Featured:

Squeedles

by Jane Polwin, Timothy Collinson, and David Bennett
(with art contributions by Benedikt Schwarz)

A Note About Production

Freelance Traveller is prepared using Microsoft Office Publisher 2010 running on a Windows 7 Ultimate x64 system. The program is reasonably easy to use, and produces good results with moderate effort; it also supports advanced typographic features such as typographic quotes and apostrophes, small caps, ligatures, swashes, and stylistic alternatives (if the advanced features are implemented in the font). Generation of the PDF files is built in to this version of Microsoft Office; no additional products are needed.

The title and heading typeface is ZapfHumanist BT, a Bitstream adaptation of Hermann Zapf's digital redesign of his 'hot lead' typeface Optima, chosen as a 'tie-back' to the title typeface of the original edition of *Traveller*. The black-and-orange of the section headings is also a tie-back to *Traveller*'s origins, though we felt that the 'correct' red was too dark. The heading sizes vary from 12 to 16 points. Body text is set in Palatino Linotype, also designed by Hermann Zapf, and is set at 11 points for most body text, giving approximately the same text spacing as Times New Roman at 12 point (which was the original *Freelance Traveller* body text), but a lighter 'color'. Palatino Linotype also 'balances' better as a body text typeface to Optima as a titling typeface.

Contents

From the Editor

One thing about having a lot of articles in an issue is that the table of contents expands, which cuts down on this space for the Editor's blather. This issue, I have even less space than last, so I'll try to keep it short: *THANK YOU.* Your contributions are what make this magazine what it is, and I'm happy about that. I'm also quite please about the way this turned into a Theme Issue entirely unexpectedly; thank you, again, to Timothy, Jane, David, and Benedikt, who together brought Squeedles to life in these pages. ✸

Mongoose Traveller 2nd Edition Starter Set (Boxed)

reviewed by Jeff Zeitlin

If you have the *Traveller Core Rulebook* for the second edition of Mongoose *Traveller*, you don't *need* to purchase this. What you will get if you do is three softcover books, six characters, and a sector map.

The three softcover books provide the basic rules of *Traveller*, plus a starter campaign. I should note here that the general thrust of the rules for combat and encounters is toward dealing with situations that may turn exceptional, not the sort of routine situation that doesn't have any significant implications if it 'goes south'. In other words, don't expect to use the rules to cover ordering a sandwich at a local deli (where the worst thing that may happen is that you get chili aioli on your roast groat sandwich instead of mustard) – but do use them for walking up to a soldier and asking (with a strong accent) 'Where are the nuclear wessels?'.

Another important thing to note is that the rules as given here generally assume that any adventuring based on them will be in a standard Third-Imperium-compatible setting, rather than an alternative or homebrew with significantly different core assumptions (like *Clement Sector*, *2300AD*, or any number of homebrews).

The first book, *Book 1: Characters and Combat*, covers creating and outfitting characters (which the text calls "Travellers"), personal combat, and a selection of equipment of all types. The information is presented clearly and in a logical sequence, starting with an overview of what *Traveller* is, and what the various notational conventions mean, in the Introduction. This is followed in Chapter 1: Traveller Cre-

ation with generating a character and putting him/her through a career, including pre-career education options and post-career benefit descriptions, plus the information needed to generate Imperial Vargr or Imperial Aslan characters, wrapped around the career descriptions and tables; a detailed discussion of skills and checks, including more complex aspects such as task chains and boon/bane, and skill descriptions, can be found in Chapter 2: Skills and Tasks. Chapter 3: Combat, is exactly that: How to game out the situation where you haven't been able to avoid a fight, whether that's a barroom brawl or an organized response to an organized attack. It does not include vehicle-to-vehicle combat, though a sentence in the introduction to Chapter 3 of Book 2 suggests that these rules should suffice.
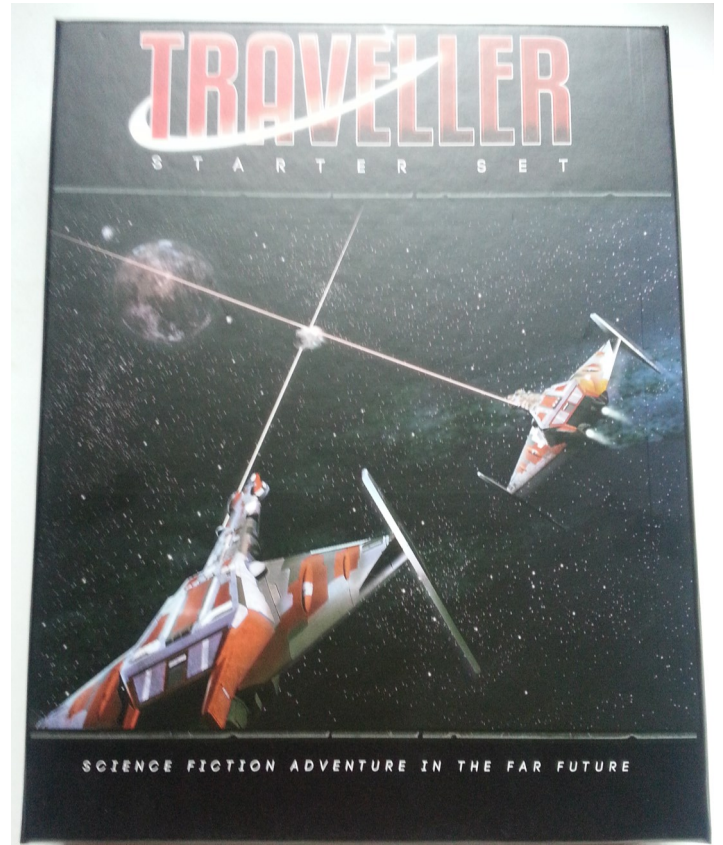
Chapter 4: Equipment briefly covers buying and selling equipment, and gives basic figures for determining a standard of living. Based on those figures, although no actual equivalent value of the credit is stated, one can reasonably estimate the value of a credit as anywhere from two to three units of your preferred present-day "reserve currency" (e.g., US

Dollars, UK Pounds, or Euros). This overview is followed by a catalog of equipment of all types, with the exception of vehicles, which get their own chapter in Chapter 5: Vehicles, giving not only a showroom catalog, but the basic rules for using vehicles in combat.

Notable by their absence in this book are rules for creating new equipment or vehicles; however, the selection of pre-generated/described equipment and vehicles will be adequate for most starter campaigns.

Book 2: Spacecraft and Worlds picks up where the previous book left off. There is no Introduction to this book; Chapter 1: Encounters and Dangers covers encounters other than combat, including animal encounters and environmental dangers. A sample selection of animals is presented, many of which have fairly obvious real-world analogues. You also get a quick summary of what a patron is, and several pages of tables of patron encounters and random encounters with people; the tables are grouped by the type of location where the encounters occur. There is enough information presented in this chapter for a referee to create people, animals, or other things for encounters, but you don't get a set of cookbook rules, just tables to roll on – which is, really, enough.

Chapter 2: Spacecraft Operations covers what you need to know about spacecraft, both starships and non-starships, to use them in an adventure; it's not (nor intended to be) a comprehensive nuts-and-

bolts guide to routine button-pushing. You get an overview of financing a purchase, of the main adventure-related systems and associated tasks, and of general costs for operations. There is also a table of spacecraft encounters (i.e., "encounters that you can have in a spacecraft", not just "other spacecraft that you can encounter"), with explanations or expansions of some of them. Following this is some more detailed operation information, including the general travel sequence, types of passenger passages, keeping order among those passengers, and travel times.

Where Chapter 3 of Book 1 focussed on personal and small-group combat, this book's Chapter 3: Space Combat focusses on combat between single ships and/or small groups of ships. Skills of characters acting as crew are assumed to play a very definite role in space combat; ships, after all, do not act on their own, even if you assume that computers have processing power close to what we might call artificial intelligence. The overall structure of this chapter matches that of the personal combat chapter in Book 1, but includes rules relevant to ship-to-ship combat, such as hit locations, boarding actions, and repair actions. Some of this should have equivalents for vehicle combat (e.g., hit locations) in Book 1.

Chapter 4: Common Spacecraft provides overviews and deckplans in the now-familiar Mongoose isometric format. As usual, you can say that they're visually attractive – but you wouldn't want to use them for combat playmaps for miniatures. You get most of the ship and small craft designs that over 40 years of *Traveller* have rendered more-or-less iconic. Again, there are no rules for creating ships or small craft.

Chapter 5: Psionics covers psionics in a way quite familiar to experienced *Traveller* referees and players. The five general classes of psionic action are presented as Talents, equivalent to Skills (and the two terms appear to be used interchangeably), and

the various activities that can be done using a talent are described and presented as tasks. Rules for determining whether a character is psionic are provided, as is a Psion career in standard format. There is a mention of psionic technology and basic rules for the use and effects of psi drugs, but only a minimal treatment; recall that the basic assumption is Third-Imperium-compatible adventuring.

Trade and merchant campaigns are supported; Chapter 6: Trade provides rules sufficient for running a small-ship trading operation. As with the *Core Rulebook*, this is what *Freelance Traveller* calls a 'goods-based' system: One determines what the good available for trade is and its base price, and then modifies the base price based on the trade classifications of the world on which the transaction is happening. Rules for smuggling and trade in illegal goods are also included, as are rules for hiring brokers and guides to improve one's ability to trade successfully.

Chapter 7: World and Universe Creation finishes out the book by presenting the rules that allow the referee to take the players beyond pre-generated material and into the basics of 'home-brew' settings. An overview of the organization of the stellar map and stellar directions is presented, along with some pointers on mapping at the subsector level, but the bulk of this chapter defines the Universal World Profile and gives you what you need to generate it. Imperial Mainworld generation is assumed; there is essentially no discussion of secondary worlds in a system, nor of generating worlds that may hold allegiance to any specific polity. Unlike earlier versions of *Traveller*, generation of the starport has been moved to near the end of the generation sequence, influenced by the population. An omission as compared with other versions of *Traveller* is lack of any decision process to determine whether a system contains a gas giant (leaving a world with zero hydrographics and a low-grade port being a dead-end

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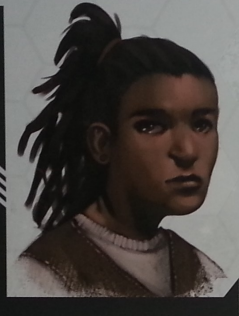
for travel); on the other hand, there are provisions for generating minority factions on a world, and a table of noteworthy cultural features to keep worlds from being generic.

These two books together cover essentially the same ground as the *Core Rulebook*; with the *Core Rulebook*, you get an overview of a subsector to adventure in, with no specific campaign or adventure tied to it. With the *Starter Set*, however, you also get…

Book 3: The Fall of Tinath is a hundred-page campaign sourcebook containing a series of linked adventures that "showcase" different skillsets, allowing inexperienced players and referees to get a good feel for what *Traveller* is and how it works. While it takes place in the universe of the Third Imperium, that polity – indeed, the entirety of the standard, well-developed setting of Charted Space – is off-screen at significant distance; the subsector and world for this campaign is very definitely frontier, with even the nearest multi-world polity being a minor influence in the campaign. As presented, the campaign does not mandate any particular player-characters or skill sets (allowing the group to generate its own characters if desired), the boxed set does include character sheets for six characters that will serve well, perhaps for use at a convention where playing time may be limited. The campaign is episodic, with each episode presenting opportunities for the player-characters to exercise their skills in a particular kind of crisis, and linking to the next episode (which will have a different kind of crisis as its centerpiece). While there are in-campaign time constraints, there is still ample flexibility for the referee to allow the players to pursue their own interests between episodes and avoid 'railroading' them through the campaign. It should be noted that the

Critics' Corner

ultimate outcome of the campaign is pre-ordained; the players can't change the end result – but they can make a difference in how they get there, and what some of the side-effects will be.

Although the campaign is not strictly for beginners – experienced players and referees can very definitely run through this and enjoy it – it is nevertheless organized well, with explanations where needed for a beginning referee and pointers for running *Traveller* in general. It does not rely on knowledge of *Traveller*, either rules or setting, that isn't presented in this boxed set, and the only thing that the players and referee need to add is dice (*and while it's not a serious omission – after all, standard six-sided dice are ubiquitous in games of all sorts, and easy to purchase separately – it really shouldn't have been an omission at all*) and pencil and paper for any notes, sketches, etc., that may become appropriate during play.

Overall, definitely a good value for the price, if you don't have the *Core Rulebook*; the campaign is not worth the price of the boxed set if you already have the core rules (but a little research finds it available separately, at least in PDF, if you do have the *Core Rulebook*).   ✺

Freelance Traveller Goes Multilingual

Although the PDFs will remain English-only, we have had offers—and will entertain others—to translate selected (by the translator) articles into languages other than English. Each translation will be linked to its English original in our website, and each language will have its own index page listing all articles translated into the language. If you are a fluent speaker of a language other than English—especially of languages in which *Traveller* has previously been published (*we're aware of Spanish, French, German, and Japanese*)—and interested in translating into that language for us, please email the editor at *editor@freelancetraveller.com*✺

THE POSTER-SIZED MAP

I'm really not quite sure why this was included. It's printed on both sides, about four feet by three feet; one side is a blank sector; the other side is the sector where the Fall of Tinath campaign is set – but with only that one subsector filled in. You get as much information right in the campaign sourcebook. Were this included in a campaign in a well-established portion of the Third Imperium or surrounds, and a complete sector map, it might have made more sense, and looked a whole lot better…
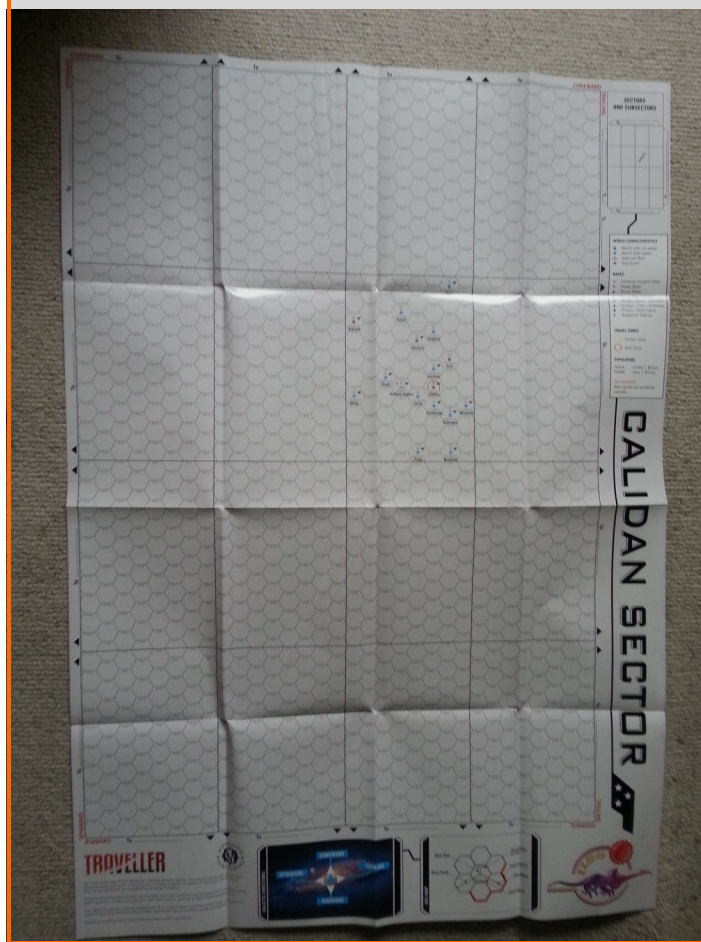
TravellerCON/USA 2019

TravellerCON/USA 2019 will be happening the weekend of 11-13 Oct 2019 at a new location, the Holiday Inn Morgantown. The theme is *Vargr*. The kickstarter has been fully funded, and registration via the TravellerCON/USA website is open at `https://www.travellercon-usa.com/registration.html`—give a click and join the fun!

