & fly at hovering height, and at half speed, if it so desires. It weighs in at 50kg at its largest size. A mantithopter prefers smaller, more manageable prey (under 50kg), but will readily attack a living being up to 100kg, including sentient plants.

Once a mantithopter gets its prey grasped in its pincers, it will attempt to hold it for 3 turns as it works up its digestive juices; as it waits, it begins gnawing at the prey with its powerful mandibles. After 3 turns of grasping its prey, the digestive juices begin to flow out from its mouth, soaking the grasped prey and seeping into any wounds caused by mandibles or pincers. The juice causes acidic damage, and after a turn of this treatment, the mantithopter will attempt to pinch the prey into smaller, easier digestible bits.

It has large side mounted, many faceted eyes, and its smallish head can rotate 180 degrees, giving it a wide angle to seek out smaller prey. Common to most species of Mantis, it is omnivorous, eating flesh and leaf, but it is also a cannibal, the female will eat a male's head during mating and finish off the rest of him after mating.

Carrion Vines	
Type	Carrion eater
Number	4d10 vines
Move	None, stationary, but it has a 10 meter radius for every 10 vines present.
IM/RS	3/30
Stamina	15 per vine, 75 for the body.
Attack	30/45 (choking, needle tipped vines, paralysis.)
Damage	Choking vines-1d10 per turn, needle tips-1d10+ 1d10 per turn if not removed in two turns.
Special Attack	Paralysis poison on needle tips will incapacitate prey.
Special Defense	None
Special Abilities	1 – 10 random Plant Mutations.
Native Habitat	Firma – swamps.

Description

Carrion vines are another misnomer, as the vines are commonly the only visible part of the whole creature. The whole creature is a carnivorous, carrion eating plant that commonly dwells in the leaf covered branches of tall swamp trees and overhanging embankments. The body of the Carrion Vine plant is indicative of the number of vines present. For every 10 vines, the body will send out longer vines over the immediate area. For every 10 meters radius, add 50 Stamina.

The vines appear pale and sickly green, rough and segmented, as a worm. They hang motionless from the tree or other overhang above, and wait until something brushes up against them. The vines are covered with tiny hooks and briars, as well as a sticky wet substance useful for entangling prey or carrion and drawing it up to the central body & the envelope-like jaw-trap mouth.

There are two types of vines, indistinguishable from each other. For every two choking vines, there will be one bloodsucking vine with a large bore needle 6 inch long at the tip, used for injecting a paralytic poison which also turns flesh into jelly, and then sucking it out.

Once most of the jellied flesh has been sucked out of the prey, the rest of the body is hauled up to the cavernous mouth on top of the body in the center, and dropped in for rending and digesting.

The fat, bloated central body is not armored, but the nature of the plant allows it a generous lifespan through a decentralized nervous system and motor process. Damage must be inflicted all over the body equally in order to kill it completely. It is not normally immune to most attacks, but it is immune to radioactive damage. Since its diet is largely indiscriminate, it may absorb mutations from other beings, thus giving it some useful mutations.

Shriekers	
Type	Fungus/Mushroom
Number	1d10+1
Move	VERY Slow 1 meter/turn
IM/RS	+3/25
Stamina	25
Attack	65%
Damage	As Sonic Stunner for 1d100 turns
Special Attack	Infection with 1d100 turns
Special Defense	None
Special Abilities	None
Native Habitat	Damp Underground

(Taken liberally & nearly literally from the AD&D Monster Manual p. 87.)-Author

Description

Shriekers are normally quiet, mindless fungus which are ambulatory. They live in dark places beneath the ground. Light within 10 meters or movement within 3 meters will cause them to emit a piercing shriek which lasts for 1d10 turns. This noise has the potential to stun any within 10 meters for 1d100 turns, IF the victim fails a Stamina check.

This noise has a 50% chance of attracting wandering creatures for the next 2d10 turns.

Mutation Fungus	
Type	Fungus
Number	1
Move	Slow
IM/RS	Special
Stamina	Special
Attack	Special
Damage	Special
Special Attack	Symbiote with random mental or physical mutations attaches to victim within 3 hours of its attack.
Special Defense	Random Physical Mutations and cancer
Native Habitat	Damp Underground near Radioactivity.

Description

Similar to the Mutating Fungus from Volturnus, this fungus is only slightly more insidious, and nonetheless dangerous. It resembles a white pasty fungus, yet it is capable of self-locomotion, creeping across small areas of land to attack its prey. Its attack form resembles that of a cancer, replacing normal healthy tissue with its own symbiotic cells.

Any character exposed to the fungus for 8 hours or more or who sleeps near it for any amount of time will find a white pasty growth covering part of its body. If the character notices it within 3 hours of its attack, the infection may be treated with antibody plus or its equivalent to counteract the effects of the fungus. If the character is not treated within 3 hours, the character gains a mental or physical mutation at the rate of 1 per day. Unfortunately, if this is not removed (commonly by amputation) within 3 days, the character will be completely consumed & turn into a Mutation Fungus permanently.



CHARACTER RACES

Author's Note: This is another in a series of articles that present many new races that exist outside the Frontier. Each of these races has been adapted by me from material that I have been developing for the Star Frontiers (URS) Project. All of these races are not yet aware of the Frontier, but many of them are spacefaring and have had contact with each other.

Andorians

By Victor M. Gil de Rubio

Average size	1.9m tall
Average mass	80kg (male), 60kg (female)
Average lifespan	500 Years
Body temperature	37°C
Reproduction	Heterosexual Viviparous

PHYSICAL DESCRIPTION AND STRUCTURE

Andorians follow the same basic symmetry of a Human and are one of several races compatible enough genetically that they can interbreed with Humans. Andorians have silver-white hair which grows on the top of their head and on the back of their head that darkens to black at the tips as they grow older. They have almond shaped eyes that range in color throughout the lighter colors common in Humans. Andorians are slender of form, and their skin is a golden bronze in color. Their ears are naturally pointed for a broader hearing range.

Internally Andorians are identical to Humans, but they are not as tolerant to alcohol as a Human making it easy to get an Andorian drunk. Andorian's bodies produce pheromones that strongly affect mammalian humanoids. It is customary for Andorians to take suppressive agents once a month to suppress their pheromones when they have to deal with non-Andorians.

SENSES

Andorians sense of vision is more sensitive to the ultraviolet spectrum granting them night vision as good as their normal vision during daylight hours. Their sense of smell, taste and touch are also more sensitive than a Human's senses.

SPEECH

Of all the mammalian species in the universe the Andorian language is the most beautiful. Spacefaring races who have had contact with this race call Andorians "Space Sirens" because their language is sung rather than spoken. Few races can speak their language fluently though many races who've met them try.



Art BY Emily Vitori

SOCIETY AND ATTITUDES

Andorians are lovers of art and beauty and are culturally superior to many races in the known universe. They are sensualists who enjoy pleasurable experiences, and their society is an enlightened one. Andorians are a very open people, and are very accepting of other races, no matter how odd they may be. The Andorian race is a peaceful race, who outwardly seem to be pacifists, but as their history proves they can be quite deadly opponents. Andorians have had one war in their long history, which resulted in the exile of the Aldorian race from the world that they shared.

Andorians do not usually allowed non-Andorians to travel where they will on their Homeworld. To allow for trade and as a gesture of goodwill the Andorians built a spaceport and a city around it which they have allowed non-Andorians to visit. Travel beyond this city is rarely given to off-worlders unless the person petitions the Andorian government or have married into an Andorian family and renounced their original race's Planetary Citizenship.

The Andorian Homeworld is a world of lush rain forests with a mildly temperate climate known as one of the most beautiful planets in the universe. Andorians have a deep love of all things natural and so have not utilized the great resources of their world except to build their cities and villas. Andoria's climate is temperate to tropical, and the Andorians wear clothes as appropriate only because it puts the other races at ease, or because it is beautiful. They are a sexually open species, and this has led to many things being said about them that are false.

Andorian society is centered around the family, and is matriarchal. Andorians have a deep love of learning and art, and their culture is heavily influenced by their pursuit of learning, and the creation of art. Andorian plays, musical

compositions, and sculpture are well regarded among the races that know of the Andorians. Andorians are a very spiritual people, believing in a unifying deity that is genderless, but represents the harmony of the mind and body. Many Andorians strive to perfect themselves to show their devotion to this ideal.

Number of planets							8
Planetary Overview							
Planet	Core Type	Dia	Ave Temp	Gravity	Orbital Period	Notes	
Desert	Rock	17,640km	293 ⁰ C	1.3g	60 days		
Desert	Magma	25,980km	154 ⁰ C	.9g	140 days		
Garden	Magma	42,300km	27 ⁰ C	.9g	380 Days	Andorian homeworld	
Pre-garden	Magma	37,380km	10 ⁰ C	1.0g	520 days		
Greenhouse	Magma	66,200km	10 ⁰ C	1.1g	640 days		
Greenhouse	Magma	73,800km	4 ⁰ C	1.2g	810 days		
Glacier	Magma	42,200km	-51 ⁰ C	1.0g	1,150 days		
Ice ball	Rock	25,860km	-90 ⁰ C	1.3g	2,050 days		

SPECIAL ABILITIES

Enhanced tactile sense: An Andorian gains a +5 bonus to any Intuition rolls that benefit from touch.

Pheromones: Andorians exude a powerful pheromone that requires mammalian races to roll a Stamina roll at -10 to avoid feeling desire for the Andorian. This effect causes the victim to desire to please the Andorian, and though they are not in any way compelled, refusing any minor request requires another Stamina roll.

Telepathy: Andorians are naturally telepathic. They can communicate with one willing mind without a roll +1 additional person per 10 points of Intuition over 50 at a range equal to 10m/20 points of Intuition they possess as long as they can see their target. Andorians cannot attack psionically with this ability.

ATTRIBUTE ADJUSTMENTS

Dex/RS	+5
Intuition	+10
Personality	+10

Beta Eridani

System Information	
Location	92 light years away from Prenglar
Sun type	Binary system (F2/ M4)
Color	Blue-White/ Red
Classification	F2/ M4
Temperature	7,000/2,500 Kelvin
Life	3,000/125,000 in millions of years
Radius	1.5/.2 listed in terms of Sol's Radius (700,000Km)
Habitable sphere*	3-6/3-7
*Planets in orbit within these orbits have the possibility of sustaining life without artificial means being employed to convert the planet so that it can support Human or Human-like races.	

Notes: Beta Eridani is one of several star systems in the Frontier that possess one or more planets that boasts an incredibly large diversity of life and have at least one major race that have evolved there. Beta Eridani however possesses four planets that have an atmosphere that can support Human or Human-like life and who possess a wide variety of native species. Beta Eridani was once home to two related major races (the Andorians, and the Aldorians) but at one point the two diametrically opposed races fought in a great war against each other which resulted in the Aldorian race being defeated and exiled from the star system.

Beta Eridani is considered by many to be home to some of the most breathtakingly beautiful worlds in the known Universe and unlike many worlds, the Andorian people have not exploited the resources of their star system, and have not condoned any outside race to do so.

Beta Eridani has a thick field of Asteroids roughly .1 light years outside of the star system that has given birth to a total of 19 comets that orbit Beta

Eridani's Binary suns. The fastest of these comets can be seen crossing into the inner systems once every ten years, while the slowest appear once every 90 years or so.

Andoria	
Orbital position	3 rd
Number of satellites	3
Diameter	42,300km
Orbital period	380 days
Rotation period	43 hours
Seasons	3
Axial tilt	32 ^o
Core type	Magma
Gravity	.9
Atmospheric pressure	.9
Tectonic plates	18
Stress factor	12%
Classification	Garden
Hydrosphere	69%
Cloud cover	24%
Chance of Precipitation	28%
Average temperature	80 ^o F
Average wind speed	3kph
Major land masses	2
Minor land masses	3

Natural Resources	
Gold	300,000cr/ton at the source
Federanium	50,000cr/ton at the source
Silver	150,000cr/ton at the source
Lead	10,000cr/ton at the source
Gems	50,000cr/ton at the source
Oil	15,000cr/ton at the source

Notes: Andoria is one of the most beautiful planets in the known universe, and has two major continents that are linked by a land bridge and cover most of the eastern half of the planet with three minor continents in the southern hemisphere. Andoria has a wide variety of terrain types, but is noted for the many rainforests that cover the southern continents. There is a massive chain of snowcapped mountains that trace the eastern edge of the planet's two major continents.

The Andorians have built many beautiful settlements in the two main continents of the planet and have left several settlements that were once inhabited by the Aldorians uninhabited allowing them to fall into ruin allowing nature to reclaim the land where once the Aldorians dwelt. Andoria is a world teeming with life, and the Andorians have never explored or used up more than 20% of the planet's surface area and resources. It should be noted that Andoria has one spaceport city in the Lethel Peninsula called Gher-L'thel where non-Andorians are allowed to visit, or live (by permit).

Andoria has three seasons. The first season is noted because the chance of precipitation on the planet increases to 56%. During the second (transitional season) the chance of rain remains at an elevated level, but the temperature drops to an average of 21°C. During the last of Andoria's three seasons, the chance of precipitation returns to normal levels but the wind speed on the planet increases to an average of 6kph.

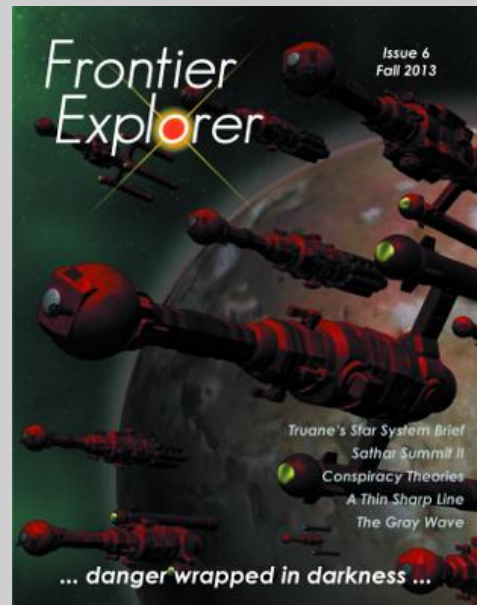
Civilization Information	
Classification	Homeworld
Progress level	7 (Frontier level)
Government type	Charismatic Oligarchy
Law level	Level 11 (civilian movement rigidly controlled)
No. major settlements	8
Population	20,000,000
Planetary wealth	Wealthy
Spaceport type	Major (private docking facility, excellent repair facilities, construction of system ships and starships, warehouse facilities, a customs house, and Spaceport security office)
Manufactured resources	
Jewelry	19,000cr/ton at the source
Statuary	15,000cr/ton at the source
Artwork	25,000cr/ton at the source



Frontier Explorer #6:

- Sathar Summit II
- Truane's Star System Brief
- A Thin Sharp Line
- Gray Wave

<http://frontierexplorer.org/>



STARFALL; INCURSION

Starfall; Incursion

By Ben Gorman

This outline is intended to familiarize the Game Master (GM) and players with this previously unknown part of frontier space.

A basic scenario is outlined herein to get things started, but once started there are several avenues that can be considered for future play and it is up to the GM to develop them further to fit into their universe.

Starfall; Incursion

Starfall; Incursion is a difficult Star Frontiers Alpha Dawn adventure intended for 6-8 experienced players (skill levels 3-4 in at least a couple of their respective primary skills). Strong technical and medical skill sets are a real bonus as this scenario is intended as primarily a scientific research and exploration adventure and players will have ample chances for experience and monetary gains associated with these skill sets. Of course a good mixture of military skills would certainly be beneficial as the physical conflict involved in this adventure is fierce!

The GM should feel free to make adjustments in this adventure in order to insure that their PCs are not overwhelmed. This adventure is intended to be challenging so that experienced players have to think on their feet and consider unorthodox solutions to tough situations.

Simply surviving on such a hostile moon even without the dangerous flora and fauna present would be exceptionally difficult in reality. It is not the intention of this author to force the PCs into a certain death situation. To that end, it is incumbent upon the GM to insure that his/her PCs are up to the challenge or that he/she adjusts the adventure enough to fit the abilities of his/her PCs. The combat aspects of this scenario can be paired back in favor of the scientific aspects if the GM's PCs are not up to the physical challenge for example.

A few very minor aspects of this adventure are based in the Star Frontiers Knight Hawks system. But any such aspects of this work so based have been fully detailed to allow play without the use of the Knight Hawks material so that only the Alpha Dawn material is actually required. Some of the material in this work has come from sources other than the Alpha Dawn material.

Any other source material (such as the various issues of Star Frontiersman from <http://www.starfrontiersman.com/>) are not required for play but are certainly suggested. Whenever such other material is referenced in this work it will be followed with a full description so that GMs that do not yet have access to this other source material may still enjoy this work.

This adventure can easily be incorporated into any existing campaign or used as a stand-alone adventure, whichever the GM wishes. Unless otherwise noted, this adventure was created with Star Frontiers Alpha Dawn Remastered in mind. Any rule-related questions concerning this adventure can be answered by consulting the aforementioned work.

Alpha Section

Abbreviations:

ATT: Attack score

D10: Ten-Sided Die

DEX: Dexterity

EXP: Experience Points

GM: Game Master

IC: In Character (may be read - or otherwise imparted - by the GM to the PCs)

IM: Initiative Modifier

INT: Intuition

LDR: Leadership

LOG: Logic

NPC(s): Non-player Character(s)

OOB: Out of Character (intended for the GM's reference ONLY)

PC(s): The Player's Character(s)

PS: Punch Score

PER: Personality

RS: Reaction Speed
 RW: Ranged Weapon Attack Score
 STA: Stamina
 Stat: One of the base character statistics
 STR: Strength
 UPF: United Planetary Federation

Alpha Subsection 1:

Movement:

Movement should be applied in accordance with the specifications detailed in Star Frontiers Alpha Dawn. However, the gravity on Evergloom is 0.5g and the PC's abilities should be modified as follows:

CARRYING CAPACITY	+25KG
LEAPING & VAULTING	+25M
DISTANCE A PC CAN SAFELY JUMP	+5M
FALL DAMAGE	-10 POINTS

Flying or gliding characters are affected by the reduced gravity according to the dictates of their individual racial ability as noted in their character description.

Alpha Subsection 2:

General Adventure Background/Introduction:

For the most part, this scenario takes place on a volatile moon called Evergloom. Names of celestial bodies are only being used at this point to reduce confusion and give the GM a point of reference; they may change later at the wishes of the GM as described below.

Evergloom is located in the previously unexplored system located in sector P (x-axis), J (y-axis) on the Star Frontiers 3.01 Map Grid (located at: [http://www.starfrontiersman.com/downloads/starfrontiersman In the Sheets & Stuff category under the heading July 04, 2007](http://www.starfrontiersman.com/downloads/starfrontiersman%20In%20the%20Sheets%20&%20Stuff%20category%20under%20the%20heading%20July%2004,%202007)), called Starfall.

Alpha Subsection 3:

System Brief

System	Starfall (Unexplored)
Habitable World	Evergloom (one of the moons orbiting Oni)
Moons	None
Star	Yellow
Total # of planets in the system	17
Artificial Satellites	None
Gravity	.5 g
Length of Day	33 hours
Length of Year	404 days
Prevalent Race	None
Population	None
Trade	None

Evergloom is a very large tidally locked moon - the largest of five - that orbits a gas giant (Oni); the fourth planet from the system's yellow star. The core of Evergloom is friction heated - with thermals generated by massive tidal forces, exerted by the orbits of the moon(s) of the gas giant; Oni. On the surface of the moon these forces manifest as a tidal pumping action that works much the same as ocean tides, except this affects the entire crust of the moon! Therefore, the very ground ascends and recedes continuously over the course of a full day. This natural cycle can be observed with time-lapse video and would make the planet appear to be breathing! This tidal pumping is slow and continuous (not seismically violent), raising the moon's surface on average, about 62 meters during the day and then receding 62 meters during the night.

Due to the high degree of volcanism on Evergloom, the atmosphere is thick, continuously cloudy and the stink of sulfur is obvious, though not overpowering. The atmosphere is breathable by human standards without any kind of oxygen supply or filtration equipment, but only just. The closer one gets to any active volcano or vent the more such artificial breathing aids will be needed.

This thick cloud layer accomplishes two things. First it acts as a buffer, trapping heat generated from the tidal forces exerted upon the moon. Second it severely mutes any light that reaches the moon from the system's star thereby leaving Evergloom in a constant state of twilight during the daytime. Night on Evergloom is a murky darkness that easily surpasses

the darkest night that can be experienced here on Earth and stars are somewhat obscured by the thick clouds.

Aside from giving the moon the mechanism it needs to create warmth and thereby, sustain life, there are a couple of stunningly beautiful aspects of this thick atmosphere coupled with the volcanic activity. Evergloom's orbit brings it close (in a relative way of course) to its parent gas giant. This proximity places the moon just within an intense radiation belt surrounding the much larger gas giant that bathes Evergloom with energized ions. This helps to strip away several tons per minute of volcanic ejecta spewed into the atmosphere and effectively vent the moon. A side effect of this process allows some of the more energetic sulfur and oxygen ions to tumble along the moon's magnetic field and back into the atmosphere, resulting in very dramatic, colorful and active auroras during the day and night (though they are somewhat diminished during the day).

As well, the ionically charged atmosphere acts as an electrical generator as it passes through the gas giant's magnetic field resulting in fantastic electrical discharges that zigzag routinely through the cloud layer.

These effects can be seen from space, giving the moon a shimmering, iridescent appearance. Also due to the high degree of world-wide volcanism, common volcanic landscapes are prevalent. Such features include lava lakes and rivers near active volcanoes, hot springs (of varying degrees of heat from lukewarm to boiling), acid rain, predictable and unpredictable geysers, carbon monoxide 'dead' zones, pyroclastic surges and toxic dust storms.

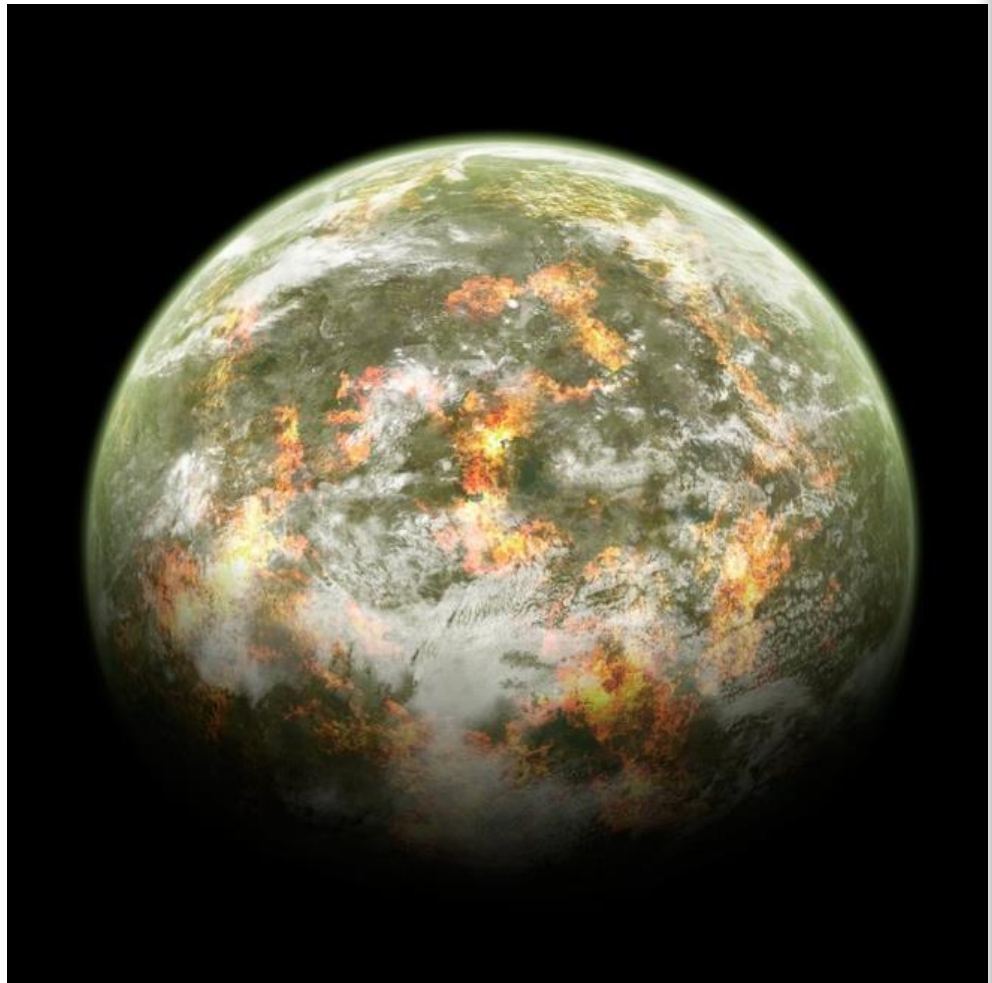
Even though Evergloom exists in a state of constant twilight and darkness it is not a cold world. The warmth generated through friction and subsequently trapped by the greenhouse effect of the thick

atmosphere keeps the moon very warm. The moon has vast black sand deserts circumnavigating it at the equator.

The moon sports average temperatures of about +27C (+80F) along the equatorial zone, with average summer temperatures of +49C (+120F) and +24C (+75F) over the rest of the moon, with average summer temperatures of +35C (+95F). Winter lasts all of three months on Evergloom, with summer taking up the rest of the year - there is no spring or fall to speak of.

The climate on Evergloom is nearly the same on a global scale; arid, warm and desert-like. The climatic extremes that will be encountered will primarily be experienced along the equator which is comprised of vast unforgiving harsh deserts (similar in harshness to the Sahara without all the sunshine). The vast majority of the moon's surface is comprised of arid scrub-land similar in nature to parts of South Africa, stretching away from the equator and extending all the way to the poles.

Art by Jake Robson @ <http://jakerobson-tull.deviantart.com/>



Evergloom has no oceans; only land-locked seas were the water table rises to the surface. There are small (no more than 5m in width and about 2m in depth) rivers that have formed due to ground water bubbling to the surface and creating a world-wide series of 'sinks' and 'rises' where rivers suddenly bubble out of the ground, flow for a few kilometers and then disappear back underground, only to repeat the process several kilometers later. These rivers tend to follow old lava tubes and are occasionally broken by large inland seas or lakes.

In areas where these rivers have dried up or have changed course, smooth hydrodynamic corosional capillary tubes and cavernous runnels can be found that sometimes stretch for kilometers - but always tend to stay close to the surface. These caverns can be extremely dangerous places as many of the planet's more dangerous fauna tend to inhabit such caves. Aside from the dangers presented by the local animals, cave-ins would also present a serious danger. In areas where old, dry river beds exist it is also common to find sinkholes that descend down to the riverbeds below. These make excellent access and egress points for native fauna (especially the nightwings, discussed in more detail below).

Because much of the moisture on the planet is locked up in underground reservoirs, Evergloom is a very dry planet. It doesn't rain much (the average annual rainfall measures about 12.7cm (5in) in the equatorial zone and about 129cm (20in) over the rest of the planet).

Rainfall along the equator is a very rare event, happening on average but once a year. The rest of the world enjoys much more rainfall, but when compared to a single rain event per year, which is not saying much. Evergloom is 27% water, all of which has an acidic pH value to at least some degree. Some pools of water that can be found on Evergloom are acidic enough to actually be dangerous to interact with and can cause acid burns (perhaps 10% of the available water on the moon will be acidic enough to be dangerous). These water sources are usually standing water sources that are located very near volcanic action or might actually be inside dormant volcanic craters (crater lakes). The pH of such volcanic crater lakes can reach a value of 0.1. For comparison, battery acid has a pH of 1.0 and common manufactured drinks have pH values as low as 2.5.

The acid in question when dealing with volcanism is sulfuric acid. The GM should assume that damage should not be applied from such acidic water sources unless the pH value (determined by the GM) is 1.0 or less. If the GM decides that a specific water source is to be acidic in nature (assume at this point that that means pH of 1.0 or less) then the GM should assign an acidic severity to the water source; mild, strong or severe.

Mild Exposure: Apply 1 point of damage per turn of exposure followed by 1d10 turns of additional damage (at 1 point/turn) after exposure (assuming the clothing of the PC that was exposed is not designed for volcanic protection - this will simulate acid-saturated cloth clinging to the body and continuing to burn).

Strong Exposure: Apply 2 points of damage per turn of exposure followed by 1d10 turns of additional damage (at 2 points/turn) after exposure.

Severe Exposure: Apply 3 point of damage per turn of exposure followed by 1d10 turns of additional damage (at 3 points/turn) after exposure. Simply rinsing the exposed area(s) with copious amounts of water can cease any further damage. A minimum of 2 liters of water must be used per exposure to a body part/single area to stop any further damage. A minimum of 4 liters of water must be used to rise a whole body. Similarly a dose of Salgel can be used to halt acid damage.

In general, water found farther away from volcanic action will not be as acidic and will likely be potable. Most bodies of water on the moon are crystal clear in nature with no discernible turbidity (unless polluted by ash fallout from a nearby volcano). The clean, sandy nature of the soil is largely responsible for this.

In addition to being a dry, shrubby moon (on a world-wide scale vegetation is mostly comprised of shrubs - no large arboreal forests), Evergloom has many active volcanoes. Though much of the topography is flat, it is often broken by large mountain ranges, huge dunes and solidified lava outcroppings. The soil of Evergloom is exclusively comprised of jet-black, volcanic sand which adds to the gloomy nature of the moon.

Because of this extremely harsh climate, life on Evergloom has adapted into very deadly forms. Predators are extremely powerful so that they can bring down their prey with minimal effort, thereby expending minimal resources. Or they hunt in groups

to make up for their lack of power. Similarly, many creatures have developed exceptionally deadly poisons for the same reason; to bring prey down quickly with a minimum of effort. Creatures on Evergloom are generally small to mid-sized; with the largest specimens being less than 200kg and with the vast majority of fauna being less than 100kg in size.

Alpha Subsection 4:

Employment:

The GM is, of course, free to bring the PCs to the Starfall system by whatever means he/she sees fit. For the purpose of this writing however, it will be assumed that the GM wishes the PCs to be sent to this system at the behest of an employer. Again, the nature of this employer is ultimately up to the GM but it should likely not be military in nature as it would be a waste of resources for the military to visit an unexplored system that is located within their own boundaries, that is what explorers and civilian contractors are for.

If the 'employer' absolutely must be military in nature the GM does have options available to him/her to get their PCs into the system. Their ship could suffer a navigation failure or some other failure that results in a mis-jump, putting them in the system or perhaps some odd transmissions were intercepted from the system and the PCs were sent to investigate. Regardless, for the rest of this writing it shall be assumed that the PC's employer is civilian in nature (it is up to the GM to decide upon an employer; whether it be a government entity, a mega corporation or a wealthy individual).

The PCs will be contacted whether directly (the employer already knows them and contacts them personally) or indirectly (the PCs read a classified ad in whatever news source they usually monitor) and are then sent to the Starfall system to explore it and see if there is anything worthwhile. The system itself is known to exist and generally where it is, but no one has yet charted a route to it nor has anyone ever been there; at least, no one that has reported their findings anyway. As the GM will see after having read further, certain dangers exist within the system that could easily have overcome previous expeditions.

As an addition to this work, if the GM would wish to add another layer of mystery, he/she could allow the PCs to find the crashed remains of some previous expedition lost long ago in order to lay the mystery to rest for any interested parties of the Frontier. Such a

situation could advance the PC's name recognition within the Frontier if the GM tracks such things. Fame and name recognition can go a long way toward more lucrative job opportunities for the PCs in the future!

The PCs will be tasked with:

- 1) Successfully charting a route. The route, once properly charted, will extend from the Capella System to Starfall and back to Capella for a one way distance of 2 light years. Taken directly from Star Frontiers Knight Hawks Remastered:

CHART NEW ROUTES

Success Rate: $50\% + 10\% \times \text{skill level} - 5\% \times \text{light years}$
An astrogator has a chance to chart a new route to a system. New routes may be shortcuts between inhabited systems that are not directly connected (Prenglar and White Light, for example), or they may be routes to unexplored star systems. If an astrogator guides a ship successfully on an uncharted route, that astrogator can regard that route as charted if he ever travels it again. However, the route is charted in only one direction. To completely chart the route, the astrogator must guide the ship back to its starting point along the same path. If the astrogator fails this subskill check, the ship misjumps (see Misjumping in the Ship Movement section).

Astrogators do not get a bonus for using high quality navigation equipment when trying to chart a new route. If the astrogator chooses to tell the UPF about the route, the information will be fed into the Federation's computer banks and within a week the route will be considered as marked on the UPF astrogation charts.

The UPF pays a standard bonus of 100,000 Cr for information on new travel routes. By custom, this money is divided equally among the crew of the ship, as they all shared the risks of the jump.

The employer states in the contract made with the PCs that he/she/it (in the case of a government or corporate entity) will not lay claim to any monetary reward associated with charting new routes that can be applied for directly to the UPF by the PCs if they wish.

- 2) Successfully cataloging the system (automatically done by the ship's computer system once they successfully jump into the system - see System Brief from Alpha Subsection 3 above).

Evergloom is the only body in the system capable of supporting life. The names Evergloom and Oni have been assigned to the moon and the gas giant respectively for ease in identification for the GM while reading this work. Since the PCs will be the first Frontiersmen to ever explore this system it is suggested that the GM allow them to name all of the celestial bodies in the system to forevermore be known by those new titles within the GM's universe if the PCs would like. If this path is chosen by the GM perhaps the names Oni and Evergloom should be completely withheld from the players so that their titles can be imparted without bias later during the course of play. Similarly, the GM may wish to do this same thing concerning the flora and fauna of Evergloom.

The system name, Starfall, is an official name as the system had previously been discovered by an amateur Vrusk astronomer named Ilix'it Maxis. Her term, translated to the human tongue roughly translates to 'Stardrop' but could also mean 'Starfall'. But since 'Stardrop' did not make much sense to humans and seemed a bit like fantasy, it is commonly referred to as 'Starfall' in human circles. Some have theorized that the name was actually challenged simply as a snide affront directed at Ilix'it Maxis by her astronomy instructor at the time named Harold Molinger for a couple of reasons.

First being that she was a student and he was jealous of her great discovery and second, because he is human and secretly harbors resentment toward the vrusk. Some credence has recently been lent to that theory as ties between Professor Molinger and the Kraatar Liberation Corps have recently surfaced in the galactic media.

- 3) If they find any habitable planets, that they take the time to explore them and collect and analyze samples of any flora, fauna, soil and water that they find.

The ship is outfitted with a state-of-the-art scientific lab for just such a mission and in the event that the lab work must be taken off ship, there is a portable

field lab (see below) in the emergency equipment locker intended for just such a situation.

Alpha Subsection 5:

Employer Provided Equipment:

If the PCs do not have a ship of their own to use on this job, the employer will grant them use of a HS 3 exploration survey ship; christened, the 'Coreolis'. This ship has a cargo hold designed specifically for secondary vehicle external entrance and egress and contains one explorer and one aircar (found in Star Frontiers Alpha Dawn Remastered). It is equipped with videocom, subspace radio and radar.

Exploration Survey Ship (Designation Coreolis)	
HS	03
HP	15
ADF	04
MR	03
DCR	29
Crew Size	12
Ship Dimensions:	
Length	50m
Diameter	08m
Hatches	01
Engines	02 (Atomic; size A)
Weapons	Laser Battery x2
Defenses	None

The employer will also pay for all associated ship costs (fuel, maintenance, jump overhauls, enough food to cover travel to and from the system as well as a month's supply to cover the time spent surveying any interesting planets, insurance premiums to cover replacement costs if the ship is lost, etc.) even if the PCs plan to use their own ship.

The emergency equipment locker aboard the ship has some basic supplies provided by the employer. This locker is designed to withstand a severe impact event in the case of a crash landing so that these supplies are likely to remain intact for use in an emergency situation. The inventory of supplies is as follows (some of the equipment listed is from sources other than the Star Frontiers Boxed Sets so some full descriptions have been provided in case the other source material is not available to the GM):

12 Standard Survival Kits: This is an emergency survival kit which contains all of the following items: All-Weather Blanket, Basic First-Aid Equipment (bandages, etc.), Compass, Everflame, Gas Mask, Holoflare, Life Jacket, Pocket Flashlight, Pocket Tool, Rope (50m), Sungoggles, Survival Rations (5 days), Toxy-rad Guage & Water pack (8 liters).

12 Plasti-Ponchos: Plasti-ponchos can be found in nearly every color (in this case: browns & greens) and pattern (in this case: mottled) and are made of silicate plastic that sheds water easily. They can stretch to completely encase the head or helmet, are designed with formfitting sleeve/gloves that prevent the arms and hands from getting wet, and are attached to the boots. Bipedal bioforms wearing them tend to look like odd Yazirians, Dralasites look like deranged beach balls, and Vrusk appear as plastic nightmares, Humma appear to be vicious tents, and Osakar are indescribable.

4 Envirotents: This tiny 3kg pouch-sized kit can be erected into a small 3-man habitat tent in about ten minutes. It takes a similar amount of time to deconstruct. It can come in a variety of colors (in this case: mottled browns & greens). When deconstructed and properly stowed, it fits in a small pack that straps to the thigh for easy transport.

3 Durarafts: This tiny 3kg pouch-sized kit can be inflated (automatically when activated) into a fully-functional four-man raft. It takes about five minutes to inflate, and a similar amount of time to deflate. When deconstructed and properly stowed, it fits in a small pack that straps to the thigh for easy transport.

12 Breathing Masks: A breathing mask protects characters from the effects of poisonous gases in the same way as a gas mask. It also has a small, pressurized oxygen tank (connected to the mask by a tough, slender, 2-meter, flexible pipe) that enables characters to breathe even where the atmosphere contains little or no oxygen. Each oxygen tank contains enough gas for 2 hours. After this time, the empty tank can be replaced in 1 turn if a full one is available. Unlike a spacesuit a breathing mask will not protect the wearer in any way from the effects of vacuum or extremes of temperature.

1 Water Distiller/Purifier: This collapsible distillation filtering tank can purify up to 400 liters of water before it needs to be changed. This is a necessary item for explorers who cannot carry enough drinking water

with them but are on a planet where water can be found. Characters drinking unfiltered water run the risk of infection, contamination, or even poisoning. The tank also has a section for dehydration, so plants can be inserted and the water drawn from them. This is also a good method for drying fruit and vegetables so they will last longer as rations.

01 Portable Field Lab (NEW EQUIPMENT): The portable field lab is larger than an Envirokit and contains all of the same equipment, with a few additional items that are indispensable for scientific field research in a laboratory setting. This portable collection of equipment is intended to allow scientists to collect and preserve samples and specimens (DNA, insects, water, etc) in the field as well as conduct some laboratory-specific work in the field if needed; such as making medicines from a liquid base provided in the kit as long as the scientist is able to isolate the primary ingredients from the environment in which they happen to be.

As noted below an Envirotent is also included. It functions as the actual lab for the scientist and is tall enough to stand comfortably in and move around.

The additional items include: Sonic Scalpel, Microforceps, Laser Scalpel, Flashlight, Envirotent, and Miniature Recording Device (for recording findings – written or voice; powered for 200 hours by one microdisk), 30 Small Shatter Proof Specimen Containers (each has a snap on airtight lid that is pre-labeled with generic labels that can be noted using the Miniature Recording Device; each holds about 1 ounce of material), Small Powered Cold Storage Unit (about the size of a lunch box; can hold 20 Small Specimen Containers and keep frozen for 100 hours with two microdisks as power), Small Centrifuge (powered by one micro disk for 100 hours), Liquid Base Components (to fabricate 2 liters of liquid medicines (of any combination); anti-venoms, pain relievers, antiseptics, etc. **Weight: 15kg. Cost: 700 cr.**

- 12 Toxyrad Guages
- 01 Techkit
- 01 Robocomkit
- 01 Medkit
- 01 Envirokit
- 06 Freeze Field Generators
- 01 Poly-vox (*See note below)
- 04 Laser Rifles
- 08 Laser Pistols
- 24 Energy Clips

05 Power Backpacks
 12 Doze Grenades
 12 Tangler Grenades

*Note: The GM should keep in mind that the sathar language has never been translated. Therefore, any attempts to communicate with the sathar through the use of a polyvox will not be possible, from the perspective of the PCs anyway.

The PCs are expected to supply any other specialty equipment not otherwise listed above.

Alpha Subsection 6:

Sathar Artifact Interactions:

There are a few points in this adventure where the PCs will have opportunities to interact with sathar equipment. It should be noted that some sathar equipment is specifically designed to be utilized by both the sathar and their dominated agents of various races. For the purpose of this work, any equipment intended solely for sathar use will require a -20% modifier to be interacted with for any Frontier Race.

If the GM so chooses, certain high technology items (computers, ships, etc.) may simply be completely incomprehensible to any frontier race so as to be completely unusable. This would be done in order to allow the GM to maintain the mystery that surrounds the sathar and keep certain high technology away from the PCs in order to retain the game balance as it is.

Of course the sathar equipment that is designed for use by both the sathar and their subject races should be available for use by the PCs. Even though the equipment in question may be utilized for the same purpose as similar pieces of equipment found in the Frontier, the designs would still be different and the GM may wish to take this into consideration when allowing their use by the PCs. Unless otherwise stated in this work, the chances of the PCs figuring out how to use any such equipment will be left to the GM's discretion. But those chances should not be prohibitively harsh. Perhaps an extra turn to look at the item (meaning they could not just pick up a sathar-made laser pistol in the middle of a fire fight and immediately start firing) or a modified (applicable) stat roll of -05% in order to figure it out.

For the sake of simplicity the GM may decide to simply forgo this suggestion and treat such equipment as any

other similar equipment that the PCs are already used to.

Alpha Subsection 6a:

Sathar Interactions:

The sathar that the PCs will be encountering in this scenario are clan X sathar. A hypnotic suggestion is implanted during the training of any sathar that will cause death if the sathar is captured. Blood flow to the brain is cut off and the sathar dies in seconds. Therefore, a sathar has never been captured alive. All of the sathar presented in this adventure will die similar deaths if they are ever in a position where it is obvious that capture is imminent, even if incapacitated and seemingly unaware of the situation.

Alpha Subsection 7:

Payment:

The PCs will be paid a lump sum (if they have an employer; if they do not then the GM should devise their own payment schedule) of 10,000 credits for each unique DNA sample they are able to bring back to their employer. As well, they will be paid 5,000 credits (each) for soil and water samples collected from each different planet source. Additionally the PCs will have the opportunity to create a few new drugs or other similar products and will be awarded 25,000 credits for each success.

In the case of extraordinarily hazardous conditions (just visiting Evergloom certainly qualifies!) the PCs will be awarded an extra 50% bonus (derived from the total of their base payment). And interacting with the sathar will get the PCs an additional 50% bonus (similarly derived from the total of their base payment) provided they give their employer a copy of the data that was collected from the interaction with the sathar.

The PCs will have the opportunity to collect some video of a previously unseen sathar ship which will be worth 100,000 credits to the UPF and if the PCs are able to determine what exactly the sathar research facility was up to that would be worth another 100,000 credits to the UPF (provided they are able to download information from the sathar computers and return with it). The PCs will also have a chance to capture and commandeer a small sathar ship which, if turned over to the UPF for the bounty on alien artifacts, will also be worth 100,000 credits. These government payments (including the payment for

charting a new route) are not subject to the 50% bonus' detailed above.

The maximum monetary gains that the PCs can attain from this expedition are about 1,120,000 credits which would then be evenly divided between all party members.

Also, note that the employer is paying the PCs for collected items and data, not for their time. The PCs may take as long as they would like to accomplish this mission. Similarly, this gives the GM the freedom to start the PCs out wherever he/she wishes and have them travel to the Starfall system. This will be particularly handy if the PCs happen to be wrapping up a different adventure on the other side of Frontier Space.

Since the 'Coreolis' (assuming the PCs are not using their own ship) comes equipped with a couple laser batteries and if the GM wishes to use the Knight Hawks rules, perhaps a scuffle with pirates while en-route to the Starfall system could be in order.

Beta Section

The Adventure Begins!

OOC:

Regardless of how the GM decides to get the PCs involved with the exploration of the Evergloom, the scenario starts when they finally jump into the system.

IC:

Inscribed on a plaque which is installed above the portal leading onto the bridge of the 'Coreolis' are the words:

"Reach for the night and you may touch the sky, for anything is possible out in the black".

OOC:

If the GM thinks that one or more of the PCs in the party might know of the origin of these words (perhaps those with skills that would have a basis in exploration such that they may have been exposed to this poem or may have even met the below-described NPC), he/she may secretly divulge the following information.

What the PCs in the know divulge from that point on is up to them. It is a well-known excerpt from the poem,

'Exploring the sky' by a renown human poet named Jaspar Feldrome, Professor Emeritus and sitting member on the board of the 'Society of Celestial Explorers' at the Triad Institute of Technology located at New Hope on Triad.

This particular NPC may well be a rich employer mentioned in Alpha Subsection 4 if the GM would like.

IC:

After just a few brief moments of weightlessness in the void the 'Coreolis', responding to the pilot's advances, slowly rotates so that the stern of the ship is now positioned toward their destination. The engines fire and gravity returns in short order as the breaking action begins while the ship hurtles into the system, starting its two day deceleration.

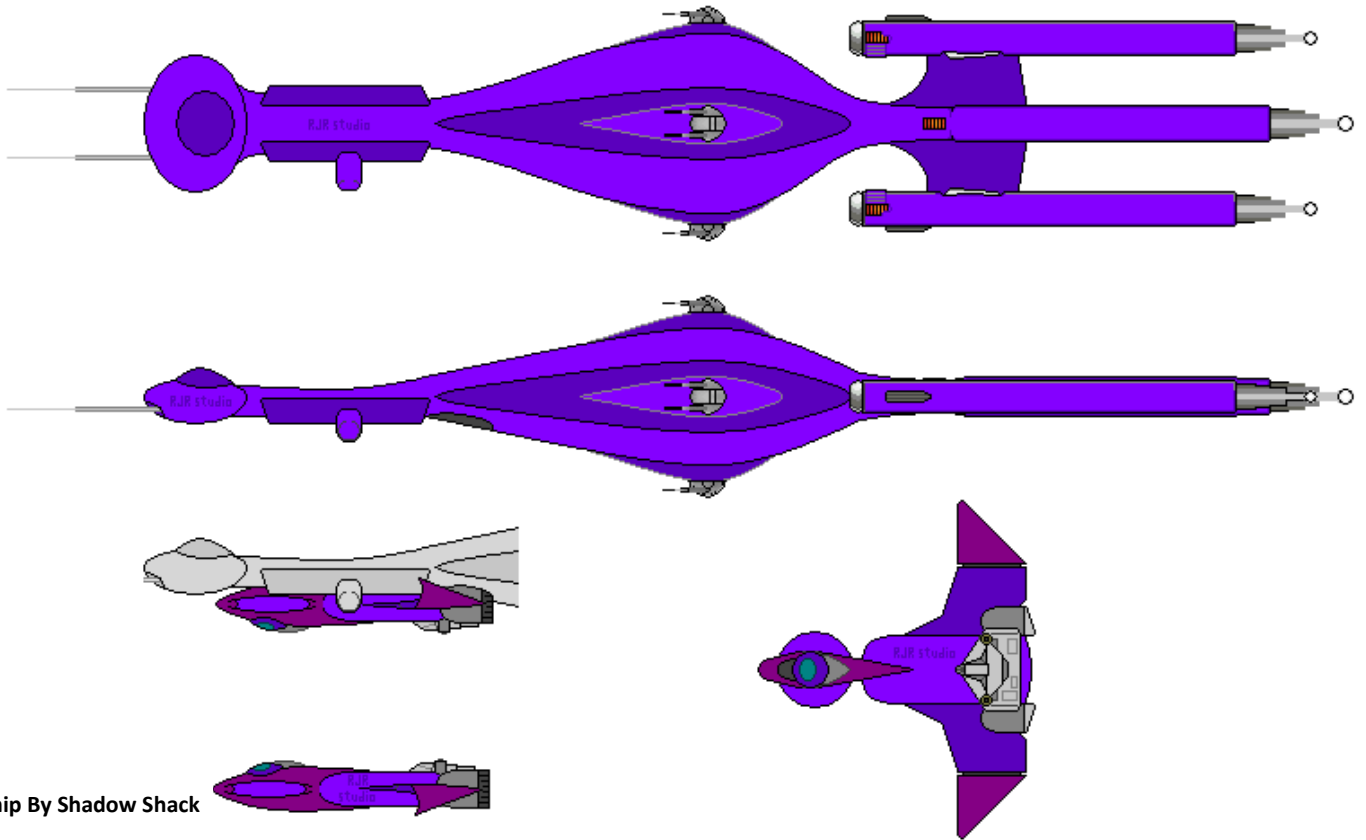
The crew members smile knowingly to each other as they consider the 100,000 credit standard UPF bounty that awaits them for having opened up a new route. Unstrapping from their restraining harnesses, the crew sets to work. A quick query of the ship's computer system begins the processing while the sensors drink in all the data they can collect regarding this new system.

Seventeen planets, a small asteroid field, eleven moons and a yellow star are quickly displayed while in the background the ship's processors begin the task of sorting through the data to build some rudimentary profiles on each celestial body.

Meanwhile, the cargo hold needs to be prepped for planet-side exploration. There is much to do! Supplies need to be checked and rechecked. Containers need to be packed. The explorer and aircar need to be inspected for use. A message needs to be relayed to the UPF to announce their success and to begin the arduous claims process for their bounty; the trip's paid for itself already!

OOC:

The PCs have two days of deceleration to prepare for their deployment to the unknown and can use them however they wish. Listed above is some of the busy work that the GM could role play through if he/she desires such interaction. If the GM wishes to move things along faster, simply having read the above passage to the PC is adequate.



Ship By Shadow Shack

Unknown to the PCs at this time, a previously unknown sathar ship with stealth technology is hiding within a small asteroid field in the system, near Oni. This hidden ship's mission is not to wage war, but rather it is to support the hidden sathar research facility located on the surface of Evergloom.

Therefore, this hidden ship will remain hidden even though they had detected the 'Coreolis' when it jumped into the system.

The sathar stealth ship's mission parameters are to fight only in defense of themselves and to retreat if at all possible:

- 1) If in danger of being captured, they are to self-destruct as soon as possible.
- 2) Support the research facility by rotating crew between the ship and the facility and to store data and samples from the facility as a safety measure in case the research facility is ever compromised.
- 3) Remain at their current post until properly relieved, until the research team completes their mission or until the research facility is destroyed.

- 4) If the research facility is ever destroyed or compromised, attempt to salvage any important data and/or insure that the facility is completely destroyed before retreating from the system.

OOC NOTE:

It is important that the GM not provide the PCs with the following ship statistics so as to preserve the mystery of the sathar. The GM should also feel free to utilize this ship in any future scenario(s) where the use of such a ship might be warranted.

OOC:

Sathar D-low Class Destroyer

This ship was built by the sathar and intended to be used as a tool of subterfuge and espionage and to see solo service within enemy territory. It can be utilized in several different ways; including, but not limited to:

- 1) Covert agent insertion into enemy territory.
- 2) Clandestine operations behind enemy lines.
- 3) Intelligence gathering.
- 4) Secret deployment of biogenic weaponry.
- 5) Advanced scouting prior to fleet operations.

Since the sathar utilize the destroyer class warship as a workhorse for their fleets, they have fashioned this ship as a destroyer variant with the designation; DDLO or D-low for short. This has been done for two important reasons.

First: Cost. By using their existing ship plans and manufacturing facilities there is no need for them to re-tool their factories in order to build this variant, at least in the initial phases of construction. This also allows them to take older destroyers out of mothballs, strip them to the frames and refits them accordingly, thereby allowing them to skip much of the initial phases of building.

Even with their cost-cutting and time-saving techniques these ships are still exceedingly expensive to create, costing the sathar about 200% of the cost of a standard destroyer.

Second: Size. The destroyer class is large enough to be relatively self-sufficient and capable of defending itself if need be and at the same time, small enough to have a better chance to go unnoticed in enemy territory.

Sathar Low Observable or 'Stealth' Ship (Designation DDLO Incursion)	
HS	06
HP	50
ADF	01
MR	03
DCR	74
Crew Size	50
Ship Dimensions:	
Length	130m
Diameter	20m
Hatches	02
Engines	03 (Ion; size B)
Available Space	250m3 (-20% = 200m3)
Base ADF/MR	03/03
Weapons	Laser Battery x4 (25m3 ea.), Grapples (60m3)
Defenses	ICM launcher (10m3) w/06 (30m3) interceptor missiles, sathar self-destruct device (10m3 [treat as a Fusion Bomb]) and passive stealth capabilities

Passive Stealth Capabilities:

This ship was constructed using composite materials involving ceramics and poly-carbon plates layered over the hull of the ship. The result is a skin of radar-

absorbing material that is jet-black in nature (making this ship incapable of utilizing a reflective hull). This makes detection via standard visual means in the void of space exceedingly difficult (essentially rendering the ship invisible at ranges greater than 150,000km [15 hexes]) as the ship may only be discerned by noting the absence of starlight behind the ship; meaning that in order to be visually observed, the observer would have to be extremely diligent in their visual search (giving even the most paranoid military observer a difficult time) or exceedingly lucky.

The effect on radar that this construction technique has is to reduce the effectiveness of radar on this ship by 50% (making the detection range 150,000km [15 hexes] instead of 300,000km [30 hexes]) by dramatically reducing the radar 'footprint' of the ship. Of course this passive stealth technology has absolutely no effect on energy sensors. Therefore, this ship is outfitted with ion engines, rendering it invisible to energy sensors.

Part of this fabrication technique necessitates the use of low-profile construction of the superstructure of the ship thereby reducing the available space (listed above) by 20%. This feature increases the total cost of any ship that it is applied to by 300% (if built from scratch - not as the sathar have done as detailed above).

Other Features:

Special operations drop-ship launch bay (35m3). This launch bay partially houses a small drop ship capable of transporting 24 Sathar commandos. Though obviously different in appearance, the basic capabilities of this shuttle would be the same as the UPF Meteor Class Assault Shuttle found in Star Frontiersman #16 p.30.

The standard Sathar version comes equipped with a laser piston mounted in the nose of the craft, a size A ion drive, magnetic coupling struts situated along the sides of the craft above and below the access hatch, a Sathar Self-Destruct Device (treat as a Fusion Bomb) and the same passive stealth capabilities utilized by the mother ship. It is also equipped with a white noise broadcaster, energy sensor and radar.

This ship is not capable of atmospheric flight (though the drop ship is).

Notes:

The ADF was reduced by 2 points due to ion drive restrictions. Both points were used to add two more laser batteries to the ship.

Available space: 300m3

Space used: 295m3

Rules used:

*Aside from the standard **Knight Hawks** rule book, other rules utilized are from, 'The Frontiers of Design' from Dragon Magazine April, 1988, 'An Interstellar Armory' from Dragon Magazine November, 1986, 'The Versatile Ion Drive' from Star Frontiersman #12, p.38 as well as 'Vehicles' from Star Frontiersman issue #16, p.30.*

IC:

After the first day of deceleration the ship's computers have extrapolated the probable densities, gravity and atmospheres of all of the celestial bodies contained within this system. Only one registers as having the likelihood of sustaining life; an obscure moon orbiting a gas giant; the fourth planet from the system's star. The moon in question is one of five such satellites orbiting the Gas Giant.

The computer displays the moon's specific information:

System	Starfall
Habitable World	Not Named (Evergloom [one of the moons orbiting Oni])
Moons	None
Star	Yellow
Total # of planets in the system	17
Artificial Satellites	None
Gravity	.5 g
Length of Day	33 hours
Length of Year	404 days
Prevalent Race	Unknown
Population	Unknown
Trade	Unknown

OOC:

If the GM chose to allow the PCs the opportunity to name this system, this moon and the other planets, now would be the time to allow them to discuss names amongst themselves.

Eventually the PCs will decide to visit Evergloom and it is likely that they will choose to do so first since it is the only body in the system with a potential to harbor life and therefore, promises the biggest payday for the PCs. But let's address the possibility that they choose to investigate the asteroid field, the planets or some of the other moons first.

- 1) Asteroid field: If the PCs choose to investigate the asteroid field first the sathar ship will remain in stealth mode; running minimal power and grappled to an asteroid so that they can stay hidden. The ship is located in the center of the field so that it can take full advantage of as much natural cover as possible. They will be able to avoid detection as long as the PCs are not specifically looking for a ship in the field and so long as they do not get too close. The GM should be quick to return an ore analysis showing the asteroids are high in ferrous metals and a potentially rich source for mining operations.
- 2) Other moons: Of the eleven moons present in the system Evergloom has already been detailed so it will not be revisited here. Nine of these other moons are barren and worthless. One is a very tectonically active moon with huge amounts of methane that is produced by geologic processes. It is a frigid moon, far too cold to support life. The vast amounts of methane in liquid form may be worthwhile for mining operations considering the close proximity to the Capella system. This methane moon orbit's the twelfth planet in the system. Oni holds 5 moons within its influence, planet seven has three moons, planet twelve has one moon and planet seventeen has two moons.
- 3) Planets: The first three planets closest to the system's star are small, nearly molten and completely worthless for any real purposes. Oni (next in line and the first of two gas giants in the system) and planets five and six are all similarly unsuitable for anything. The seventh planet is a gas giant similar in nature to Oni, except that it holds vast amounts of Helium-3 within its

influence. There is a potential for mining the Helium-3 for industrial uses. Planet number twelve is a gas giant and the remaining nine planets are worthless balls of rock.

Evergloom

Beta Subsection 1:

Alas Coreolis, we hardly knew ye!

IC:

As the 'Coreolis' approaches the moon the crew can clearly see the beautiful iridescence from the charged particles in the atmosphere coupled with the occasional spider-web burst of electrical energy adding surprising flashes of blue-white color splashing over the globe.

Breathtakingly beautiful and surreal at the same time, there is a rough patch of turbulence as the 'Coreolis' penetrates the upper atmosphere but that gradually subsides as the ship rapidly descends. The crew is therefore very surprised when the ship's proximity alarm sounds, warning of an incoming object approaching at a startling speed!

OOC:

The sathar research facility located approximately seventy-five kilometers north of the ship's descent trajectory has detected the ship and has fired a ground-based missile. The actual damage is not terribly important. The GM should simply allow for one or two of these missiles to hit the ship and cause enough damage to justify the crash to follow.

The GM is free to describe the damage as being just enough to cause the crash or catastrophic such that the ship is a total loss. It is important however, to not just slay the crew willy-nilly here. If there are NPCs that the GM wishes to kill off for 'artistic flare', then sure, but the PCs should survive more or less intact. Depending upon the rolls of the pilot, the ship may or may not be salvageable later. If the pilot fails his/her rolls miserably, the GM may wish to assign some damage to the PCs; perhaps 4d10 each. Even if the pilot manages to make all of the rolls that the GM demands, the landing will be exceedingly rough. A surprise attack using explosive missiles during a controlled descent in an atmosphere is certain to be rough no matter how good the pilot is. So perhaps 2d10 damage for each PC would be appropriate even under the best circumstances.

The GM should feel free to allow whichever PC wishes to try (but there is only enough time for one attempt!), the opportunity to use the ship's computer to identify what the incoming object is and from where it originated. The PC will have only a few seconds to achieve this so the GM should assign a negative modifier to their skill roll; perhaps -10% to identify the incoming object and -10% to calculate the likely point of origin. The negative modifiers represent intense stress in this situation.

The Sather research facility's mission parameters are:

- 1) Conduct field research on the native flora and fauna of Evergloom; determine if anything useful can be manufactured from them.
- 2) Collect and archive DNA of every species encountered.
- 3) Determine the feasibility of bio-engineering new constructs from native flora and fauna.
- 4) If any non-sathar ship attempts to land, engage and destroy it; seek out and kill any survivors.
- 5) Regularly import research findings to support ship in order to retain mission priorities should the facility be compromised.
- 6) If facility is compromised, utilize the escape craft to save any data collected and self-destruct the facility.
- 7) If escaping is not an option, self-destruct the escape craft as well.

Once on the ground, the 'Coreolis' and her crew will be about twenty-four kilometers from the sathar research facility and it should be noted that the generic encounter clock started ticking as soon as the ship hit the ground. Rolls should be made for generic encounters starting from that point.

IC:

Once on the ground the crew notes that the ship is oriented in such a way that the external cargo bay doors are hopelessly blocked by debris and to further complicate matters, the cargo bay doors are slightly twisted in the frame meaning it would take days if not weeks with heavy equipment, cutting torches and welders to be able to fix them.

Looking around the crew is somewhat dismayed, but at the same time completely in awe of the landscape they behold. The ground is comprised almost entirely of black, volcanic sand. The ship is parked right next to

a huge dune of the stuff. But just as dark as the sand is the darkness that surrounds them; the darkest night any of them have ever beheld. Overhead the aurora dances playfully to some celestial tune unheard by mortal ears. The shimmering shawl of splendid colors is occasionally broken by a spider's web of streaking lightening.

The smell of sulfur is thick in the air, though not so thick as to warrant wearing a mask to aid in respiration. Far in the distance active volcanoes glow red as they send lazy rivers of lava cavorting down their sides. Indeed there is a fierce, primordial beauty to behold here but there is much to be frightened of here also. For all the beauty there is a sinister, foreboding feeling that permeates every bit of the landscape and to make things even more unsettling; the ground seems to continually be shifting slightly beneath their feet.

OOC:

Assuming the GM allowed the explorer and aircar to survive the crash, they will not be available for use by the PCs.

IC:

Sadly, the explorer and aircar will not be available as they are hopelessly stuck inside the cargo hold of the ship.

OOC:

A survey of the ship will take a couple hours.

IC:

A survey of the ship reveals that it is hopelessly damaged to the point that it will not be able to lift off again without serious mechanical repairs and replacement parts. System-wide power outages are plaguing the ship and will take hours to track down and repair.

Happily the subspace radio is 100% functional, though power to it is somewhat spotty - a portable source could be rigged easily enough.

OOC: If any of the PCs wish to send out a distress signal on the subspace radio they will be met with white noise as if they are being jammed, because they are. The sathar are now in seek and destroy mode and will do whatever it takes to eliminate the threat. The GM should consider allowing the PCs to make a roll in order to figure out that their radio signals are being jammed, or may simply wish to tell them so outright.

IC:

Attempts to use the subspace radio are met with static.

OOC:

The PCs have about eight hours from the time they crashed until the sathar arrive. During that time they can heal up and collect whatever gear they think they'll need and/or want. All of the gear stashed in the emergency equipment locker is easy to get at and is all undamaged.

The PCs personal gear should also be available; though that is completely up to the GM. If the rolls were failed to identify the missiles as missiles, then perhaps the stark realization of a jammed radio will make the PCs realize that they may be in for some big trouble soon.

The GM should remember that on this world water is vital and finding it can be difficult. The GM should make note of the PC's water usage and be ready to hold them accountable if they run out!

Art by J.A. Davis



Beta Subsection 2:

Egad man, we've got worms!

IC:

Roughly eight hours after the crash the darkness has receded a bit, giving way to a persistent twilight. The crew is now able to see shapes in the distance - looming, jagged mountains and huge sand dunes dot the landscape here and there. Even though it would seem to be daytime, the aurora continue to dance merrily across the canvas of the sky overlapped at times by streaking lightening. The sand dune next to the ship seems much less imposing than it was the night before, the previous darkness having exaggerated its looming size a bit.

Those of the crew gazing at the now height-challenged dune are quick to notice a bit of movement at the top, about forty-five meters distant. The movement is followed by several silent rivulets of black sand cascading down the dune's face toward the crash of the 'Coreolis'. Suddenly it becomes clear what is moving about atop the dune as the distinct profile of a sathar peeks over the pile of sand and peers down at the milling crew members.

OOC:

The sathar research facility has sent a squad of commandos, its entire compliment (ten commandos), out to find and destroy any alien survivors associated with the ship that they just shot down. The sathar will shoot on sight with the sole intention of killing the intruders.