Come play with us!   ✺

Starship Interiors

by Guy Garnett

Introduction

Traveller starships span a wide variety of technology levels, with corresponding variations in construction techniques and standards. Some *Traveller* starship design sequences produce measurable differences for a ship built at different technology levels, and some do not. For example, Classic *Traveller Book 2* or the Mongoose *Traveller Core Rulebook* provides a minimum technology level for a given design, but doesn't specify any improvement for higher-tech starships. On the other hand, Classic *Traveller Book 5: High Guard* would allow the TL-15 design to take advantage of the increased technology level by using a smaller power plant and smaller fuel processors. Similarly, Mongoose *Traveller Book 2: High Guard* allows primitive and advanced spacecraft components to have differing costs, volumes, and benefits. It also clarifies that designs using the base rules are generic ships at approximately TL-12.

However, even using rules that provide for different results by technology level leads to the issue that we would need different starship designs and different deck plans for each class of ship at multiple TLs. Ideally, there should be a way of providing a distinct look and feel for each ship, even ships that are nominally equivalent, but built in different places and at different technology levels – without having to re-design the ship multiple times, and without having to draw and re-draw deck plans.

Describing Starship Interiors

Consider the following two descriptions, the first of a relatively low or early stellar starship:

The whooping klaxon and flashing master alarm light gets your attention – you need to be on the bridge, and fast. Ducking your head to avoid a low-hanging light fixture, you leave the crew's common area and scramble forward through the

narrow hallway linking it with the bridge. Sliding doors to the left and right lead to crew staterooms. All are currently closed, but you can hear cursing behind you as Gamaagin fumbles to get dressed. She'll be right behind you – she's always had a sense for trouble. The tangle of conduit, ductwork, and structural elements on the ceiling is punctuated by the occasional glow plate, which casts a harsh light on the surrounding area. You barely avoid knocking yourself senseless on a low-hanging pipe. Upon reaching the bridge, you activate the iris valve and step through, keeping your head down to avoid the top of the doorway. Inside, the cramped cockpit is filled with a myriad of readouts, displays, buttons, and controls – all of which are in the red and clamoring for your attention.

Compare it with this one from a high technology starship:

The insistent tone of the master alarm gets your attention even before the ship's emergency lighting starts to blink red. You leave the crew's common area and rush forward through the hallway to the bridge. Sliding doors to the left and right along the hall lead to crew quarters. All are closed as you pass, but you can hear one open behind you. That must be Gamaagin; she's always had a sense for trouble. The modern plasteel ceiling and wall panels that seem so clean and efficient in the ship's standard ambient lighting become a surreal parody of themselves when the lights go emergency-red. Upon reaching the bridge, the iris valve smoothly cycles open in front of you. As you step inside, the computer recognizes you and brings up your control console even before you have a chance to sit down. To your dismay, almost all of the indicators are in the danger zone and need attention fast.

Despite the differences in the description, these two ships are both standard Subsidized Merchants, with the same performance specifications and same

deck plan. The differences are merely descriptive, designed to lend an appropriate "feel" to each ship.

Technological Progression

The progression of starship technology can be used as a rough guide to the interiors of different *Traveller* starships. At early TLs, use descriptions such as "small", "cramped", and "Spartan"; consider referring to the bridge as the "cockpit" instead. Mention characters hitting their heads on piping or fixtures, particularly as comic relief. These ships should have the overall "feel" of movie starships like *Firefly*'s *Serenity* and the *Millennium Falcon* from the *Star Wars* franchise. At higher TLs, there should be a sense of more space, better lighting, and better décor; use words like "spacious", "well-lit", "sleek", "smooth", "clean" and "modern". These ships should be described like *Star Trek*'s *Enterprise*. Consider the following suggestions by technology level:

TL-9: Early starships and spacecraft are cramped because ships can afford little spare mass or volume. Ceilings and bulkheads will be unfinished, with visible structural members, equipment, conduits, pipes, ductwork, and fittings. The overhead clearance in most sections of the ship will be uneven, as these items will protrude from the ceiling. Overhead clearance will vary between 1.70m and 2.00m, with an average of about 1.85m (6' 1"). This is low enough that even moderately tall people will have to remember avoid light fixtures and fittings. Some tall people will be unable to stand upright. Some decoration may be present in passenger areas, selected for low mass and little volume, but otherwise these ships will be very Spartan. Interior partitions will be lightweight and offer little in the way of sound insulation. Unpowered pocket doors are used in place of sliding doors. Passengers and even some crew who have experienced better will complain about the primitive conditions.

TL-10: The situation improves somewhat at TL-10, and overheads increase to an average of 2.00m (6'

4"). Ships are still cramped, but a noticeable improvement over the first generation. Unfinished ceilings and bulkheads are still the norm, but at least even the lowest-hanging fixtures and equipment are more than 6 feet off of the deck. Some tall people will still have to duck on occasion, and particularly tall individuals may not be able to stand upright. The furnishings for passenger areas will still be governed by mass and volume concerns, and complaints will be common. Military ships, and the engineering spaces of civilian ships, will be purely functional.

TL-11: As space travel technology matures, naval architects are able to allocate more mass and volume to crew and passenger comfort. Overheads increase again to an average of 2.15m (6' ½"). Particularly tall individuals may risk hitting their heads on a few prominent fittings, and ships are noticeably more cramped than planet-based residences or workplaces. Passengers will often comment about how small or confined the ship seems to be. Bulkheads and ceilings remain unfinished with exposed conduits, ductwork, equipment, and fittings that may protrude downward by several inches. Passenger areas and interior partitions may have some sound insulation to increase privacy, and the use of powered sliding doors is universal.

TL-12: At average stellar technology levels, overhead clearance increases to an average of 2.30m (7' 6"). Although lower than most residences and office

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Pocket Doors

Pocket doors are manually operated sliding doors found in low-tech starships. They work exactly like sliding doors, except that they are unpowered: pocket doors are pushed open or pulled closed by hand, using a handle or fitting inset into the door. The door can be locked from either side using a mechanical lever. Once locked, the door must be unlocked from the same side before it can be opened. Some sliding doors are equipped with more sophisticated mechanical locks, that can be locked or unlocked from either side with a combination or a key. Pocket doors cannot be opened, closed, locked, or unlocked remotely or under computer control.

buildings, this is high enough that the vast majority of the population doesn't have to worry about hitting their heads. Bulkheads and ceilings remain unfinished in crew areas. Passenger areas now feature lightweight sound-insulating panels on the walls and ceilings, improved lighting, and individual temperature and gravity controls in each stateroom. These amenities, along with improved decorating options, significantly improve comfort and privacy.

TL-13: Overheads increase again to 2.5m (8′ 2½″), which is comparable to many residences. The increased volume and mass budgets allow the ceilings and bulkheads of all areas to be finished with lightweight panels, giving the interior of the ship a modern and finished look. Panels in maintenance-intensive areas such as the bridge and engineering are designed for easy removal, and military ships typically omit them entirely in these areas. Passenger areas are often carpeted. If well appointed and maintained they can be comparable to a planet-side budget hotel.

TL-14: At high stellar technology levels, overheads increase again to 2.7m (8′ 10″), which is comparable to many commercial buildings. Passenger and crew areas feature improved fit and finish, such as low-maintenance surfaces that reduce noise and improved lighting. Smart portals are used in passenger spaces, but some ships prefer standard portals for crew areas. Increased mass and volume capacity means that the comfort of passenger accommodations is often governed by cost: they can be equivalent to a planet-side mid-range hotel if the ship owner is willing to pay the expense.

TL-15: Overhead clearances do not increase at this stage of development, but further improvements in fit and finish, higher mass and volume budgets for décor, improved artificial gravity and life support systems often result in passengers being unable to tell if they are aboard ship or in a high-

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Smart Portals

At high technology levels, sensor and computer technology is both inexpensive and powerful enough to create "smart" doors. This technology can be applied to sliding doors and iris valves aboard starships. It is first used as a passenger convenience, and later for all powered portals. A smart portal contains sensors that will recognize authorized users as they approach, and open automatically for them if their movement indicates that they intend to pass through. It will ignore individuals who merely intend to walk past, and refuse to open for unauthorized individuals. The ship's computer can also override smart portals to open, close, lock, or unlock them. Smart portals are capable of decision-making, and authorized users can add access rules as desired. For example: When Gamaagin walks to her stateroom, the sliding door will open automatically for her. It will not open automatically when Eneri, the ship's navigator attempts to enter — instead, it will sound a chime inside the stateroom to let Gamaagin know that someone is at the door. However, Gamaagin is having an affair with Marq, the ship's engineer. She has set the door to let Marq enter automatically if she is present in her stateroom, allowing him to visit her discreetly when he goes off-duty.

Smart portals can use biometric recognition or short-range wireless keys for their operation. Wireless keys are usually issued to passengers, and are valid only for the duration of the trip. Many ships have distinctive keys in the shape of a corporate logo or silhouette of the ship. Permanent crewmembers use biometric recognition, because stealing a key can't defeat the system's security. Biometric recognition identifies authorized users by matching face, body and movement patterns such as gait and mannerisms against a stored profile. Programming the profile takes a half-hour and access to the ship's computer. It is possible to defeat a smart portal's biometric recognition with careful disguise and skillful mimicry of the subject's movement and mannerisms. Roll the system's TL or higher on 2d6 to fool the biometric recognition system. Applicable DMs include disguise skill and acting skill, or -3 if neither skill is available. The referee should apply an additional DM based on the similarity of the two individuals, from -3 if they are not at all alike, to 0 for most attempts, to +2 for identical twins.

For comic relief, consider an individual from a high-tech world who is used to the ubiquitous use of biometric recognition and smart portals. The first time aboard a lower-tech spacecraft, he or she might bounce off of the sliding doors and iris valves, not realizing that they have to be activated by pressing a wall stud or button before you can pass through.

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quality planet-side hotel. Use of smart portals is ubiquitous.

These descriptions assume an Imperial vessel designed for a typical mixed Solomani or Vilani crew. At TL-13 and above, the 2.5m to 2.7m ceiling

(Continued from page 9)

heights will accommodate Aslan, Darrian, Droyne, Solomani, Vargr, Vilani, and Zhodani. At TL-12, only particularly tall members of the tallest species will have difficulty with the 2.3m clearances. Below TL-12, taller species will build their ships with higher minimum overhead clearances to suit their particular needs.

To determine if a passenger or NPC has an issue with the ceiling height without generating the character's height in detail, roll 2d6. Apply a -1 DM for diminutive species such as Vargr. If the result is less than the technology level of the ship, there is no problem. If the roll equals the ship's TL, that passenger or NPC will have to watch out for a few particularly low-hanging fixtures. A dice result greater than the TL indicates a character that encounters overhead height issues aboard the ship.

Down in the Hold

Starship deck plans typically show the ship's cargo hold as a large empty space. However, aboard a working starship, empty space in the cargo hold represents lost revenue. In a role-playing context, the things that make the cargo hold an interesting setting for adventure are what it contains: the containers, pallets, boxes, and bales of goods that must be transported from one world to another.

You open the iris valve on the deck, and step down the ladder into the ship's cargo hold. Despite the size of the space, the narrow aisles and alleys between containers feel claustrophobic, and the deck cargo with its tie-down straps looks like an ominous spider in the forward hold. The bad lighting and stale air don't help your mood, either. It seems like you're always down here after every visit to an overcrowded mudball, iron-fisted police state, or planet overrun by religious nutjobs. There's someone hiding in the hold, and you have to deal with it before the ship lifts. Most of the time it's some wet-behind-the-ears kid, who thinks that getting off world is their ticket to fame, fortune,

and the Iridium Throne. You wouldn't mind the kids so much – heck, you even remember being that eighteen-year-old kid, taking your first step on a journey that led to being an officer on a free trader – except for the times when it isn't a kid. Those are the ones that you worry about, when the shadow between containers turns out to be a hijacker, a pirate, or some kind of Ine Givar terrorist. Those can go bad, fast.

Physical Description

The cargo hold is an empty deck or decks, generally clear of obstructions, designed to accommodate shipments of freight and cargo. The floor and walls contain tie-down fittings so that standard containers can be secured in the hold. There is at least one pressure-tight bay door that opens to the full height of the hold, and at least 4.5m wide. The bay doors are often 7.5m, 13.5m, or 15m wide or wider, to accommodate standard containers lengthwise. The doorway usually has a fold-down loading platform or ramp, and the ship's internal cargo-handling equipment extends outward far enough to pick up containers and pallets placed near the door or on the platform. Environmentally, the hold is maintained at the same temperature, pressure, and gravity as the rest of the ship:

Environment	Nominal	Minimum	Maximum
Atmospheric Pressure	100kPa (1.0 atm)	50kPa (0.5 atm)	150kPa (1.5 atm)
Temperature	20°C (293K, 68°F)	0°C (273K, 32°F)	40°C (313K, 104°F)
Gravity Field	10m/sec² (1G)	None	20m/sec² (2G)

Given the large size and limited air circulation, heat and atmosphere can become concerns. Some types of containers have built-in support equipment that keeps the interior cold or frozen for shipping refrigerated or frozen goods. Higher-tech containers can also mount nuclear damper systems for safely shipping radioactive, or gravity systems for shipping goods that must be maintained in an environment of other than standard G. These systems all use

(Continued from page 10)

power and produce heat, so must be loaded in spots with adequate power and ventilation. Live cargo, such as livestock, can be subject to similar concerns.

Mechanically, the overhead clearance in cargo holds must be at least 2.7m so that standard cargo containers can be accommodated, but is often higher – for example, the standard Type R Subsidized Merchant has a cargo hold that is two decks high. The table below shows minimum and maximum clearances as well as the standard container load-out for a given cargo bay height, in decks:

Height (decks)	Overhead Clearance		Container Loading (layers from bottom up)
	Minimum	Maximum	
1 deck	2.7m (8' 10")	3.0m (9' 10")	1 standard
2 decks	5.6m (18' 4")	6.2m (20' 2")	1 high-cube + 1 standard
3 decks	8.5m (27' 11")	9.3m (30' 6")	2 high-cube + 1 standard
4 decks	11.4m (37' 6")	12.5m (40' 10")	3 high-cube + 1 standard
5 decks	14.3m (47' 0")	15.6m (51' 2")	4 high-cube + 1 standard
6 decks	17.2m (56' 7")	18.8m (61' 6")	5 high-cube + 1 standard

All cargo holds can accommodate cargo up to the minimum overhead clearance, and may be able to accommodate cargo up to the maximum. The ability of the cargo bay to accept over-height goods, including attempts to load high-cube containers instead of standard ones, depends on the technology level of the ship. Low-tech ships are often designed to the minimum standards, while higher technology ships are designed with generous clearances and flexibility in mind. The table below shows the maximum amount of cargoes that exceed the minimum overhead clearance that can be stowed in the bay, and the difficulty of doing so. Referees should treat loading over-height cargo as a task against Mechanical skill and/or Intelligence. If the task fails, the item

Ship TL	Maximum Over-Height	Difficulty
TL-9	1% of cargo bay volume	Formidable (14+)
TL-10	5% of cargo bay volume	Very Difficult (12+)
TL-11	10% of cargo bay volume	Very Difficult (12+)
TL-12	20% of cargo bay volume	Difficult (10+)
TL-13	30% of cargo bay volume	Difficult (10+)
TL-14	40% of cargo bay volume	Average (8+)
TL-15	50% of cargo bay volume	Average (8+)

> **Deck-to-Deck Height**
>
> *Traveller starship deck plans use a 1.5-meter grid. With a nominal height of 3 meters from the surface of one deck to the next, two grid squares are 13.5 cubic meters, one dton. This article assumes slight variation in these nominal figures: Lower-technology ships have somewhat less space, perhaps as little as 2 meters in crew areas and slightly less than 3 meters for cargo holds. Higher-technology ships may exceed the nominal spacing slightly, with up to 3.15 meters from one deck to the next. These variations are within the plus or minus 10% that is typically allowed for deck plans.*
>
> *The overhead clearance must necessarily be less than the deck-to-deck spacing: there is a good deal of equipment, such as structural members, power and control conduits, artificial gravity and life-support systems, ductwork and piping, not to mention the deck plating itself, that must be placed between decks. If we assume that this equipment takes up anywhere from 15cm to 45cm, this gives an overhead clearance of 1.85 meters for low-tech ships up to 3 meters in some areas of high-tech ships.*

will not fit, and the task may not be re-tried unless the cargo is modified to make it more likely to fit.