Capturing is not even a consideration. Since the sathar occupy the high ground and the PCs do not, the sathar will be enjoying the benefits of hard cover (-20% to be hit).

If the PCs have moved away from the 'Coreolis' then the sathar commandos will track them and eventually catch up to them.

Sathar Commandos	
STR/STA	50/50
DEX/RS	55/55
INT/LOG	55/55
PER/LDR	45/65
PS	+03
IM	+06
RW	50

Commando Equipment (divided evenly among the group):

8 Laser Auto Rifle: The laser auto rifle is a rifle-sized firearm that shoots laser blasts at a high rate, allowing bursts of laser fire instead of the single beams projected from conventional laser pistols and rifles. It is a fully-automatic laser rifle. The laser blasts projected from the laser auto rifle are small, quick blasts rather than the long, elegant beams of most laser weapons, but the higher rate of fire allows for bursts – which can sometimes help you hit a target, especially if they're behind partial cover.

Single Shots: The laser auto rifle cannot be switched between beam power settings. Each pulse does 1d10 points of laser damage and the firer of the weapon can fire up to three of these pulses in a turn, each aimed independently.

Burst Fire: Alternatively, the weapon can fire a burst of 10 pulses, giving the shooter a +20 chance to hit and causing 5d10 points of laser damage on a successful hit. It can be aimed at up to five adjacent targets in a 10-meter wide area. Such an area burst causes a total of 5d10 points of damage plus 1d10 for every additional target after the first, divided among all targets in the area fired upon. Only one roll is needed to hit all the targets, but any negative modifiers that could apply to one target apply to the entire group.

Each shot fired expends 1 SEU from the weapon's power source. Therefore, single shots drain 1 SEU each, while bursts drain 10 SEU. Laser auto rifles use 20 SEU clips but can be attached to beltpacks or powerpacks with a 1-meter power cord.

An albedo suit or screen halves the damage from all lasers. The laser auto rifle's range is 5/15/30/60/150 because the smaller beams diffuse more rapidly. ROF: 3(1). **Cost: 750 cr. Defense: albedo.**

1 Heavy GyroJet Rifle: A big brother to the gyrojet rifle, the weapon fires a larger (25mm) rocket propelled bullet. It can be used as a direct fire rifle. The bullets have a shaped charge of Tornadium D-19 for armor penetration. With a flick of a switch the gyrojet bullets turn into small air burst fragmentation grenades.

The heavy gyrojet rifle has an integral scope. Lock in the range and the grenade will burst at its preprogrammed destination. When using the heavy gyrojet rifle the rifleman can adjust the proximity fuse to explode the gyrojet rocket near the enemy (6d10 area air burst, 6 meter radius). The rifleman can shoot over or past cover to hit the enemy. This effectively negates the effect of hiding or cover. So, the attacker does not get the -10% for soft cover or the -20% for hard cover. If the roll to hit fails; the grenade bounce table is used.

When the rifle is set to impact, the attack is resolved as a normal rifle. The rocket impacts on the target and detonates the armor piercing shaped charge (8d10, 40 structural damage points). The player must declare what setting the gun is on before firing or the rifle will keep the previous setting. (i.e.: the previous shot was an 80 meter air burst. So the undeclared shot is also an 80 meter air burst.) The weapon's integral mounted scope has infra-red capabilities, laser range finder and a ballistic computer. Makes shots one range closer (i.e.: L range becomes M range) and designates ranges for the air burst setting.

1 Gauss Sniper Rifle: In the hands of a skilled character, a sniper rifle can be even more deadly. Military PSA characters can multiply their rolled damage by their Beam Weapons skill level, but only if two turns are spent aiming. The sniper rifle uses 2 SEU per shot as well as a sabot. The sniper rifle holds a 20 SEU clip. It does not have an outlet for an SEU pack. The silent nature of the gauss acceleration helps to keep the sniper hidden while performing his art. The scope mounted on it takes into account the ranges given, so no bonus provided for the scope. On a roll of 96-00 the rifle has overheated and will not fire for 1 turn. Gauss (magnetic coil) technology is basically an electric field that repulses an object. It then pulses to make the object travel. High rates of speed can be obtained.

Earlier versions of gauss accelerators were in the form of simple guns. They utilized a power source with a series of capacitors to accelerate the projectile. These early versions were severely limited by the ever increasing gap needed between capacitors as the projectile increases velocity. Also the imbalance in repulsor magnetism needed as more power is applied.

The latest technology utilizes a pulsing inertia field that pushes the sabot. The hardened projectile reaches extreme velocities. This advancement made

the concept of accelerators much more reliable and efficient. In addition the repulsor force field spins the projectile for stability. The advantage of gauss rifles is that they have virtually no recoil and a very high velocity, up to 5,000 meters per second, many times faster than conventional rifles.

The disadvantage is that the weapons require nearly as much power in SEU to operate as laser weapons, and still need caseless sabot. The gauss rifle fires a small caseless sabot, 5mm. which allows a high capacity clip. Due to the need for ammo and a separate power source, their high cost and being unreliable, gauss accelerator guns never reached widespread use throughout the Frontier. They have seen limited use by UPF marines. When a gauss rifle fires there is no explosion of gunpowder. Just a sharp crack as the bullet breaks the sound barrier. Due to the hyper acceleration, the air that is displaced is turned to plasma by the bullet. This effect leaves a short red or blue streak trailing the projectile. In spite of its drawbacks, gauss rifles are still encountered, mainly used by collectors or eccentric sportsman. Their armor penetration is unrivaled. Note: a gauss rifle won't fire from within an activated gauss screen!

- 10 Gas Masks
- 10 Toxyrad Guages
- 10 Albedo Screens
- 10 Skeinsuits
- 10 50-gram charges of Tornadium-D19
- 10 Variable Timers
- 10 Vibroknives
- 20 Fragmentation Grenades
- 10 Poison Grenades (*Special, see below)
- 10 Belt Packs
- 24 20-SEU Clips (for the laser auto rifle users)
- 08 Heavy Gyrojet Clips
- 03 20-SEU Clips (for the gauss sniper rifle user)
- 03 10-shot 5mm caseless clips (for the gauss sniper rifle user)
- 01 Laser Pistol (used by the gauss sniper rifle user)
- 02 20-SEU clips (for the laser pistol user)
- 10 Half-Full Water Packs

Laser Auto Rifle	
Cost	750 Cr
Weight	3kg
Damage	1d10 each or 5d10 burst
Defense	Albedo
Ammo	Each shot drains 1 SEU, bursts drain 10 SEU but provide +20 to hit
Rate	3(1)
Skill	Beam
Range	5/15/30/60/150 because the smaller beams diffuse more rapidly.

Heavy Gyrojet Rifle	
Type	semiautomatic, clip fed
Cost	2,000 Cr (Heavy gyrojet clip, 10 shots, cost 50 Cr)
Overall length	.9 meters
Weight	9.5 kg
Damage	8d10 impact (40 structural). 6d10 area burst.
Defense	Inertia
Ammo	10 shots (25mm)
Rate	2
Skill	Gyrojet
Range	-/5/75/150/500 (700) -500 meters max for impact, -700 meters max area burst.
Bullet Type	Gyrojet stabilized rocket. Proximity fuse air burst, or impact armor piercing
Damage	-6d10 air burst as a fragmentation grenade Air burst area effect 6 meter radius -8d10 impact armor piercing (40 points structural)

Gauss Sniper Rifle	
Cost	2000Cr
Weight	5kg
Damage	4d10*
Defense	Inertia
Ammo	20 SEU/ 10 shots caseless (5Cr)
Rate	1
Skill	Beam Weapons
Range	-/70/200/500/1000

Sathar Poison Grenade:

This new weapon's statistics are identical to the standard poison grenade (S05/T10). The difference is in how it is deployed and used tactically. These grenades, though they can be thrown just like the standard poison grenades detailed in the Alpha Dawn rules, are designed to stay clipped on the sathar's belt.

Simply pushing a button on the top of the device activates it. Three seconds later the poison is released. The sathar however, seem to have developed a poison that they are immune to (whether by bio-engineering or some other means is unknown). Whenever engaged in hand to hand combat any of the sathar outlined in this work will utilize this tactic thereby potentially poisoning their foe(s) while continuing to engage them in melee.

If the GM feels that this encounter is going to be too difficult there are a couple ways that he/she can tone it down while keeping the same number of sathar and the same gear for loot later. As was mentioned at the beginning of this work, this is intended to be a difficult adventure. If the GM has overestimated the PC's abilities this particular encounter could prove to be extremely difficult. But there are ways to balance it out as detailed below.

Option one:

Break the sathar force into two groups of five each. They may not know precisely where the crashed ship is and have split up to look for it. While apart, one group will happen upon the survivors and engage them in combat.

Meanwhile, the second group might hear the firefight and be drawn to it, but are far enough way that by the time they arrive the combat is finished and the PCs have had a chance to regroup.

Option two:

Evergloom is a very dangerous place! If the PCs are being outmatched, maybe a black racer (or one of the other types of creatures) could pop up and attack a sathar or two, thereby inadvertently aiding the PCs.

Option three:

Combine options one & two above so that the second group is attacked by a creature while the first group is engaged with the PCs. Thus the second wave of sathar to attack the PCs will be suitably diminished.

Option four:

Simply reduce the size of the sathar force and leave half of them at the research facility. Once the first group fails to check in at a prescribed time, the second force will be sent out. The GM could combine option two with this option as well so that by the time the commandos reached the PCs they have a bit less ammo and their skinsuits are damaged and maybe some of their STA has been reduced.

Of course, these are by no means the only ways that the GM could balance this encounter out if need be. But these options are easy to fit in with very little adjustment to the adventure required.



Art by Marcos Hidalgo @

<http://toposolitario.com/principal/index.html>

Beta Subsection 3:**Aftermath:****IC:**

After the dust clears and the wounded are tended to, the crew turns their attention to the sathar corpses. Though odd in appearance, the majority of the equipment's function seems obvious enough and, though it may take a bit of time to get used to it all seems pretty straight forward.

OOC:

All of the equipment found on these sathar is designed to be used by the sathar or their subject races so the GM should refer back to Alpha Subsection 6. If there are any sathar poison grenades left, that could be a valuable piece of equipment to collect for future study and could provide hints about the sathar's strengths and weaknesses in regards to poisons.

One small item of note concerning the sathar equipment. Since the weapons are a bit different, the sathar e-clips and other ammunition is not compatible with the PC's gear and cannot be made to be compatible. The sathar belt packs on the other hand, could be made to be compatible with a bit of effort and an appropriate skill roll.

After collecting whatever items they wish to keep from the sathar corpses, the next thing to consider is what to do next. The PCs will have had a chance to at least get a general idea of where the sathar research facility should be located. If they failed to determine the approximate launch location of the missiles then they can determine an approximate direction that the commandos approached from by looking for their trail and offering an educated guess. Further, if they are clever, they could also remember that it took about eight hours for the sathar to reach them. Now they have a direction and a length of time and this could get them in the general area of the research facility.

Even so it could potentially (and realistically would) take a very long time for them to actually locate the facility through trial and error. This should give the GM ample opportunity to roll for numerous encounters over an extended period of time and there will be all manner of dangers along the way as described in Alpha Subsection 2 above.

Simply traversing such hostile terrain can be quite an adventure with the volcanic vents, acidic pools, poison gases, uneven footing and jagged rocks to contend with. This period of searching can enable them to work on their original mission while wandering around.

Here are a few items that can be produced from the indigenous flora and fauna of Evergloom (the GM is encouraged to think of more as there could be numerous different applications for some of the substances found on this world):

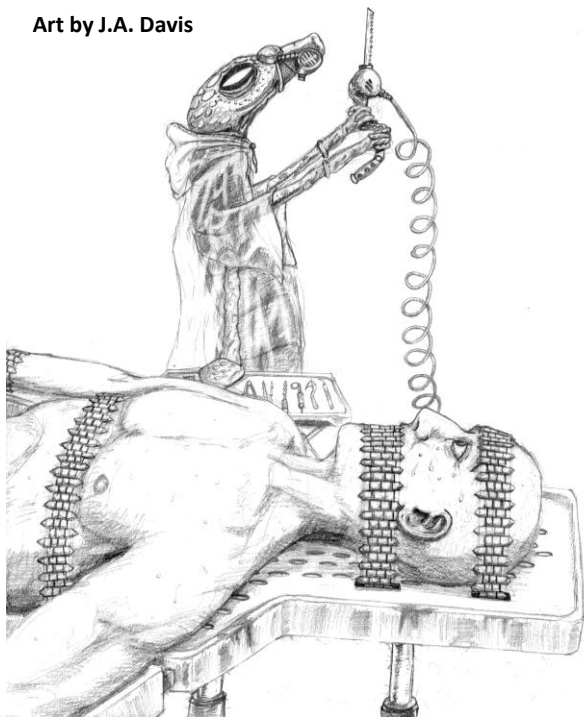
- 01)** Anti-venoms specific to each type of creature that poison is collected from.
- 02)** Dried poisons that could be used later to deadly affect.
- 03)** Anti-septic derived from the lightning bug's honey.

- 04) Hospital-grade anesthetic derived from the black racer's poison.
Natural surgical-grade adhesive derived from the lightening bug's saliva.
- 05) Treatment for extreme photosensitivity derived from the blood of nightblades and nightwings.
- 06) Treatment for stat reductions due to old age derived from sand flea saliva. Reverses the effects of old age by 25%.
- 07) Cosmetic applications derived from black racer poison (similar to botox).
- 08) A drug that induces a death-like trance derived from stinging snail venom. Lasts for five hours.
- 09) Systemic pain reliever derived from weed rat venom. Heals 2 points of damage within ten minutes of consumption. May be used twice per day and in conjunction with biocort.

The potential maximum monetary gains from Alpha Subsection 7 were calculated using only these ten entries for the section that discussed creating new drugs and similar products. If the GM were to add to this list then the potential payout for the PCs would increase.

Right about the time that they have collected enough samples and readings to wrap up their survey of the planet the GM should allow them to stumble upon the sathar research facility.

Art by J.A. Davis



Gamma Section

Sathar Research Facility:

OOC:

The sathar research facility is exceptionally well hidden. Due to the tectonic nature of the moon the facility has been specifically constructed to withstand shaking and the regular daily tidal effects of the ground. The whole structure effectively rides up and down with the swelling ground along a central column.

To aid in hiding the facility it has been built inside of a steep-walled depression whose lip is about 5 meters taller than the top of the facility during 'high tide'. To further enhance the camouflage, the sathar have placed a hologram over the depression effectively making the area appear as a jagged field of lava rocks jutting up out of the ground every which-way.

Situated on the roof of the structure, attached to the central column, is an elevator to allow for access and egress to the facility. Atop the central column is another beam that reaches from the central column across the pit to a tunnel just beneath the lip of the depression. The elevator is then able to ride up and down the central column as well as side to side across the beam overhead, meeting up with the tunnel in the wall of the depression. The tunnel leads quickly to a set of stairs that lead the short distance to the surface.

IC:

Shortly after stopping for the night, an envirotent is accidentally dropped while setting up camp. Amazed eyes watch as the small three kilogram bundle bounces off a rock, rolls down a small ripple of sand and suddenly completely vanishes from view!

OOC:

The envirotent has just bounced into the small tunnel with stairs that leads to the sathar research facility's elevator. This entrance is covered by the hologram so the actual entrance cannot be seen. But the disappearing tent sure does make an impression! The crew from the 'Coreolis' are not the only ones to have noticed the small bundle topple into the tunnel because inside the tunnel are three death weavers (refer to Delta Section for further information).

As soon as the first PC passes through the hologram the spiders will pounce in unison. Once the spiders are dispatched the PCs may proceed down the short flight of stairs, about 3 meters, to the landing below, also about 3 meters. There they will find a pedestal against one wall of the tunnel with a button situated on top.

Pushing the button calls the elevator to the landing so they can board and ride over. The elevator can only carry five people at a time.

IC:

Proceeding down the short flight of stairs to a small landing, a pedestal can be seen against one wall of the tunnel. On top of this pedestal is a yellow button. Directly to the right of the pedestal is an unblocked archway that affords a clear view of a depression which contains a large, round structure. There is a beam leading from the rock just above the archway and spanning the open space between the wall and the roof of the structure. This beam is attached to a column that seems to be built through the round building below.

OOC:

There is no other way inside the research facility without the use of shaped charges. If the PCs wish to climb about and poke around they can do so without alerting anyone. While hanging out here though, they have an increased chance of encountering death weavers. Roll for an encounter with 1-3 death weavers once every 15 minutes (25% chance). In this area these are the only encounters that the PCs will have; at least until they get inside the facility. There are a total of fifteen death weavers loose in the immediate vicinity of the research facility. They are intended as guards. The GM should keep count of how many are eventually killed by the PCs as their numbers are finite and once they have all been dispatched then the GM can switch back to standard encounter rolls as previously outlined.

Gamma Subsection 1:**Into the Quickdeath's Den:****IC:**

Inside the elevator, another yellow button is easily found. Pushing it causes the elevator to scoot along the horizontal track until it reaches a point about three quarters of the way across. Then the elevator comes to a momentary halt with a slight bounce followed by a mechanical clicking noise, then a whirring noise. Then, with a bit of a jolt, the elevator

changes direction as it is lowered by a cable attached to a winch on the roof of the car toward a slowly opening round door in the roof of the building below. After a few seconds, the elevator comes to a halt and the inner doors slide open revealing a pair of recessed, vertical alcoves positioned on either side of what appears to be a closed doorway directly on the other side of the now-open elevator doors. Each alcove is about a quarter meter in length, about ten centimeters in width and appears to be about six centimeters deep. Both are coated with a clear mucus-like film.

OOC:

These alcoves are what the sathar use to activate the door. They reach into the recessed alcoves with their tentacles, simultaneously and lightly stroke a skin-like, mucus-covered membrane in a specific patten in order to deactivate the security protocols and release the door mechanism. All doors in the entire facility have identical locking mechanisms. These are the common locking mechanisms employed by the sathar for this particular facility design.

This is a level four lock. Bypassing it can be accomplished after applying a -20% modifier to the skill roll since it is alien in nature in addition to applying the standard modifier of the lock's level vs. the PCs skill level. Failure means that the security protocols will be activated and the door will remain locked. If the door is opened any other way the security protocols of the facility will be activated.

As soon as the security protocols are activated those mucus-coated alcoves on every single door in the facility will begin to flash with a dim yellow light. All automated security units will become active as described below and an encoded automatic message will be sent to the covert sathar ship positioned nearby. Additionally the facility will automatically be set to self-destruct! The sequence, once validated by a sathar in the power plant, will complete its cycle in thirty minutes. See Gamma Subsection 4 for further detail.

If the PCs fail to bypass this door using their technical skills then the only other way past this door will have to be brute force. One shaped charge of tornadium D-19 will work nicely, assuming the PCs collected the explosives and timers from the defeated sathar commandos. If they do not have access to explosives at this time the GM may allow them to return to the site of the battle with the commandos and retrieve

their explosives. If this option is utilized then regardless of the time that has elapsed, (an absolute bare minimum of sixteen hours but much more likely would be a couple weeks or more), the corpses will have been shredded and scattered by wild animals.

Any gear that was left behind will likely not be able to be recovered in the full quantity that had been with the commandos originally. There would be some loss and the GM should take that into account. Given the quantity of explosives that the commandos had though, at least one block of TD-19 and one timer should be recoverable.

There will be two possible outcomes to breaching this door:

1) The PCs are able to bypass the lock and in the process, the security protocols. If so, then the door will quietly slide to the left leaving an open portal about one meter wide and two meters tall. The PCs will now have access to the inside of the structure and no violence will be visited upon them in the room beyond (Lobby).

2) The PCs blast open the door thereby setting the security protocols into motion. If so, then there will be two ceiling-mounted sentry guns in the next room. These guns will be mounted on tracks in the ceiling (the distance between the ceiling and the floor in the entire facility is three meters) and will pop out of alcoves located against the back wall. These alcoves will have small doors that keep the sentry guns hidden from view under normal circumstance but that slide open to allow the sentry guns to move along the ceiling tracks while /or following targets. The sentry guns may not move out of the room in which they are installed.

Sathar Scorpion I automated sentry guns	
Level 2	
IM/RS	+6/55
STA	100
ATT	50%

Each sentry gun is a rectangle approximately one meter long, half a meter wide and a quarter meter thick. There are four small dorsal turrets affixed to the rectangular base at each corner. Two turrets are electro-stunners (always set for blast, never stun) and the other two turrets are laser pistols set at 2d10 per

shot. These sentry guns are tied directly into the station's power supply so they never need recharging as long as the station has power. Each of the four small turrets may fire once per turn at the same target, four different targets or any other combination of targets not to exceed a total of four.

These sentry guns detect movement via video and infrared sensors. They are programmed to recognize the difference between 'friendlies' and 'targets'.

Any being that enters a room guarded by one of these sentry guns and that does not have a photo on file with the security protocol program that these guns access is immediately fired upon until it (the being in question) stops moving.

Since these units track via video and infrared sensors they can be blinded by any appropriate method (heat to confuse the infrared sensor or smoke to the obscure visibility to blind the video tracking system). Similarly, targeting the unit's sensors (-25% to hit) specifically will effectively disable the unit, even if it has not been otherwise damaged because if it cannot 'see' movement, it will have nothing to fire at and will therefore, shut down on its own. Simply hitting the sensor and doing at least one point of damage is enough disable the turret.

This is sathar technology so if the PCs, for whatever reason, wish to tinker with these devices (perhaps repairing them for their own use later) the alien equipment modifier will apply.

Once the room is safe, the PCs will notice a few doors.

IC:

Once the smoke clears it is easy to notice the three doors that lead out of this room, two to the north and one to the south.

OOC:

The two doors to the north lead to storage areas. Both are locked with level three alien locks. Each room contains the following:

- 05 Sathar Enviro suits
- 05 Water Packs
- 01 Medkit
- 01 Envirokit
- 01 Techkit
- 01 Robcomkit
- 100 Meters of Rope
- 05 Breathing Masks (see Alpha Subsection 5)
- 05 Toxyrad Gauges

The south door is locked with a level three alien lock. Once inside, the PCs will find themselves in an intersection with doors leading south, east, and west and of course, the one they just came through to the north. The doors to the east and west are locked with a level three alien lock. The door to the south is locked with a level four alien lock.

Both the east and west doors lead to hallways. There is one Scorpion I sentry gun located in the ceiling in each hallway. If the PCs have not yet set off the security protocols, these sentries will still be stowed in their respective alcoves, out of sight. Otherwise, they will open fire as soon as they have a viable target.

Gamma Subsection 2:

House of Horrors

OOC:

If the PCs have not yet alerted security then the following is what will be seen once they have bypassed the level four alien lock that protects the south door:

The PCs will find themselves in the facility's laboratory.

There is a large computer positioned a bit off-center in the room. Upon closer inspection however, it will be revealed to be five separate computers built into a single console. There is one sathar on the southern side of the computer inputting data into the system.

There are also four large and eight mid-sized vats that contain swirling and bubbling liquids. Some of them contain creatures that the PCs have already seen outside. One of the mid-sized vats contains something else, however.

One mid-sized vat contains what appears to be a sathar submerged in a bubbling liquid. There is a digital display attached to the vat that reads vital signs and it is showing that the creature in the vat is dead.

From the outside of the tank the PCs will be able to see that this creature looks very similar to a sathar, but it has two additional tentacles that look less like tentacles and more like spindly arms with no hands. These extra appendages are stunted and thin.

Furthermore, this creature has an additional set of eyes positioned just over its snout, between the first

set of eyes that one would normally attribute to a standard sathar. Additionally the creature in the tank has patchy areas of coarse hair here and there on its body.

And lastly, it has a set of very long, curved fangs sticking through its cheeks on either side of its obviously-shortened snout.

The sathar here were involved in attempting to cross sathar DNA with the DNA of a different species. It is left to the GM to determine whether to utilize this situation in any future scenario(s). In this case, the sathar were attempting to enhance the physical prowess of their species by crossing sathar DNA with the DNA of a shade. The attempt seems to have failed but perhaps future attempts may not.

There are also five tables in this room. The ones against the northern and southern walls are obvious surgical or dissection tables complete with nearby trays covered with various cutting devices. The northernmost table happens to be occupied when the PCs enter the room.

A black racer has been restrained and is in the process of being dissected alive. There are two sathar here performing the task. The two sathar at the table will immediately rush the PCs and activate their personal poison grenades as they retrieve vibroblades from their belts.

The sathar behind the computer will duck down, out of sight of the PCs and activate the facility's security protocols before popping back up with a laser pistol powered with one 20 SEU energy clip and set for 2d10 damage.

As soon as security is activated, two scorpion I sentry guns will rush out of their alcoves and engage the PCs from their position on the ceiling of the laboratory.

Gamma Subsection 2a:

House of Horrors

OOC:

If the PCs have already alerted security then the following is what will be seen once they have bypassed the level four alien lock that protects the south door:

The PCs will find themselves in the facility's laboratory.

The description of the laboratory from above is still mostly accurate, except now there will be four sathar in the room, all of which will have hard cover and their laser pistols at the ready. The sentry guns will already be active as well.

Sathar Scientists	
STR/STA	40/40
DEX/RS	40/40
INT/LOG	45/45
PER/LDR	25/45
PS	02
IM	04
RW	30

Equipment (each):

- 01 Vibroblade with one 20 SEU energy clip
- 01 Military Skeinsuit
- 01 Laser Pistol with one 20 SEU energy clip (set at 2d10 damage)

Gamma Subsection 3:

Big Guns

OOC:

The hallways to the east and west of the first four-way intersection have already been preliminarily described. Once past the scorpion I sentry guns, it will become apparent that both hallways are very similar.

Each leads to a three-way intersection and each three-way intersection leads to areas of the facility that are essentially the same. So this description will effectively cover either route but will be actively describing the western route.

At the three-way intersection the PCs will be faced with a choice of three different doors. The north door leads to one of the missile launchers and is locked with a level four alien lock.

Investigating the missile launcher room the PCs will find that the majority of the weapon is housed outside the facility on the roof in the form of a turret with a 360 degree range. There are controls for operating the weapon on one console which is protected by a level four alien lock. Aside from targeting and firing this console also allows the operator to raise the entire turret housing four meters above the roof of the facility.

On a similar but smaller console nearby is another set of controls which are also protected by a level four alien lock. This set of controls allows the operator to raise and lower the entire facility along the central column so that the missile launchers can be raised above the lip of the depression for firing regardless of the phase of the 'tide' that the moon happens to be experiencing at the time.

Mounted on the side of the missile turret housing is a display screen that shows targeting information and also has the ability to record some basic telemetry about the target being displayed. This may become important later depending upon the actions of the PCs.

IC:

It is obvious that this room houses a large missile weapon of some kind. It has two tubes in which missiles can be loaded. They are currently empty. There is one large console with levers and switches on it situated near the weapon. There is another, smaller console also with levers and switches on it off to one side.

Gamma Subsection 3a:

OOC:

For any GMs that wish to incorporate the Knight Hawks materials (or use this land-based system for some other adventure), these missiles are nearly the same as Assault Rockets so use the combat rules from Knight Hawks for damage resolution. These launchers become much more accurate if the operator has a Gunnery Skill with a specialization in Rocket Weapons.

It is a computer-assisted system meaning that after any modifiers have been resolved anyone operating the weapon system is then afforded a +5% chance to hit per level of skill. The difference between these missiles and assault rockets is size and range. These missiles are larger to accommodate a larger fuel payload in order to allow the missiles enough energy to reach orbit and still contact their target. Also, they have two ranges, optimal range and maximum range. Optimal range is zero hexes for ships entering the moon's atmosphere in preparation for landing. Maximum range is one hex for ships orbiting the moon. This weapon system can target and destroy ships in orbit, but not beyond.

This weapon system is intended for smaller landing craft but it is capable of destroying much larger ships in orbit provided the operator scores enough hits and assuming the ship does not simply just leave orbit to avoid destruction.

The missile launchers are two-barreled affairs and can fire one missile per turn over the course of four turns before they must be reloaded.

Because of the limited fire control abilities of the facility, only one launcher may fire at a time. They each take two turns to reload.

Gamma Subsection 3 continued:

OOC:

Back out at the three-way intersection, there is a door to the west (or east depending upon which intersection the GM is dealing with at the time). This door is protected with a level four alien lock. Inside are racks of missiles for the afore-mentioned launcher(s). There are ten missiles in each storage room allowing for one complete load of each launcher and allowing for four complete reloads of each launcher thereafter.

IC:

Entering the room to the west of the three-way intersection reveals a couple racks of missiles. There are ten missiles in this room.

OOC:

The door to the south leads to the living quarters and is protected by a level three alien lock. There is enough space in the living quarters to house ten sathar (in each wing). Within the living quarters the GM will notice two generic storage rooms a hygiene room and a food storage room. None of these rooms are locked.

IC:

Upon entering this spacious room it almost seems as though its function is that of a dormitory. There are ten troughs, about two meters long, one meter wide and one meter deep, each half-filled with a watery substance and enclosed with a transparent dome in a clam-shell fashion. Next to each of these ten troughs is a lidded metal box, about the same size and shape as a foot locker.

OOC:

If any of the PCs investigate the fluid in the small troughs or the large pools they will find that it has a mucus-like consistency but seems harmless. Readings from the equipment contained in an envirokit will confirm that, aside from having some low concentrations of partially digested nutriment suspended in the solution (sathar waste), the fluid seems to have a high concentration of amino acids and oxygen and may actually act in some small way as a method of healing while resting.

Though this is a conclusion that the PCs could easily come to, it is in fact, the case. The GM should be certain to never definitively state such things though in order to maintain the mystery of the sathar.

In game terms these 'beds' act to provide 1d10 natural healing for sathar only; if they are able to spend a full resting period relaxing in the fluid solution. This healing effect can be gained in addition to the use of healing effects gained from drugs, such as biocort.

In small amounts, the sathar waste suspended in the solution is actually vital to the healing qualities of this mucus bath. The bacteria contained within the waste material aids in the healing process as long as their population is kept in check. The unit has a filter that the fluid is routinely flushed through and that allows a certain small percentage of waste to remain in the solution. Excess waste is filtered away and sent to the food storage area for further processing.

The boxes by each resting chamber are indeed, personnel storage boxes assigned to the occupant of the 'bed'. The westernmost living quarters were the living quarters of the commandos that the PCs encountered previously and are all empty now as their personnel gear was with them during the encounter.

IC:

There are a couple storage closets that hold innocuous everyday items.

Investigating the Hygiene Room proves to be a bit unsettling. Here there are a couple extremely oversized baths, more like small, shallow pools really. Each bath is filled with what appears to be the same, viscous fluid in the troughs in the adjacent room. But where one might easily come to the conclusion that those smaller troughs are intended for an individual sathar, these pools appear as though they would be intended for several sathar at one time.

OOC:

These pools are indeed intended for use by up to five sathar at one time, each. This room serves a couple functions.

First, it is a hygiene room as the name suggests. These baths are filled with the same fluid that the beds are, with one significant difference. There is an enzyme additive that helps keep the sathar's skin free of parasitic organisms and fungal infections. But because this additive can become irritating to the sathar's skin after a short period of time, it is not added to their resting chambers.

Second, these baths also function as entertainment after a fashion. A euphoric stupor overtakes a group of sathar when they enter such mucus pools and slither together in close contact. It is a way for them to relieve anxiety and tension.

IC:

The last room contained within this large space is lined with troughs and some machinery. The troughs higher up on the wall are partially filled with what appears to be dirt. Above these dirt-lined troughs, mounted in the ceiling of the room, is another trough that seems to be aligned perfectly with the trough below it.

Occasionally vents on the bottom of this highest trough spring open and more dirt is sprinkled down into the trough below. A closer examination of this dirt-lined trough reveals that there are many thousands of maggot-like creatures wriggling around just beneath the surface.

This dirt-filled trough spirals around the room where it is eventually joined to the lowest trough; down near the floor. This lowest trough is filled with a mucus-like fluid that looks suspiciously like the fluid from the chambers in the larger room adjacent. Freely swimming about in this fluid are large, human thumb-sized, maggot-like grubs. Occasionally a large specimen wriggles out of the dirt from the midlevel trough and slips into the fluid of the low-level trough.

OOC:

This is the food production and storage room. Any excess waste produced by the sathar while in their resting chambers is filtered off and pumped to this room where it is dried. When dried it looks like dirt.

The small maggot-like creatures in the mid-level trough eat this 'dirt' and grow and produce more offspring. When they attain a certain size, their bodies change and they become aquatic grubs which the sathar then eat before the next stage of their life cycle can begin. And then the whole cycle starts again.

Gamma Subsection 3b:

Eastern living quarters difference from the western living quarters:

There are a couple differences between the two compartments but only in regards to the occupants. The western living quarters had no occupants. The eastern living quarters may have two occupants.

Back in Gamma Subsection 2 and 2a a difference in the number of sathar in the laboratory was described depending upon the alert level of security. The fourth sathar listed in the laboratory in Gama Subsection 2a came from the eastern living quarters if the conditions in Gama Subsection 2a were met.

So if the security protocols have not been triggered by this point, there will be two sathar in the eastern living quarters. They will attack the PCs with their laser pistols on sight and have all the same stats and gear listed in Gama Subsection 2a.

If the security protocols have been engaged however, the eastern living quarters will be empty. One of the sathar from here will have gone to the lab. The other sathar will have gone to the power plant in order to validate the self-destruct sequence.

Gamma Subsection 4:**A wrench in the Works****IC:**

There is one last door to explore in this large chamber.

OOC:

This last door leads to the back hallway of the facility where all the machinery is that makes the place work. As with the front hallway, this door is protected by a level three alien lock and there is one scorpion I sentry gun located in each hallway.

IC:

After having passed into this back hallway, a door is observed immediately to the south.

OOC:

Approaching from the western living quarters, the first room to the south will contain the machinery responsible for waste water treatment and environmental controls. The door into this room is protected by a level three alien lock.

Any of the fluids used in the resting chambers or the hygiene chambers that has become too soiled for those units to filter completely, will be pumped off for treatment here so that it can be recycled and put back into the system. This coupled with the food production capabilities of this facility make it extremely self-sufficient so that it can remain in remote areas and not have to rely on regular deliveries of supplies.

IC:

Softly humming away inside are numerous machines. There are several pipes that enter and leave this room; they look as though they may be plumbing pipes. There are also numerous access panels and control panels in this room.

OOC:

As with the machinery found throughout this facility, if the GM may or may not wish to allow the PCs to make the appropriate rolls to figure out what this stuff does. As mentioned previously in this work, the GM should apply an appropriate modifier while attempting to figure out alien technology.

IC:

Heading down the hall a bit further, the group comes to a four way intersection.

OOC:

The doors leading into this four-way intersection from either the western or eastern hallway are protected by a level three alien lock. Once inside the intersection, the north and south doors are protected by level four alien locks. The door to the north leads to the laboratory which has already been detailed. The door to the south leads to the power plant.

As stated previously, if the security protocols have been activated, there will be a sathar inside the power plant. He will have already confirmed the automatic self-destruct security protocols and is waiting inside with his laser pistol drawn and ready in an effort to slow the PCs enough that they will not have enough time to hack into the system and stop the sequence, thereby perishing in the inevitable fireball.

The facility's self-destruct mechanism must build up over the course of thirty minutes (in game time, not real time) in order to create a catastrophic explosion and destroy the structure. Hopefully the PCs had been moving right along and not dragging their feet!

The GM should allow for every chance that the PCs can pull this off and feel free to give them a break if they are at least somewhat close. Shutting down the self-destruct mechanism is a matter of succeeding in a roll against a level four security program to override the system and allow the coolant to continue circulating through the core.

Though possible, it is not terribly probable that the PCs could have reached this point in this facility without having activated the security protocols or having fired a single shot. This would assume that the PCs were able to successfully bypass any locked door they encountered and that they have not yet visited the laboratory or the eastern living quarters.

If they enter the laboratory or the eastern living quarters from this back hallway they could easily stand a chance of killing off all the sathar in the facility and keeping them from getting to the power plant in order to validate the self-destruct sequence. If this happens then the security protocols will be stuck at that point, unable to initiate the self-destruct until a sathar validates it.

IC:

The door to the south leads to a large room that houses an obvious power plant.

OOC:

Proceeding east along the hallway, the PCs come to the potable water storage tanks after dealing with the scorpion I sentry gun located in the ceiling overhead and the level 3 alien lock that protects the door. There is nothing much of note here unless the PCs are in dire need of something to drink.

IC:

After proceeding down the hallway, another door along the south wall comes into view.

OOC:

The rest of the facility has been covered in other sections and subsections.

The GM should keep in mind that any scorpion I sentry guns that had not previously been destroyed are still out there. At this point, the security protocols will have been activated so PCs moving around inside the research facility in areas that were not previously cleared may find themselves being unexpectedly shot at!

At some point during the next few hours, assuming the PCs were able to clear out the facility and keep it from self-destructing, the PCs are likely to start poking around some of the computers and other equipment. If they do so the GM should allow them to discover that there is a ship located in a similar pit covered by a hologram about one hundred meters to the south of the research facility.

Gamma Subsection 5: Here comes the Cavalry!

OOC:

About three hours after the security protocols were activated, the sathar covert ops ship will arrive in orbit around the moon. The PCs will be alerted to this fact by the computer in the laboratory sounding an alarm. The ship in orbit has hailed the hidden laboratory in an effort to ascertain the reason that the security protocols had been activated.

If any of the PCs try, they may be able to achieve a targeting solution as well as real time video (by way of a telescopic video camera mounted outside the facility which is part of the missile targeting system) of the ship in orbit. Under normal circumstances attempting to target the sathar stealth ship could prove difficult, to say nothing of being able to collect video of it. But by following the radio carrier wave back to the source, the PCs may be able to fine tune the equipment enough to get some fuzzy video as well as some other basic telemetry of the stealth ship. This video clip and telemetry data of the ship in orbit will show the unusual design and seemingly different construction materials, assuming they make the appropriate skill rolls with any appropriate modifiers. This information would be worth 100,000 credits to the UPF.

If the PCs wish, they may man the missile launchers and fire at the ship. They can have a chance to download a video clip of the fight from the missile launcher room(s) as well if they wish, provided they make any appropriate skill rolls. The ship will be in the process of sending down a group of fourteen

commandos to investigate the situation (as per their mission objectives).

However, as soon as the ship starts taking fire from the moon's surface, the primary objective will override any other mission objectives and the commander will order a tactical withdrawal back to sathar space. Even if they have already launched a landing craft full of commandos, they will recall it or simply destroy it (as a last resort to keep it from falling into enemy hands) and retreat rather than risk their ship being destroyed.

The PCs will then be free to destroy the landing craft (provided the mother ship hasn't recalled it) at that point since the stealth ship will have begun jumping out of the system. As soon as the PCs fire on the stealth craft in orbit, the commander of the ship will initiate a remote self-destruct order on the hidden laboratory. Alarms will sound and it will be obvious that something is amiss. This self-destruct override will be impossible to stop.

Assuming the PCs were able to access previous computer information from the terminals, they will be able to ascertain that the reactor will melt down within 30 minutes. Provided they do not dally overlong, they should have enough time to reach the hidden sathar ship nearby and lift off. Of course, the GM may wish to allow them to 'only just' escape the ensuing blast if he/she so desires.

Sathar Scout Ship (Designation Rogue)	
HS	03
HP	10*
ADF	06
MR	05
DCR	29
Crew Size	06
Ship Dimensions	
Length	40m
Diameter	10m
Hatches	01
Engines	02 (Atomic; size A)
Fuel	01 loaded and 01 in reserve
Weapons	None
Defenses	Reflective hull and sathar self-destruct device (10m3 [treat as a Fusion Bomb])
*The hull section structural points are only 100+2d100.	

Hidden Sathar Scout Ship:

The sathar scout ship is unarmed. However, it is extremely fast and maneuverable. It supports a total of six beings (four crew and two passengers), is capable of atmospheric flight and can land or take off from solid ground or underwater. It is equipped with videocom, subspace radio and radar.

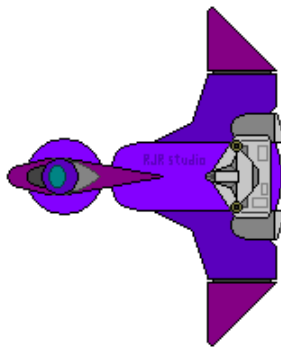
Gamma Subsection 6:**Wrapping Things Up****OOC:**

The PCs may be able to recover enough data from the sathar computer to warrant another 100,000 credit payout from the UPF. The information, though not necessarily decipherable by the PCs will hold some valuable information for the UPF scientists.

Specifically, the information gathered will be about their latest genetic research (the dead sathar in the vat) and bio-engineering black racers into sathar attack constructs as well as the clan affiliation of this group of sathar; clan X.

Ship by Shadow Shack

It will be left up to the GM to determine how much or how little information is gleaned from the ship encounter and the computer download. The ship information might eventually lead to the UPF's own stealth program as an example.

**Gamma Subsection 7:****Lift Off****OOC:**

The ship located just to the south of the research facility is a sathar scout ship. It has been designed with sathar agents in mind therefore, much of its technology will be similar to technology that the PCs are already familiar with.

Going outside the research facility will expose the PCs to any death weavers that had not previously been killed and/or the natural creatures that inhabit the moon.

Arriving at the location where the ship is hidden, the PCs will discover that the pit is accessed by locating a stairwell heading down through the lava rock to the pit floor. The ship's access hatch is closed and locked with a level three lock. Once past the outer access hatch into the airlock, the PCs will exit the airlock and enter a larger room. There is a scorpion I sentry gun located in the ceiling of that larger room. It is not hidden in any alcove and is programmed to attack any being that does not match any of the entries in its database.

As with the research facility, once the scorpion I sentry gun becomes active, the ship will automatically be set to self-destruct. Again, as with the research facility, the self-destruct mechanism cannot complete the self-destruction of the ship without direct sathar verification.

Since there are no sathar left to validate this, the PCs should not be in any danger of blowing up as a result of this. A successful roll to disable this function will cancel the self-destruct order easily enough.

Once inside the PCs will need to defeat a level three security lock on the ship's computer in order to access the system and commandeer the ship.

As with other recovered alien artifacts and or data, the UPF will pay 100,000 credits for this ship. Of course, this means that the PCs will effectively sell this ship to the UPF for 100,000 credits. Why would they do that when they could very likely sell it on the black market for considerably more? Well, their reputation with the UPF will positively increase which could lead to lucrative UPF contracts later and in the end, net the PCs more cash and adventure in the long run.

Besides, how dangerous is it to be flying around in a sathar ship anyway? How many frontiersmen are going to shoot first and sort it out later? And of course, there is the fact that the UPF would view the sale of any such sathar artifact(s) as a criminal act...

Gamma Subsection 8:**Experience Awards:**

This adventure can effectively be broken into two parts as far as experience is concerned. The outline of exp. awards below shows the exp. given to each party member.

First Part: From the point the PCs enter the new star system till just before they enter the hidden research facility.

Maximum EXP award: 10 points should be awarded for groups that are able to complete all of their mission objectives, collect DNA samples from all of the flora and fauna listed in the flora and fauna section, synthesize at least ten new medications or related products and suffer no PC deaths during this part of the adventure.

Average EXP award: 08 points should be awarded for groups that are able to complete most of their mission objectives, collect DNA samples from three quarters of the flora and fauna listed in the flora and fauna section, synthesize at least five new medications or related products and suffer 25% or less casualties during this part of the adventure.

Minimum EXP award: 05 points should be awarded for groups that are unable to complete all of their mission objectives, collect DNA samples from less than three quarters of the flora and fauna listed in the flora and fauna section, synthesize less than five new medications or related products and suffer more than 25% casualties during this part of the adventure.

Second Part: From the point where the PCs enter the research facility till they leave the star system in the commandeered sathar space craft.

Maximum EXP award: 10 points should be awarded for groups that are able to collect all of the sathar data/items possible from the research facility (video of covert ops ship, computer data download and commandeer the unmanned sathar ship hidden near the research facility) , commandeer the unmanned sathar ship hidden near the research facility and suffer no PC deaths during this part of the adventure.

Average EXP award: 08 points should be awarded for groups that are able to collect at least two of the sathar data/items from the research facility (video of covert ops ship, computer data download or commandeer the unmanned sathar ship hidden near the research facility) and suffer 25% or less casualties during this part of the adventure.

Minimum EXP award: 05 points should be awarded for groups that are only able to collect one of the sathar data/items from the research facility (video of covert ops ship, computer data download or commandeer the unmanned sathar ship hidden near

the research facility) and suffer more than 25% casualties during this part of the adventure.

Delta Section

Scenario Support Materials:

Encounter Table (Roll 1d100 twice/day)	
01-10	No Encounter
11-16	Average Herbivore (from AD p.83)
17-22	Weather (ash storm, rain, hot, etc)
23-28	Average Carnivore (from AD p.83)
29-34	Terrain (mountains, bodies of water, dense brush, lava, etc)
35-40	Average Omnivore (from AD p.83)
41-46	Nightwing (night only)
47-55	Sand Flea
56-60	Sand Strider
61-65	Black Racer
66-70	Nightblade (night only)
71-75	Lightning Bug
76-80	Dripper
81-85	Luminous Hopper
86-90	Shade
91-95	Stinging Snail
96-00	Weed Rat

Delta Subsection 1:

Flora and Fauna Specific to Evergloom

Below is a collection of some of the more interesting creatures to be found on Evergloom. The GM is encouraged to be creative when adding others during the course of play. For example, it can be noted that the encounter table provided has listings for average herbivores, carnivores and omnivores.

Since this world is a dry, desert moon it is reasonable to think that rolling an average herbivore encounter might end up being a creature similar to an antelope. Or an average carnivore could be something similar to a snake. Keep in mind however, that this moon has a very harsh environment and many creatures on Earth found in a similar environment tend to be fairly small and poisonous.

The various poisons utilized by the various creatures described below (unless otherwise noted in the creature's description), can all be collected for use by someone other than the creature(s) in question and

for uses other than the obvious toxicity but only in a laboratory setting (field or proper). For example, animal poisons are often used to synthesize antidotes and beneficial drugs (anesthetics to name but one medicinal use). In this game setting it is also logical to conclude that other things could be derived from poisons such as physiologically and psychologically augmentative drugs and even recreational drugs.

It will be left up to the GM to determine these specifics, for the purposes of this adventure, it is enough that these possibilities are known so that the option is there to allow for expanded play in a medical (creating anti-tox on the fly in a makeshift field laboratory setting specific to the individual creatures on the moon for example) or mercantile direction (collecting poisons with the intention of selling them later for fame and fortune - perhaps even treating the moon as a 'mining' moon for the express purpose of collecting poison) if the GM chooses to do so.

Name	Black Racer
Type	Small Carnivore
Number	1
Move	Very Fast
IM/RS	+6/65
Stamina	15
Attack	60
Damage	1d10 bite
Special Attack	Poison (S5/T20)
Special Defense	None
Native World/Habitat	Evergloom. Any warm, sandy areas

DESCRIPTION: The black racer is a many-legged arachnid that is about a meter in diameter (if just the body were measured it would be about half a meter in diameter). It is a plain black in color which blends nicely with the coloration of the sandy soil of the moon. It sports two fangs that are 7.5 centimeters in length and that are capable of easily penetrating a leather boot and delivering a load of poison to the foot inside. They have no spinnerets and do not produce webs as they are strictly a terrestrial predator. They are very powerfully built; robust even, and depend upon their speed (very fast!), strength and highly toxic poison to subdue prey (a dose of Anti-tox will clear this right up).

These spiders are extremely fearsome and exceptionally aggressive. Living in a harsh desert landscape, they lunge at the chance to feed on any

prey item and will aggressively chase anything that they encounter. As a result of their harsh living conditions, their poison is also extremely toxic so that a single bite is generally capable of killing any creature twice the size of a human or smaller within moments of exposure.

Any bite that manages to bypass the defenses of the black racer's victim and does at least one point of damage will inject a deadly toxin (S5/T20) into the victim.

In addition to the damage inflicted by the poison, this toxin has a secondary effect: paralysis. Each turn that passes, the victim must roll against their STA stat with a cumulative -10% or become completely paralyzed. The victim will still be able to feel and breathe, just not move or speak. Regardless of how much time passes, at the point at which the victim falls to the ground paralyzed, the spider will quickly approach and begin to feed...leaving the still-live victim to feel everything that the spider is doing while it contemplates its death.

Generally this arachnid will rush at a victim, deliver a deadly bite and then back off quickly, relying on the poison to bring the prey down. This learned behavior works very well against standard animal prey as those creatures generally are not armored. However, PCs are often armored and as such may be able to withstand a blitz attack like these making encounters with these spiders seem rather mundane. The danger though, will be for those PCs that are not so armored or who rely on skeinsuits which will allow half the damage through, and thereby allow the PC to be poisoned.

Also, these spiders don't particularly care if the victim is walking around, ready for a fight - or asleep in the middle of the night; vulnerable and weak. Once a victim has been brought down, the black racer will defend their kill viciously and without regard to personal safety. They will climb up on their prey, wave their two front legs about menacingly, while arching back and displaying their fangs and hissing loudly to warn off any trespassers.

If any other creature were to approach a black racer while it was defending its prey in such a manner and if that creature were to get to within 5 meters, the black racer will spit a stream of venom at the eyes of the intruder with an attack score of 50. If the attack is successful, the new victim will suffer the same

exposure to the toxin as if they had been bitten. Obviously if the victim has any kind of facial protection (that would cover the mouth and eyes [fully enclosed helmet or powered inertia screen for example]) the poison will be nullified even if the attack is successful.

The black racer can only produce and store two loads of poison in a day. Producing this poison takes a lot of energy, which is why it is so very potent. Once it is out of poison, a black racer will seek a good hiding place (caverns, crevices and other similar dark places) to restore its supply before venturing back out to hunt.

If killed (and not completely destroyed), the poison glands (one each, located directly behind the fangs - each containing 1 ounce of toxin) could be harvested and used in a variety of different ways. The liquid could be collected in a small vial, kept tightly sealed and later added to food as a potent and deadly assassination tool, the potency of which would be identical to having been delivered directly by the black racer. It could also be applied to low tech, bladed melee weapons or to needler ammunition. Once dried it would last indefinitely but would be used up after one successful attack. Used in this manner, it would be half as effective (S5/T10 and the -10% STA roll would not be cumulative).

Black racers are edible, but must be thoroughly cooked. Failing to do so could (25% after each meal) cause a parasitic infection (Sporekill will clear this right up) of grubs (each about 1/2cm in length and 1/8 cm in diameter) that live in the intestinal walls of the host, burrowing about and causing severe pain and bloody stools.

This parasitic infection causes the decrease of all physical attributes by 10% (of the original base stat) per month until the host eventually dies (once their original base stats are at -100% or 10 months). When this happens the victim's bowels will have been perforated enough by the burrowing grubs as to have been completely compromised thereby causing death by massive internal bleeding. The grubs will continue to feed on the decaying corpse until the rotting flesh degrades enough that they can break free of the husk. They will then pupate and mature over the course of 3 days, bursting from their shells as adult flies that are otherwise harmless, except to the black racers upon which their life cycle depends. If properly prepared however, the flesh of a black racer is similar to crab meat.

Name	Dripper
Type	Large Shrub
Number	1
Move	N/A
IM/RS	N/A
Stamina	50
Attack	N/A
Damage	1d10 per hour and/or 1% per hour
Special Attack	Acidic resin
Special Defense	None
Native World/Habitat	Everloom. Anywhere



Picture By ringonoki @ <http://ringonoki.deviantart.com/>

DESCRIPTION: This is a large shrub that can reach a height of about 3 meters and it can become fairly bushy. Its limbs are woody in nature; though never get much thicker than 4 cm. The leaves are thick and leathery; cactus-like with long, sharp thorns. They grow to about half a meter in length and perhaps 4 cm wide and 1 cm thick. If examined closely small, clear beads (about the size of a BB) of resin can be seen dotting the surface of the leaves here and there.

During the heat of the 'day' this resin becomes less viscous and can drip off the leaves and onto the ground (or anything else) below. This resin is quite acidic (sulfuric acid that it absorbs) and can cause damage to people and equipment if not careful. It is easy to identify these shrubs by the 'melted' and 'glassy' appearance of the sand around the base of the plant. Over time, the dripping resin will melt the sand leaving a slightly compressed depression covered in a glassy crust that encircles the shrub and helps to funnel rain water toward the base of the plant.

In game terms the resin will cause 1d10 points of damage per hour to anyone beneath the shrub. If the resin is actually touched it will cause one point of damage each time a glob of it is handled. If equipment is left where the resin can drip onto it, the equipment will degrade by 1% per hour meaning that, after 100 hours of exposure, that piece of equipment will effectively be broken and useless. This 1% per hour figure has been applied for the sake of simplicity. If the GM wishes to apply different rates of degradation depending upon the size or mass of the equipment in question in order to achieve more realism, they are welcomed to do so.

If a leaf is somehow damaged (like shooting it with a projectile weapon for example), the resin will drip rapidly from the 'wound'. This could come in handy if an enemy were to take cover behind one of these shrubs. Simply shoot at the leaves overhead and wait for them to come running out! Assume the damage inflicted under this circumstance would be 1d10 per turn spent beneath the shrub.

If, for whatever reason, someone would wish to collect this resin for later use, it can be easily contained in a glass container with no ill effects.

Name	Lightning Bug
Type	Tiny Herbivore
Number	1-1,000
Move	Fast
IM/RS	+7/70
Stamina	1
Attack	40
Damage	1 point or 2 points
Special Attack	Daytime sting does 1 point of electrical damage, nighttime sting does 2 points
Special Defense	Immune to electrical attacks
Native World/Habitat	Evergloom. Any warm, dark areas

DESCRIPTION: The lightning bug is a flying insect that is roughly 3cm in length. It is difficult to see the actual bug because of its brilliant blue glow. However, if an alternate light source is shining in the area of a lightning bug the insect will cease glowing and take refuge within their hive (which looks very similar to the hive of a paper wasp), or beneath a leaf or other similar structure to rest until the light gives way to

darkness. During that period of inactivity a lightning bug may be viewed more closely.

Upon closer inspection the bug is revealed to be jet-black save for a small deep red irregular blotch that covers only the top side of their thorax. Along the underside of the insect's abdomen a small blue arc of electrical energy continuously dances even during daylight hours though at a greatly muted intensity. At night, this arc of electrical energy crackles along the entire insect and causes it to glow intently like the filament of a light bulb.

If looking directly at a lightning bug when it is glowing, the vision would be slightly impaired as if looking directly into a 15 watt light bulb. Lightning bugs glow continuously during times of darkness - though they do blink rapidly during courtship.

Generally these creatures are not dangerous unless handled or their hive is disturbed, but if left alone they will be no threat. If picked up they will automatically 'sting' (the simple act of touching the underside of the abdomen causes the effect). Like a wasp, these insects can sting repeatedly (stinging causes a soft, audible crackling, popping sound) with no ill effect to the lightning bug. As noted above, the intensity of the sting varies depending upon whether the bug is inactive (daytime) or active (nighttime). If dropped, the lightning bug would cease to be a threat.



Art by JRMP @ <http://jrmb-stock.deviantart.com/>

If however, the hive itself is disturbed, then the entire lightning bug population in the immediate area will actively swarm in defense of the hive (like Africanized bees) regardless of the intensity of light at the time.

They will relentlessly attack, without regard to personal safety; anything within 10 meters of the hive after it has been disturbed and will continue swarming angrily for up to an hour after such a disturbance.

Though they do very little damage as individuals, as a large group the damage potential is alarming!

However, standard electrical defenses are effective at nullifying the effect (though it would take very little time for a swarm of lightning bugs to rip down a gauss screen). Similarly, simply wearing thick non-conductive clothing that covers all exposed body parts would effectively nullify the defensive mechanism of the lightening bug.

Macerating the body of a lightning bug will produce a thick paste that is bio-luminescent and will glow with a dull blue light (10 such ground up lightning bugs would produce enough light to equal one LED). This glow will persist for about 5 hours. The larvae (each one is about 2cm in length and about 1cm in diameter) of the lightening bug also glow; each one equal to the intensity of a single LED. They glow naturally when alive so if collected and kept alive (feeding them honey produced by the adults), they would provide a reliable light source for several weeks before pupating and eventually transforming into adult lightening bugs.

These insects produce a blue-grey honey which can be harvested from their hives. The honey is bio-luminescent and will glow dull blue continuously (seemingly indefinitely). Though not very bright, about 1 liter of the viscous liquid will glow enough to equal one LED. The honey never loses this glow. It also acts as a very weak battery to a degree - releasing a very weak electrical charge if handled (making a curiously pleasant sensation on the tongue if ingested).

The marketing possibilities for this honey are quite interesting. Naturally glowing drinks sweetened with this honey for instance. The honey is also very palatable to vrusks and even intensifies the intoxicant effect of alcoholic drinks - even to the point of being a mild intoxicant by itself - for vrusks. To a human this honey would be very similar to honey we consume today, albeit very good quality honey to be sure. Though the honey could be collected and transported off-world for various uses (it even has medicinal uses as it is a very good anti-bacterial agent), the lightning bugs would not be able to produce their honey off-world. Aside from the unique characteristics of the

insect, the honey's properties also rely upon a specific flower that the lightning bugs feed on. Without that enclosed ecosystem the honey cannot be replicated.

Name	Luminous Hopper
Type	Tiny Omnivore
Number	1-1,000
Move	Slow
IM/RS	+6/60
Stamina	1
Attack	N/A
Damage	N/A
Special Attack	None
Special Defense	None
Native World/Habitat	Evergloom. Any shrubby areas

DESCRIPTION: Luminous hoppers are a small, flightless insect; about 10cm in length. They are similar in appearance to a cockroach and though they are called hoppers, suggesting that they hop, they actually do not hop. Instead, they cock their head back against their thorax, locking it in place. Then their bodily fluids are redistributed to that area, causing their head to 'pop' forward with a violent snap.

Thus they can propel themselves through the air about half a meter from their starting point all in the span of a fraction of a second. This 'hopping' ability works whether the insect is on its belly or back. This mode of transportation is secondary to simply crawling, which they do most of the time.

Aside from their somewhat odd mode of locomotion, the luminous hopper has another fantastic ability; they glow. Much like other bioluminescent creatures, the luminous hopper emits a constant, soft cobalt blue glow; about one eighth as strong as a LED.

In the case of the luminous hopper this is a defensive mechanism that helps ward off their main predators; the small nightwing and small nightblade (though the glow will hold the larger versions at bay just as well). To be effective however, the hoppers must swarm together and form a bright enough light to harm the predators and keep them at bay. A small group of hoppers will simply attract the predators and be eaten. But a large enough group (100 or more; of course the more the better!) will ward them off.

These insects feed both on other small insects (primarily sand fleas!) and plant matter. When a large

swarm of hoppers congregate, it is a certain bet that the sand flea population in the soil in and around the swarm is non-existent. Once the food supply is exhausted in one area, the hoppers will move on to another area to continue their cycle.

Travelers looking for a safe place to rest away from sand fleas, nightblades and nightwings, can find safety within a swarm of luminous hoppers. However, care must be taken not to disturb the swarm too much and cause them to scatter. By slowly approaching and sitting still; the hoppers will eventually crawl upon the creature and swarm around it, protecting it indirectly. It is not at all uncommon to find certain animals taking advantage of this protection as well; such as the sand strider.

Macerating the body of a luminous hopper will produce a thick paste that is bio-luminescent and will glow with a soft cobalt blue light (8 such ground up hoppers would produce enough light to equal one LED). This glow will persist for about 5 hours.

Name	Nightblade
Type	Small, Medium & Large Carnivore (Strictly Nocturnal)
Number	1-100, 1-20 & 1-5
Move	Fast, Medium & Medium
IM/RS	+6/60, +6/55 & +5/50
Stamina	20, 65 & 120
Attack	50, 60 & 70
Damage: Bite or claws	1d10+3, 2d10+6 & 3d10+9
Special Attack	Entanglement, See below
Special Defense	None
Native World/Habitat	Evergloom. Any warm, dark areas - though mostly subterranean areas

DESCRIPTION: These voracious and utterly vicious beasts are flightless versions of nightwings, though more brutish and powerful.

Their skin is a mottled dark brown/black color and is covered with very fine scales. Their heads resemble that of a pterosaur (triangular in shape but with a very short, powerful beak that is filled with sharp teeth). They have two legs and two arms (all of which sport very sharp claws: 4 toes on the feet and 4 fingers plus an opposable thumb on their hands). They use diagonal locomotion (like a dog) thus they are fast and graceful creatures.

They have long (equal in length to their bodies from beak to rump), prehensile tails which are used for climbing (they are very good climbers - able to scale sheer rock walls with ease and even traverse the ceiling of a cavern with half their movement rate) and to great effect when in combat, grappling with and entangling their prey. On any even roll that hits its target, the beast is able to entangle its prey with its tail and enjoys a +10% chance to hit with any subsequent attack while the target remains entangled.

Meanwhile, the target receives a -10% to any physical action while it remains entangled. A successful strength check will allow the target to break free. When carrying off prey, slivers use their tails to grapple the victim so that it can be carried off to be torn up later. They can carry anything that is 75% of their own weight or smaller.

Similar to bats, nightblades use echolocation to locate prey - they eat anything smaller than themselves but are capable of killing larger prey when they pack together to do so. If hunting alone they will fearlessly charge into groups of victims, singling out and carrying off an individual. Sonic attacks will temporarily 'blind' (1d10 turns) any slivers within the area of effect.

These beasts are active exclusively at night and operate equally well in total darkness (subterranean areas) or starlit nights. They are however physically injured by any light source (whether natural or artificial) greater than starlight (even the soft light of the full moon will cause pain and physical damage: 1 point of damage per second exposed). When they are exposed to light their skin will rapidly desiccate with a hissing sound and an obvious release of vapor. In game terms this means that any light-based attacks (laser, flame throwers, etc) will cause double damage to these creatures and a simple flashlight will cause 1 point per second exposed. If an area is illuminated these beasts will avoid going into the lit area unless desperate for food (in which case sprinting through the area, grabbing a victim and sprinting back out in the span of a couple seconds would be the tactic used).

There are three different sizes associated with these creatures - all three sizes are identical in appearance and vicious demeanor. The only real difference (beside size of course) is the tactics used when hunting.

The smaller variety form 'packs' in order to bring down larger prey, as a collective. After the kill however, it is not at all uncommon for fighting to break out amongst the creatures over the meal. They are about 20kg and 1m in length, with their tail adding another 1m to total length.

Medium-sized nightblades tend to hunt in smaller groups (less competition after the kill!) and rely more on raw power to kill their intended meals. They are about 75kg and 1.5m in length, with their tail adding another 1.5m to total length.

The larger ones are often found hunting alone and almost completely rely on stealth (attacking quietly from the darkness) and raw power to kill their prey. They are about 150kg and 2.5m in length, with their tail adding another 2.5m to total length.

It is not at all uncommon for these beasts to kill and consume their own kind - especially in regard to larger ones killing smaller ones.