Fittings and Features

Just like the main areas of the ship, the fittings and features of the cargo hold itself will vary with the technology level of the starship. Use the following descriptions as a guide:

TL-9: Holds will have limited lighting and little or no air circulation – but at least there is pressure, although the temperature may vary widely. Ceilings and bulkheads will be unfinished, with visible structural members, equipment, conduits, pipes, ductwork, and fittings. Cargo handling equipment is mechanical, and loading or unloading the entire cargo hold can take several crewmembers the better part of two days. No provision is made for over-height loads.

TL-10: Power drops are placed at intervals throughout the hold to allow the ship to provide electrical power to up to 10% of the containers in the hold. This allows containers to have individual environmental-support units that keep the contents at a specified pressure, temperature, and gravity regardless of conditions in the hold. Minor provisions are

made for loading over-height cargoes, but dealing with these types of loads remains difficult.

TL-11: Although physical conditions don't change significantly, gravitic cargo-handling equipment is now built into the ship's hold, which significantly improves the speed and ease of loading and unloading. Two crewmembers can now load or unload the entire cargo bay in less than a day.

TL-12: Starting at TL-12, cargo holds are designed to handle a limited amount of oversize freight, easing the difficulty of loading such cargoes. Cargo handling and power availability remains otherwise unchanged.

TL-13: The cargo hold remains unfinished, but improved power margins and air circulation in the hold allows it to provide electrical power to up to 20% of the containers in the hold. Increased automation of the gravitic cargo-handling equipment facilitates rapid loading and unloading. A single crewmember can completely load or unload the cargo hold in a matter of hours.

TL-14: At high stellar technology levels, cargo holds receive easily replicable floor, ceiling, and bulkhead paneling made of a durable and resilient plastic for improved maintainability. The ability to handle over-sized cargo improves again, but cargo handling and the availability of power drops remain unchanged.

TL-15: At this TL, further improvements allow power drops to supply up to 30% of the containers in the hold. Cargo handling remains unchanged.

Cargo and Containers

There are two general types of goods in interstellar transport: bulk and break-bulk. Bulk goods are transported unpackaged and in large quantity: grains, minerals, ores, fuels, cement, and chemicals. They are usually transported by purpose-designed bulk carrier or tanker starships. Small commercial starships typically carry break-bulk cargoes, such as

trade goods, media, and manufactured items: anything from toys to tools and computers to handcrafts. The vast majority – over 90% – of break-bulk goods is shipped in a standard cargo container. Small quantities of bulk cargoes may also be shipped in containers. Most of the rest are deck cargoes – the general term for any large item that is secured in the hold. Vehicles, machinery, and other items that are too large to fit in a container are typically shipped as deck cargo.

Present-day Terran containers are based on a standard 20' intermodal container that is 8' 6" (2.591m) high, 8' 0" (2.438m) wide, and 19' 10.5" (6.058m) long. These exterior dimensions make it about 2.9 dtons, and it can hold 33.1m3 of cargo (2.346 dtons). Standard containers come in 20' and 40' lengths, and also in "high-cube" variants that are 9' 6" (2.896m) tall and either 40' or 45' long. These dimensions are slightly inconvenient for our 1.5-meter floor grid, since the containers don't line up exactly.

> ### Displacement Tons
>
> *The Traveller displacement ton, or "dton" for short, is based on the volume of a metric ton (1000kg) of liquid hydrogen. Liquid hydrogen has a density of 70.85kg/m3, which works out to a volume of 14.11m3 per ton. Sources such as CT Supplement 7 and Traveller[5] tell us that in Traveller, a ton of hydrogen fuel occupies 13.5m³. This figure is easily achievable with slush hydrogen. Slush hydrogen, a combination of liquid and frozen hydrogen, can be as dense as 85kg/m³, resulting in a volumes as low as 11.76m³ per metric ton.*

Imperial Containers

A more convenient size might be 2.6m high, 3m wide, and 6m long — this would occupy 8 deck grid squares, and fill the space from floor to ceiling while leaving enough space to support another deck above. This would be a "4-ton" container, not because it has a 4-ton capacity or is 4 dtons itself, but because it occupies 4 displacement tons worth of space in a ship's cargo hold. The container is actually about 3.3 dtons, and can store about 2.66 dtons or

37.53m³ of cargo. These dimensions are the basis for a range of standardized containers:

4-Ton Standard Container: A standard interstellar shipping container, 3m wide, 6m long, and 2.6m high. It occupies 8 deck grid squares and 4 tons of capacity in a ship's cargo hold, and accommodates 37.53m³ (2.66 dtons) of goods.

8-Ton Standard Container: A double-size container, 3m wide, 12m long, and 2.6m high. It occupies 16 deck grid squares and 8 tons of capacity in a ship's cargo hold, and accommodates 76.54m³ (5.42 dtons) of goods.

8-Ton High-Cube Container: A high-capacity interstellar shipping container, 3m wide, 12m long, and 2.9m high. It occupies 16 deck grid squares and 8 tons of capacity in a ship's cargo hold, and accommodates 85.38m³ (6.05 dtons) of goods.

9-Ton High-Cube Container: An extra-long, high-capacity container, 3m wide, 13.5m long, and 2.9m high. It occupies 18 deck grid squares and 9 tons of capacity in a ship's cargo hold, and can contain 97.63m³ (6.92 dtons) of goods.

All containers have 8 twist-lock fastener sockets, one on each corner, so they can be secured in a cargo hold or stacked on other containers. The 9-ton high-cube has a second set of sockets 0.75m from each end so that it can be fastened to standard-length containers. Larger containers are used for less-dense items, since all containers are limited to a maximum of 32,000kg. Multiple container designs are available in the standard sizes, including box containers for general goods, tank containers, refrigerated containers for perishables, bins for bulk solids, as well as frames and pallets for a wide variety of unique or irregularly shaped objects.

Container Freight

Shipping rates for freight are based on the nominal size of the container, so the 2.66 tons of goods inside a "4-ton" container would get billed at the

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Traditional Vilani Length Measures

Few Terrans are aware of the traditional Vilani units of length, because the Third Imperium uses the Terran SI ("metric") system. The Second Imperium officially imposed the SI system on all worlds, but adoption varied in practice. Unofficial use of traditional Vilani units has continued on many worlds with a Vilani cultural heritage, even into the Third Imperium.

The primary unit of length on Vland was the ashesh *(commonly translated as "pace" or "stride" in Galanglic). In antiquity, this distance was based on an adult woman's walking pace, and measurements could vary considerably depending on whose stride was used. It was eventually standardized around 11,000 years ago at the 47th semi-annual meeting of the Grand Committee to Promote Uniform Weights and Measures for Trade at a length of 750.47mm by current Imperial measures. Traditional measurements of short distances are based on a* shiashesh *("half-pace", commonly but incorrectly translated as "Vilani cubit"), which was then broken down into 4 "hands". Each hand was further subdivided into 4 "fingers". Traditional measurement of longer distances is based on multiples of the* ashesh, *with the* giashesh *("double-pace", sometimes called a "Vilani fathom") as the starting point. Larger units included 10, 100, and 1000 of these double-paces, though only the largest of these, the* milakha *or "Vilani mile", was used frequently.*

Unit	Translation	Measure	Equivalent
Ugish	Finger, "Vilani inch"	¼ *ushalar*	2.34cm, 0.923 in
Ushalar	Hand	¼ *shiashesh*	9.375cm, 3.69 in
Shiashesh	Half-pace, "Vilani cubit"	½ *ashesh*	37.5cm, 1.23 ft
Ashesh	Pace, "Vilani yard"	basic unit	0.75m
Giashesh	Double-pace, "Vilani fathom"	2 *ashesh*	1.50m
Milakha	"Vilani mile"	1000 *giashesh*	1500m, 0.93 mi

Despite Imperial standardization on SI units, the Vilani ashesh *lives on in two significant ways:*

When the 531st semi-annual meeting of the Grand Committee to Promote Uniform Weights and Measures, Establish Standards for Intercontinental Trade and Improve Transportation Efficiency standardized intermodal container sizes on Vland, they established 4 ashesh *as the width for transport containers. This was practical because early Vilani roads were typically wider than ancient Terran roads, since the riding beasts of Vland were larger than horses or oxen (see* Vilani and Vargr, *p.17). This standard survives to this day as the 3-meter basic width for interstellar shipping containers in the Third Imperium.*

Secondly, Vilani dwellings were typically measured in giashesh, *so building and starship interiors often have a 1-*giashesh *grid superimposed on them to provide an easy and convenient sense of scale.*

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rate for 4 tons of freight. Larger containers, and particularly the high-cube containers made possible by

Doing It My Way

the more generous space allocations in high-tech ships, offer a better value.

As the hold is loaded, the cargo officer must ensure that the hold is packed efficiently, loads are secured firmly, the mass of the load is distributed evenly, and that sufficient space remains for access to the hold. At minimum, a 1.5m corridor should remain clear to link all of the iris valves, hatches, or airlocks that open into the cargo hold. As goods arrive for shipment, the cargo officer enters them into a manifest maintained by the ship's computer. The computer then calculates the optimum loading for the hold based on size, mass, and destination. Shipments that arrive late can change the loading plan, forcing the ship to unload and re-pack some or all of the items already stowed. ✪

Oddball Containers

Starships may of encounter a number of non-standard container sizes in and around the Third Imperium. Any of these can pose a challenge to starship crews, as they attempt to efficiently load their cargo bays. Selected unusual containers include:

A "cube" or half-container that is 3m square and 2.6m tall. This container occupies 4 deck squares and 2 tons of cargo capacity.

Unusually long or tall containers are often used to ship products that will not fit in standard containers, and may need a hold that will accept oversize cargo.

Scout Service "shorty" containers used for mail and equipment; they occupy the same area as a standard 4-ton unit, but are only 2.25 meters high.

Containers based on the old Terran standards are sometimes encountered in the Solomani Rim. These containers can be difficult to secure to Imperial-standard tie-downs, due to the different spacing.

Near Vland, shippers sometimes use Vilani cargo pods. They are 3m wide, 3m tall, and come in 4.5m, 6m, and 7.5m lengths – corresponding to 3-ton, 6-ton, and 9-ton sizes. These containers require a hold that can accommodate oversize cargo.

In A Store Near You   The Gun Shop

GeDeCo Suram Rifle

by Benedikt Schwarz

The Suram rifle is something of an oddity: a deliberately low-tech weapon manufactured using high technology. The General Development Corporation operating in the Trojan Reach created the rifle for use on underdeveloped worlds where high- or medium-technology ammunition and maintenance utilities may be scarce. There are whole ranges of GeDeCo goods that work on the same basic principle: high-tech manufactured gadgets that are sturdy and serviceable, and can be maintained and repaired with local materials at a much lower technology level than they were produced at.

As such, the Suram is either sold to low-TL barbarian tribes of the Reach as part of GeDeCo's development programme, or issued to operatives or settlers on frontier worlds. It has been very success-

ful in all these roles, and pirated copies have made their way into the Spinward Marches, where they are found on low-tech worlds or in self-sufficient enclaves.
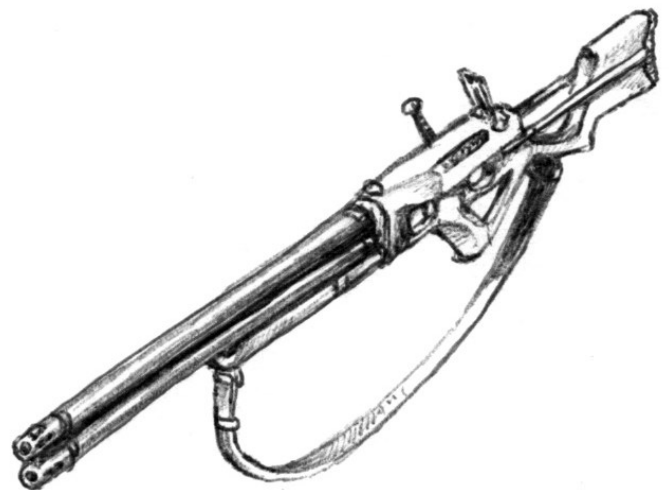
Use and Effect

The Suram is a rugged breechloading gun with two long rifled barrels in an over-and-under configuration. It is loaded much like an ancient cap-and-ball revolver; the chamber is filled with gunpowder, and a round bullet made from zinc or lead inserted. A lever is pulled to work a loading ram that compresses the powder and primes the chamber. When the trigger is pulled, the hammer strikes a shaped piece of flint against a grooved iron surface, igniting the powder and triggering the shot. The firer may choose to fire only one barrel or both at the same time; if both are triggered simultaneously, a single attack roll is made, with a -1 modifier, but if successful, the target is hit two times.

Ammunition may be carried in sturdy waterproof wax-paper cartridges that hold the correct amount of powder and a bullet each. The cartridge is ripped open for use, and acts as a funnel to pour the powder into the breech.

Ready-made cartridges containing high-quality, finely ground powder and precision-forged sintered zinc-alloy ball can be obtained from GeDeCo outlets, but the prime advantage of the rifle is that ammunition can be easily manufactured even in outlying communities. Simple black powder can be mixed from two parts charcoal, three parts sulphur and thirteen to fifteen parts saltpeter, all of which are readily obtainable even in primitive societies. Similarly, suitable bullets may be made from any soft metal, preferrably lead, tin, zinc, or copper; casting tongs for the correct caliber are supplied with the rifle and fit neatly into a bracket in the gun's stock.

Homemade ammunition will yield very different results from batch to batch, depending on the quality of the basic ingredients, how finely ground and pure the powder is, and the specific weight of the ball's material. A shooter using homemade cartridges will be at -1 to all shots until xe has zeroed the rifle with a few (1D6) trial shots (on a successful ROUTINE, Gun combat/slug, UNCERTAIN, SAFE check). Every new batch of ammunition needs to be zeroed again, as each may behave differently from the last batch.

Any of the Suram's parts, if damaged or worn out, can be replaced or repaired at TL 2 (approximately the early Terran Renaissance age) using local materials, although the gun's performance may decrease somewhat – it is not possible for a low-technology gunsmith to match GeDeCo's original exacting tolerances. The result is usually workable, though. It is not unusual to see a Suram with its barrels replaced by locally-made smoothbores, or sporting a replacement stock inlaid with ivory and decorated with tribal patterns.