Name	Nightwing
Type	Small, Medium & Large Carnivore (Strictly Nocturnal)
Number	1-100, 1-20 & 1-5
Move	Fast, Medium & Medium
IM/RS	+6/60, +6/55 & +5/50
Stamina	20, 65 & 120
Attack	50, 60 & 70
Damage: Bite or claws	1d10, 2d10 & 3d10
Special Attack	Entanglement, See below
Special Defense	None
Native World/Habitat	Evergloom. Any warm, dark areas - including subterranean areas

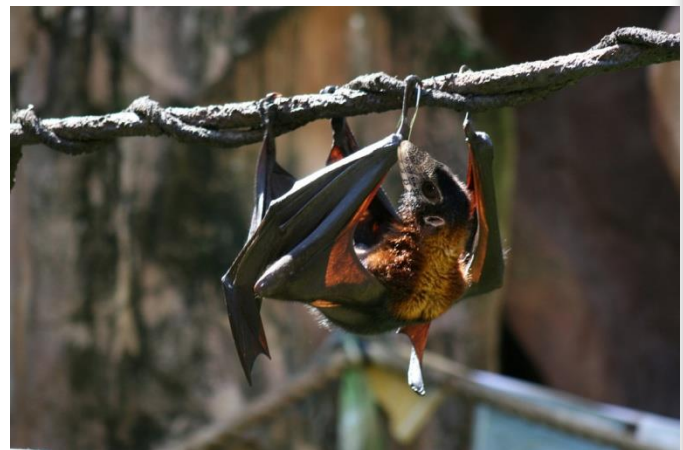
DESCRIPTION: These voracious and utterly vicious beasts resemble large reptilian bats. Their skin is a mottled dark brown/black color and is covered with very fine scales. Their heads resemble that of a pterosaur (triangular in shape but with a very short, powerful beak that is filled with sharp teeth). They have two legs and two arms (all of which sport very sharp claws: 4 toes on the feet and 4 fingers plus an opposable thumb on their hands), with a leathery membrane that stretches between their wrists and ankles (similar to a yazirian). This wing configuration

allows them to fly with incredible speed and agility. Similar to bats, they are fairly clumsy on the ground.

They have long (equal in length to their bodies from beak to rump), prehensile tails which are used as stabilizers while flying and for gripping solid objects when roosting. They dangle upside down as a bat does when they rest. They can also use their tails to great effect when in combat, grappling with and entangling their prey. On any even roll that hits its target, the beast is able to entangle its prey with its tail and enjoys a +10% chance to hit with any subsequent attack while the target remains entangled.

Meanwhile, the target receives a -10% to any physical action while it remains entangled. A successful strength check will allow the target to break free. When carrying off prey, nightwings use their tails to grapple the victim so that it can be carried off - then they can tear at it in mid-flight with their claws. They can carry anything that is 75% of their own weight or smaller.

Similar to bats, nightwings use echolocation to locate prey - they eat anything smaller than themselves but are capable of killing larger prey when they pack together to do so. If hunting alone they will fearlessly swoop into groups of victims, singling out and carrying off an individual. They are extremely capable flyers and can snatch flying targets from the sky.



Art by Machinegun-willy@ <http://machinegun-willy.deviantart.com/>

They do not restrict themselves to hunting airborne prey however as they are equally capable of swooping down upon terrestrial targets. Sonic attacks will temporarily blind (1d10 turns) any nightwings within the area of effect.

These beasts are active exclusively at night and operate equally well in total darkness (subterranean areas) or starlit nights. They are however physically injured by any light source (whether natural or artificial) greater than starlight (even the soft light of the full moon will cause pain and physical damage: 1 point of damage per second exposed). When they are exposed to light their skin will rapidly desiccate with a hissing sound and an obvious release of vapor. In game terms this means that any light-based attacks (laser, flame throwers, etc) will cause double damage to these creatures. If an area is illuminated these beasts will avoid going into the lit area unless desperate for food (in which case swooping through the area, grabbing a victim and swooping back out in the span of a couple seconds would be the tactic used).

There are three different sizes associated with these creatures - all three sizes are identical in appearance and vicious demeanor. The only real difference (beside size of course) is the tactics used when hunting.

The smaller variety form 'packs' in order to bring down larger prey as a collective. After the kill however, it is not at all uncommon for fighting to break out amongst the creatures over the meal. They are about 20kg and 1m in length, with their tail adding another 1m to total length.

Medium-sized nightwings tend to hunt in smaller groups (less completion after the kill!) and rely more on raw power to kill their intended meals. They are about 75kg and 1.5m in length, with their tail adding another 1.5m to total length.

The larger ones are often found hunting alone and almost completely rely on stealth (attacking quietly from the darkness - swooping in from altitude, etc) and raw power to kill their prey. They are about 150kg and 2.5m in length, with their tail adding another 2.5m to total length.

It is not at all uncommon for these beasts to kill and consume their own kind - especially in regard to larger ones killing smaller ones.

Name	Sand Flea
Type	Tiny Carnivore
Number	1-10
Move	Fast
IM/RS	+6/60
Stamina	1
Attack	85
Damage	1
Special Attack	Poison (S1/T1) and Disease (-10/D*Special)
Special Defense	Tiny arachnid - very difficult to see
Native World/Habitat	Evergloom. Common in any warm, dry, sandy areas

DESCRIPTION: Though not at all related to a flea as the name suggests, these arachnids are more similar to a tick. Still, they do have a couple things in common with fleas. They are very tiny and therefore, extremely difficult to see. And they subsist on blood. Their usual prey is the nightblade and/or nightwing. Nightblades and nightwings possess immunity to the poison and the disease effects of sand fleas so they aren't particularly bothered by these tiny arachnids. Sand flea concentrations are extremely dense in the underground dens of nightblades and nightwings (increase the Number category from 1-10 to 1-50 when traveling within the confines of a nightblade or nightwing dens).

Generally these creatures are harmless as they live in the sandy soil of the moon and would not usually come into ready contact with sentient beings. If however, a victim were to lay on the ground for a short period of time, crawl through tight caverns or in some other way come into contact with the dirt against their bare skin, that could give these arachnids the access they need to attack the host and come away with a blood meal. Once the sand flea bites and gets its fill of blood, it drops off the victim with no further effect.

In game terms, the Attack number listed above represents the chance that one of these creatures will successfully strike their intended victim once they have crawled onto their target. The GM should only roll once for the attack (GM's choice if they wish to roll for each sand flea's attack or just once for a group). On a roll of 86 or higher the sand flea(s) has bitten into clothing or has been unknowingly brushed away and cannot attack again.

The bite of the sand flea is painless as they exude a poison during the course of the attack that numbs the area being bitten. Aside from causing a single point of damage, this poison (S1/T1) causes no other ill effects of note but to deaden the pain and keep the host from realizing it is being attacked. There is however, a side effect that comes about as a result of the poison breaking down in the body of the host; severe itching (can be treated with Anti-tox or Aller-tabs). This itching is nothing more than an annoyance that lasts about 3 days. The itching starts about 20 minutes after the initial bite. The itching is severe enough to keep the victim from sleeping adequately and as well; the scratching that results can cause infection if not properly treated (can be treated with Omnimycin).

In game terms, this lack of adequate sleep penalizes any DEX/RS, INT/LOG and PER/LDR related rolls by -10% (this effect *IS* cumulative with the disease effect listed below if the victim happens to be affected by both effects simultaneously) but only after the second day. It should be noted that if a victim is bitten on one day, their itching starts within 20 minutes and lasts for 3 days - and if bitten again on the next day, this new batch of bites will effectively extend their sleepless, itch-filled nights by a day, etc.

The resulting disease (-10/D*Special) affects the victim's entire body, causing severe joint pain, lethargy, fever and extreme dry mouth (resulting in an irrational need to drink fluids on a continual basis which poses a danger if water supplies are limited).

Though not deadly by itself, the disease does significantly reduce the physical and mental prowess of the victim. In game terms this amounts to a -10% to **ALL** stat-related rolls indefinitely (can be treated with Antibody Plus). Meaning, this effect will persist for the life span of the victim or until the victim is treated with Antibody Plus, whichever comes first.

This disease is not automatically contracted, but once contracted it starts to inhibit the victim within 24 hours. There is a cumulative 1% chance to contract this disease from each exposure. Meaning, each time the victim is bitten the GM will note the number of bites that the victim has acquired and secretly roll a percentage equaling the number of bites (20 bites = a 20% chance to get the disease, etc.). This secret roll is made after each group of exposures.

Example: The victim sleeps on the ground the first night and is bitten 5 times - they now have a 5%

chance of getting the disease and the GM rolls once for that 5% (**NOT** 5 individual rolls at 1%, 2%, 3%, 4% and then 5%). The GM's roll is a 96, the victim does not contract the disease. The next night the victim sleeps on the ground again and gets bitten 8 times leaving their percentage now at 5+8=13%. The GM's secret roll is a 57, the victim does not contract the disease. The next day the victim covers himself in sand as camouflage to avoid a confrontation with an animal and gets bitten 10 more times leaving his percentage at 13+10=23%. This time the GM's secret roll is a 20 meaning that the victim has now contracted the disease and all the aforementioned penalties apply. The GM should use some common sense when using these creatures against players. These are extremely tiny creatures. If the victim is wearing a protective screen (like an inertia screen for example) that protects against physical attacks - as long as the screen has power these creatures will not be able to contact the skin of the victim and will not, therefore, be able to bite the victim. Similarly, full suits like space suits or environmental suits will keep the sand fleas at bay.

Name	Sand Strider
Type	Medium Herbivore
Number	10-100
Move	Very Fast
IM/RS	+5/55
Stamina	85
Attack	50
Damage	1d10 kick (hind legs - usually executed if being pursued and after having already used its Special Defense)
Special Attack	Poison spit (S10/T1)
Special Defense	Poison offal (S10/T1)
Native World/Habitat	Evergloom, arid plains, especially near water sources

DESCRIPTION: The sand strider is a mid-sized creature (175 kg and about 2.5 meters long, 1.5 meters at the shoulder and about 2 meters tall if seated in a feeding position) that resembles a cross between a large dog and a kangaroo. It has a thick cow-like tail and four legs.

The feet of the hind legs resemble those of a kangaroo while the feet of the fore legs resemble those of a dog except with elongated, finger-like toes. The toes on

both the hind and fore feet are webbed (which enable it to stay aloft on soft sandy soil sort of like snowshoes). The head, snout and ears are also similar in appearance to a kangaroo.



Art by Eyth @ <http://eyth.deviantart.com/>

When feeding on the local shrubbery, the sand strider sits on its rump like a dog, thereby elevating its snout and forelegs to within easy reach of the tender new growth at the tops of the shrubs that make up its diet. It uses its finger-like toes on its forelegs to grasp the branches and pull them closer so that the leaves may more easily be accessed and eaten.

They are covered in a dark brown fur that tends to blend with the landscape. The individual hairs that make up their coats are long and hollow and tend to give them a somewhat shaggy appearance. Due to the hollow nature of the creature's hair, it provides an excellent thermal barrier, thereby keeping the creature cool. It also creates a natural buoyancy; making them excellent swimmers. If near water and in danger, they will not hesitate to enter the water to escape.

Sand striders are ruminants, meaning they have four-chambered stomachs and they regularly regurgitate and 'chew their cud' like cows. The plants that they feed on contain natural toxins that the sand striders use as a defensive mechanism. If startled, the sand

strider can accurately expectorate a bolus of macerated plant pulp and saliva (about the size of a ping pong ball) similar to the ability of camels. They can easily hit a target the size of a grapefruit at 15 meters and always aim for the face. If the plant pulp/saliva mixture (poison spit S10/T1) manages to strike a target in the eyes it will cause immediate burning (10 points of damage) and temporary blindness (-20% to all actions for 30 minutes or until rinsed out of the eyes with copious amounts of water), allowing the sand strider to sprint to safety.

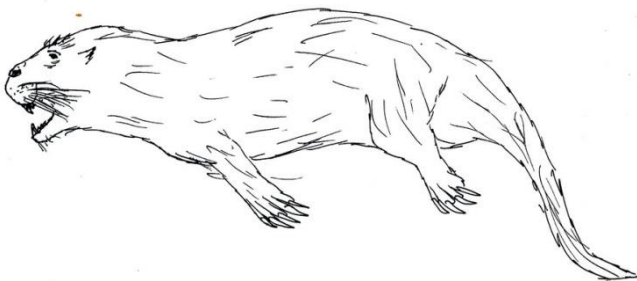
The area of the face of the victim which was 'splattered' with spit will be stained black. This stain will persist for about 3 days before fading (a RS check can be made to completely avoid this effect). After spitting and then turning to flee, the sand strider has one last defensive mechanism that may help it avoid predators.

They can explosively expel the contents of two anal glands (just below and on either side of the tail) while running at full gallop and use their tail, sweeping back and forth rapidly, to 'spread' a curtain of watery, flying offal in a 45 degree arch behind them. This is a blind attack that has a possibility (25% chance) of striking any target within 45 degrees of the hind end of the sand strider and within 2 meters. If the target is struck then treat it as if it had been successfully spat upon as detailed above. The anal glands only contain enough material to execute this ability once but will naturally refill after a couple hours and a meal.

Though edible, the sand strider is not terribly palatable (by human standards) as the flesh takes on the pungent creosote-like flavor of the plants that it consumes.

Name	Shade
Type	Medium Carnivore
Number	1-2
Move	Medium
IM/RS	+6/60
Stamina	80
Attack	75
Damage	2d10 claws or teeth
Special Attack	Ambush - If able to stealth to within striking range, damage is doubled for the first attack
Special Defense	Camouflage - 80% to remain unnoticed at night until it moves to strike; 60% during the day
Native World/Habitat	Evergloom. Any rocky or shrubby areas

DESCRIPTION: The shade is a medium-sized carnivore that weighs 50kg and can reach lengths of up to 2 meters (plus half a meter for their tails), but standing only about 30cm tall. It is a mammal and is covered in dense, jet-black fur which provides it with extremely good camouflage on Evergloom. The creature is adept at the fine art of stealth and can often sneak to within 2 meters of its intended victim before springing forth and delivering a fatal bite to the back of the neck. They look similar to a river otter, sleek and long, but with a foxlike face. They have four legs, each of which has four toes that end in wicked claws.



Art By rajaharimau98

<http://rajaharimau98.deviantart.com/>

Shades are built very low to the ground, with their bellies often scraping along. They move in a fashion very similar to lizards, a sort of side-to-side gait. Though it looks ungainly it is not. It allows them to 'slither' forward slowly and silently and, if need be; to burst forth with alarming speed.

It is not uncommon for them to work in pairs, even going so far as to coordinate their initial assault on the

same target simultaneously in order to maximize their chance of killing their prey quickly and with the least effort. Their preferred prey is sand striders, though they will prey upon anything that is roughly that size or smaller.

Their favored tactic is to sneak to within 2 meters of their target and then leap upon its back, biting down upon the back of the creature's head or neck. Thus anchored, the shade will then proceed to rake the back of the victim with its claws until it ceases struggling.

Name	Stinging Snail
Type	Small Herbivore
Number	1
Move	Very Slow (1m)
IM/RS	+1/10
Stamina	05
Attack	40
Damage	1d2 Sting
Special Attack	Poison (S1/T75)
Special Defense	None
Native World/Habitat	Evergloom. Common in any warm, moist or wet areas

DESCRIPTION: The stinging snail is a small (about 3kg) terrestrial mollusk. It lives around water sources, scraping algae off the shoreline while at the same time keeping itself moist. Though it can survive if submerged in water for up to an hour; and often can be seen grazing on the floor of a body of water close to the shore, it prefers to stay above the water line most of the time.

It carries a thick, multi-colored triangular shell on its back that is produced naturally by the snail. The multi-colored pattern is unique to each individual but is always some mix of different shades of brown; from light to very dark, configured in a barred pattern.

Located just above the rim of the shell's entrance/exit are a series of four small holes situated side-by-side laterally; parallel to the rim. Just barely protruding from these small holes are thin, very sharp, barbed spikes (1 per hole) that are no more than 1/2cm in length. Using hydraulic pressure, the stinging snail can 'shoot' these small spikes about 15cm with enough force to pass through a layer of clothing (or fur) and imbed in the skin of the target. These spikes remain attached to the snail via a nearly-invisible cord through which poison (S1/T75) is pumped, quickly

making its way via hydraulic action into the spike and then the victim. These small cords are then severed (though the venom sac and the pumping organ remain attached and continue to push venom into the victim) as the victim pulls away, leaving the barbed spike embedded in the skin.

This poison is an extremely potent neurotoxin that is fast acting. 3 minutes after having been stung the victim must make a STA check. Upon failing the STA check, the victim will fall into unconsciousness, and begin to convulse; taking 1 point of damage each turn until the victim dies or takes 75 points of damage, whichever comes first. Passing the STA check means there is no damage taken. Similarly if the sting attack fails to pass through whatever defenses the target possesses, then the poison will have failed to be injected and no poison damage is applied.

Administering a dose of Anti-tox will negate the poison and administering an Aller-tab will reduce the effectiveness of the poison by 50% (1 point/rnd for 37 rnd's). Multiple stings have a cumulative effect; 2 stings would be 2 pts/rnd for 75 rnds, etc.

If the snail is handled, it will reflexively use its sting as a defensive measure. If it is immediately dropped and left alone, it will not try to sting again. If however, it is handled further, it will sting again up to a maximum of 4 times. Once it has used all of its stings, it will be left completely defenseless, except for its hard shell, until it can re-grow its spikes and venom sacs (about 5 days).

When deploying its spikes there is a small puff of fluid that is easily seen, but the spikes and cords are small enough that they can go unnoticed. If the spikes are avoided and if the snail is thoroughly cooked (thereby destroying the poison left in its venom sacks - under cooking [or eating raw] could result in poisoning by all remaining venom sacks!), the stinging snail is edible and very palatable (by human standards), tasting similar to a scallop. Most of the snail's weight comes from its shell. But once the shell is broken away, the adult specimens can easily provide 1kg of edible flesh.

Name	Weed Rat
Type	Small Herbivore; aquatic mammal
Number	1-10
Move	Medium
IM/RS	+6/60
Stamina	15
Attack	35
Damage	1d10/2 (die roll of 1 = 1)
Special Attack	Poison (S1/T10)
Special Defense	None
Native	Evergloom, any water sources
World/Habitat	

DESCRIPTION: The weed rat is a small (about 15kg), furry mammal that lives exclusively in the water bodies that occur on the moon of Evergloom. They have the distinction of being the largest organism living in the waters of Evergloom. Though they can leave the water if they desire, they very rarely do as they are ungainly and clumsy on land. Their fur is a dark brown color, with a black belly. Their snouts are short and broad and contain dull, flat teeth suitable for scraping algae from the rocks that grows in their aquatic environment. They have short, stubby, thick tails that serve no real purpose. They have four feet that consist of six webbed toes each which enable them to speed effortlessly through the water with powerful strokes.

They give birth to live young (4-6 pups per litter) on rafts of aquatic weeds that they gather to form semi-solid platforms used as floating sleeping mats. They usually lodge these mats against rocks or debris to hold them in place if they have made their home on a flowing water source. Otherwise, in the case of calm waters, they tend to simply allow their weed platforms to float languidly wherever they may.

They are timid and shy creatures that prefer to avoid other creatures by simply swimming away and maintaining their distance. However, if caught and handled, they can deliver a painful attack with a claw located on the inside ankle of each hind leg. Though minuscule as an attack by itself, the claw is hollow in nature and provides an avenue along which poison can flow and be injected into their attacker. This attack is used strictly as a defensive measure.

As long as their claw is able to penetrate the defenses of their target and inflict at least one point of damage, the weed rat's poison will be injected. This poison is

fairly mild (S1/T10) as it does not generally cause death. Rather it is an extremely effective deterrent as it causes extreme discomfort upon contact. Following a failed STA roll, any character affected by this poison will experience severe system-wide pain (represented by a reduction of all stats by 75% for a 5 hour period). During that period the victim will experience severe dizziness, weakness and vomiting (all of these effects can be counteracted with Anti-tox or Aller-tabs).

Weed rats are edible as long as the rear feet are disarticulated at the ankle joint and discarded (thereby removing the venom sacks), or the rear feet are thoroughly cooked.

Delta Subsection 2:

New Sathar Attack Monster

Name	Death Weaver
Type	Small Carnivore
Number	1-3
Move	Very Fast
IM/RS	+6/65
Stamina	35
Attack	60
Damage	1d10 bite
Special Attack	Poison (S5/T20)
Special Defense	Hard exoskeleton acts as 10 point skeinsuit.
Native World/Habitat	Sathar attack monster. Any warm areas.

DESCRIPTION: The death weaver has been bio-engineered from original black racer stock from the Starfall system. It is a many-legged arachnid that is about a meter in diameter (if just the body were measured it would be about half a meter in diameter). It is black in color and sports two fangs that are 7.5 centimeters in length and that are capable of easily penetrating a leather boot and delivering a load of poison to the foot inside.

They have been bio-engineered with spinnerets (unlike the original stock) and use their webs primarily for hiding their nests and for lowering themselves from unexpected places, thus developing an ambush predator lifestyle. These webs are strong enough to support these massive spiders and eventually, through learned behavior (as the species did not originally produce webs), may begin to use its webs in a fashion similar to other spider species.

They are very powerfully built; robust even, and have been bioengineered to develop a denser carapace so that they can now support their own weight on worlds with higher gravity (now, anything less than 1.0). They depend upon their speed (very fast!), strength and highly toxic poison to subdue prey (a dose of Anti-tox will clear this right up).

These spiders are extremely fearsome and exceptionally aggressive, chasing anything that they encounter. Their poison is also extremely toxic so that a single bite is generally capable of killing any creature twice the size of a human or smaller within moments of exposure. Any bite that manages to bypass the defenses of the death weaver's victim and does at least one point of damage will inject a deadly toxin (S5/T20) into the victim.

In addition to the damage inflicted by the poison, this toxin has a secondary effect: paralysis. Each turn that passes, the victim must roll against their STA stat with a cumulative -10% or become completely paralyzed. The victim will still be able to feel and breathe, just not move or speak. Regardless of how much time passes, at the point at which the victim falls to the ground paralyzed, the spider will quickly approach and begin to feed...leaving the still-live victim to feel everything that the spider is doing while it contemplates its death.

Generally this arachnid will either rush at or ambush a victim from above, delivering a deadly bite before backing off quickly and allowing their poison to bring the prey down. Once a victim has been brought down, the death weaver will defend their kill viciously and without regard to personal safety. They will climb up on their prey, wave their two front legs about menacingly, while arching back and displaying their fangs and hissing loudly to warn off any trespassers.

If any other creature were to approach a death weaver while it was defending its prey in such a manner and if that creature were to get to within 5 meters, the death weaver will spit a stream of venom at the eyes of the intruder with an attack score of 50. If the attack is successful, the new victim will suffer the same exposure to the toxin as if they had been bitten. Obviously if the victim has any kind of facial protection (that would cover the mouth and eyes [fully enclosed helmet or powered inertia screen for example]) the poison will be nullified even if the attack is successful.

The death weavers have been bio-engineered to produce twice the amount of poison as the original stock. It can produce and store four loads of poison in a day. Producing this poison takes a lot of energy that is why it is so very potent. Once it is out of poison, a death weaver will seek a good hiding place (caverns, crevices and other similar dark places) to restore its supply before venturing back out to hunt.

If killed (and not completely destroyed), the poison glands (one each, located directly behind the fangs - each containing 2 ounces of toxin) could be harvested and used in a variety of different ways. The liquid could be collected in a small vial, kept tightly sealed and later added to food as a potent and deadly assassination tool, the potency of which would be identical to having been delivered directly by the death weaver. It could also be applied to low tech, bladed melee weapons or to needler ammunition. Once dried it would last indefinitely but would be used up after one successful attack. Used in this manner, it would be half as effective (S5/T10 and the -10% STA roll would not be cumulative).

The Sathar used an advanced form of DNA manipulation to create these hideous beasts from a deadly spider found on a moon in the Starfall system. Unlike the original stock, this monster has been engineered to create far more eggs each year - potentially creating as many as 200 young a year.

Also unlike the original stock, this spider has been engineered to survive for two years rather than dying naturally after just one. This allows the beast to produce 400 offspring during its lifetime with a very real potential to over populate on planets with no natural enemies and collapse entire ecosystems, not to mention the extreme hazard to civilized population.

As with all sathar attack monsters, the sathar plan to release this one on enemy planets to terrorize its inhabitants. Though this construct is most certainly less powerful than some of the other sathar attack monsters, it still has some very real benefits over those other more powerful constructs. It is really small in comparison which allows the sathar to carry many times more death weavers than cybodrags while en-route to a planet to drop them off for example.

Zeta Section

Starfall Research Facility Map

See map on next page.

Eta Section

Credits:

Writer/Story: Rollo (Ben Gorman)

Sathar Ship Design: Rollo

Sathar Ship Design Consultants: Shadow Shack & TerIObar

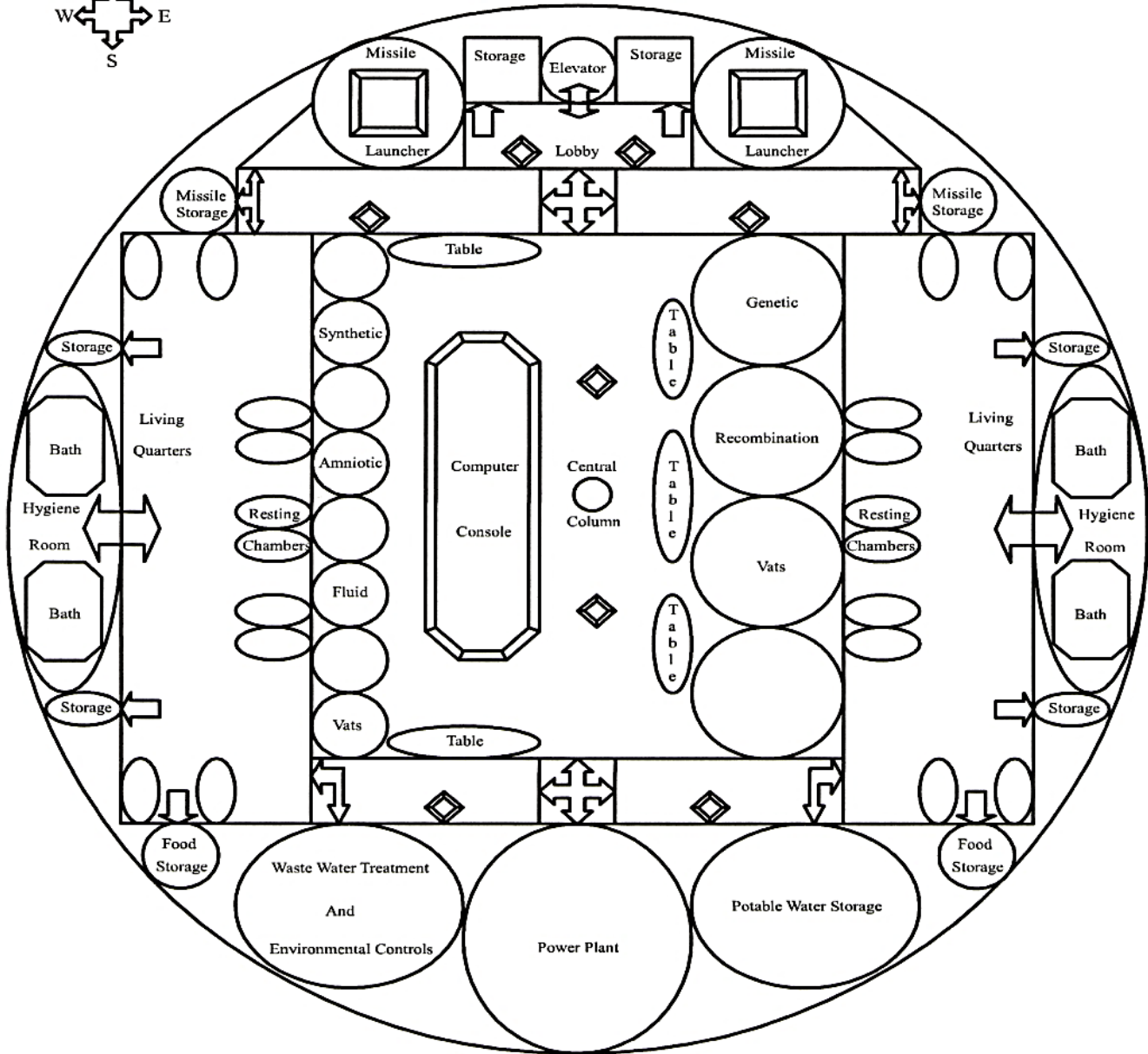
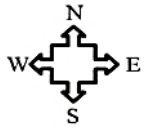
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Editing: Jedion357, Lauren Wise & Thespiritcoyote





Arrows indicate areas where doorways exist.

◆ = Scorpion I Sentry Gun Turret.

EQUIPMENT

Hover Armored Personnel Carrier

By w00t



HAPC
Size: 5, Hover Armored Personnel Carrier
Protection: 11, Hardpoints: 10 (10 remain) SP: 1,875
Top: 125, Cruise: 63, Accel: 32, Decel: 35
Passengers: Pilot, Navigation, 2x squads (4 men each)
Cargo: 120kg, m3: 5
Cost(Cr): 115,650
Weapons
3x large missiles, Range:1600, 3d10x10 (surface mount)
Medium laser cannon, Range:500, 2d10x10 (surface mount)
Medium cannon, Range: 300 2d10x10 (surface mount)
Medium rockets, Range: 100, 3d10x10 (internal mount)
Defenses
Armor
Albedo Screen (10 emmiters)
Interia Screen (10 emmiters)
Can only have one screen active at a time.
Equipment
5,000 SEU drum powers screens and laser weapons.
EWC System, each weapon has a link, 2 helmets



Variant Armor Types in Star Frontiers

By Andy Campbell

MODERN ARMORS

Name	Type	Points of Defense	Mass	Cost
Kevlar Suit (Light / Medium / Reinforced Flak)	Inertia	10 / 20 / 30	2.5 / 4 / 8 kg	75 / 150 / 275 Cr

Effects:

Reduce damage from projectile and gyrojet weapons by 1/2; reduce all other Inertia damage by 1/4.

Notes:

Kevlar fibers were the primitive forebears of the advanced ballistic fibers now used in skeinsuits. Although skeinsuit fiber largely made Kevlar obsolete, Kevlar is cheap and fairly simple to produce; as a result, Kevlar armor can still be found in use on small or low-tech Frontier colonies, among criminals and pirates, and members of militant cults. Except on colony worlds, law enforcement officers will pay extra attention to Kevlar wearers due to the unsavory nature of most Kevlar buyers.

Name	Type	Points of Defense	Mass
Duraweave	Inertia	15 (lt) or 25 (hvy)	2 or 3.5kg

Effects:

Reduce damage by projectile and gyrojet weapons as per skeinsuit.

Notes:

Lighter and more flexible than Kevlar, duraweave is a common fabric for use in hostile environments. Whether outdoors such as on a new planet under exploration or in an indoor facility where impact

protection is required, duraweave is a cheaper alternative to the skeinsuit and unlike a skeinsuit is nearly indistinguishable from regular fabrics. Duraweave is breathable and available in many variants (low and high temperature, waterproof, etc.).

ARCHAIC INERTIA ARMORS

Effects Reduce damage from melee and archaic missile weapons by 1/2; reduce all other Inertia damage by 1/4.

Notes Archaic armors are completely outclassed by the high-tech weaponry common on the Frontier. On Frontier worlds, the only situations where such armors might be encountered would be ceremonial occasions (worn by royal guardsmen for a state parade) or in entertainment facilities (worn by actors, historical recreators, etc.). However, archaic armor has been encountered on various low-tech planets such as Voltornus and Starmist by explorers. In survival situations, a few simpler types can be fashioned by trained Environmental specialists.

Armor	Inertia	Cr)
* Cost in parentheses is the cost on Frontier worlds to buy these shields from specialty craftsmen; they are not widely available, must be specially ordered by the buyer and are priced accordingly.		
** Hide, leather or plant fiber armor may be made by Environmentalists using the "Making Tools / Weapons" subskill if the right materials (wood, leather, etc.) can be found.		

SHIELDS

Shield Use:

Since Star Frontiers does not use a hit location system there are two ways in which shield use can be represented in game play. These are:

A. Passive Defense

If played as a passive defense, a shield is treated as "cover" if the shield-bearer is attacked. Depending on what the shield is made of, the cover modifier will either be for "hard cover" (-20) or "soft cover" (-10); see the Expanded Game Rulebook, page 22 for the effects of cover. The cover modifier is only applied if the defender is aware of the attack and actively using the shield to defend itself. If the target is aware of the attack and defending itself, then the cover modifier is applied to all incoming attacks except those from behind; the reason for this is that even if the shield cannot stop a bullet, for instance, it obscures the shooter's view of the target which may cause a miss. If the attacker misses their to hit roll by an amount that would have hit without the shield's modifier, they roll damage as normal and apply that damage to the shield itself.

Example: An attacker needs a 60 or less to hit an enemy with a shot from his gyrojet pistol, 40 after applying the "hard cover" -20 modifier for the defender's riot shield. The attacker rolls a 54, which would have hit if the shield had not been used. This means the shot was caught by the shield and it will take damage. The attacker rolls 2d10 and gets a 20 damage result. 1/2 of 20 points yields 10 points of damage to the shield; since the riot shield only has 10

Name	Type	Points of Defense	Mass	Cost*
Furs / Hides /Light Leather**	Archaic Inertia	5	5 kg	- (20-50 Cr)
Leather / Studded Leather	Archaic Inertia	10	8 kg	- (25-100 Cr)
Chain Scale / Ring Mail	Archaic Inertia	15	15 kg	- (200-600 Cr)
Brigandine / Splint / Platemail	Archaic Inertia	20	20 kg	- (500-1000 Cr)
Full Plate	Archaic	25	25 kg	- (2000+

points hit points, it is shattered and useless.

B. Active Defense

If shields are treated as an active defense, they are used by PC's to block attacks directly and can only be used to defend against melee or archaic missile weapons. The shield will only absorb damage if used to successfully block an attack. A block is successful if the defender rolls below 1/2 their RS. If the shield user is fired upon by missile weapons, the shield will block an attack only if the user rolls under 1/10 their RS (if successful, the user is able to anticipate the general area of the incoming fire or is simply lucky). Note that if a shield is used to block an attack by a melee weapon which causes damage by electricity (such as a stunstick or electric sword) a block will have no effect, as the electrical damage will pass right through the shield into the defender.

Name	Type	Points of Defense/ Cover Type	Mass	Cost*
Riot Shield	Inertia	10 / Hard	2.5 kg	50 Cr
Effects: Reduce from melee, projectile and gyrojet weapons by 1/2.				
Shield (soft)**	Archaic Inertia	5 / Soft	2.5 kg	-(20-50 Cr)
Effects: Reduce damage from melee and archaic missile weapons by 1/4.				
Shield (hard)	Archaic Inertia	10 / Hard	5 kg	-(50-100 Cr)
Effects: Reduce damage from melee and archaic missile weapons by 1/2; reduce all other Inertia damage by 1/4.				
* Cost in parentheses is the cost on Frontier worlds to buy these shields from specialty craftsmen; they are not widely available, must be specially ordered by the buyer and are priced accordingly.				
** Soft shields may be made by Environmentalists using the "Making Tools / Weapons" subskill if the right materials (wood, leather, etc.) can be found.				

Another equipment article from Andy Campbell. These are weapons converted from other games for use in Star Frontiers. May they find a place in your game?



Some New Weapons

By Andy Campbell

Beam Weapons

Fusion Rifle	From Gamma World
Damage	Special*
Ammo	20 SEU Clip
SEU	2
Rate	1
Defense	Inssuit
Range(meters)	
PB	0-10
Short	11-45
Medium	46-176
Long	176-350
Extreme	351-700
Cost	5000 cr
Mass	10kg

* The Fusion Rifle fires dual beams of high-intensity radiation at its target; both barrels are linked, so only one individual may be targeted per shot, and the damage caused is the total for both beams. The beams inflict radiation damage to the target equivalent to a S10 / T5 poison with each hit - that is, a second shot will cause additional damage as a S10 / T5 poison, etc. These weapons are very dangerous, requiring the rifleman to wear an inssuit (see KnightHawks, p. 30) at all times due to the highly radioactive power supply built into the weapon. If the inssuit is breached (ie. if the rifleman suffers any inertial or laser damage), the rifleman will suffer S5 / T5 radiation damage every turn until he discards the weapon and moves at least 5 meters away from it (radiation intensity will drop by S1 / T1 for every meter between the individual and the rifle). Fusion Rifles were experimental weapons built for UPF commandos and are illegal on all UPF planets, with possession punishable by up to life imprisonment or death; they are much feared on the battlefield.

Mark V Blaster	From Gamma World
Damage	4d10
Ammo	20 SEU Clip
SEU	4
Rate	1
Defense	Synth
Range(meters)	
PB	0-5
Short	6-15
Medium	16-35
Long	36-75
Extreme	76-150
Cost	700 cr
Mass	2.5kg

The Mark V Blaster pistol was an experimental model built by WarTech for Landfleet but not widely used. The pistol fired a powerful particle beam similar to the Rafflur series, but was capable of using standard 20 SEU powerclips. Although the Mark series blasters could inflict heavy damage and use standard clips, they were heavier than the Rafflur series and managed only half the Rafflurs' rate of fire. As a result of the weight and rate of fire problems, they were not adopted by Landfleet and are now occasionally found among Star Law Ranger, militia and corporate mercenary troops. They are favored by some assault troops for their famous ability to burn a 10 cm hole with each shot into nearly any material, making entry into doors and hatches much simpler.

Mark VII Blaster Rifle	From Gamma World
Damage	5d10
Ammo	20 SEU Clip
SEU	5
Rate	1
Defense	Synth
Range(meters)	
PB	0-10
Short	11-40
Medium	41-120
Long	121-225
Extreme	226-450
Cost	850 cr
Mass	4.5kg

See Mark V Blaster, above, for notes.

Mark XII Blaster (Blaster Cannon)	From Gamma World
Damage	10d10
Ammo	Parabattery
SEU	10
Rate	1
Defense	Synth
Range(meters)	
PB	-
Short	0-325
Medium	326-750
Long	751-1500
Extreme	1501-3km
Cost	5000 cr
Mass	25kg

The heavy ordnance version of the Mark VII rifle, this weapon has been marketed to militia and mercenary groups by WarTech in an attempt to recoup losses after it was rejected by Landfleet's procurement officers. See the Mark V blaster pistol for general notes.

PGMP-12	From Traveller
Damage	6d10
Ammo	240 SEU power pack
SEU	6
Rate	1/2
Defense	Gridsuit
Range(meters)	
PB	-
Short	0-100
Medium	101-200
Long	201-375
Extreme	376-750
Cost	10,000 cr(weapon)/ 2500 cr(power pack)/ 50 cr(cost of recharge)
Mass	6kg (weapon)/ 3kg (power pack)

The PGMP-12 (Plasma Gun, Man-Portable) is an experimental weapon in the testing stages at WarTech. Only a few hundred have been built and their very existence is a closely-guarded secret. The weapon's power pack uses a laser ignition system to fuse hydrogen fuel into a plasma, which is contained in a small magnetic field. The rifle fires bolts of the hydrogen plasma, which are 2 cm in diameter as they

exit the barrel and begin to dissipate immediately. The immense recoil of the weapon requires the wearer to be equipped with an exoskeleton (see SF Expanded Rulebook, p.41 and 48); any being not so equipped will suffer 1d10 points of damage per shot fired and have either a -40 to hit penalty (if STR is 60 or less) or a -20 to hit penalty (if STR is higher than 60). Only robots with a standard body and tracks or a heavy duty body may fire the weapon. Recharging the PGMP-12's power pack requires 4 hours, and must be linked to a generator or power grid (ie. it cannot be recharged from parabatteries). Though extremely powerful weapons, UPF officers have been disappointed by the ease with which PGMP-12's can be located using infrared sensors (the power packs give off copious amounts of waste heat); thus far no practical cooling mechanism has been effective in concealing the power packs' heat signatures.

PGMP-13	From Traveller
Damage	8d10
Ammo	unlimited
SEU	(8)
Rate	1
Defense	Gridsuit
Range(meters)	
PB	-
Short	0-125
Medium	126-250
Long	251-500
Extreme	500-1000
Cost	65,000 cr(weapon)/ 50,000 cr(power pack)/ 20 cr(cost of recharge)
Mass	9 kg (weapon)/ 7 kg (power pack)

Similar in concept to the PGMP-12, the PGMP-13 is the single most advanced weapon in WarTech's arsenal. Still in the prototype stage, less than 20 exist as of FY 111. Of these, a few are located on Moonworld undergoing testing by the UPF; the remainder are kept under maximum security conditions in the heavily-defended WarTech labs on Ringar (Solar Major system). The PGMP-13 is a more powerful version of the PGMP-12, and has an even more punishing recoil. On the plus side, it has twice the rate of fire of the PGMP-12 and a power supply which provides effectively unlimited ammunition; on the downside, it cannot be fired except by a soldier in powered armor, a heavy duty robot or a vehicle due

to the recoil. Power-armored suits used with the weapon must be modified with a special recoil-absorbing socket, which the PGMP-13's shock-absorbing piston fits into (there is no stock on the rifle per se); once the piston is plugged into the socket, a data-link is established between the weapon and the suit computer. The power pack is composed of a compact fission or fusion generator (depending on the prototype) and a hydrogen condenser (uses a catalytic unit to extract hydrogen from any atmosphere with water vapor, hydrogen, methane, or ammonia in it).

The Rafflur Series was first published in Polyhedron #20. Later it was incorporated into the Zebulon's Guide to the Frontier. If you do not have either one of these items they are included in this article. Also you can pick up the remastered Zeb's Guide at <http://starfrontiersman.com/downloads/remastered>

Rafflur Helmet	From Polyhedron #20
Damage	4d10+5
Ammo	SEU microdisc x 2
SEU	All
Rate	1
Defense	Synth
Range(meters)	
PB	0-1
Short	2-6
Medium	7-12
Long	-
Extreme	-
Cost	625 cr
Mass	.5 kg

Helmet rafflurs are mounted in pairs, one on each side of the helmet. They are activated by a jaw-tension mechanism, an action so simple that it can be completed in addition to other normal actions that turn. They can only be fired in the direction the wearer is looking, and do so at a -10 to hit modifier. It takes four turns to replace both microdiscs in the helmet rafflurs.

Rafflur M-1	From Polyhedron #20
Damage	4d10+5
Ammo	SEU microdisc x 2
SEU	All
Rate	1
Defense	Synth
Range(meters)	
PB	0-1
Short	2-6
Medium	7-10
Long	-
Extreme	-
Cost	300 cr
Mass	-

This personal defense device is the size of a cigar and contains a SEU microdisc. Its damage is 4d10+5, and it only fires once. Its range is extremely limited. After it is fired, the microdisc is disposed of and a fresh one inserted.

Rafflur M-2	From Polyhedron #20
Damage	2d10 per SEU
Ammo	10 SEU Clip
SEU	1-5
Rate	2
Defense	Synth
Range(meters)	
PB	0-5
Short	6-15
Medium	16-35
Long	36-70
Extreme	71-150
Cost	650 cr
Mass	1 kg

The proton pistol is roughly the size of a laser pistol. Its damage is 2d10 per SEU, and it has a dial that can fire from 1 to 5 SEUs per shot.

Rafflur M-3	From Polyhedron #20
Damage	2d10 per SEU
Ammo	10 SEU Clip
SEU	1-5
Rate	2
Defense	Synth
Range(meters)	
PB	0-6
Short	7-20
Medium	21-40
Long	41-80
Extreme	81-160
Cost	825 cr
Mass	2 kg

This extremely limited production model's damage and SEU usage are identical to the M-2 pistol, but it has design modifications such as a folding stock and energy modulator, which increases its range and accuracy (+5 to hit modifier).

Rafflur M-4	From Polyhedron #20
Damage	Special
Ammo	10 SEU Clip
SEU	10
Rate	2
Defense	Synth
Range(meters)	
PB	0-7
Short	8-25
Medium	-
Long	-
Extreme	-
Cost	1000 cr
Mass	3 kg

The official weapon of the "Hoppin' Hundred and Eighth" Humma Elite Forces, the main advantage of these 75-cm-long rifles is that they release all 10 SEUs at once in an area effect. Their range, however, is extremely limited (as that of a pistol). Their beam is cone shaped with the point at the gun's muzzle. The beam width increases by 1 meter for every 2 meters from the muzzle (5 meters wide at 10 meters from the muzzle, 13 meters wide at 26 meters, etc.). Any target in the blast path receives a maximum of 40 points of damage (is a Cobalt result is obtained on the attack roll). If the first target is within 2 meters of the muzzle, it totally blocks the beam and nothing behind the first

target can be damaged. Otherwise the M-4 can damage any target in the beam. The weapon's circuits superheat when fired, requiring the weapon to cool three turns before reloading with a new mini powerclip.

Rafflur M-6	From Polyhedron #20
Damage	4d10 per SEU
Ammo	10 SEU Clip
SEU	1-10
Rate	1
Defense	Synth
Range(meters)	
PB	0-9
Short	10-35
Medium	36-75
Long	76-180
Extreme	181-375
Cost	900 cr
Mass	4 kg

The proton rifle is a longer version of the pistol, with a selection of up to 10 SEUs per shot and a longer range.

Rafflur M-8	From Polyhedron #20
Damage	4d10 per SEU
Ammo	10 SEU Clip
SEU	1-10
Rate	1
Defense	Synth
Range(meters)	
PB	0-15
Short	16-50
Medium	51-200
Long	201-400
Extreme	401-500
Cost	1200 cr
Mass	5 kg

Designated the LONG RANGE SHARP SHOOTER version of the rafflur rifle, this long-barreled beauty comes equipped with a built-in telescopic sight. It cannot be accurately aimed at anything closer than 15 meters, but it has a truly impressive 500 meter range. An expensive break-down version is often used by big-game hunters.

Rafflur M-10	From Polyhedron #20
Damage	5d10 per SEU
Ammo	parabattery
SEU	5-25
Rate	2
Defense	Synth
Range(meters)	
PB	-
Short	0-120
Medium	121-550
Long	551-1100
Extreme	1.1 km – 2.2 km
Cost	5000 cr
Mass	20 kg

Projectile Weapons

Light Revolver	.22/5.56mm
Damage	1d10
Ammo	6 rounds
SEU	-
Rate	1
Defense	Inertia
Range(meters)	
PB	0-5
Short	6-15
Medium	16-30
Long	31-50
Extreme	51-100
Cost	100 cr (weapon)/ 1 cr (box of 20 bullets)
Mass	1 kg

Heavy Revolver	.44/11mm
Damage	3d10
Ammo	6 rounds
SEU	-
Rate	1
Defense	Inertia
Range(meters)	
PB	0-5
Short	6-15
Medium	16-30
Long	31-50
Extreme	51-100
Cost	250 cr (weapon)/ 10 cr (box of 20 bullets)
Mass	1 kg

Sniper Rifle	.50/12.5mm
Damage	4d10
Ammo	10 rounds
SEU	-
Rate	1
Defense	Inertia
Range(meters)	
PB	-
Short	0-100
Medium	101-300
Long	301-700
Extreme	701-1500
Cost	500 cr (weapon) 20 cr (20 round clip) 50 cr (30 round clip)
Mass	4.5 kg

Heavy Autopistol	.38/9mm
Damage	2d10
Ammo	20 rounds
SEU	-
Rate	3/1
Defense	Inertia
Range(meters)	
PB	0-5
Short	6-15
Medium	16-40
Long	41-75
Extreme	76-200
Cost	300 cr (weapon) 10 cr (20 round clip) 25 cr (30 round maxi-clip)
Mass	2.5 kg

Heavy Autorifle	.303/7.62mm
Damage	3d10
Ammo /SEU	20 rounds/-
Rate	3/1
Defense	Inertia
Range(meters)	
PB	0-10
Short	11-50
Medium	51-125
Long	126-175
Extreme	176-400
Cost	500 cr (weapon) 20 cr (20 round clip) 50 cr (30 round maxi-clip)
Mass	4.5 kg

Automatic Shotgun	12 guage
Damage	4d10/ 8d10 burst
Ammo	10 rounds
SEU	-
Rate	3/1*
Defense	Inertia
Range(meters)	
PB	0-10
Short	11-15
Medium	16-25
Long	26-40
Extreme	41-100
Cost	400 cr (weapon) 15 cr (20 round clip) No maxi-clip available
Mass	3 kg

*Autoshotguns are unique in that they can affect area targets in both single shot and burst mode. In single shot mode, they can affect up to 2 targets within a 5 meter space; in burst mode (fires 10 shots at once), up to 5 targets in a 10 meter wide zone can be affected. In both cases, effects of fire in the area are resolved as if they were automatic weapon bursts (see SF:AD, page 23). Since a shotgun burst is actually a cloud of small pellets rather than full-size slugs, targets protected by skeinsuits or inertia screens suffer only 1/4 damage if hit; if a target is using both a skeinsuit AND an inertia screen, they suffer only 1 damage point per die of damage rolled (for a minimum of 1 point). Though ineffective against armored opponents, shotguns are extremely useful against unarmored foes at short ranges. Illegal versions are favorites of pirates and terrorists since they cause no structural damage; they are also favored by some big-game hunters.

Gauss Rifle	Traveller
Damage	3d10/8d10 burst
Ammo	40 rounds
SEU	-
Rate	2/1*
Defense	Inertia
Range(meters)	
PB	0-10
Short	11-65
Medium	66-200
Long	201-600
Extreme	601-1200
Cost	1500 cr (weapon) 30 cr (40 round clip)
Mass	3.5 kg

Gauss rifles fire needle-like projectiles using an electromagnetic field generated along the barrel. The projectiles themselves are long, thin slivers of dense, armor-piercing metal surrounded by a jacket of softer metal giving the round both good stopping power and armor-piercing capability. The rifles are easily recognized by their long barrels (up to 2m in some models) and are easily located by magnetic scanners. This ease of detection has limited their battlefield use, though they remain in service with several UPF units. They are strictly military weapons, and their possession is a felony offense on all UPF member worlds.

LAW*	Light Anti-Tank Weapon/76 mm
Damage	8d10
Ammo	1
SEU	-
Rate	1
Defense	Inertia
Range(meters)	
PB	0-10
Short	11-50
Medium	51-100
Long	101-150
Extreme	151-300
Cost	200 cr
Mass	2 kg

*The LAW is a disposable, 1-shot shoulder-fired rocket.

Structural Damage Point Ratings	
Caliber of Projectile Weapon	Structural Damage
.22 / 5.56mm	5 pts / shot
.303 / 7.62mm	10 pts / shot
.38 / 9mm	5 pts / shot
.44 / 11mm	10 pts / shot
.50 / 12.5mm	15 pts / shot
12 gauge shotgun	no damage

New ammunition types (usable in projectile and gyrojet weapons):

Hollow point ammo ("dum-dums")

Ammo does 1d10 extra damage per shot to unarmored opponents; only inflicts 1/4 damage against either a skeinsuit or inertia screen, and only 1 pt per d10 rolled if opponent uses a skeinsuit AND an inertia screen.

Cost: 1.25 x normal ammo cost

Incendiary ammo

Ammo does normal damage for ammo type, but will inflict an additional 1d10 internal damage on the turn following the hit. Illegal on every world of the UPF and carries the highest penalties of law for its possession and use. Primarily used by military troops, and is occasionally found among pirates and on the black market.

Cost: 2 x normal ammo cost

Smart rounds (gyrojet weapons only)

Standard ammo enhanced with tracking microcircuitry. Weapon must be modified with sighting and transmitter hardware similar to that used with a Comp-Sight 1 Progit (SF:ZG, page 78); cost of hardware is 2,000 Cr and it must be successfully installed by a Techex. When smart round is fired, it locks onto target and guides itself to it using tiny vents in the gyrojet round. If the shooter rolls a miss, he may roll a second time using his SKILL LEVEL ONLY as the to hit %. If he scores a hit on the second roll, he rolls damage as normal; if he misses again, the round missed the mark and is lost. Note that all normal modifiers for moving targets, cover etc. still apply.

Smart rounds are restricted to Star Law and military use only and carry the death penalty or life imprisonment if they are used in a crime; any civilian techex found to have modified a smart weapon in any way will face decades of imprisonment.

Cost: 10 x normal ammo cost

NOTE: None of these modified ammo types may be combined with any other (ie. no smart hollowpoints or any other combination).

STAR FRONTIER / MODERN WEAPON EQUIVALENTS

This post covers the closest modern analogs I've found to the SF projectile, gyrojet & heavy weapons. Without further ado, here's the SF to modern gun equivalents list (note that Rates of Fire are per minute, not per turn)-Author's note

SF Weapon / relevant stats	Modern equivalent stats
Musket/ 1 shot, ROF 10, max. range 100 meters	"Brown Bess" (US, War of Independence) / 1 shot, ROF 3 (by trained marksmen), effective range 80 meters, max. range 183 meters
5.56 mm Autopistol*/ 20 rounds, ROF 30 (10 bursts), max. range 150 meters	5.56 mm Bushmaster SMG/ 30 rounds, ROF about 400, range about 150 meters
5.56 mm Autorifle* / 20 rounds, ROF 30 (10 bursts), max. range 300 meters	M-16A1 5.56 mm Assault Rifle (US) / 20 or 30 rounds, ROF 45-65 (semi-auto) / 150-200 (full auto) / 700-950 (cyclic), max. effective range 460 meters
Machine Gun / 200 round belt, ROF 100 (10 bursts), max. range 1000 m	M-60 7.62 mm Machine Gun (US) / ---, ROF 200 (auto) / 550 (cyclic), max effective range(bipod) 900 m, max effective range (tripod) 1,800 m
Recoilless Rifle / 1 shell,	M-106A1 106mm

ROF 5, max range 3000 meters	Recoilless Rifle/ 1 shell, ROF ?, max effective range 2700 meters, max range 7200 meters
Grenade Rifle / 1 bullet, ROF 5, max range 200 meters	M-79 Grenade Launcher (US) / 1 grenade, ROF 5, max. effective range (point targets) 150 m, max effective range (area targets) 350 m
Grenade Launcher Attachment (Zeb's Guide) / 1 bullet, ROF 5, max range 200 meters	M-203 40 mm Grenade Launcher / 1 grenade, ROF ?, max range 350 m
Grenade Mortar / 1 shell, ROF 5, max. range 2000 meters	M-19 60 mm Mortar (US) / 1 grenade, ROF 30 (max) or 18 (sustained), max. range 1,800 m (high explosive)
Rocket Launcher / 1 rocket, ROF 5, max. range 1000 meters	M-47 Dragon (US) / 1 rocket, ROF 1, max. range 1000 meters



SRM 2011

Art By AZ_Gamer

CREATIVE REFEREEING

Not Just a Flesh Wound

By Sam Quier

An optional wound system that provides one shot, one kill capabilities. But be warned, in this system combat can be much more deadly.

(note: without a gamer group, I have been unable to playtest this, but please let me know if you use it and how it works for your group. Thanks, Sam)

WOUNDS AND WEAPONS

Personal combat in Star Frontiers is a wonderfully simple system, easy to master and quick to play. But the cold truth is that personal combat in Star Frontiers is not all that dangerous. It is nearly impossible to get killed with a single shot, and with appropriate armor or defensive screens it isn't likely that you will even be seriously injured. Some gamers, I suspect, have had issues with the nonlethal nature of most weapons in the Star Frontiers. In fact, no sidearm or rifle in Star Frontiers is lethal in a single shot save for a close range shot from a sonic weapon or a laser weapon switched to high power -- a single shot from a gyrojet, needler, autopistol or musket has no chance to kill an opponent outright. The system described below returns some risk and danger to combat. Not so much as to make it realistic. Just enough to make you sweat.

LETHAL WEAPON

Each weapon (laser pistol, sword, claw, fist...) is given a Wound number which reflects the relative lethality of the weapon. During combat, a successful attack rolls for damage. If any of the d10's rolled for damage equals or exceeds the wound number and at least 1 point of stamina damage gets past armor and/or screens, the target receives a potentially life threatening wound. If a damage roll includes a plus or

minus (i.e., 1d10+2 or 1d10-1) that modifier should be applied prior to wound determination (a weapon with a + to damage would be more deadly).

Defenses may modify the wound number of an attack they protect against (i.e., skeinsuit will not affect a sonic weapon's wound number). If the damage rolled is equal to or higher than the modified wound number, the victim receives a wound so long as at least 1 point of stamina damage penetrates the defenses. If the armor and/or screens blocks all damage, no wound is received.

Wound numbers can make weapons more or less lethal without changing their overall stamina damage roll. For example, an autopistol bullet or musket ball damage of 1d10 but with a wound number of (w6) becomes far more deadly than a laser pistol with a wound number of (w10).

If a wound number is at or is modified to be above 10, the weapon cannot directly cause a wound, but may still do so via shock (see below).

Some weapons may not be lethal at all (w NA), indicating that the damage they do is purely against stamina and recorded as described in Alpha Dawn. Such weapons are unable to cause wounds via shock.

Up to two wounds per attack may occur - one from rolling the wound number and another from shock.

SHOCK

Although weapons may not cause a life threatening injury outright (critical injury to major organs, etc...), their overall damage may cause victims serious damage and shock. Shock per these rules is simply a means of recognizing that a massive amount of stamina damage inflicted in one attack may very well indicate life threatening injuries and is treated as the victim receiving a wound (for shock).

For an attack to reach this level, damage received (after defenses) must be above their Shock number (STA/10 + STR/10). If a single attack causes this much damage or more, the victim is receives a wound. For example, a hero with Strength 55 and Stamina 65 has a Shock number of (Shock 12). For attacks to cause a shock wound against this hero, they would need to cause 13 points of damage or greater after defenses are applied.

WOUNDS

Each wound received represents a possibly deadly injury. Upon receiving a wound, the victim must roll a stamina check. (NOTE: the roll against current stamina takes into account all stamina lost from this attack)

If the victim rolls equal to or below current stamina, they are wounded, and they do require medical attention, but they are still conscious and able to act.

If the roll is equal to or below max stamina (their STA statistic) but above current stamina, they are either dazed or knocked unconscious by the attack (GM choice or 50/50 chance for either).

If the stamina check is failed, the victim is either dead or dying soon (GM choice). Such death is treatable by appropriate medical skills/equipment.

As soon as a character receives a wound, and until all wounds are fully healed, they are considered "wounded" (per Alpha Dawn rules) and they receive the negative modifiers described. Each additional wound beyond the first will cause an additional -5 modifier. (a character with 3 wounds will have a -20 modifier).

Dazed characters suffer an additional -10 to all checks (in addition to being wounded) and a -3 to their initiative modifier. Dazed modifiers disappear 10 minutes after all wounds are treated. Wounds left untreated will eventually lead do unconsciousness and death.

If by some miracle of lucky dice rolls and medical attention, a character receives a number of wounds equal to their shock damage number (see Shock) and

yet survive, they are unconscious until such time as at least one wound is healed.

HEALING

First aid is required to stabilize wounds. A stabilized wound will heal at the rate of 1 wound a week with rest and no strenuous activity.

Dazed modifiers disappear 10 minutes after all wounds are treated.

Minor surgery will allow an additional 2 wounds to be healed in a week's time (added to first aid's 1 wound), with rest and limited activity. This also assumes medical care throughout the week (checking on condition of injuries, etc...). Without additional medical follow-up throughout the week, minor surgery will only heal 1 additional wound per week.

Major Surgery will heal up to 5 wounds per week (including anything gained through first aid and minor surgery), but this requires medical care throughout the week and only rest for the patient.

Both minor and major surgery will require appropriate medicines (i.e., biocort).

Surgery and First Aid will still heal stamina as described in Alpha Dawn.

An untreated wound (without first aid) will cause the victim to roll against current stamina or become dazed after 10 +1d10 turns. Wounds left untreated will eventually lead do unconsciousness and death.

FINAL THOUGHTS

The Wound system can be designed by GM's to promote and/or sideline weapons in order to drastically alter their settings. Further, this addition allows the creation of advanced weapons and/or special ammunition without simply adding additional dice for damage (i.e., autopistols with armor piercing ammunition or high powered laser rifles may have lower wound numbers). A sample chart of some weapons and defenses is offered below.

Sample weapon and defenses wound chart

- Bullet weapons (w5)
- Gyrojet (w5)
- Laser (w10)
- Sonic (w10)
- Stun (w NA)
- Melee and archaic must be done individually...
- Whip (w NA)
- Knife (w8)
- Axe, sword (w8)
- Musket (w5)
- Bow, crossbow (w6)
- Brass knuckles, Nightstick, club, staff (w10)
- Vibro weapons (w5)
- Shock, electric sword (w NA)
- Sonic sword, sonic knife (w10)
- Heavy weapons (lasers, sonic) have a -3 wound number (heavy laser [w7])
- Fragmentation Grenade (w8) (NOTE: Frag grenades may not cause a life threatening injury directly, but will likely cause a wound due to shock).

- Skeinsuit (w+2)
- Albedo suit (w +0)
- Inertia Screen (w +3)
- Albedo Screen (w +0)

Lethal Wounds System Chart

Wound Number	Damage roll on a d10 required to cause a Wound
Shock Number	STA/10 + STR/10 A single attack that inflicts more damage than this causes a Wound (for shock)
Surviving Wounds	Roll equal to or less than current stamina: Wounded, but conscious Roll above current stamina but equal to or below Stamina statistic: Unconscious Roll above Stamina statistic: Dead or Dying
Wound Effects	1st wound: victim is wounded (per Alpha Dawn rules) Additional wounds: additional -5 modifier per wound

	Number of Wounds = Shock Number: victim unconscious until at least one wound fully healed
Healing	First Aid - heals 1 wound per week Minor Surgery - heals 2 wounds per week (not including First Aid) Major Surgery - heals 4 wounds per week (not including First Aid) Untreated - dazed after 10+1d10 turns
Dazed	-10 to all skill checks, -3 to initiative modifier



A Shot in the arm

By Jason Pamental and David Packard

A special damage system for STAR FRONTIERS® games

From Dragon Magazine #124 August 1987

The combat system used in the STAR FRONTIERS® game is generally realistic and simple, but the damage system lacks that realism. You never see anyone with a broken limb, a wound, a concussion, etc. The only damage taken is to one's Stamina.

The following rules make the damage system more realistic and provide information about broken limbs, wounds, and cuts, and how this damage can be healed.

It also provides realistic damage to robots, computers, weapons, and equipment. Vehicle damage is already covered in the game rules.

The system

Each character has a percentage chance to cause special damage to an opponent when that character performs a “to hit” roll. This chance is figured out by the formula: $3\% + (\text{skill level} \times 2)$, where the skill level refers to the appropriate weapons skill.

For example: Fl'remp, a female Vrusk, fires a laser pistol at a Human. She has a level 4 Beam Weapons skill, so her chance to cause special damage is 11%.

She rolls a 06 on her “to hit” roll (less than her chance), so she has scored special damage. A character can add 1% to his special-damage chance for each round spent aiming at a target. A maximum of

10% may be added this way. If a character's chance to hit an opponent is less than the chance to cause special damage, then special damage cannot be scored.

After a character has caused special damage, the player must find out the type of damage done (this special damage is in addition to normal Stamina-reducing damage).



To determine damage, the player rolls 1d10. Add or subtract any applicable modifications to this roll, as shown on Table 1. The referee may modify this number with modifications not found on Table 1 as seen fit. Note that a target in an activated defensive screen cannot take special damage.

There are two damage type tables: one for living beings and one for robots. Computer damage is explained elsewhere.

To read the damage tables, go from left to right. The first column on the left is the number a player has rolled. The next column shows how much extra damage is taken to the target's Stamina score. The third shows what kind of special damage is taken, and the final column shows how many pieces of equipment have been destroyed.

There is a 10% chance that a weapon will be destroyed instead of equipment. The victim's player can pick which piece of his equipment has been destroyed. If the character has more than one unit of a certain type of equipment, then two units of the equipment are destroyed (two clips, two rations, etc.).

Special damage need not only occur due to an attack using weapons. Vehicle accidents, falling, and fires are just a few of the other possibilities, although this article is only concerned with weapon-related damage. The referee should keep track of damage for NPCs, creatures, robots, and computers, while players should keep track of their own damage themselves (unless the referee doesn't trust them).

If the referee feels that damage to a character might greatly lessen the other players' chances for completing their mission, then he may alter the damage taken by that character.