The Suram rifle in use

When it is introduced to primitive cultures, the Suram is usually superior to the local weapons and becomes a prestige weapon carried by chieftains, champions or the retinues of kings. In societies where hunting is important, it is usually the chief hunters that are issued the rifle. In most cases, this period is followed by a phase of rapid technological advancement as local gunsmiths start copying the principle and experimenting with the gun – which is exactly what GeDeCo intends. The rifle is high-tech enough to trigger the natives' curiosity as to the underlying principles of its manufacture, but low enough on the technological scale not to induce cultural shock.

The rifle's breechloading mechanism and lever-action loading ram make it possible to reload without standing up, which places it at a definite advantage over muzzle-loading TL2 and 3 muskets. Its range is also significantly greater, and the folding range-scaled iron sights ensure that a trained soldier is able to exploit this characteristic to the fullest. The rifle's superiority usually enables a nation or city-state equipped with it to quickly surpass or conquer

its neighbours. GeDeCo routinely sells the rifles to those tribes and nations whose rulers are favourable to trade and contact, to give them an advantage over hostile or isolationistic neighbours.

In this way, the company sows the seeds of technological progress and ensures that those states favouring interstellar trade are also the most influential on the planet. At the same time, the rifles are still very much inferior to automatic weapons or laser rifles, so if a ruler backed by GeDeCo turns out to be a bad choice, xe can still be easily defeated by mercenary troops in the company's employ.

Being easy to use and very robust, Surams tend to stay in circulation long after the society has pro-

gressed to a higher technological level; even after a planet's equivalent of the Industrial Revolution, rural communities and the planet's Third World regions may still have a Suram knockoff in every hut.

Settlers on newly colonised planets also favour the Suram as a hunting rifle, because of its rugged reliability and its independence from external supplies. This has created a "secondary market" of explorers, settlers and frontiersmen. The Suram's success in these circles prompted the Imperial Scout Service to commission the Scout Carbine from GeDeCo, which shares many parts and operates on a similar principle (to be covered in a later article).✪

	TL	Range	Damage	Mass	Cost	Magazine	Magazine cost	Task
Suram rifle	10	150 m	3D	5 kg	Cr 300	2	Cr 5	ROUTINE (6+) Gun combat (slug) check to reload
using poor homemade ammunition	10	100 m	3D-3	5 kg	n/a	2	Cr 5	ROUTINE (6+) Gun combat (slug) check to reload
w/ shortened barrels	10	100 m	3D	4 kg	n/a	2	Cr 5	ROUTINE (6+) Gun combat (slug) check to reload
shortened barrels and poor ammunition	10	75 m	3D-3	4 kg	n/a	2	Cr 5	ROUTINE (6+) Gun combat (slug) check to reload
w/ homemade smoothbore barrels	2	75 m	3D	5 kg	n/a	2	Cr 5	ROUTINE (6+) Gun combat (slug) check to reload -1 to shooting

Critics' Corner

Ships of Clement Sector 4-6:
Traders, Scouts, and Small Craft

reviewed by "kafka"

There are only so many ways that one can review a book of deckplans and ship drawings… however, I am happy to report that GKG keeps on improving their product line, especially, when it comes to renders of ships. Not only do we get a diverse array of ships that can be transported into any *Traveller* universe, but we get an interesting array of

ships with some of the best ship illustrations that one has seen in *Traveller* in a long time (well, not since the dawn of the initial Mongoose rulebook). The illustrations approach that of anime paradigm (which represents the Gold Standard for vehicle illustrations in SFRPGs). If there is a drawback is that they follow the traditional Traveller grid-paper pattern rather than super-sleek 3D renderings that more contemporary deckplans follow. The ships are interesting and varied – however – as the title suggests – these are small ships, not Capital ships, in keeping with the Clement Sector ATU. My problem is that I do like Capital Ships, but, nor do I need to see pages filled large fuel holding compartments or empty cargo holds.

Scattered throughout there is purple prose that gives a deeper feel for the ship. However, these come in the form of many voices. One thing that has been absent in *Traveller* products since DGP's *Starship Operator's Guide* has been the voice of an "Old Timer" and a detailed rendering of starship interiors. Now, I realize that is a well-nigh impossible task, as individual starships – particularly small ships would vary quite widely as one house would not resemble another home's interiors even if built by the same builder in a subdivision. And, that customization would fill a book with lots of jarring images. However, it still might be useful to have more individualized voices, in which, we chart the perspective of different shipboard "careers" (engineers, pilots, medics, etc.) as they talk about different aspects of "their" ship.

Rounding things out might be some of the interesting personalities that operate these ships – both NPCs and the innovation that the Serenity RPG introduced – the ships themselves. And, given that
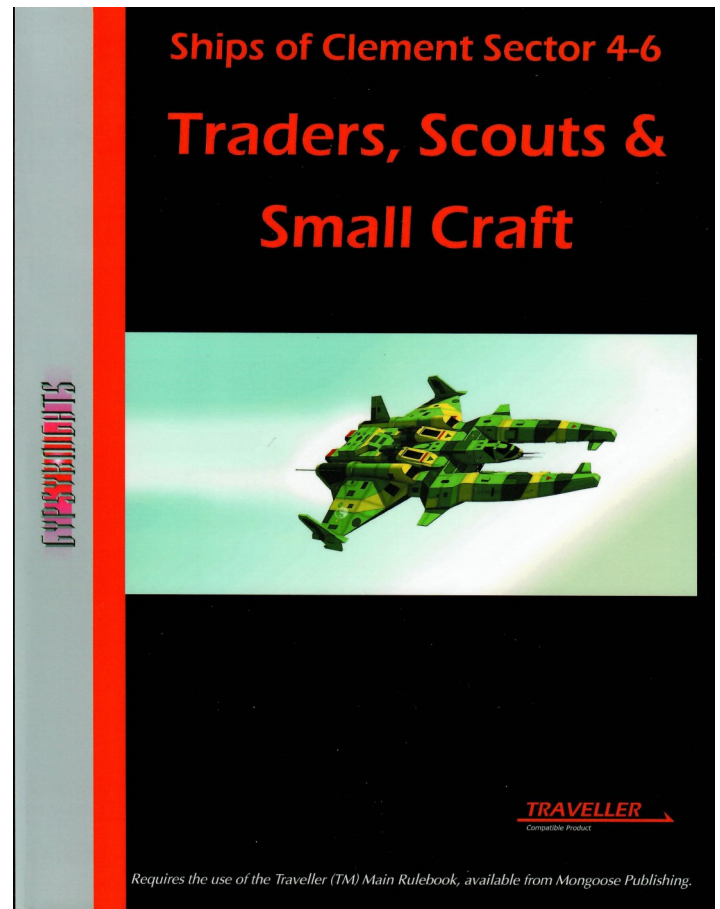
these are mass produced starships what differentiates and sample customizations. All too often, we have seen starships just merely rendered as vehicles, but *Traveller* implies that they are something else – they are also a surrogate home. Even if there is a homeport, Starships and Characters grow together almost organically and to date – I have not seen a *Traveller* product that addresses that.

I was very pleasantly surprised by this volume. I had expected mundane ships with more banal deckplans. What I found was a worthy addition to my *Traveller* collection. GKG continues to blaze ahead and create new content for their *Traveller* universe that makes them akin to another small press that has gone down in *Traveller* lore – the above mentioned DGP. GKG, job very well done.   ✪

Unfixed

by Bill Cameron

This adventure was originally posted to the pre-magazine Freelance Traveller website in 2003.

Synopsis

When faced with a 'fixed' boxing match and the heavy bookmaking losses that would result, an odds maker approaches the PCs for help in 'un-fixing' the fight.

Players' Information

While hanging around the star town and finding themselves with a few days of free time, the PCs are approached one afternoon by an acquaintance who asks if they might like to earn a little extra money for hardly any work. If the PCs indicate that they are open to the idea of earning some extra lucre, their acquaintance says he would like to introduce them to friend of his. The PCs are then lead to a table at a fashionable cafe and introduced to a Mr. Bhushan Lis.

Mr. Lis is a nattily attired fellow of considerable charm and excellent manners. After being introduced, he will immediately do his best to put the PCs at ease. The waiters will be very attentive to Mr. Lis' needs. They will take the party's orders rapidly and return with whatever was ordered even more quickly. Once the drink and canapes have arrived, Mr. Lis will turn to business.

He will politely ask about the PCs' backgrounds, never prying and seemingly happy with the most general information or responses. He will be particularly interested in any 'extracurricular' jobs the PCs may have had in the past, especially those in which the PCs had to deal with people in a variety of less than perfect situations. He will also try and determine if the PCs can handle themselves in potentially 'dicey' situations.

The conversation with Mr. Lis will not in any manner seem like an interrogation. The tone of the conversation will be light, and Mr. Lis' manner will be decidedly 'formally informal'. No matter how guarded or wary the PCs behave, Mr. Lis should remain pleasantly genial though out the meeting.

Once the canapes and a round or two of drinks have been consumed (or not, depending on how paranoid the PCs are), Mr. Lis will take his leave. He will pronounce himself very satisfied with the conversation. However, he will state that he needs to think things over before hiring the PCs for the 'little task' he has in mind and he hopes the PCs will understand.

Mr. Lis will suggest they all meet at this cafe sometime this evening, agreeing to whatever time the PCs decide on. Pulling a large roll of cash out of his coat pocket, he will first pay the café's check, leaving a tip well above the cost of the food and drink, and then count out 100 CrImps per player in large denominations bills for the 'PCs' time'. Before leaving, he will also present each PC with an engraved business card and suggest that they 'ask around' about him before they meet that evening. Mr. Lis will then bid the PCs good day and take his leave with the PCs' acquaintance.

If the PCs follow or shadow Mr. Lis and their friend, they will notice Mr. Lis handing over a sum of money to their acquaintance before leaving in a taxi. Following the taxi will prove fruitless.

Mr. Lis' card will be of obvious high quality. The card will have *Bhushan Lis - Consultant* engraved on one side and the day's date written on the back.

'Asking around' about Bhushan Lis before their next meeting should now be the PCs main concern. While getting information from their acquaintance who set up the meeting will be the first route many PCs would take, working the startown's 'street' will turn up information too.

As the PCs canvas and 'work the street' for information regarding Mr. Lis, they should become aware that someone is doing the same thing about information regarding them. That someone is Bhusan Lis.

By the time for their evening meeting with Bhusan Lis arrives, the PCs should be very intrigued to learn about just what sort of job this gentleman has in mind for them.

Background Information

Locally, betting is in a legal grey zone. While the region around the starport does not allow bookmaking or betting, it does allow local bettors to contact bookies and make bets in any region that does allow bookmaking. A number of bookie operations have been set up inside the starport's extrality line as a result. Physically, a bettor may be in the region that prohibits betting, but legally his bet was made 'at' the starport. The local authorities are well aware of this loophole but tolerate it as it prevents bookmaking from being a source of cash for organized crime.

Contrary to public belief, bookies do not make their money from people losing bets. Instead, bookies make their money on the 'vig' or interest they charge losing bettors. In an ideal situation, bookmakers want the wagers on either side of a contest or event to balance. They can then pay the winners with the losers' money and charge the losers interest to keep their accounts open. The desire of bookies for this 'balanced' betting leads them to offer 'odds' or 'lines' on all events.

Every event or contest will have a favorite, an individual or team that the public feels will win or prevail. When betting, the public will naturally place their wagers on the favorite. That's where odds and lines come into the picture. By offering to pay more on a given bet if an upset occurs, the bookmakers can lure more bets to be placed on the non-favorite in a contest and thus 'balance' the wagering.

Quite naturally, with all this emphasis on 'balancing' wagers, the odds or lines published for each event are critical and subject to change. As wagers are placed, bookies will monitor how balanced the betting remains. If the balance is off in some manner, the bookmakers will adjust the odds or lines to bring the wagering back into balance.

Referee's Information

Bhusan Lis is a well respected local odds maker. He does not operate any betting books or parlors, rather he consults with those who do take the 'action'. Using his skills and knowledge, he helps them set and adjust the odds for whatever contests and events they then take bets on. While Mr. Lis' business does bring him into contact with some of the less savory aspects of society, there are no hints of any impropriety on his part in any manner.

When the PCs and Mr. Lis meet again, both parties should be satisfied with what they have found out about the other. Before the PCs can ask him about it, Mr. Lis will admit that he had been 'asking around' about them during the afternoon. Just as in the first meeting, Mr. Lis will order food and drinks and await their being served before discussing any business. He will engage in the same polite and genial small talk as he did earlier. After everyone is settled in and has been served, Mr. Lis will place a handbill on the table and tap it with a well manicured forefinger. This is the little job he would like to hire the PCs to help him with.

The handbill, or flyer, is an announcement of a boxing smoker to be held two nights from now. The preliminary matches, or undercard, lists the usual assortment of tomato cans beating each others' heads in for the paying public. The marquee match-up involves two much more well known fighters; Gamel "Kid" Kamehameha and Niko Broz, the "Battling Belter". Mr. Lis indicates that he has a professional interest in this particular boxing match.

Active Measures

It seems that Mr. Lis calculated the odds for this boxing match; given both fighters' records, the "Kid" is very much an underdog. Several of Mr. Lis' clients then used those odds in their bookmaking operations. Once the books were open for this fight, the bookmakers noticed something unsettling: too many people were betting on the "Kid". The bookies then adjusted the odds several times to try and bring the wagering back into balance, but money continued to be bet on "Kid" Kamehameha.

The bookmakers contacted Mr. Lis about this and strongly questioned the rationale behind his original odds. Eager to protect his professional reputation, Mr. Lis assured his clients of his original estimate and promised them he would look into the matter. After spreading around quite a bit of money and calling in quite a few personal favors, Mr. Lis discovered that the fight has been fixed. Someone has paid Broz to throw the fight and news of this reached enough ears to upset the normal flow of wagering.

Normally in this case, the bookmakers would immediately close the book on the fight in question and return all the moneys wagered. However, Mr. Lis also uncovered some information that convinced him he would be able to 'unfix' the fight; he believes this new information can be used to persuade Niko Broz not to throw the boxing match. With that in mind, Mr. Lis has counseled his clients not to close their books on the now 'unfixed' fight.

Mr. Lis would like to hire the PCs to speak with Niko Broz regarding both the upcoming fight and the new information Mr. Lis has uncovered. He would also like the PCs to spread the word around the port and town that the upcoming boxing match is not 'fixed'. He is willing to pay the PCs 350 CrImps each to do this, plus an additional few hundred as 'walking around' money that the group can use to spread the news. The PCs can negotiate with him and he will go as high as 500 CrImps. However, if the PCs hold out or haggle for more, Mr. Lis will thank them for their time, pick up the café's check, and leave.

If the PCs accept the job, Mr. Lis will pay them on the spot from his large bank roll and throw a few extra hundred in 'walking around' money. Mr. Lis will then pass over an envelope. Inside are tickets to the boxing smoker, a list of addresses where Niko Broz can be found, and a piece of paper with the name 'Giacomo DePeyster', the phrase 'Edam Neckties', and the word 'extradition'. Those cryptic facts are the information Mr. Lis wishes transmitted to Niko Broz.

Mr. Lis will recommend that they 'remind' Niko Broz of the facts three or more times before the boxing match. He points out that Broz is most likely at the gym listed among the addresses right now. Mr. Lis wraps up the meeting by wishing the PCs well and remarks that he will see them at the fight. He also intimates that, if things go well, there may be a bonus in it for the PCs. With that, Mr. Lis will pick up the check and leave the PCs to their work.

The initial approach to Broz, who is after all a boxer, should be handled circumspectly. Simply waltzing up to him as a group in a public venue and shouting Mr. Lis' information will hardly get the job done. Broz should be taken aside by one or more PCs, with the others nearby, and spoken to gently. Presenting Mr. Lis' information in friendly terms will help things go smoothly.