Computer damage

Computer damage is easy to determine because a computer has no major moving parts. Take the modified 1d10 roll generated above and divide it by 5, rounding down; this represents the number of programs which have been destroyed. The lowest-level programs are destroyed first, highest level last. If the computer has a Computer Security program which has not been destroyed, then any alarms it controls are set off.

A computer may be repaired, but the programs may not be brought back unless a computer specialist knows them (as per the Computer skill). A computer which has more programs destroyed than it possesses will explode, causing 6d10 damage points to anyone within 5 meters of it (Reaction Speed check defense). A computer destroyed in this way cannot be repaired.

Healing special damage

Adventurers may find it necessary to heal damage caused to them. To heal a *wound*, all Stamina points of damage caused by the attacking weapon must be healed, and 1d10 +1 hours of game time must pass until penalties caused by the wound are nullified.

A cut may be healed as a wound, but it takes 4d10 hours until the penalties caused by the cut are nullified.

A *deep cut* may be healed this way, but it takes 1d10 +1 days until those penalties are nullified.

A *broken limb* may be mended if all the Stamina points are healed and the limb is set in a cast or splint. If it is not set within two hours, the limb does not heal until the character enters a hospital (costing 50 Credits per day for 3d10 days). A limb set in a cast or splint takes 3d10 +1 days until the penalties are nullified.

A *concussion* may be mended if all Stamina is healed and the PC rests at least 10 hours per day for 1d10 days. Hospital fees for this time amount to 200 Credits.

The *back wound* is special. It may be mended if all Stamina is healed, major surgery is used to repair paralyzation damage, and the PC rests for 2d10 hours.

Otherwise, it heals in 3d10 days. A hospital charges 200 Credits for these services.

A Dralasite cannot have a broken limb, but it loses the ability to grow one until the spot heals where it was hit. This healing takes 3d10 days. The Dralasite still suffers the same penalties as if it had broken limbs.

If a character has multiple damage, such as a chest wound and a broken leg, it still takes 1d10 +1 days for the leg to heal. Healing times are not cumulative.

A Vrusk with a damaged arm requires a 1d10 roll to find out which arm was hit: 1-5 is the left arm; 6-10 is the right.

A Dralasite is not able to absorb a paralyzed leg until it is healed. Because of this, the Dralasite suffers the special penalties caused by the paralyzed leg.

An electrostunner does not break a limb. If a *broken limb* is indicated because of an electrostunner or other electrical damage, then the limb has excessive nerve damage instead. The same penalties occur, and the nerve damage may be healed the same as would a broken limb.

Table 1	
Special Damage Modifiers	
Modifier	Reason
+1	Short range
+2	Point blank range
+2	Explosive weapon
+1	Careful aiming *
+2	Firing a burst
+1	Per 5 SEU used by weapon
+1	Target hit twice in same turn
+1	Small target
+2	Tiny target
+1	Per skill level with weapon
+2	Per Robotics or Computer skill * *
-1	Large target
-2	Giant target
-1	Long range
-2	Extreme range
-1	Moving target* * *
-2	Suit-type defense
-2	Target is underwater
-2	Target makes RS check
* +1 is added for each round spent entirely on aiming, up to the maximum of +5.	
* * This applies only to attacks against robots or computers, respectively.	
* * * This modifier is counted only once, even if both attacker and defender are moving in any manner.	

Repairing a robot

Repairing a robot is easier than healing a living creature. A character with Robotics skill is required.

Damage to a robot takes 2d10 minutes to repair. A **broken** part takes 5d10 +5 minutes to fix, while a **cracked** item takes 4d10 +5 minutes. Add 10 minutes to the repair time for each joint which is **damaged** or **broken**, and 20 minutes if the brain casing has been hit. If the brain casing and the body have been **cracked**, add 1 hour to the repair time.

Table 2

Weapon Modifiers

Weapon type	Modifier
Projectile pistol	+2
Projectile rifle	+3
Heavy projectile	+5
Beam rifle or pistol	+3
Heavy beam	+4
Gyrojet pistol	+2
Gyrojet rifle	+3
Heavy Gyrojet	+6
Short melee *	+1
Long melee *	+2
Fist	+1
Grenade**/Other thrown weapon	+2
Bow or crossbow	+2
Tooth, claw, etc.	+2

* Whips, swords, pole arms, spears, chairs, and big clubs are long; axes, bottles, small clubs, knives, nightsticks, pistol butts, shock gloves, etc., are short.

** Only a fragmentation or incendiary grenade can cause special damage.

Each counts as an explosive weapon on Table 1.

The very first RPG I played, I was 9, and my friend's dad was the game master. He told us a story and we made choices and he would keep telling us the story with the changes based on our decisions. No dice, no charts, no papers. He told us where we were hit and what was happening to us. At the age of 9, that was good enough. Later on, you just want more detail. I hope this article helps in your quest for detail in your game.-Editor



Art By Arne Niklas Jansson



Art By Arne Niklas Jansson

Table 3

Damage Results Table: Living Beings

Modified 1d10 roll	Stamina damage	Special damage	Units of lost Equipment
1 or less	0	None	0
2	5	Chest wound	0
3	5	Leg wound	0
4	5	Arm wound*	1
5-6	8	Shoulder wound *	1
7	9	Arm wound**	1
8	10	Head wound	1
9-10	10	Leg broken	1
11	15	Chest deeply cut	1
12-13	8	Arm broken *	1
14	8	Arm broken **	1
15-16	15	Abdomen deeply cut	1
17	15	Back wound, leg paralyzed	2
18	12	Shoulder deeply cut **	2
19	15	Side deeply cut	2
20-22	30	Head concussion	2
23+	1,000	Head removed, body falls apart, target vaporized, etc. (pick one)	5

*Secondary side (i.e., the left side if on a right-handed person)

**Primary side (i.e., the right side if on a right-handed person)

Special damage effects

Chest wound: -5 to hit.

Leg wound: -3 meters/turn on movement.

Secondary-side arm wound: -5 for firing rifles, can only fire one weapon, -10% for doing tech, robotics,

medical, demolitions, and computer skills.

Primary-side shoulder wound: -10 for firing rifles, same other modifiers as a secondary-side arm wound.

Primary-side arm wound: -30 to hit, can't use rifles, -15% on above-mentioned skills.

Head wound: -5 INT/LOG, 50% chance to be unconscious for 1d100 minutes.

Leg broken: Only 2 meters/turn movement.

Chest deeply cut: -10 to hit, -5 DEX/RS.

Secondary-side arm broken: No rifles can be fired, -10% to all skills mentioned for a secondary-side arm wound, may only fire one weapon.

Primary-side arm broken: Same as with secondary-side arm broken, but with -25% to all above mentioned skills, -10% to hit with all other weapons.

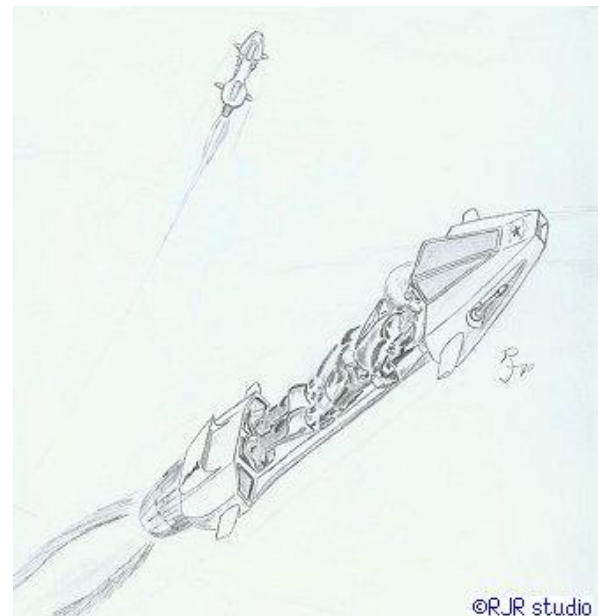
Abdomen wound: -3 meters/turn on movement, -5% to hit with all weapons, -8kg on limit for carrying items.

Back wound, leg paralyzed: Only 2 meters/turn on movement, -15 kg for carrying items.

Side deeply cut: -8 DEX/RS, -10 kg for carrying items.

Head concussion: -10 INT/LOG, -5 DEX/RS, 75% chance to be unconscious for 1d10 hours.

Dead: Dead beyond a doubt, no chance of revival.



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Art By Shadow Shack

Table 4

Damage Results Table: Robots

Modified 1d10 roll	Stamina damage	Special damage	Units of lost Equipment
1 or less	0	None	0
2	5	Body damage	0
3	5	Leg damage	0
4	5	Arm damage	1
5-6	8	Arm joint damage	1
7	9	Arm joints damage	1
8	10	Brain casing damage	1
9-10	10	Leg broken	1
11	15	Body cracked	1
12-13	8	Arm Broken	1
14	8	Arm joint broken	1
15-16	15	Brain casing cracked	1
17	15	Movement center damaged	2
18	12	Arm joints broken	2
19	15	Body and Brain casing cracked	2
20-22	30	Brain casing broken	2
23+	1,000	Explosion (cannot be repaired)	15

Special damage effects

Body damage: -5 to hit with weapons because of internal damage.

Leg damage: -5 meters/turn on movement (unless robot has alternate movement system, such as rocket movement).

Arm damage: Attacker can choose attacked arm or

tentacle, -9 to hit with any weapon held in that arm.

Arm joint damage: -14 to hit with a weapon in that arm, -2 damage for melee attacks.

Arm joints damage: No weapons may be fired from that arm, no melee attacks.

Brain casing damage: 50% chance of robot being stunned for d100 minutes (even if A-S implant is installed), -5 to hit with all weapons, 20% chance of a malfunction. All robots have brains, but a non-cybernetic robot's brain is a computer.

Leg broken: -10 meters/turn on movement, -5 meters/turn to movement using alternate movement system because it also has been hit.

Body cracked: -10 to hit with all weapons, -5 meters/turn on movement, 20% chance of a malfunction.

Arm broken: No weapon can be fired from the arm, -5% to chances to repair it.

Arm joint broken: Same as arm broken, but a -25% to chances to repair it.

Brain casing cracked: Stunned for d100 +20 minutes, 50% chance of being deactivated, -10 to hit with all weapons, 35% chance of a malfunction, -30% to chances to repair it.

Movement center damaged: Robot cannot move, -30% to chances to repair it.

Arm joints broken: No weapons can be fired from the arm, -20% to chances to repair it.

Body and brain casing cracked: The same effects as body cracked and brain casing cracked combined. All damage and penalties are cumulative.

Brain casing broken: Automatically deactivated, -20 to hit with all weapons, -20 meters/turn on movement, 55% chance of malfunction, -50% to chances to repair.

Explosion: Everyone within 10 meters takes 7d10 damage (RS check defense).



SYSTEM BRIEF:

K'aken-Kar

By Allen Trussell

K'aken-Kar	
Star type	K8 V
Stellar Radius	438,480 km(0.63 Sol)
Stellar Mass	1.312806×10^{30} kg (0.66 Sol)
Stellar Temperature	4,420 K
Luminosity	0.84612×10^{26} W (0.22 Sol)
Planets	5

History

Ken'zah-Kit is the first world settled by the vrusk when they entered what is now called the Frontier, although it was discovered after Kawdl-Kit due to its agricultural prospects. Shortly after its discovery in 156 pf, several colony ships landed on this pristine garden world and began the process of taming a wild planet. It was discovered that Ken'zah-Kit was home to its own indigenous people; the tyleri. The tyleri were at the time a primitive, stone-age civilization, and small in number. The vrusk decided to integrate these people into their society, and while there were some hostile encounters, things generally went smoothly. The tyleri, while still a minority of the population, are a fully incorporated into the society of Ken'zah-Kit.

Vast company farms and ranches cover the many kilometers of agricultural land. The cities are clean, environmentally friendly places where foods are processed and shipped to all corners of the Frontier. The few manufacturing complexes work to support the agricultural efforts, supplying machinery, chemicals and fuels for the farms.

People

The people of Ken'zah-Kit are largely agrarian and hard-working, with a corporate mentality. Vrusk and tyleri alike work either on the farms or in the support industries of the planet. The vrusk take their work seriously, and work hard with an eye toward profit

and advancement within the corporate ranks. The tyleri have adapted to modern society easily and rapidly, and fill many important roles in Ken'zah-Kit society. There are also a few tyleri who have clung to traditional ways. Both races celebrate various holidays centered on planting, harvesting and feasting, as well as the seasons. Vrusk and tyleri practices and rituals have mingled here, and both races enjoy these festivals greatly. Just as the tyleri language has adapted with the influence of the vrusk language, so has the local vrusk dialect been influenced by Tyla (the tyleri tongue); the natives of Ken'zah-Kit are often marked by this peculiar dialect.

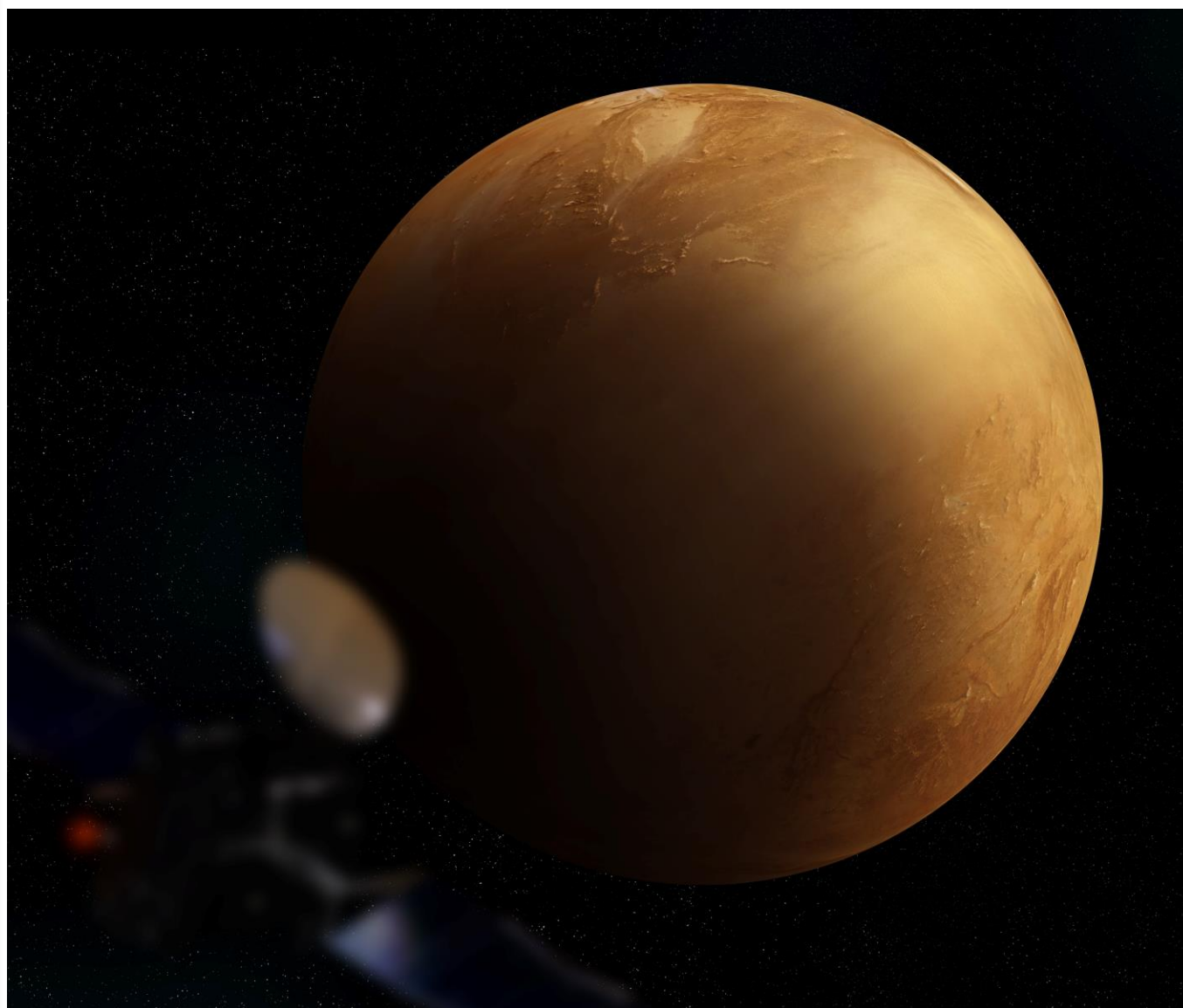
Places of Interest

- **Kan'zik Xen'kar'tr Museum:** This grand museum is unusual; it is a vast building honoring agriculture and farming. While oft ignored by the populace, the museum garners a fair number of visitors from other worlds who come to see and learn about the advancements in agribusiness that have been made during the 260+ years of this world's civilization. The museum also doubles as a university, and many students from around the Frontier can be found here.
- **Tyleri Tribal Camps:** Scattered around Ken'zah-Kit, there are tyleri that still practice their ancient traditions. Many of these are open as tourist attractions, where the native tyleri perform ritual dances and songs, and sell hand-crafted goods. Some tyleri (on both sides of their culture) see many of these performing tyleri as being disrespectful to the old ways, and shun these tourist traps.

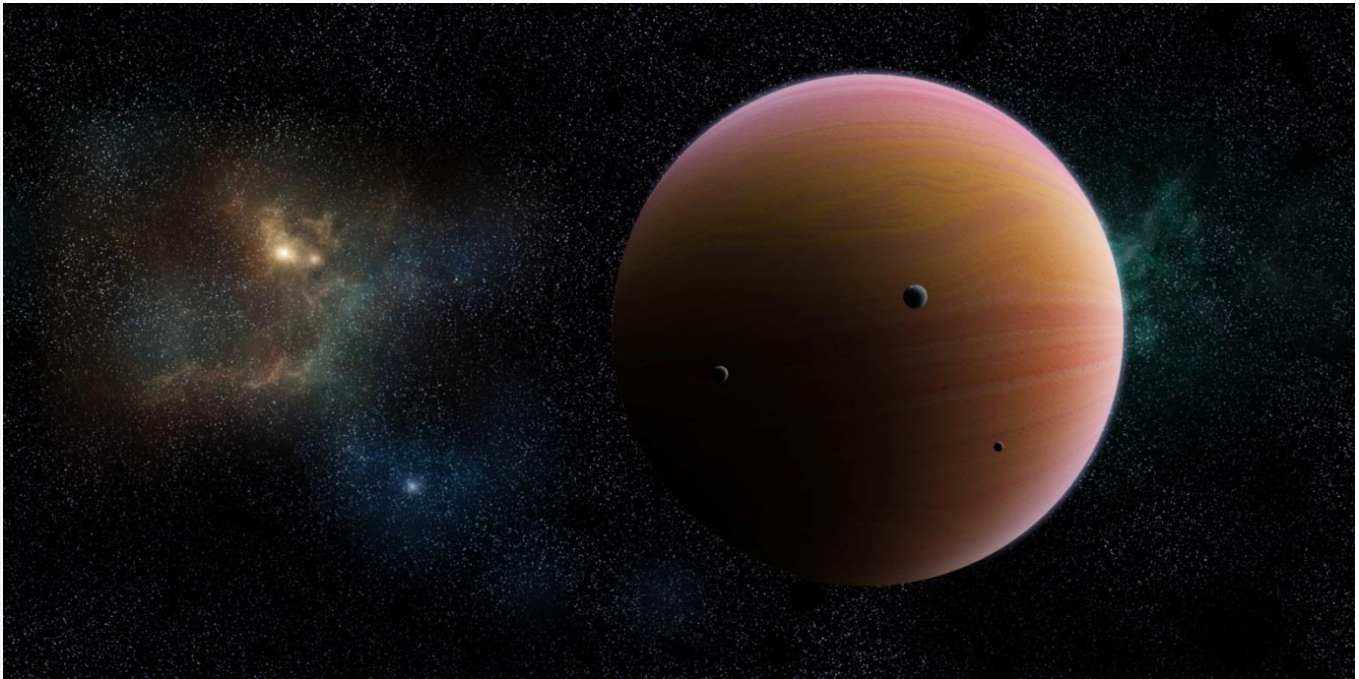
The Planets

Taz'k-kit (K'aken-Kar I)	
Type	Hot rocky desert
Mean Orbital Radius	22,439,680.65 km (0.15 AU)
Local Year	31.34 galactic standard days (25.07 local Ken'zah-kit days)
Local Day	20.69 galactic standard days (16.55 local Ken'zah-kit days)
Gravity	0.85 g
Mean Diameter	18,000 km
Atmosphere	Dense; Nitrogen 70%, Carbon Dioxide 20%, Nitrous Oxide 5%, trace others
Mean Temperature	500 C
Moons	0
Notes	This is a hot, rocky planet with no useful or interesting mineral value. A small, unmanned research satellite orbits to provide data on the sun.

Planet Art by Jake Robson-Tull

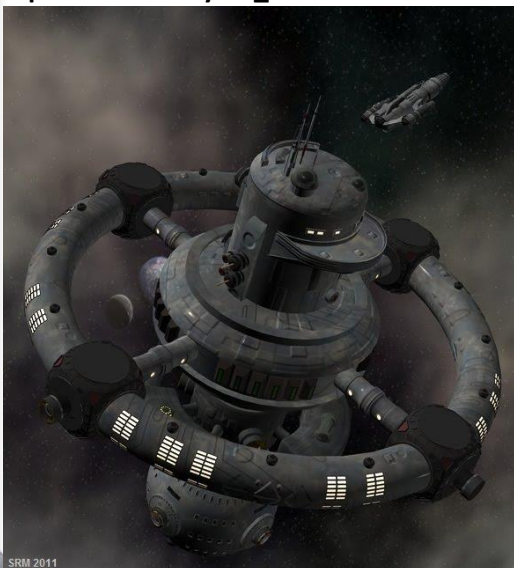


Mraz-kit (K'aken-Kar II)		
Type		Gas giant
Mean Orbital Radius		44,879,361.3 km (0.3 AU)
Local Year		88.65 galactic standard days (118.2 local Ken'zah-kit days)
Local Day		10 standard hours
Gravity		2.74 g
Mean Diameter		68,000 km
Atmosphere		30 % Hydrogen, 30% Helium, 20% Nitrogen compounds, 20% Carbon compounds
Mean Temperature		200 C
Moons		3 major, 9 minor
Notes		This is a hot gas giant, with numerous moons. Its hydrogen-helium atmosphere has large quantities of nitrogen and carbon compounds, giving it a smoky, red-orange appearance. None of its moons are over 2,000 km in diameter, though there are substantial mineral deposits on the largest, Z'kiir.



Space Station by AZ_Gamer

Planet Art by Jake Robson-Tull



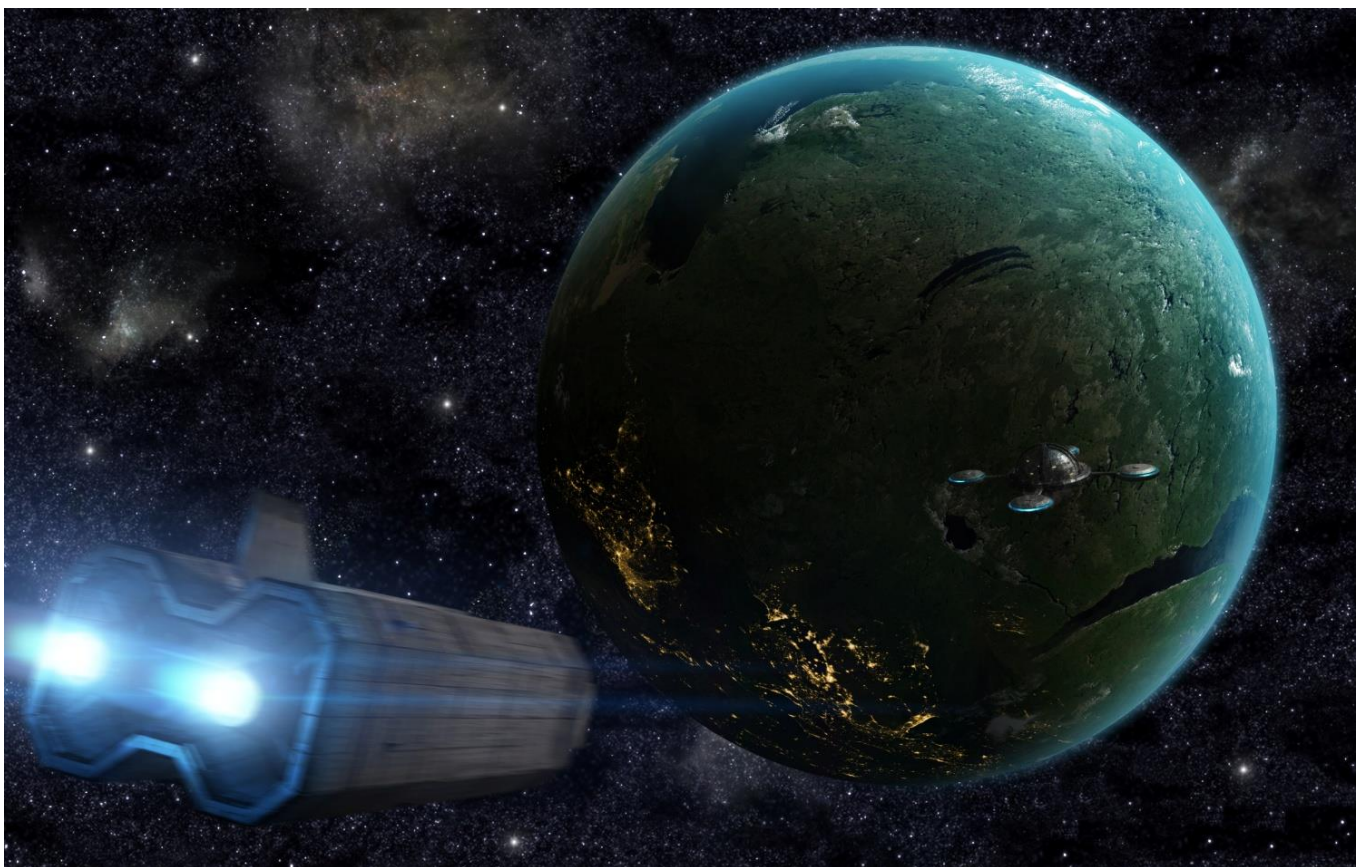
SRM 2011

T'zaak Naar: This Fortified Space Station serves to defend Ken'zah-Kit, and is also the primary port of call for those seeking to leave or land on the planet. Customs agents inspect any incoming cargo thoroughly to ensure nothing enters Ken'zah-Kit that could contaminate the farms.

Ken'zah-Kit (K'aken-Kar III)

Type	Terrestrial
Mean Orbital Radius	59,839,148.4 km (0.4 AU)
Local Year	136.49 galactic standard days (109.19 local Ken'zah-kit days)
Local Day	25 galactic standard hours
Gravity	0.9 g
Mean Diameter	13,000 km
Hydrosphere	40% (0.6% ice)
Atmosphere	76% Nitrogen, 20% Oxygen, 2% water vapor, trace others
Mean Temperature	13.85 C
Climate	Temperate, cool to hot, with forests, plains and badlands predominating
Trade	Agriculture; Ken'zah-kit is a garden world, suitable for a variety of plants and animals.
Government	Corporate Democracy. A number of corporate concerns rule various regions of the planet, and meet in a General Assembly, with members voted by the citizen-employees. A Managing Director oversees the Assembly, also voted into power for a term of 6 gsy, breaking tie votes and the like.
Population	92% vrusk, 7% tyleri, 1% others; approximately 3 billion
Space Stations	FSS (<i>T'zaak Naar</i>)
Moons	0
Note	Ken'zah-Kit is the agricultural center of the vrusk worlds, supplying foods to vrusk colonies and other worlds throughout the Frontier. As a result, it is a vital system, and is orbited by a Fortified Space Station, <i>T'zaak Naar</i> . Although most of the arable land is taken up in agriculture, there are still wild places of the world; here roam the immense lemmaru, the flying rik'ta and tribes of the primitive tyleri.

Planet Art by Jake Robson-Tull



Zah'ren-Kit (K'aken-Kar IV)

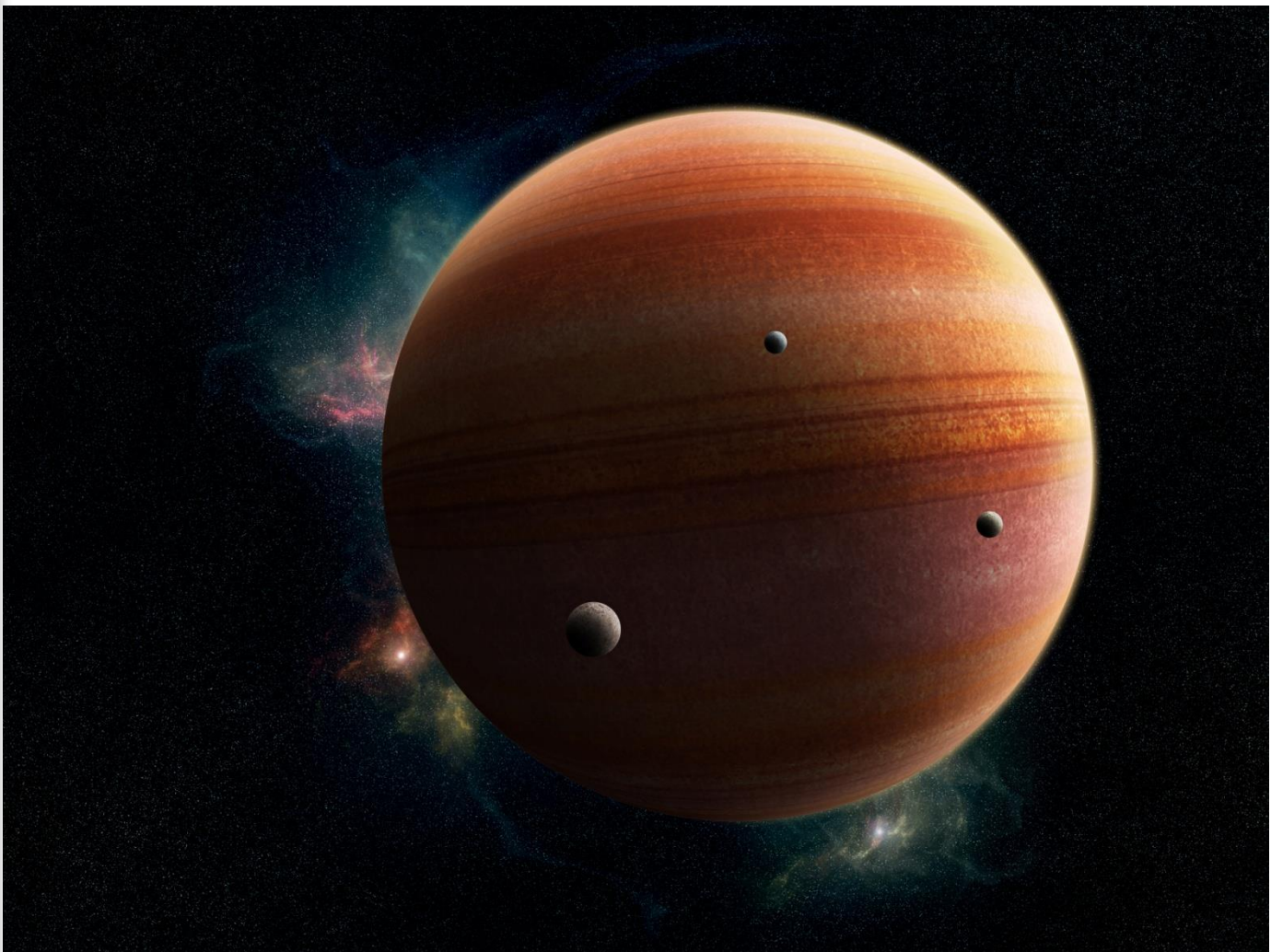
Type	Terrestrial
Mean Orbital Radius	76,294,914.21 (0.51 AU)
Local Year	196.5 galactic standard days (157.2 local Ken'zah-kit days)
Local Day	19 galactic standard hours
Gravity	0.71 g
Mean Diameter	18,000 km
Atmosphere	78% Nitrogen, 17% Oxygen, 3% Carbon Dioxide, trace others
Mean Temperature	6.79 C
Moons	2
Notes	This world is extremely cold, but otherwise habitable. It is under the process of terraforming, and is expected to be fully habitable within the next few decades. Currently, small populations of scientists, engineers and laborers reside here to further the terraforming, as well as teams searching for mineral riches.