Broz will be quite interested in the information. He will question the PCs about it, trying to determine what they know and how they know it. The PCs should keep things simple, merely repeating the three facts and suggesting that throwing the boxing match may not be a good idea.

Ideally, Broz should be first approached as soon as possible after the PCs' meeting with Mr. Lis. If the PCs put off approaching Broz for whatever reason, a

message from Mr. Lis will reach them asking why the approach has not been made. After the first approach, keeping tabs on Broz and reminding him of the facts should be easy. The two days before the fight, Broz will usually be found either at the rooming house where he lives or at the gym where he trains. The other addresses found in Mr. Lis' envelope include a diner Broz frequents and a cabaret Broz enjoys.

Spreading the news about the now 'un-fixed' boxing match should be even easier for the PCs. All they need to do is spend two days visiting their usual and not so usual haunts chatting with anyone who cares to listen. Mr. Lis' money will provide them with the wherewithal to carouse to their hearts' content. Crafty PCs may even use part of their pay to place a bet on the fight!

The night of the fight the PCs will find themselves enjoying ringside seats courtesy of their patron. Mr. Lis will be seated nearby with the port's chief constable as his guest. The PCs will undoubtedly notice Bhusan Lis introduce the chief to Broz before the fight. If the PCs did their job well and Niko Broz took the information to heart, the boxing match between the "Kid" and the "Battling Belter" should be one for the ages.

Possible Complications

1. Niko Broz is losing the fight. If the PCs were conscientious in their work, Mr. Lis will not hold them responsible. If they shirked their job, Mr. Lis will be displeased. Either way, he will send the PCs a note suggesting that they do something. Realizing that they are ringside, savvy PCs will heckle and taunt Broz. Shouts of 'extradition' and the all other bits should bring Broz back in fighting form rather quickly.

2. Niko Broz loses the fight. He either slipped on a banana peel, the "Kid" got in a lucky punch, or Broz decided not to heed the PCs' warnings. As

in 1 above, Mr. Lis' reaction will depend on how conscientiously the PCs performed their job.

Broz will be arrested after the fight on unspecified charges and held for extradition to an unspecified location.

3. After being first approached with the information, Niko Broz asks the PCs for help. The person(s) who originally paid him to throw the fight will be angry if he goes back on the deal. Broz fears for his life if he doesn't throw the fight, but he cannot risk Mr. Lis' information about him being given to certain parties. Broz will beg the PCs for help in solving the mess he finds himself in.

The PCs could help Broz 'disappear' after the fight, speak to the original fixers about the matter, or try and guard him from any unpleasantness. Smart PCs may think of approaching Mr. Lis for assistance with Broz's problem. Mr. Lis will gladly help, only if Broz first boxes in the scheduled match.

4. Niko Broz disappears before the fight. After being approached by the PCs, Broz sets out for parts unknown. His disappearance will be cause for few inquiries in official circles, but other parties will take a great interest in Broz' absence. Seeing as the PCs were observed talking to him recently, those other parties will want to talk with the PCs.

While the books had to be closed on the fight and all wagers returned, Mr. Lis and his clients will be satisfied with the outcome.

5. Niko Broz is found dead either before or after the fight. As with 4 above, the PCs' private chats with Broz will be of great interest either to the authorities or other, more private, individuals.

The manner in which Broz is murdered, the PCs' alibis, and any other factors should be determined by the referee for the type of effect she wants. Are the PCs prime suspects or merely

Active Measures

witnesses to be interviewed? Will the authorities and the other interested parties believe the PCs' testimony?

As a respectable and low profile citizen, Mr. Lis may be reticent to admit any involvement with the PCs.

6. There was no fix at all. Either someone spread a rumor to queer the fight's odds and that rumor took on a life of its own, or unknown parties decided on a course of action to besmirch Mr. Lis' reputation with his clients, or someone is engaged in an elaborate con, or whatever other explanation the referee develops, it all doesn't matter. Broz was never paid to throw the fight and knows nothing about the information the PCs' approach him with.

The PCs actions; seeking to speak privately with Broz and then passing along gibberish, will seem very odd in certain quarters. Broz, his handlers, or the smoker's organizers may all become interested in the PCs and their behavior. The PCs may be approached by those interested parties or they simply may be reported to the authorities. Either way, as in 5 above, Mr. Lis will be reticent to admit any involvement with the PCs or their work.

Resolution and Conclusion

However this adventure plays out, the PCs will have a chance to flex their carousing and streetwise muscles instead of their trigger fingers. The PCs may find themselves earning some easy pocket money while enjoying the sights and sounds of the starport or they may find themselves deeply involved or even implicated in a murder investigation.

Depending on how well the PCs handle the job they were hired for, Mr. Bhusan Lis and his 'odd' occupation could make for an interesting and recurring patron or an interesting and recurring irritation. The unknown person(s) the PCs prevent from fixing the boxing match may prove to be trouble also. However the fight turns out and whatever his role it in, Niko Broz will be interested in the PCs too. ✪

Less Dangerous Game

Kellika

by Benedikt Schwarz

This flying creature has grown into a dangerous nuisance throughout the whole Spinward Marches. It originated on one of the border worlds of the Zhodani Consulate and spread to the Imperium during a time of relative peace and mutual trade. For a period of time it was believed in the Marches that kellika were deliberately spread to Imperial worlds along the border as part of a Zhodani plot. The rumour is still around and takes its own time to die down, although it has since been proven that the sudden spread was due to egg-clutches travelling undetected on the undersides of cargo pallets and containers in the holds of free traders. Kellika proved to be highly adaptable to new environments, and have successfully carved themselves (no pun intended) niches in a wide variety of ecosystems.

The original name for the kellika is "qliap", a Zdetl word meaning a curved knife used in harvesting. "Kellika" is surmised to be a mispronounciation of this. Other common terms are "clipper" (again a rendering of the original Zdetl word), "sabrewing", "axebird" or "slasher", referring to the creature's usual mode of attack.

Although their body structure is similar to a bird's or bat's, their behaviour, intelligence and breeding habits are more similar to insects. Kellika are classic *r*-strategists, producing a high number of

offspring with a limited lifespan, and little energy is expended increasing the survivability of the individual, especially in terms of intelligence.

Mottled gray, tan or brown, a sabrewing's hue reflects the dominant colour of the environment it lived in as a nymph. The belly and sinuous neck are somewhat lighter than the dorsal region. The hind legs are very short, barely more than short hooks able to grip a branch or rock for perching. If forced to move around on the ground, a kellika uses an awkward slow waddle or short hops assisted by the wings. The head has a prominent, hard, curved beak, and adults also sport a large axe-like crest on top of their heads. Actually, this is composed of a spongy substance that cushions the head and especially the eyes from collisions if the kellika misjudges the distance or hits a harder target than intended.

A kellika's leathery wings have a span of 80-100cm. Like the inner skeleton, the edges of the wings are made of lightweight silicates, providing a rigid, blade-like edge with which the creature strikes its prey. Attacks are made from overhead, with the kellika dropping down, catching itself at the last instant and striking with one or both wings before circling upwards again. Without favourable updraughts, it takes about three rounds to gain enough height between strikes.

Kellika have no real social structure or cohesion, but while circling for prey will seek out the vicinity of other visible kellika. A typical proto-swarm is made up of ten to twenty individuals, but in times of frenzied hatching (see below), swarms comprise over a hundred adult kellika each.

Adult sabrewings will attack anything that moves on the ground regardless of size, dropping down in waves and striking again and again until the prey is dead. They cannot distinguish between animate and inanimate objects – their brains are a single and none-too-complex central ganglion running down the length of their bodies – and will

ANIMAL	HITS	SPEED
Kellika	(N)2 (A)8	20m
SKILLS	(N)Recon-1 (A)Brawling/Wing Slash-2	
ATTACKS	Flee on (N)8- (A)3-; Attack on (N)10+ (A)5+; Wing Slash (N)1D-2 (A)1D	
TRAITS	Small (-2); Fast Metabolism (+2 to Initiative); Flyer	
BEHAVIOUR	(N)Scavenger/Hijacker (A)Carnivore/Killer	
NOTE	(N) for Nymph phase; (A) for Adult phase	

Morphology	Bilateral symmetry, tetrapod (four-limbed), biped (two very short hind limbs used for grasping, sitting and limited locomotion), winged (two winged forelimbs)
Biochemistry	C, H, O, N, P, S; broadly compatible with humanity; high Si_xO_y compounds
Respiration	Oxygen-nitrogen inhalant, Carbon dioxide exhalant
Ecology	Diurnal (active during the day)
Habitat	Open areas, steppes, deserts, hills, mountain ranges
Diet and Trophics	Scavenger/hijacker (in nymph phase), carnivore/killer (in adult phase), exothermic (cold-blooded)
Reproduction	One gender, conjugal intercourse, oviparous birth (laying a clutch of about forty hard black eggs), semelparous (reproducing only once a lifetime). Progeny are not cared for. (*r*-strategist)
Lifecycle and ontogeny	One month as a nymph, moulting / gestation, two months as an adult. Dies after egg-laying.

attack cars, tumbleweeds or drifting logs with the same abandon as they do live prey. They cannot hurt a closed vehicle, other than a lucky hit shaving off an antenna or cracking a window pane, and if striking a hard surface like a car roof a swooping kellika takes 1D damage itself. Large swarms of sabrewings have been seen to dash themselves to death on armoured vehicles. The swarm will immediately veer off if the prey manages to get out of sight (burrowing in the sand, taking shelter or entering a ditch).

Larger groups of objects moving together in cohesion are seldom attacked, but straying from a trav-

(Continued from page 23)

elling party while shadowed by a flock of kellika will immediately draw an attack.

In flight, the creatures are very difficult to hit unless with a laser weapon or shotgun; all other weapons get a -4 modifier to hit a flying kellika. Hand weapons can be used to hit a swooping kellika, but this requires a DIFFICULT dexterity check first, and if the check is failed, the creature will hit automatically. On particularly infested worlds, sand-filled shells are available for shotguns and grenade launchers, which can punch a hole in a swarm 1-3 (shotgun) or 1-6 (grenade launcher) creatures wide but will not harm humans (other than a nasty bruise for point-blank hits) if they are wearing jack or better and have their faces covered.

While very nimble in an attack on ground targets, sabrewings are nearly defenseless against flying predators; they have a -3 modifier to hit a flying creature. Along the border, a common tactic against kellika is the release of flying raptors such as skestri-als or kites into the wild, which tend to make short work of the pests.

After a successful period of kills and feeding, kellika mate by injecting each other with a spermatophore, which each individual then uses to fertilise a clutch of about forty eggs. The eggs are laid in a single cluster in an enclosed, dark space – usually a rocky crag, but the undersides of overhanging roofs or cargo pallets are modern favourite places. After egg-laying, the adult ceases eating and will die within a week. Eggs are rather robust and can stand hard vacuum and extremes of temperature up to 200° C for a short while. They can lie dormant for up to twenty years until the environment is favourable for hatching. If the climate is unfavourable, few of the egg-clutches hatch. If this happens for several years in a row, a single mild spring can result in a sudden hemisphere-wide mass swarming that can be very dangerous to anyone travelling in the countryside.

The young are smaller versions of adults, lacking the distinctive axehead-shaped crest. They are harmless at this stage, living as scavengers and feeding on carrion and dirt or sand (for the necessary skeletal silicates) until they moult into imagos (adults). Only one of thirty survives to adulthood in any environment where there are other predators present.

Adventure Seeds

1. The travellers are moving cross-country in an ATV and come under kellika attack. The swarm dashes itself to death on the vehicle, and after several tense minutes in the closed vehicle, everything is over. However, the creatures have managed to damage the radio antenna, and one or two have wedged themselves into the air filtration system. There will be no filtered air or radio contact until repairs are made – and another swarm is coming closer.

2. The travellers are expecting a courier, who is overdue. As they investigate, they come across his vehicle and xir flayed remains in the middle

of the road – xe stopped to attend a call of nature and was attacked by kellika. The creatures are still around, and the travellers need to go outside into a hail of slashing wings to retrieve the coded message cylinder from the body.

3. An outlying colony experiences a mass swarming of sabrewings. Children have been attacked in the street, and the city seeks volunteers who go outside with improvised protective suits and sandblast shotguns to cull the swarms.

4. The travellers took on board a batch of environmentally controlled cargo containers – with kellika egg-clutches sticking to their bottoms, which hatch during flight. The nymphs will not deliberately attack, but they are frantically zipping around the cargo hold. Travellers may get injured if they move around the hold, and delicate equipment will be damaged. Several cables are slashed, causing the temperature control on the containers to fluctuate. This may set a dangerous substance free or damage an important batch of vaccines for the destination planet. Not to mention that the authorities will order the ship quarantined until every air duct and crawlspace is scoured and every one of the kellika nymphs disposed of.

5. The travellers and their ship or air/raft are pressed into service in an infested area, to spread an enzyme which will damage the egg-clutches´ cellular membranes and keep them from hatching. The task is enormous: it is impossible to get the liquid into every nook and crevice from the air. Several caves will have to be investigated on foot and sprayed by hand. Sheltered in one of the caves, they find a family of five who weren't evacuated and now are very sick from getting exposed to the enzyme. They need to be taken to a hospital, but the authorities are adamant that the operation continue on schedule.

6. A visitor from the Consulate is abducted by a violently anti-Zho mob who subscribes to the rumour that the spreading of the kellika was part of a Zhodani invasion plan. They marooned xir in the middle of a sabrewing-infested wilderness "to give the dirty Zho a dose of xir own medicine". The travellers have to find xir before xe is flayed alive, or diplomatic affairs will take a rather frigid turn. The area is huge, and an aimless search could take weeks, so first they need to find one of the activists and get xir to talk where they left the Zhodani.

7. The travellers come across the remains of a dead prospector getting gnawed on by a flock of kellika nymphs. They will be able to shoo most of them away to get at the equipment belt the man was carrying, but a few of the nymphs are loathe to leave their food and will try to fend of the grasping hands with their sharp wings.

8. Travelling overland in an open-topped car, the travellers spot a flock of saberwings. Alone on the plain, their vehicle presents an inviting target. They have to take refuge in a herd of grazers and need to approach very carefully to avoid startling the animals.

9. The travellers explore a cave and discover thousands of hibernating egg-clutches. They need to find a way to mark the cave's exact location, as the next sandstorm will probably change the appearance of the terrain beyond recognition. If the cave cannot be found again, next summer could see a huge invasion of kellika as the eggs hatch.

10. Exiting a subterranean base or natural cave, the travellers find themselves eye to eye with a whole colony of hundreds of adult kellika roosting on the rocks around the cave´s mouth. They have to move very carefully (with several excruciating DEX checks) to avoid scaring up the saberwings, or they will take flight and cut the travellers to pieces.

Less Dangerous Game

11. As the travellers approach a hidden prospector camp, their air/raft triggers a proximity mine that scatters sand into the air (similar to the sand-filled bullets mentioned above, but on a much larger scale). Nobody is hurt, but the sand has clogged the exhausts, and they need to land and repair the damage. The mines were placed by the prospectors to protect the mining 'bots from kellika attack.

12. In a battle zone, the combatants have to hunker down in tunnels and bunkers for the day and can only come out to fight during the night, because of frequent kellika attacks in the daylight. One side's commander proposes a surprise day raid, which would involve constructing camouflage equipment or moving from cover to cover. The risk of falling prey to the kellika is high, but the enemy would be taken unawares. ✪

The Prep Room

Agents of Governance: Decoding Government from The Ground Up

by Cian Witheren

For most of us, the UWP is a glimpse of the grand scheme of a world, waiting to be fleshed out and adventures discovered. Occasionally, however, one hits a little snag. Most often, this snag is trying to turn these details into something the players can act upon. And frequently, this is the result of Top-Down Worldbuilding – painting in broad strokes and working downwards in layers of detail, like an artist working with oil paints. It even makes sense, building grand relationships between massive conglomerates of people that drive potential adventure in trickle-down tensions, giving a big picture to hang your plot on while details emerge as relevant.