Planet Art by Jake Robson-Tull

Krz't-Kit (K'aken-Kar V)

Type	Gas giant		
Mean Orbital Radius	98,734,594.86	(0.66 AU)	
Local Year	289.28 galactic standard days (231.42 local Ken'zah-kit days)		
Local Day	11 galactic standard hours		
Gravity	2.25 g		
Mean Diameter	56,000 km		
Atmosphere	30% Hydrogen, 30% Methane, 25% Helium, 15% trace gases		
Mean Temperature	100 C		
Moons	5 major, 7 minor		
Notes	This is a rather unremarkable gas giant, typical of its kind. Of its numerous moons, two (Z'vikiir and Kahl'r'kiir) have useful ores and support mining efforts.		



Planet Art by Jake Robson-Tull

Tyleri:**A Minor Race of the Frontier**

The tyleri are a race of bipedal mammalians, once a primitive race on the world of Ken'zah-Kit. They resemble humans physically, albeit with some obvious differences. The average tyleri stands some 1.5 meters in height, and has yellowish skin tones, ranging from golden-yellow to deep maroon. They have body hair roughly equivalent to that of humans, with similar colors and textures, though males and females both can grow thick facial hair. Tyleri have pronounced canine teeth in both genders, and claw-like fingernails and toenails. Tyleri eyes have slit pupils, allowing them excellent night vision; they are yellow, olive or green in color. The overall affectation is somewhat akin to an anthropomorphic feline or canine hominid.

Tyleri have a rich tradition of nature worship, and still hold to their native religions. Although they have full access to modern science and are full citizens in modern society, there are some individuals who still live primitive traditions. In this manner, the tyleri “shamans” work “magic”, rituals that serve nothing more than a placebo effect, but are largely harmless. Nonetheless, even modern tyleri rarely may say the shamans or other spiritual leaders of their people.

Tyleri speak their own language, which is descended from the few dozen original tribal dialects extant before the coming of the vrusk. This modern language, Tyla, has evolved along with the local vrusk dialect, and has many borrowings from it. It is possible for most other races to learn Tyla with relative ease. Examples still exist of the ancient tongues, from tribal historians, recordings and rituals. Tyleri also speak Pan-Gal, Vrusk and other tongues, as needed.

The most notable ability of the tyleri is their capacity for change. When the vrusk came, the tyleri quickly adapted to the new culture, and learned new technologies quickly. This has made the tyleri invaluable as technicians, researchers, and scientists, as this adaptability also leads to innovation. Their respect for their animistic religious traditions also

leads these folk to seek environmentally friendly options to the problems of agribusiness, infinitely useful on their garden homeworld.

Few tyleri have left their home on Ken'zah-Kit, though nothing bars them from doing so. Most feel there is little need to roam, some still hold to their religious traditions. These state that the tyleri and the world are one, so that to leave is to die (which is patently untrue). Still, some tyleri do seek the worlds beyond, and have ventured into various careers in the Frontier and rare individuals can be found in every walk of Frontier life.

Tyleri	
+5 INT/LOG	Tyleri are very smart and intellectually adaptable.
-5 STR/STA	Tyleri are somewhat small and frail.
Average Size	1.5 meters tall
Average Mass	70 kg (male), 75 kg (female)
Average Lifespan	180 years
Reproduction	Heterosexual, viviparous
Body Temperature	38 C

Adaption: Tyleri have a knack for learning things quickly and adapting to new situations. Tyleri can apply up to one half of their accumulated experience as a bonus to any skill check, and can even attempt a skill check in which they have no training. This does not expend any experience points, and is applied as a +5 per 1 point of experience applied to the skill check (half that for an untrained skill, rounded down to the nearest whole number). For example: Rentha has accumulated 12 total experience points, and decides to apply 6 points to an *operating machinery* skill check. This grants him a +30 bonus on that check, even if he is untrained in it (in which case he gains a +15 bonus instead), without actually expending any experience points.



HOME SWEET HOME

Edited By William Douglass

Creating planets for the Star Frontiers game

By David Cook



From Ares Magazine: Special Edition 2 1984

Rex Dexter, planet explorer extraordinaire, cracked the hatch of his scoutship open. Snakelike threads of vapor reached into the airlock, and then the hatch swung open with a distinct pop. Having studied the aerial maps, he knew the place was bad, but as he looked out, his historic first words were stifled in his throat.

Before him stretched a red plain, strewn with yellow-speckled boulders. To his eye, the ground had the same gentle swelling consistency as his mother's oatmeal. Plants, resembling giant fuzzy blue mold, swayed gently in the roasting breeze; they threw complex shadows from the light of the eight bright moons overhead. The air was dense enough to feel like paste; it clogged his lungs, nearly choking him. His feet dragged, held in the grip of 6 G's. "Oh s ____" he said, "not again!"

Does this happen to you? Are your science fiction characters constantly landing on planets that resemble Gumby Land? Do you keep expecting Duck Dodgers (of the 24th and a half century) to appear around the next rock? Do you have the feeling that the planets you are landing on are not quite realistic?

This article presents a method for creating realistic star systems and planets for use in the Star Frontiers game. The method given below attempts to be accurate, allowing referees to create planets that are reasonably and scientifically possible. Wherever possible, the best scientific theories and information have been used in making this system. However, at the same time, very little is positively known about how planets are formed or even whether habitable planets are common.

The tables below should be used in the order listed. However, creating planets should not always be done by the dice roll. If the referee has some plan or idea of what he wants, he should design the planet by choice, not letting random rolls dictate the outcome.

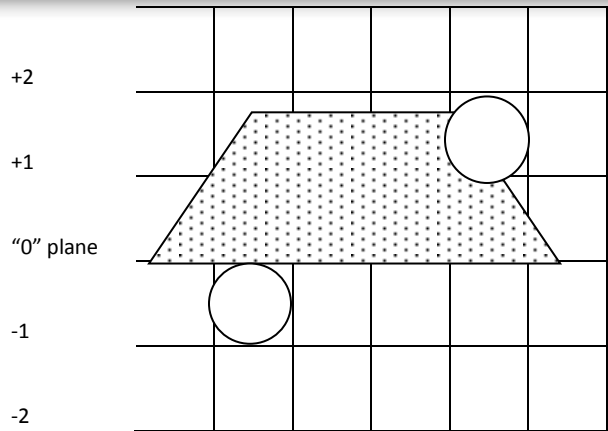
Likewise, the referee should not expect these rules to do everything for him. The planets created will have descriptions of the physical factors – the gravity, size, average temperature, amount of water, etc. It is still necessary for the referee to give the planet “life” – creatures, places of interest, colorful descriptions, and a history. No amount of tables can do this, nor any number of rules. This work must be done by the referee.

If the referee is designing a completely new area, the first step is to create the sector map. This may be done using graph paper, hexagon paper, or even a blank sheet of paper. The referee should start by rolling for ten to twenty stars on the Stellar Configuration Table (found below). The General Column of the two die ranges should be used. As the referee learns what each star system is, he should place it on the map (wherever he chooses). The map symbols on the following page may be used to indicate each type of star or object. After the referee has done this, he should place an additional 2-20 stars on the map, this time using the Habitable System Column of the table. This will ensure that there are at least several habitable systems in the sector.

The referee should not place all of the stars that would be found in a sector, since in reality, a sector map could have hundreds of stars in the area. Only enough stars to provide many exciting adventures need be placed.

Realistically, it is very unlikely that so many habitable systems would be found in one area of space. However, the more realistic possibility of one habitable planet every 1,000,000 cubic light years (or thereabouts) is not very exciting or useful for most science fiction games.

For those referees wanting greater realism for their sector map, the third dimension may be added. Stars do not all exist on the same plane (as a sheet of paper would seem to indicate), they fill an area. This may be done by assigning a plus or minus number to each star. (See the diagram below) True distances between stars may then be found by doing some simple math, using the formula for finding the hypotenuse of a triangle. However, this is not a math class. Furthermore, this math can be tedious if there are many stars involved. Therefore, adding in the third dimension is optional. The diagram below shows a perspective view of this mapping system.



Once a system map has been created, the referee may begin designing the actual systems that are found around each star. The following tables are used for creating star systems. They will determine the arrangement of the stars, type of star, and the number of planets in each system. If the referee does not need to know this information, these tables may be skipped.

Creating Systems

Stellar Configuration: When placing the stars on the sector map, the referee should determine the stellar configuration (or type and arrangement) of the star(s) at each location. This is done by rolling or choosing from the table below. The General Die Roll applies to most stellar systems. If the referee does not want to bother with these stars he may roll on the Habitable Die Roll column of the table.

Stellar Configuration Table		
General Die Roll	Habitable Die Roll	Configuration
01-10	01-40	Sun like star, habitable planets
11-18	41-72	Binary*:sun like and dwarf, habitable planets
19-24	73-97	Binary*:two sun like stars, habitable planets
25	98-99	Binary*:sun like and giant star, habitable planet
26-93	-	Non sun like star, non-habitable planets
94-99	-	Any type star, no planets
00	00	Special features**

*: A binary star system is one that has two stars that orbit each other. In this system, the binaries will either be close or far. In a close binary, two stars circle each other so that they almost appear to be touching. In a far binary, one of the stars is at least as far away as Jupiter is from the Sun. It is suggested that most stars in a binary system be far apart from each other.

** : Special Features represent things in space which are extremely rare or do not fit into other categories. These serve as sources of possible adventures for the PC's. To determine what the special feature is, the referee should either make one up, or roll percentile dice and consult the table below. The special features are explained after the table.

Special Feature Table	
Die Roll	Feature
01-03	Alien Artifact
04	Alien Lifeform
05-06	Artificial World
07	Black Hole
08-20	Dead Star
21-22	Derelict Spaceship
23-50	Dust Cloud
51	Neutron Star
52-71	Proto Star
72-80	Rogue Planet
81-99	Supernova Remnant
00	White Hole

Map Icons

Map Icons/Stars	
	Single Sunlike
	Binary Dwarf
	Binary Sunlike
	Binary Giant
	Non Sunlike Star/Planet
	Sunlike Star/Planet

Alien Artifact: An alien device just floating in space. It could be space mines left from some ancient battle or an unmanned deep space probe. Whatever it is, it is likely to be a source of adventure for the player characters.

Alien Lifeform: Some unknown creature, able to live in deep space without any life-support is found here. The referee will have to create the creature.

Artificial World: Instead of a star system with planets, there is a world created or drastically altered by unknown beings. Such worlds could include artificial suns and planets, ringworlds, or Dyson Spheres.

Black Hole: A collapsed star with a gravitation field so intense that even light cannot escape its pull. The exact effect of the black hole will depend on the game being played.

Dead Star: A burnt out cinder of a star. The surface will still be very hot, but may be able to support some type of alien life.

Map Icons/Special Features	
Feature	
	Alien Artifact
	Alien Lifeform
	Artificial World
	Black Hole
	Dead Star
	Derelict Spaceship
	Dust Cloud
	Neutron Star
	Proto Star
	Rogue Planet
	Supernova Remnant
	White Hole

Derelict Spaceship: A spacecraft in deep space. It may be a recent ship abandoned after a pirate attack, a lost slower-than-light colony ship, a damaged fighting ship unable to return to base or whatever else the referee desires.

Dust Cloud: If a dust cloud is rolled, the referee should roll 1d10. This is the number of cubic light years filled by the dust cloud. Dust clouds may be a hazard to navigation.

Neutron Star: A collapsed star of extreme density and high gravity. Although not as intense as a black hole, a neutron star emits a high amount of energy that could pose a hazard to communications and navigation.

Proto Star: This area is considered a dust cloud for the purpose of navigation. It is really a star in the beginning steps of forming.

Rogue Planet: a planet pulled out of orbit from its star and now travels by itself between stars. The planet may have been inhabited, and the inhabitants may still be alive under the surface of the planet.

Supernova Remnant: A rapidly expanding aura of hot gases and particles. Long distance communication may be difficult.

White Hole: Currently a theorized counterpart to a black hole. Where a black hole absorbs everything, a white hole would release enormous amounts of energy and matter. They could therefore be exit points for the matter drawn in by a black hole. The amount of energy given off by a white hole is so great that any ship of known design would be totally destroyed if it came too close. Therefore, white holes are considered hazards to navigation.

Stellar Class

In astronomy, all stars are given a stellar class to indicate the brightness and size of the star. However, not all stars can support habitable planets. Some are too hot and others are small and cold. Some stars give off too much dangerous radiation. A small range of stars (from F2 to K1) are thought to be right for habitable planets.

These are called sunlike stars in these rules. The stellar class of the sunlike star will have an effect on the number of planets around it. The referee should roll on the table featured right to find the stellar class of the sunlike star in the system.

Sunlike Stellar Class Table

Die Roll	Class	Planet Modifier	Length of Year			Color
			Close	Med	Far	
01-05	F2	+2	605	810	1030	Yellow-White
06-10	F3	+2	550	750	970	
11-15	F4	+2	500	675	845	
16-20	F5	+2	450	620	785	Yellow
21-25	F6	+1	420	530	690	
26-30	F7	+1	390	500	635	
31-35	F8	+1	360	470	605	
36-40	F9	+1	335	440	555	
41-45	G0	0	325	380	480	
46-50	G1	0	285	370	455	
51-55	G2	0	260	350	440	
56-60	G3	0	245	315	405	
61-65	G4	-2	215	280	370	
66-70	G5	-2	205	265	335	Orange-Yellow
71-75	G6	-4	200	250	300	
76-80	G7	-4	195	235	270	
81-85	G8	-4	193	220	255	
86-90	G9	-5	191	210	225	

91-95	K0	-5	190	200	210	
96-00	K1	-5	189	195	200	Red-Orange

Class: The letter and number combinations listed give the Stellar Class for information purposes.

Planet Modifier: This is used when determining the number of planets in the system, as explained below.

Length of Year: The approximate length of a year in earth days (24hours) for an earthlike planet.

Range: there are three different orbit ranges that a character-habitable planet can be in – close, medium, far. These will have an effect on the temperature of the planet. You may choose an orbit range or roll randomly to determine it.

Color: The colors for stars listed blend into each other. A G9 star would be orange with a slight amount of red to it.

Planets in the system

Not all star systems with planets will have the same number of planets. Furthermore, not all planets are the same. These rules divide planets into categories – Planetoids, Minor Planets, Terrestrial Planets, and Jovian Planets. Because of the way they are formed, the different types will be at different positions from the star.

The table below determines the number and type of planets that will be found in a star system. To use the table roll 1d10 and add or subtract the Planet Modifier obtained from the Stellar Class Table. Treat modified die rolls of less than 1 as 1 and greater than 10 as 10. Find where the proper row and column meet. The information there will give the numbers and general types of planets in the system. This information is arranged from planets closer to the star to planets farthest from the star.

After this information is found, the referee should place each planet on a system display or some type of solar map. At the center of the display is the star. Each ring out from the sun is a possible planet orbit. Each planet should be placed on an orbit ring. If there are more rings than planets in the system, the referee may skip any rings he or she desires. The shaded area

of the display is the star's Habitable Zone. All character-habitable planets should be placed in this zone.

Planet Type Table					
First Die Roll					
Second Die Roll	1-2	3-4	5-6	7-8	9-10
1-2	1H	1M/2H	1M/2H /2J	1M/1H /1J/1T	2M/2H/ 1J
3-4	2M/1H /A	1M/1H /2J	1H/A/1 J	1M/A/ 2H/1J/ 1T	3M/1H/ 2T
5-6	1M/A/ 1H/1P	2M/2H /2J	1M/2H /1J/1T	2M/2H /2J/1P	1M/1P/ 1H
7-8	2M/2H /A/3J	3M/2H /3J/1P	3H/A/2 J/2T	3H/A/2 J/3T	2M/3H/ 4J
9-10	2M/3H /2J/2T	1M/3H /5T	3M/3H /4J/2T	3H/4J/ 4T	3M/A/1 H

#: The number of planets of that given type.

M: Minor planet-a small chunk of rock much like mercury in size.

H: Terrestrial Planet located in the Habitable Zone-Venus, Earth, and Mars are considered terrestrial planets.

A: Asteroid Belt.

J: Jovian planet-a gas giant planet, more a cloud of gases. Jupiter and Saturn are Jovian Planets.

T: Terrestrial Planets not in the Habitable Zone.

P: Planetoid-a small chunk of rock barely large enough to be spotted.

Creating Planets

The following tables (Planetary Diameter and Gravity and Satellites) are used to create any planet, whether habitable or not. If the planet is not habitable, these are the only tables used. If the planet is habitable, the remaining tables of the article are used to generate more information.

Planetary Diameter, gravity, and Atmosphere: The following table determines the approximate size,

gravity, and atmosphere of both habitable and non-habitable planets. Size and other factors have a great deal to do with the gravity of any given planet. The table below already has those factors figured into its results. The table is divided into four categories-Planetoids, Minor Planets, terrestrial Planets, and Jovian Planets.

First, find the proper category of planet type. Next, roll 1d10 and find the proper column across the top of the table. Then, roll 1d10 and find the correct row down the side. Find where the column and row meet to get the gravity and atmosphere of the planet. The diameter is listed beside the second die roll.

Diameter: The number in this column is the diameter of the planet in kilometers.

.1-5.6: The gravity of the planet in tenths of a G; 1.0 equal's normal earth gravity.

NE: Negligible gravity. The strength of the gravity on the planet is not enough to have any game effect. The rules for weightlessness should be used when characters are on the planet. Obviously, the planet will not have an atmosphere. Characters will have to wear spacesuits when on the surface.

N: The planet has no significant atmosphere. Characters will have to wear spacesuits when on the surface.

H: Hostile Atmosphere. The planet has an atmosphere, but it is not breathable by the player character races. The atmosphere may be poisonous methane and ammonia, hydrogen and helium, frozen solid or any of a number of other dangerous combinations. Characters will have to wear spacesuits when on the surface.

B: The atmosphere of the planet is breathable by the character races, if the planet is in the habitable zone of the star. However, other conditions (gravity, average temperature, etc.) make the planet unsuitable for colonization. No character may remain on the planet for more than six months. If the planet is not in the Habitable Zone on the system display, the atmosphere is considered hostile.

*****: The planet is character-habitable if in the Habitable Zone of a sun-like star. Conditions allow it to be colonized.

Planetary Diameter and Gravity Table

1 st Die Roll											
2 nd Die Roll	Diameter	1	2	3	4	5	6	7	8	9	10
Planetoids											
1-4	Less than 1500	NE	NE	NE	NE	NE	NE	NE	NE	NE	.1N
5-6	1500	NE	NE	.1N	.1N	.1N	.1N	.1N	.1N	.1N	.1N
7-8	2000	.1N	.1N	.1N	.1N	.1N	.1N	.1N	.1N	.2N	.2N
9-10	2500	.1N	.1N	.1N	.1N	.2N	.2N	.2N	.2N	.2N	.2N
Minor Planets											
1-3	3000	.1N	.2N	.2N	.2N	.2N	.2N	.2N	.2N	.2N	.3N
4-6	4000	.2N	.2N	.2N	.2N	.2N	.3N	.3N	.3N	.3N	.3N
7-8	5000	.2N	.3N	.3N	.3N	.3N	.3N	.4N	.4N	.4N	.4N
9	6000	.3N	.3N	.3N	.4N	.4N	.4N	.4N	.5N	.5N	.5N
10	7000	.3N	.3N	.4H	.4H	.4H	.5H	.5H	.5H	.5B	.6B
Terrestrial Planets											
1	8000	.4H	.4H	.4H	.5H	.5B	.5B	.6B	.6B	.6B	.7*
2	9000	.5B	.5B	.6B	.6B	.6B	.7*	.7*	.8*	.8*	.8*
3	10000	.5B	.6B	.6B	.6B	.7*	.7*	.8*	.8*	.8*	.9*
4	12000	.7*	.7*	.8*	.8*	.9*	.9*	1.0*	1.0*	1.1*	1.1*
5	14000	.8*	.8*	.9*	1.0*	1.0*	1.1*	1.1*	1.2*	1.3*	1.3*
6	16000	.9*	.9*	1.0*	1.1*	1.1*	1.2*	1.3*	1.3*	1.4*	1.5*
7	18000	1.0*	1.1*	1.1*	1.2*	1.3*	1.4*	1.4*	1.5*	1.6H	1.7H
8	20000	1.1*	1.2*	1.3*	1.3*	1.4*	1.5*	1.6H	1.7H	1.8H	1.8H
9	22000	1.2*	1.3*	1.4*	1.4*	1.5*	1.6H	1.7H	1.8H	1.9H	2.0H
10	24000	1.3*	1.4*	1.5*	1.6H	1.7H	1.8H	1.9H	2.0H	2.1H	2.2H
Jovian Planets											
1	30000	.3B	.4H	.5H	.6H	.6H	.7H	.8H	.9H	1.0H	1.1H
2	40000	.3H	.5H	.7H	.7H	.8H	.9H	1.0H	1.2H	1.3H	1.5H
3	50000	.5H	.6H	.8H	.9H	1.0H	1.1H	1.3H	1.5H	1.7H	1.9H
4	70000	.6H	.9H	1.2H	1.3H	1.5H	1.6H	1.7H	2.0H	2.3H	2.6H
5	90000	.8H	1.0H	1.5H	1.7H	1.9H	2.0H	2.3H	2.6H	3.0H	3.4H
6-7	110000	.9H	1.4H	1.8H	2.0H	2.3H	2.5H	2.8H	3.2H	3.7H	4.1H
8-9	130000	1.1H	1.6H	2.2H	2.4H	2.7H	2.9H	3.2H	3.8H	4.3H	4.9H
10	150000	1.3H	1.9H	2.5H	2.8H	3.1H	3.4H	3.8H	4.4H	5.0H	5.6H

Satellites

Many planets have satellites orbiting them. These will range in size from chunks of rock, barely visible from the ground, to large moons. In addition to satellites, some planets, especially larger ones, will have rings around them.

To determine the number of satellites around any planet, character-habitable or not, the following table should be used. The referee should find all modifiers that apply to the planet and add them to the roll of 1-100. The modifier results are on the table below.

Satellites	
Modifiers	
Gravity x 10	
Diameter/1000	
Die Roll	Satellites
01-107	None
108-118	1-2 planetoids
119-129	Ring*
130-136	1-5 planetoids
137-149	1-10 planetoids
150-170	Ring**
171-250	2-20 planetoids
251-306	2-20 planetoids and 1 minor planet

*: If a ring result is obtained, another modified die roll should be made. If the planet already has rings, treat the result as 1-5 planetoids.

** : If a ring result is obtained, another modified die roll is made. If the planet already has rings, treat the result as 2-20 planetoids.

If the referee desires, he may determine the diameter, gravity and atmosphere of the satellite by rolling on the proper section of the Planetary Diameter and Gravity Table. However, if the referee does not intend for the player characters to ever reach the satellite, this is not necessary.

Character-Habitable Tables

The following tables should only be used for character-habitable planets. If the planet is not character-habitable, no further information is required.

Length of Day

The following table is used to find the length of the day (in standard 60 min Earth hours) on any character-habitable planet. It is possible for a day to be longer or

shorter than the amounts listed. However, if this were so, the conditions on the planet would not be suitable for living creatures.

To determine the length of the day, roll percentile dice and read the proper row. This will give a range of hours, 1-5, 1-10, or 1-20. The referee should roll the proper die to determine the exact number of hours in the day.

By doing a little simple arithmetic, the referee can find the length of the year in planet days. Multiply the number of Earth days in the planet's year by 24. Divide this total by the number of hours in the planet's day. The result is the number of planet days in the year. (Year in Earth days x 24 = hours in years. Hours in year / hours in planet day = number of planet days in year.)

Equatorial Inclination

Most planets tilt on their axis. This tilt will have an effect on the seasons of the planet. The greater the tilt, the more severe the seasons will be. This will affect the average temperature of the planet according to the season. To find the equatorial inclination, roll percentile dice and read the results on the table below. This will list the degree of inclination, the general effect on the seasons, and the Average Temperature Modifier.

Equatorial Inclination Table			
Die Roll	Degrees Inclination	Seasonal Effect	Av. Temp. Change
01-15	0	No seasons	0 ⁰
16-35	10	Mild seasons	+5 ⁰ /-5 ⁰ C
36-55	20	Earthlike seasons	+10 ⁰ /-10 ⁰ C
56-70	30	Strong seasons	+15 ⁰ /-15 ⁰ C
71-85	40	Extreme seasons	+20 ⁰ /-20 ⁰ C
86-00	50	Drastic seasons	+25 ⁰ /-25 ⁰ C

Average Temperature

With the orbit range and inclination of a character-habitable planet, the referee can determine its average yearly temperature. To do so, match the planet's orbit range on the table below with the orbit range for the planet on the Stellar Display. This will give a spread of degrees for the average temperature of the planet. The referee should roll 1d10 and add the base number (if any). The result is the average yearly temperature for the temperate zone of the planet. To find the average temperature for the different seasons, the referee should add and subtract the Average temperature Change given above for the planet's inclination. The lowest number is the winter temperature; the highest number is the summer temperature. Remember, these temperatures are only average. Some days will be hotter or colder. Furthermore, many other factors may affect the temperature of a planet (these may be created by the referee).

Orbit Range	Base Temp in Celsius
Close	20 ⁰ C
Medium	10 ⁰ C
Far	0 ⁰ C

Percentage of Water

All character-habitable planets will have some amount of surface area covered by water. Obviously, planets with a low percentage of water will be dry and barren for the most part. Planets with a high percentage of water will have many island chains, and will often be humid or sometimes tropical. It is impossible (by today's knowledge) to have a character-habitable planet that has less than 10% water or more than 90% water. The first would be a dry, barren ball and the second would be a misty globe.

Roll percentile dice and check the result against the following table. Add or subtract the adjustment amount from the die roll. The result is the percentage of surface water on the planet.

Surface Water Table	
Die roll	Adjustment
01-25	+10
26-75	0
76-00	-10

Optional Tables

Age of Planets

The age of the planet will affect the results of the Lifeform, Resource, and Unusual Features Tables, and should be determined before these tables are used. The young planets will be less likely to have highly developed lifeforms, and will have different resources and unusual features as compared to older planets. Determining the age of the planet will give a modifier that is used on the three tables.

To determine the modifier, find the proper stellar class for the star below. The amount listed is either added or subtracted from the die roll.

Stellar Class	Age Modifier
F Stars	-2
G0-G3	-1
G4-G6	0
G7-G9	+1
K Star	+2

If the result is positive, that number should be added to the die rolls on the proper tables. If the number is negative, that number should be subtracted.

Lifeforms

If the referee has not decided what type of creatures will inhabit the planet, he may use the following table for a general idea. It is important to note that the categories used are extremely general. Many different kinds of creatures fall under each categories. Secondly, the creatures and evolutionary order are all from earth. This certainly does not mean that these creatures will be found on other planets, only something similar to them. A flowering plant on another planet might be sticky pads of seeds that open, get caught on a passing creature, and eventually drop off the creature at a different place. A semi-intelligent creature might have five small brains controlling different parts of its body and a larger brain controlling the smaller brains. The referee should remember to create all alien creatures with imagination and common sense.

Roll 1d10 and add or subtract the planet age modifier then consult the table below. The result will be the general level of development of lifeforms on the planet.

Lifeform Table

Die Roll	Typical Lifeform Equivalents
1 or less	Single celled bacteria, red algae
2	Simple sponges, corals, jellyfish
3	Worms, lichen, snails, clams, green algae
4	Fish, insects, ferns, mosses
5	Lungfish, frogs, Sago palm (not a true palm tree)
6	Lizards, pine trees, snakes, palm trees
7	Dinosaurs, birds, rats, flowering plants
8	Mammals, grasses, oak (and other trees)
9	Apes, Chimpanzees, dolphins, whales, primitive beings
10+	Intelligent beings (equal to character races)

Special Features Table

Die Roll	Feature
0 or less	Extreme geothermal activity
1	High air pressure
2	Retrograde spin
3	Twin Planet
4	No feature
5	No feature
6	No feature
7	Violent weather
8	Alien artifact
9	Low air pressure
10	Greenhouse effect
11+	Tainted atmosphere

Extreme geothermal activity: The planet is still quite hot and active. On its surface are volcanoes, geyser basins, and fault lines. There is a 5% chance per week that an earthquake will occur in the region of the player characters. These quakes will knock characters off their feet and cause minor damage. The referee should place many active volcanoes and geyser basins on the world map.

High air pressure: The air on the planet is denser than Earth normal but still livable.

Retrograde spin: The planet rotates in the opposite direction from most planets. The sun will rise in the west and set in the east.

Twin Planet: The planet actually circles another planet and both circle the star. The referee should note the twin planet on the stellar display. Five should be added to the length of the planet's day. The other planet of the twin planet group may or may not be habitable. Roll 1d10: 1-3 indicates a Minor Planet, 4-8 is a Terrestrial Planet, and a 9-10 is a Jovian Planet. Determine the size and gravity as a normal planet of the proper type. The length of day will be identical to the first planet.

Violent weather: Storms and high winds are common on the planet. There is a 50% chance each day that high winds will prevent any flying movement and will halve ground movement.

Alien artifact: Something (a city, wrecked spacecraft, etc.) of unknown alien construction is found on the planet.

Low air pressure: The air is less dense than that of Earth. Characters will require oxygen while on the planet. Characters without oxygen will suffer a small amount of damage every 12 hours (or part thereof).

Greenhouse effect: The ground is always shrouded by a thick cloud cover, casting in into continual twilight. The temperature of the planet is increased by 15⁰ C.

Tainted atmosphere: Some agent in the air (a pollen, micro-insect, etc.) makes the use of a filter mask required. For every 30 minutes in the atmosphere without a filter mask the character will suffer serious damage.

Technological stage

If the referee decides or determines that a planet has intelligent creatures, this does not necessarily mean they are equal in technology to the player character races. Instead, the beings are at *some* technological stage. To find their technological stage, roll 1d10 and consult the table below.

Each line is divided into four different parts for different areas of technology. These areas are transport, power sources, types of weapons, and information storage. An Earth equivalent for each category is given. The referee, if he/she chooses to do so, may raise or lower the stage of technology in any of the categories. For example, a 4 is rolled. The referee (because he/she wants it that way) decides

the planet is poor in metals. Therefore, he/she lowers the Weapons category by two, giving the following combination – sails; water/wind; spear/bow; books/scrolls.

Technological Stage Table				
Technological Categories				
Die Roll	Transport	Power	Weapons	Data
1	Foot	Muscle	Muscle	Memory
2	Animal	Animal	Spear/bow	Painting/carving
3	Wheels/oars	Animal	Metal weapons	Alphabet
4	Sails	Water/wind	Crossbow	Books/scrolls
5	Steam/airship	Steam	Gunpowder	Printing
6	Internal combustion	Electric/gasoline	Rapid fire weapons	Radio/television
7	Electric	Man-made fuel	Gases	Early computer
8	Jet/rocket	fission	Nuclear	Magnetic bubble
9	Interplanetary	fusion	Large beam weapons	
10	Equal to Character Races			

Editor's note:

This article was written about 30 years ago. Since then there have been many discoveries and postulations as to how many planets are or could be around stars today. At the Starfrontiers.us site there are a couple of in house experts that can help you with a more realistic account for planets in a given star system.

Using this article to design your star maps will give you the feel of the old school Star Frontiers and some insight into how they designed the original maps.

Notes

Settlement Size

To assist the referee in preparing maps of inhabited areas, he/she may use the table below to find the size of an average settlement on the planet. The result from the table will list the population of an average size town on the planet. Roll 1d10 and add the number of the Technological Stage of the inhabitants.

Settlement Size Table	
Adjusted Die Roll	Settlement Size
2-4	10-50 beings
5-7	10-100 beings
8-11	100-1000 beings
12-15	1000-10, 000 beings
16+	More than 10, 000 beings



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