But what if we didn't?

What if we built worlds from the bottom up, starting with the details the players need now? You, the Referee, might care that the king of this world is a mere figurehead who hands power to legal lobbyists financed by criminal strongmen. Do your players? Are they going to meet the king while they root around seedy bars, looking for a risk-averse patron with needs that overrule financial sense while their captain negotiates with a vaguely defined broker who sells slightly less vague goods? No. They're not. *Traveller* is a sandbox, shifting locations at a barely constrained whim, driven by the desires of the players and the goals of their characters. The top-down picture takes too long to build, lacking in details that are needed now instead of being anxiously brushed aside in a hurry as you scramble to extrapolate from the grand overview you wrote already. So, focus on the details the players need, starting from a street-level framework and building higher as they chose to delve deeper into a world. Build a world, from the ground they start on, up to the heights they might turn their eyes to.

Government, and how it affects the players outside of Law Level, has long been a stumbling block in top-down worldbuilding. Extrapolating an entire government from a single generic description and a terse explanation, then taking it down to "what does this mean for the party?" strains the mind, most especially in how one defines "Ruling Functions". Instead, view Government from the position of action: it doesn't matter who *sets* the policy, it matters who *enacts* it. The Ruling Functions, or the Functions of Government, are the services it provides. When the common person needs something from the government, who is

it that they deal with? Who are these people, these hands of political will? How are they selected, what structure do they operate under, what is their relationship with their superiors and the population? Who are these Agents of Governance, and how do they operate?

The idea of the government code describing the common civil servant can make worldbuilding much easier, especially when a location might be abandoned in a single session. The relationship between a petitioner and the gatekeepers of government services is easily defined, as is the structure they operate in. It is these people, and these structures, that the players might have to navigate in the course of ordinary events, much less the extraordinary ones. In this context, only a few of the government codes require more work to interpret, as they can very easily describe a top-down view.

Of course, one must remember that the UWP is a starting point for the imagination. Nothing prevents the Referee from selecting the government (it is, according to the dice, impossible for a pop5 world to be ruled by a Religious Dictatorship, yet a cult can start a small colony), or combining governments (the USA, as an example, is a Pop8 sovereign planetary region (Gov7) ruled by Elected Representatives (Gov4) who direct departments of government employees (Gov8/9). Which does the average person interact with the most?). The Referee can even dig down into specific locations, creating the particular power structures and struggles the players will most likely run into (A Corporation [Gov1] seeks to subvert the publicly appointed police force [Gov2] complicated by the strongest local religion having more influence than either [Gov13]. Their agents come to blows in a bar. The one the players are in).

So, working from the bottom up, let's have a look at each government code (sticking to the original 13) in turn, alongside the population ranges it typically shows up in and their typical law level (up to Law

Level 10+). As a note, a few these require the context of an interstellar society. For a recently contacted world, or an isolated one, just skip past those codes. Furthermore, the fact that a government will tend to show up at a population level equal to itself shows a form of progression – the social situation evolves as more people are added.

Gov0 – *None (Pop1-5, LL0-5) (X)*: There is no government to work for, and there is no structure to provide services outside of negotiating with individuals. Absent membership in, or proximity to, some interstellar state, there might not even be a common currency. This is almost always a temporary (on the historical scale) state, as eventually the population creates a common structure for dealing with issues. Law Level indicates the presence and strength of a Social Contract – the common rules that individuals follow to avoid conflict with their neighbors.

Gov1 – *Corporate (Pop1-6. LL0-6) (CO)*: This can be top-down, indicating that the world, and its population, belong to an interstellar corporation, or a group of them. It can also indicate (especially on higher population worlds) that the government contracts private companies to provide services to the citizens (as opposed to hiring companies to provide services to the government, or companies hiring governments to… Most likely hire them to provide services to government and populace). It can also be that a company provides the functions of a government. Law Level can mean corporate rules, but could also be the legal requirements of the world the company is legally chartered on. This structure typically doesn't evolve naturally, developing societies will jump to either Gov2 or Gov3. In economic terms, it means the government is a Command Economy – all production of goods and the distribution of products is by decree of the government.

Gov2 – *Direct Democracy (Pop1-7, LL0-7) (DD)*: Civil servants are chosen by the voting populace. This differs from Representative Democracy in that these

people are not chosen to create policy, but to enforce policies voted on by the public at large. This can get a bit tricky, as many factors can be at play here – how often are votes called for, how long can a person serve in a role, and what defines a voting citizen. Many direct democracies will put limitations on who can vote – age is typically the minimum restriction, but others are possible, such as: males over 35, prior military service, ownership of land, the elders of a tribe, or the second daughter of your oldest living matrilineal ancestor. Those with stringent or expensive requirements will tend to create a Self-Perpetuating Oligarchy, while those who prevent the rise of a ruling class will fall into Representative Democracy as population grows. Direct Democracies are limited in their maximum voting population size by the available communications technology – one linked by verbal couriers calling the voters to a meeting can only reach maybe a few thousand people, while handheld computers on a wireless network can count millions of votes a second – as well as the frequency of votes, since frequent voting will restrict the total number who can dedicate enough time to the process. As a rough guideline, the Tech Level or TL-1 will provide a good estimate of the maximum voting population at TL3-, while TL or TL+1 serves for TL4+. Voting populations in excess of this will be very slow, and easily fragmented, perhaps leading to a tradition of proxy votes that create the first Representative Democracies. Voting populations that are a small segment of the total population will eventually form Oligarchies.

Gov3 – *Self-Perpetuating Oligarchy (Pop1-8, LL0-8) (OL)*: Government services are performed, or directed, solely by those drawn from a specific group, usually marked by familial inheritance. Non-familial inheritance is also possible, with civil servants choosing and training their replacements, but this usually ends up creating the same effect over time. Oligarchies can be created on their own, such as by warlords or other leaders taking control of a chaotic situation,

but can also very easily emerge from direct democracies that do not prevent voting rights from being restricted to a small group that can inherit the qualifications to vote. Oligarchs will have another governmental structure attached that defines how they are chosen to perform or direct their duties, but in the absence of such notes a family inheritance of these duties can be assumed (the common bailiffs of the European Medieval period are a great example of how Oligarchies based around familial inheritance of duty does not require the inheritor to be a noble).

Gov4 – *Representative Democracy (Pop1-9, LL0-9) (RD)*: Civil servants are chosen by elected representatives. Many municipalities use this in conjunction with Civil-Service Bureaucracy – an elected council uses their power to select the head of a municipal department, who then directs the department in activities and hiring. The actual selection process of this dutiful servant of the state, and even who is eligible for consideration, should be given some thought. This sort of local power structure is also the most familiar to players, as our modern society makes extensive use of it; plot ideas can be mined from small town political news.

Gov5 – *Feudal Technocracy (Pop1-10, LL0-10) (FT)*: First, read the sidebar on Feudalism. Taking this definition in the context of determining the common government worker, the term actually breaks down to its component parts – Technocrats, or people competent in a particular field of expertise, working in a Feudal structure. Keep in mind that this does not mean a ruling caste of scientists and engineers – that's a Self-Perpetuating Oligarchy with a cultural requirement. Putting it all together, it means civil servants are chosen and promoted on the basis of personal loyalty and competence at the job. Their obligation to the person who chose them for the job is the provision of services related to their field. Their superior is obligated to provide them with what they require to perform those services. Both are obligated to their society or

A Note on Feudalism

While nobles and kings and commoners are still on your mind, now is a great time to briefly discuss Feudalism in preparation for Gov5 -Feudal Technocracy. Specifically, what is Feudalism, and does it automatically imply some form of noble class? This is easily answered by disengaging Feudalism from the historical examples of the structure. Feudalism is a Relationship Structure built around mutual obligation and personal loyalty. It arose from defining the ideal relationship between two people on different levels of a hierarchy, specifically the hierarchy of the Self-Perpetuating Oligarchy that politically defined the European Medieval period.

In that political structure, one owed some form of obligation (services, goods, or currency) to a higher ranked person, who also collected such things from others below them. In return, the higher had obligations, usually the provision of common resources, material or legal support, and/or infrastructure, to those below them. The personal loyalty came into play in the long term; both parties continued the contract even when breaking it would be more advantageous to either party.

Now, it is very easy to imagine Feudalism as solely a vertical structure, but consider this: two friends who promise to help each other, and who stick by that promise even when doing so disadvantages them, have created a feudal relationship even though neither is superior to the other. This structure defines feudalism, and implies only one thing about a culture: that breaking an oath or promise is one of the most morally wrong acts possible to these people. Feudalism can be present in any governmental structure, whether it be vertical or horizontal; Nobility is not required.

government to fulfill these duties. While commonly a vertical structure (such as a corporation where employees are guaranteed work and pay appropriate to their abilities in exchange for an unbreakable long-term employment contract; or a bureaucracy where managers create teams according to their needs), it can also be a horizontal structure (such as an anarchic society where the specialists in a field pick their representative and manager, who then works to ensure they have the resources they require; or a Libertarian society bound by contracts to provide services). Feudal Technocracy is easily implemented in other government structures – it could be how an Oligarchy functions, the civil servant hiring process of a Representative or Direct Democracy, or the chain of command stretching down from a Dictator. It can easily

Feudal Technocracy vs. Civil Service Bureaucracy

How is a FT different from a Civil Service Bureaucracy (CB)? While both a Feudal Technocracy and a Civil Service Bureaucracy effectively create superficially similar structures (an ascending hierarchy of information flow, matched with a descending hierarchy of orders), it's the details that make them different, and it's details that can make two superficially similar adventures or worlds starkly different. Indeed, an FT can be seen as the larval form of a Bureaucracy, starting off as people sent to solve problems, creating an organization that shares information, and slowly building up standards based on what worked. Over time, a Bureaucracy emerges.

A CB is the more familiar structure, so we will start with that. It has a certain number of implications – a centralized or semi-centralized government, which sets orders, rules, and hiring standards. Applicants are assessed, trained, and assigned according to their abilities, all according to the central set of standards and the needs of the organization. Loyalty to ones managers or coworkers is not required, or even desired – loyalty and obligation to the organization is more desirable. Work is performed according to another set of standards, with some wiggle room for adapting to the situation at hand.

In contrast, a FT functions on a more informal, decentralized basis. Applicants are hired by specific people to fulfill specific functions on their team, with standards set by the person they are going to be working for and with. Loyalty to the team and the manager, is important and rewarded, with managers taking care of their team and the team supporting them. Standards for work are minimal, and mostly consist of documenting the process of reaching the desired end goal while avoiding death by bad decision.

A Bureaucracy frustrates players by restricting the actions they can take, placing them in a circle of paperwork, offices, meetings, and endless waiting while people figure out what they can do about this. A FT can frustrate players by making harder for them to get what they need. One team might not communicate with another, forms for the same thing might be completely different between areas, people might not be as capable as expected of dealing with a situation, or the position could even be empty.

They are similar – the base actions of governmental service are there, people still solve problems and duck out of work, but the details are different enough to distinguish the two.

grow out of a Representative Democracy, be the remnants of a Bureaucracy, or backslide into an Oligarchy when loyalty and family favors outweigh competence.

Gov6 – *Captive Government (Pop1-11, LL0-10+) (CG)*: This is absolutely a top-down view, as it indicates that control over all governmental functions does not belong to a local institution – and probably not even one that the locals can participate in. To find out what is going on at the level of the local paper-stamper, you must first figure out the controlling world, then determine the relationship between the two. A colony world, or one that has joined an interstellar state that provides all government functions, will share the same government type and nominal law level as the capitol world. Policy is made on the controlling world, and many times civil servants are either selected from its population, or managed by people from that world. One example is a colony world where local bureaucrats must be sent to the capitol for training, certification, and assignment, while another has resettled dissidents being managed by the ideologically pure. On the interstellar state side, one can imagine a centralized hub of decision making, with local functions being performed by a mixture of locals and assigned offworlders. A captured area is most likely placed under a strict rule chosen by the controlling world, lead and staffed by their citizens, and very likely to be subjected to greater control than they would tolerate in their own lives. Let population and law level be your guide.

Gov7 – *Balkanised (Pop2-11, LL2-10+) (BA)*: Another top down view, it simply means, in this context, that there is no governmental structure common to the whole world. Different regions have different governments, or similar governments with different identities. Balkanised worlds don't have to be at war, as this could also be an alliance or federation of nations that share laws without being part of the same structure (even if they have the same government type). The first determination comes after Tech Level is rolled for, as communications and transportation infrastructure does place a limit on a governments ability to maintain control in many of these other struc-

tures; as a rough guideline, a population of TL+1 is about the limit of what a centralized government can handle without replicating itself into decentralized local centers serving lower population areas. This can mean a world where the governments have more potential capacity than world population, but also an alliance, or even just propaganda reach. Next is determining the maximum amount of governments – Pop-0 is 1, Pop-1 is 10, Pop-2 is 100, Pop-3 is 1000, and so on. Then you select the ones the players are most likely to interact with, decide on their populations, then roll for their governments. Easy. Follow this up with their relationships, maybe add some tensions, and see what pops out for adventure complications.

Gov8 – *Civil Service Bureaucracy (Pop3-11, LL3-10+) (CB)*: Civil Servants are hired to work in a set structure, following a set of standards. As noted above, The Civil Service Bureaucracy is the mature form of the Feudal Technocracy. Many people are familiar with the Bureaucracy, as almost every single modern government uses this structure to administrate services. Most of these operate opposite to how the law works for most people – if an action is not specifically permitted, it is presumed forbidden. Bureaucracies kept to a manageable size – specifically the number of layers between the top and the bottom – can be very quick and efficient, as the institutional knowledge of the organization allows them to determine the quickest and most successful way of performing their duties without spending too much time on internal matters. Ones subjected to managerial bloat will very quickly become slow glaciers of corruption, as the number of layers between giving orders and fulfilling them distorts the messages, and people attempting to look like they're doing something force the generation of internal documentation that takes time away from the actual work. However, more actual work is done on their duties than their internal matters, and they will still be responsive to the needs of the citizens.

(Continued from page 30)

Gov9 – *Impersonal Bureaucracy (Pop4-11, LL4-10+) (IB)*: Civil Servants work in a structure where adherence to protocol and tending to interpersonal affairs is more important than getting actual work done. Remember the managerial bloat that can plague a Civil Service Bureaucracy? This is the end result, where the needs of the organization take precedence over its duties. They are nasty places to live and work, generating massive amounts of paperwork and memorandums that go nowhere, do nothing, and say very little, existing only to cover ones backside or be used as a weapon against someone who didn't cover theirs. Internal politics is the battlefield of their careers, shying away from the battlements that stand between the common citizen and a lack of services. It's easy to see how managerial bloat leads to an ineffective organization – after all, if every hour of actual work leads to four hours of internal paperwork, and that leaves no time to respond the endless stream of memos being passed down from above, who will be seen as "not a team player"? This existential threat to their jobs then pushes those who exist anywhere above the lowest positions to spend more time on defending their jobs than on doing them. The only thing that keeps them afloat is inertia and pockets of Feudal Technocrats who build teams of people who want to do their jobs before spending every waking moment on defending their ability to do so. Players who want to get anything done without breaking the law must find these people.

GovA(10) – *Charismatic Dictator (Pop5-11, LL5-10+) (CD)*: From the top down, this can be found anywhere where a single person has been given the right (or taken it by force) to make decisions for a single group, but how they direct the functions of government must still be determined. The position of this government, coming after the Impersonal Bureaucracy, shows a very different picture from the bottom-up context than the idea of a revolution kicking the managers to the curb. This picture is one where the average person is unable to get services out of the government, a situation where they then turn to those who know how to game the system, or otherwise get what they need. Very often, these are criminal organizations, but could easily be trusted members of the bureaucracy. In any case, the people rely on those who can get things done.

GovB(11) – *Non-Charismatic Leader (Pop6-11, LL6-10+) (NL)*: The informal "get things done" structure that existed outside of the government seen in GovA has become its own institution. On the top-down view, the single person empowered to make decisions has been replaced by another person operating in the same power structure.

GovC(12) – *Charismatic Oligarchy (Pop7-11, LL7-10+) (CO)*: In many ways, this is just a variant of the Charismatic Dictator, but instead has a group of people empowered to make decisions for the population, or a group outside the government that provides services (not to be confused with an organization lead by a Charismatic Dictator who provides services with resources hijacked from the government). What really distinguishes the two is the top-down view: Charismatic Oligarchies often arise from revolutions, but

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Law Levels in Bureaucracies and Beyond

At the level of Bureaucracies (and, in fact, even earlier), one faces a question regarding high law levels – what do they mean? It's not just the government directly forbidding things, but also creating requirements to gain Permissions to perform various activities. Government agencies are what grant those Permissions, and it is they who determine the actual legality of those activities by enforcing their regulations. So past a certain point in the Law Levels, much of what will trip up Travellers is local regulation. It goes far beyond banned items and police actions, but also includes the restrictions on activities and even local customs. A High Law Level can also represent the difficulty that offworlders have in doing business.

As a suggestion, Law Level can be effectively reduced for natives of that world – they know how it works, and who to go to, their documentation is local and known, they have an easier time getting licenses and slipping beneath notice. In a trading campaign, navigating local business law is just as important as navigating between stars.

(Continued from page 31)

can also be the transition phase between a Direct Democracy and a Self-Perpetuating Oligarchy. The selection process of these Oligarchs is typically not hereditary, but organizational (they are selected by being promoted through the ranks of civil servants) or ideological (such as a one-party system). The ability to enter the selection process might have requirements that can be fulfilled by inheriting them, but that typically bleeds over into being an ordinary Self-Perpetuating Oligarchy. As with a top-down view of the Charismatic Dictator, the structure these Oligarchs use to perform the daily tasks of governance has to be determined.

GovD(13) – *Religious Dicatorship (Pop8-11, LL8-10+) (RG)*: Civil Servants are part of a religious structure. This is absolutely a top-down view, so determining the actual structure used internally is required. In many cases, Religious Dictatorships have to be selected typically (as their minimum population is far higher than the typical colony world that a religion can found), and their oddball position at the top of the list can puzzle many. If one takes the view that government codes can be seen as a progression, then a Religious Dictatorship can be seen as the end result of an ideologically based Charismatic Oligarchy, where the single-party system has become a system of faith.

Final Notes

The specific structure of the Government Table is mutable – it was originally built this way to suggest a common type of universe, where low population worlds used small, typically decentralized, structures because they didn't have the population to support anything complex; while high population worlds used complex structures that were eventually replaced by people and organizations that used ideology to control people. It the middle was a sweet spot, between not enough people to support complex government, but too many people to keep integrated into a single political unit, right next to the colonies and captured areas of other worlds. Modifying the table to create a new sequence of government structures takes some thought, but is doable.

On another thought, combining types of governments can create much deeper and richer worlds, and allows for nominally similar worlds to be significantly different. As an example, an interstellar nation might require all of its member worlds to be Representative Democracies operating through Civil Service Bureaucracies. Rather than just running each world as politically the same, the Referee can roll another government code, this one indicating how that structure works locally, or the issues that plague it. One might have all the Representatives come from a *de facto* Oligarchy, while in another they can be recalled or ordered to vote a certain way at any time by their constituents in a Direct Democracy. Some Bureaucracies might be Impersonal, while others are Feudal Technocrats playing fast and loose with the standards they get sent. Criminals might work behind the scenes as a form of Charismatic Dictator, infiltrating the Companies that hold the contracts to actually provide the services required. Infinite combinations are possible.

For the final note, a table of probabilities for government by population is provided. This is expressed as a fraction of the total number of possible die combinations. ✸

Gov	Pop										
	1	2	3	4	5	6	7	8	9	10	11
0	15/36	10/36	6/36	3/36	1/36	0	0	0	0	0	0
1	6/36	5/36	4/36	3/36	2/26	1/36	0	0	0	0	0
2	5/36	6/36	5/36	4/36	3/36	2/26	1/36	0	0	0	0
3	4/36	5/36	6/36	5/36	4/36	3/36	2/26	1/36	0	0	0
4	3/36	4/36	5/36	6/36	5/36	4/36	3/36	2/26	1/36	0	0
5	2/26	3/36	4/36	5/36	6/36	5/36	4/36	3/36	2/26	1/36	0
6	1/36	2/26	3/36	4/36	5/36	6/36	5/36	4/36	3/36	2/26	1/36
7	0	1/36	2/26	3/36	4/36	5/36	6/36	5/36	4/36	3/36	2/26
8	0	0	1/36	2/26	3/36	4/36	5/36	6/36	5/36	4/36	3/36
9	0	0	0	1/36	2/26	3/36	4/36	5/36	6/36	5/36	4/36
10	0	0	0	0	1/36	2/26	3/36	4/36	5/36	6/36	5/36
11	0	0	0	0	0	1/36	2/26	3/36	4/36	5/36	6/36
12	0	0	0	0	0	0	1/36	2/26	3/36	4/36	5/36
13	0	0	0	0	0	0	0	1/36	3/36	6/36	10/36

Mongoose Traveller 2nd Edition: Central Supply Catalogue

reviewed by Mike Mekler

Central Supply Catalogue. Matthew Sprange.
Mongoose Publishing http://www.mongoosepublishing.com
154pp., Hardbound and PDF
US$47.93(H)$29.99(P)$52.93(H&P)/
UK£33.85(H)£21.18(P)£37.38(H&P)

Pros: great humor makes for a fun read; useful for both Players and Referees; makes you consider unusual environments and situations.

Cons: prices of certain entries do not make sense; some items are dull; costly for a book that restates content from the *Core Rulebook*.

To give some background for the review: I read through *Central Supply Catalogue* in less than a week on my laptop, and it is still fresh in my memory. I got it because I was looking for rules to handle robots in Mongoose *Traveller* 2e (New *Traveller*). My experience with *Traveller* is limited to the New *Traveller*: I have read the *Starter Set*, *Companion*, *High Guard*, and one of the *Referee's Briefing*s so far. Since the *Starter Set* is substantively the same as the *Core Rulebook*, I refer to the *Core Rulebook* even though technically I have not read it.

An aptly-named supplement, *Central Supply Catalogue* offers exactly what is on the cover—a catalog. A typical entry consists of a paragraph or two of description, special rules where necessary, stats for the game, and an illustration.

Illustrations accompany almost every item, which jogs the creativity most of the time but annoys in a few instances (do we really need a picture of a shovel?). The book attempts to create a catalog feel by assigning numbers (SKUs?) to items and then identifying images by those numbers. While evocative in theory, this approach left me with a headache scrolling through pages trying to connect pictures to objects.
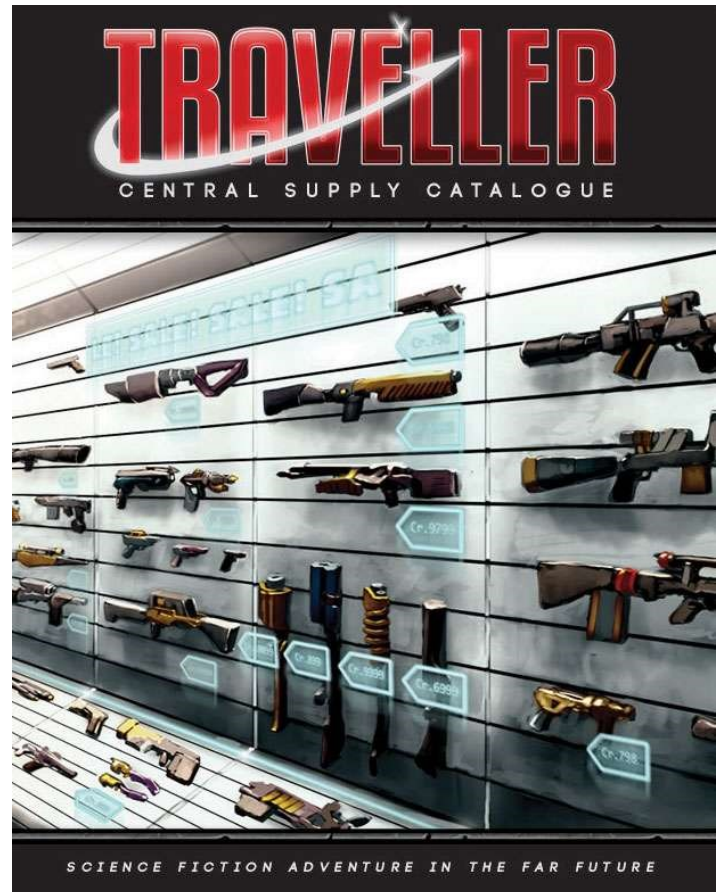
Little jokes crop up now and then in descriptions, some of them prompting genuine laughter. The book does not take itself too seriously, which makes for an entertaining read. I cannot name another catalog that is so fun to read.

However, I do not think all the items deserved full entries. A large number of things only needed a name, TL, weight, and a price: rope, duct tape, hiking boots, etc. A large table with everyday items could have saved page count and also helped establish a "feel" for fair prices.

Speaking of pricing, after reading this book I still have no idea how to spot-price certain items. The assigned pricing sometimes seems arbitrary. Establishing some sort of a "Big Mac Index" for *Traveller* (Astroburger index?) would have gone a long way towards giving the reader an idea of the purchasing power of a Credit. [*Editor's Note: In practice, using Cr1 = ¤2 or ¤3 seems to be reasonable (¤ = reserve currency of choice, e.g., US$, UK£, or EU€)*]

With that said, let's go over each of the 17 substantive chapters:

Equipment Availability: This chapter gives you new rules on how to acquire things based on the system you are in. The rules go over finding items that are legal, but hard to get as well as illegal items, and then ends with law enforcement response to the latter. This is a bit redundant with what is in the "Legalities and Lawbreaking" chapter of the *Traveller Companion*. However, it is a good thing—it lets the Referee pick and choose how to approach things.

New Rules: A page to give you new Weapon Traits. My only gripe is that the *Central Supply Catalogue* does include items from the *Core Rulebook*, but does not restate their traits. So, the idea that you would only ever need one book for equipment falls a bit flat.

Personal Protection: Armor and armor-related accessories. This chapter covers the basics and introduces some exciting niche items for Referees who like Mad Max or want to go medieval. Some pieces of equipment in this chapter can also turn your Travellers into veritable *Warhammer* Space Marines with Protection and Electronics to boot.

Survival Gear: A couple of pages per dangerous environment and some generally useful items. These 19 pages get the creative juices flowing. As a Referee, I cannot wait to put my Travellers through all the situations that would require the items from this chapter. Especially the Squirrel Suit. One small gripe—this chapter is missing a bookmark in the pdf version of the book.

Electronics: A couple of pages for electronics. It mostly restates what is in the *Core Rulebook*, except for a couple of useful detection gadgets and rules for wrist watches.

Computers and Software: Again, a few pages on the topic of computers with most of the stuff coming from the *Core Rulebook*. I would say, however, that this chapter makes it easier to understand which piece of software you need for which scenarios.

Robots: The section I really bought the book for. And it is a bit disappointing. The rules for robots are mostly the same as for animals. That's really it. There are no guidelines for pricing the robots, which, combined with a small number of examples, makes it hard to price new ones. Some of the example robots have a distinct *Star Wars* vibe—I'm not sure how to feel about that. Finally, all moderately useful robots are insanely expensive. The most advanced battle dresses and great weapons together are more affordable than a single combat robot—and outperform it.

Tools and Engineering: A few pages with useful tools, including a chainsaw. Some entries make you imagine unusual scenarios where the items in this chapter would be helpful.

Medical Supplies: A short section that packs a punch. Useful items all around, including PSI-related drugs, combat boosters, and healing supplies. This chapter also presents affordable and relatively low TL tools for bringing dead Travellers back to life.

Personal Augmentation: A reasonably robust, albeit short list of creative and exciting augmentations. The chapter also introduces options for augmentations, including biotech augmentations.

Home Comforts: The most fun chapter in the book, full of jokes and unusual items. Without spoiling much of it, I can only say that this chapter makes you think about the regular life of Travellers, what they do for fun, and generally helps you consider Travellers as human beings and not just space-faring murder hobos.

Close and Personal: Ten pages of close combat weapons. This is a robust chapter that gives you all the necessities, as well as introduces non-standard items: arms to avoid detection, PSI-weapons, weapons for assassins, and melee weapons that use shotgun shells.

Self-Defense: More than a dozen pages of ranged weapons short of heavy weaponry. This chapter also includes archaic weapons such as crossbows, grenades, and a lot of technological variations on how to deliver a piece of lead to your opponent.

Heavy Weaponry: Artillery, vehicle-mounted weaponry, and a few man-portable machines of death. It is not as fun as the previous two chapters, but if your Travellers really need something dead and have the Credits, this is the chapter for you.

For the Discerning Weapons Specialist: A short section with whips, bolas, boomerangs and other weapons that are more style than substances, as well as explosives from plastic to nuclear.

Ammunition: This chapter lets Travellers customize their slug-throwers further. It is mostly practical and just makes guns better for a bit of cash.

Sighting Aids and Accessories: A fun little chapter that helps you make weapons a bit more interesting. It contains such essentials as silencers and high-capacity magazines, as well as a touch of gonzo in the form of chainsaw bayonets.

Overall, *Central Supply Catalogue* is fun to read, useful for Referees as well as Players, and lets you customize your *Traveller* game or turn it into *Star Wars*, *Warhammer*, or *Fallout*. It is undoubtedly the most entertaining and robust catalog I have ever read. I would not call it essential, especially since the Robot rules are barebones, but if you have the money, it is well worth the investment. If anyone has any questions about this review or the supplement though, contact me on Reddit (u/Chubby_Russian), and I will try to respond. ✹

Less Dangerous Game

Squeedles

by Jane Polwin (stats by Timothy Collinson)

Squeedles are harmless squid-like worms common in areas that are persistently damp or moist for most of the year on Terra-like worlds. They are amphibious scavenger/insectivores generally 10-15cm in length, with a mass of approximately 30g. They are brightly colored (pink and green) in contrast with their natural environment; this appears to deter many predators. Their bodies are tubular, with seven short tentacles and two long tentacles. Both sexes use the same body plan, differing only in coloration (Males are bright green except for the long tentacles, which are pink; females reverse the color pattern).

In their natural environment, they can breed very quickly and become a nuisance. In some clusters of worlds they may be encountered as a starport pest with the risk of them finding their way into galley areas and storage on starships where they can be

hard to winkle out of crevices and crannies—hiding is a natural defense for them, as their unarmored bodies can tolerate very little damage before fatality. They may be considered from world to world as anything from vermin to pets to a delicacy.

Squeedle—Classic Traveller Stats						
No.	Animal	Mass	Hits	Armor	Wounds and Weapons	
4	Squeedle	25g	1/1	None	1 (tentacle)	A7F4S½

Squeedle—Mongoose Traveller 1st Edition Stats							
Type	Habitat	STR	DEX	END	INT	Instinct	Pack
Squeedle							
Hunter (Omnivore)	Any damp/ moist environ.	1	6	3	0	8	4
Athletics (endurance) 0, Deception 0, Recon 0, Survival 0, Telepathy 0, Telekinesis 0							
Tentacles (1), Psionic - special (see below), Number Encountered: 1d6-2							
Amphibious worm-like creatures with sticky tentacles, vivid colouring and hairy growths above their eyes that may be mistaken for eyelashes.							

Squeedle—Mongoose Traveller 2nd Edition Stats		
ANIMAL	**HITS**	**SPEED**
Squeedle	1	3m
SKILLS	Athletics (endurance) 0, Deception 0, Recon 0, Survival 0, Telepathy 0, Telekinesis 0	
ATTACKS	Tentacles (1), Psionic - special (see below)	
TRAITS	Amphibious, Psionic (3), Small (-4),	
BEHAVIOUR	Omnivore, Hunter	
NOTE		

Squeedle—Cepheus Engine Stats

25g Hunter (Omnivore), Any damp/moist terrain, 163084, 1d6-2

Athletics 0, Recon 0, Streetwise 0, Survival 0, Telepathy 0, Telekinesis 0

Tentacles (1); Speed 3m

[*N.B. Streetwise and Navigation have been listed instead of Deception and Survival. Streetwise is here used to mean a deceptive ability for the squeedle to use local terrain and cover to its advantage. Referees can choose to add Deception and Survival to the* Core Rules *skills if desired as noted on p.33*]

Squeedles as Pets

The squeedle makes an easy pet that can show some recognition of owner and responds to affection with waving tentacles and fluttering 'eyelashes'.

If you want to keep a squeedle as a pet then a modular system (*see pictures*), the more extensive and complicated the better, is highly recommended. This allows food to be provided in different sections (never put food in the 'home' area) and the modules rearranged on an irregular basis to keep the squeedles stimulated. It is also recommended that active live food such as skittle beetles and jubilee hoppers be provided approximately once a week, alongside their normal food to satisfy their need to hunt.

To aid stimulation each module of the squeedle's cage can be lined with a different substrate, e.g. moss, wood shavings, grit and so on. Ideally, keep-

ing an entire squirm [the proper collective noun] of squeedles instead of only a single animal will result in generally healthier animals, though the habitat will necessarily be (possibly inconveniently) larger.

Referee's Information

The one point of damage is inflicted as a stinging pain if the natural excretions of the squeedle come into contact with an open wound (even just a minor graze) *or* after 1D minutes of sustained contact. Otherwise, it simply feels slimy to the touch and can be washed off with relative ease. The stinging is considerably worse than that from e.g., nettles or a bee.

The point of damage is inflicted every 1D minutes thereafter; after three points of END are lost, further damage moves to INT as the stinging becomes unbearably distracting. This 'damage' heals at a rate of one point per hour per minute suffered. After 3 points of such INT damage, any additional wounds are applied to physical characteristics as usual as the secretions enter the blood stream.

A simple habitat for a squeedle. The modules should be rearranged frequently, and the module bottoms covered in frequently-changing materials.

Raconteurs' Rest

A more complex squeedle habitat. The modules should often be rearranged, and the module bottoms covered in changing materials, but rearrangement and fill-changing need not be as frequent as for the simple habitat.

For humans this is nearly inconsequential, if very uncomfortable, and easily avoided. For smaller prey or if something should cause an attack of several squeedles *en masse*, it can be more problematic. Best not to fall into a tank of them.

It has recently been discovered that squeedles have a potentially dangerous/debilitating psionic effect. When kept as pets, in conditions that do not require them to actively scavenge for their food, or kept on their own with no squirm rivalries or interactions, the squeedle emits a low level psionic field that keeps the owner(s) interested in looking after them. However, after an undetermined period of time this reduces the inborn intelligence level of the owner or handler. This means that complex tasks become increasingly difficult, eventually affecting the more mundane tasks in life, and finally resulting in a coma. What is not (yet) known by the research team investigating squeedles is that at the same time, the handler will heal at twice the normal rate.

1D months (the "period") after first adopting a squeedle that is not appropriately stimulated, a handler will lose one point of Intelligence if an Average Endurance check is failed (the number of months in the period, *P*, is a negative DM on this throw). This loss will then, potentially, occur every subsequent period. Any sophont affected rolls separately for their individual period.

In the squeedle's natural environment the psionic field generated by a squirm of squeedles means that the insects they hunt, e.g. an ants' nest sentry, may not even be able to sense the squirm's approach and raise the alarm.

Note: The original squeedle in which the psionic field was first observed, is still alive and well in an Imperial Research Station where her abilities are being closely monitored and studied. However, given the bias against psionic abilities generally, the location of The Institution is being kept a secret.

The Institution hopes to gather more squeedles and form a squirm. The squirm will then be released into a tightly controlled natural environment where the psionic field of the whole squirm and the role it plays in communication and hunting situations can be monitored.   ✪

Picture credits: The simple habitat is a Rotastak Space Command gerbil habitat; the image was found by the author on eBay UK. The complex habitat is a Habitrail OVO gerbil habitat; the image was found by the author on Pinterest.

Squeedles and the Cult of Carsten

by David Bennett

Squeedles – *Gregarious, faintly psionic vermiform amphibians belonging to the species* Pseudonata squedelium. *Squeedles are characterised by their pronounced eyelashes and ring of independently innervated, prehensile circumcloacal tentacles. Once native to subtropical woodlands and lowland areas of many Terranclass worlds. Domestication of the squeedle was rare and the species passed without much notice until a particular religious cult emerged in 1106 that raised the common squeedle from ecological curiosity to purported channel of divinity. That this involved praising the animal's psionic powers as a path to spiritual enlightenment caused some alarm across the Third Imperium.*

It was discovered that the squeedle had been initially misclassified by taxonomists and that instead of descending from anatomically similar species native to the empire, the squeedle itself originated on planets now controlled by the Zhodani. Some cultists were rumoured to have gained limited psionic powers after prolonged exposure to squeedles. It was speculated that the Zhodani had deliberately introduced the squeedle to the Third Imperium so that its contagious psionic abilities would spread among humanoid lifeforms. Their eventual aim was variously speculated to overrun the Imperium with psionic humanoids who would then be numerous enough to force their acceptance (or dominance) or to cause accidents, worker shortages and other disruptions across the Imperium capable of derailing the economy and bringing down the Imperium from within.

Labour shortages reported on some worlds after clusters of semi-skilled menial labourers left employment to join the growing religious movement and rumours that a distant member of the Imperial Family had crashed their pleasure craft after suffering an absence seizure brought on by keeping a squeedle as an exotic pet took the public imagination by storm. Within months, rumour became accepted fact and pressure was brought to bear on the security services to tackle "the squeedle menace" once and for all.

In what many modern historians have argued was a heavy-handed approach designed to quell these rumours, Imperial Security reacted by passing emergency measures to exterminate squeedles wherever they were known to exist. Faced with mounting resistance from the scientific community as news of the widespread squeedle extermination spread, when the planet Aramis objected to the squeedle's extermination on sound ecological grounds, the Imperium curtly agreed to leave the squeedle population of the planet intact. They instead summarily imposed an Imperial interdict, placing the world under indefinite quarantine. Not for the first time, the administration appeared more interested in suppressing civil unrest and making demonstrable actions against psionic activity than they were in natural justice.

The religious cult itself was outlawed and appeared to disappear around 1113, within five years of the widespread eradication of squeedles.

~ "Squeedles", Encyclopaedia Galactica. Regina: Imperial University Press, 1115.

Imperial Security Report

Subject:	Origins and extent of "The Listeners": a psionic amphibian-worshipping cult.
Legal status:	Outlawed for psionic activity in 1107.
Public status:	No longer in existence.
Actual status:	Extent and activity unknown.

Species discovery and description

The limbless amphibian *Pseudonata squedelium*, commonly known as the squeedle, was first described by an expeditionary force several hundred years ago. Recent research into the species has found the original classification to have been at error, and characterises the squeedle instead as a relatively recent introduction around 200-300 years ago

from planets under Zhodani control. Following its introduction to the Imperium, the squeedle spread rapidly and naturalised as a detritivore, insectivore and common agricultural pest species. For around a hundred years, it was accepted as part of the natural fauna and on some worlds came to take over important ecological niches. Outside primitive agrarian communities, it was afforded little significance until 1105, when reports surfaced of it being bred and used for its comparatively weak psionic abilities in the rituals of a religious cult who called themselves the "Listeners".

It remains uncertain whether the original confusion of *P. squedelium* with morphologically identical native species was an honest mistake or deliberate subterfuge. The species displays remarkable convergent evolution and physiological similarities to some native species but none of them have demonstrated the same capacity for reproduction and spread of the squeedle. In a science with considerable error bounds and little research being put into a species that is not a serious economic pest on developed worlds, differences in behaviour and metabolism were easily overlooked as the squeedle outcompeted and replaced morphologically identical native species of amphibious worms wherever it was introduced.

Psionic capacity and cult worship

Prolonged contact with *P. squedelium* is capable of inducing psionic abilities in otherwise healthy humanoids. Whether the introduction of this contagiously psionic amphibian into the Third Imperium comprised a hostile act by the Zhodani or whether it was introduced accidentally is uncertain; however, its extremely rapid spread throughout the Imperium is suspicious.

A religious cult describing themselves as the "Listeners" cultivated *P. squedelium*, apparently attracted by its psionic powers. The cultist professed not to be seeking new psionic abilities for themselves but claimed to experience absence seizures following prolonged contact with *P. squedelium*, during which they believed was revealed to them realities unknown to the waking mind. After extended exposure, the psionic damage inflicted causes higher brain functions to permanently cease, which the cult celebrated as the moment that the individual's mind or soul (accounts vary) was released to a higher reality to join or serve some deific being rather than being condemned to the usual oblivion following a natural death.

Co-distribution of species and associated cult

It is speculated that a criminal known only as "Adma" might have started the religious cult after treating members of the trader *March Harrier* for accidental exposure to the psionic effects of *P. squedelium*. Following a possible psychotic break resulting from experimental psionic treatment on Aramis (for evidence of this see Appendix) "Adma" is believed to have subsequently introduced *P. squedelium* deliberately to several populated worlds and started the teaching of what seems clearly to have been a personality cult. An early figure featuring consistently in cult lore is that of the "Amanuensis" or "He who first heard". Uncharacteristically for this religion, this particular mythologised character is consistently represented as male, and suspects interrogated on different worlds report that he started "spreading the faith" at the exact time "Adma" was known to have been serving as medical officer aboard the trader *March Harrier* in the Spinward Marches. All this lends further credence to the supposition that "Adma" might have been the progenitor of this cult. No clear connection can be made between "Adma" and the Zhodani but with such a widespread introduction of a psionic species, cases like this were eventually inevitable. This was the justification for the final extermination of the pest species.

Kurishdam

Perhaps surprisingly, it was on the scarcely populated desert world of Carsten (Spinward Marches 2906) that the religious cult was first discovered. Other cult chapters were soon uncovered radiating outwards across the Spinward Marches and from there spread along major trade and shipping routes into the heart of the Imperium.

On each affected world, clusters of victims were identified suffering from prolonged absence seizures, erratic behaviour and mood changes. All shared a similar unexplained neurological dysfunction. Radiation sickness was blamed at first, followed by heavy metal poisoning but the standard treatments proved ineffective. Semi-skilled workers working in drainage, liquid waste reclamation and air conditioning systems were the most commonly struck down, suggesting some specimens escaped captivity and adapted to life in waterways in urban settings and that these hapless workers, cultists or not, were therefore among the most heavily exposed.

Beliefs and organisation

Popularly known as "The Listeners" or less commonly the "Cult of Carsten", this religious sect has a strict cellular organisation similar to many terrorist and intelligence organisations. Each cultist cell or "chapter" commonly farms sometimes small hives of the amphibian. Cultists travel individually to other *P. squedelium*-infested worlds where they approach those disenfranchised with the social order and indoctrinate these vulnerable individuals, their friends, families and associates. The reduced mental function they later suffer is interpreted as a sign of being "chosen" or "blessed" (reports vary) by their obscure deity. This deity, whom they refer to variously as the "Old One", "Great Counsellor" "She/He who listens", "The inheritor" or (in one source) "He who hears even that which has not yet been spoken", does not match descriptions found in any pre-

viously-known Imperial religions or literature. It is not possible to know whether it originates in Zhodani culture.

Very little is known of the cult's belief system, other that it involves spending long periods meditating, sleeping or dreaming in close vicinity to *P. squedelium*. All those cultists who have been captured have been found to be severely mentally compromised. Interrogations revealed only that cultists understand the mental inebriation brought about by the amphibian to be a dream state in which they receive divine knowledge about the true nature of reality. While this knowledge is impossible to recall upon waking again to this world, they believe each extended absence seizure brings them closer to "true awakening" or "sublimation". This is reportedly the point where all higher mental activity in the body ceases. At this time, cultists believe the consciousness is freed to a higher state of awareness, independent of physical form.

Even among the cultists, there is only a weak consensus of what happens after higher brain functions cease. It seems to be generally held that the awakened mind or soul serves the aforementioned obscure deity. Some believe that following sublimation the enlightened simply rest alongside the deific being who has guided them to the truth, until all who resist enlightenment or otherwise die in ignorance simply cease to exist. This sect holds our material reality to be nothing more than a delusional consensus somehow maintained by an imperceptibly weak psionic force shared by all intelligent life. It is from this collectively maintained delusion they believe prolonged exposure to *P. squedelium* frees them. Following this logic, the eventual death of all intelligent life will precipitate the collapse of our collective reality, leaving the sublimed and their deity to inherit reality unchallenged, a time some describe as the "Dawn of the Second Age", when reality will be remade.

Impact and spread

Evidence of the cult has been found across the Third Imperium, with cultists fanning out to spread their beliefs along trade routes from the Spinward Marches toward the centre of the Imperium. No concrete evidence exists of the original cult having ever spread beyond the Spinward Marches but reports of similar activity, imitation cults and secret psionic research stations are still filing in from across the Imperium. Many respectable research installations such as that on Aramis have been found to house secret psionic research facilities. Money dedicated to bettering humankind has been spent in the pursuit of research into this foul Zhodani practice independently of the military and in secret. Such activity should be considered *de facto* treason. It is uncertain how directly the Zhodani control or manipulate these networks of researchers and religious devotees. The hand of the pale puppet masters are never clear until their foul rites are complete, when it is too late to escape.

Most accidents involving psionic injury have been attributed to the result of careless exposure to unstimulated specimens kept as pets. These claims are being re-investigated out of concern that any or all of these incidents might be concealing cult worship. Given the status of many of those affected, the cult might have reached up to the highest levels of the Imperial Administration. At any rate, there have been sufficient clusters of menial and semi-skilled worker incapacity on many worlds to cause localised economic injury. The resulting unrest and rising prices for raw materials was itself an intolerable security threat before the mass media began to generate hysteria over the possibility that the Zhodani had disrupted Imperial supply lines to derail the Imperial economy through the psionic infiltration and replacement of native wildlife with psionic clones as a prelude to a full-scale invasion. Paranoia was fast becoming hysteria and public order concerns made it necessary to act.

Risk assessment and control measures

P. squedelium was purged under the Planned Planetary Extinction (Pest Species) Regulations on all inhabited Imperial worlds where it was known to live. Refusing to allow the extinction of what was claimed to be a keystone species supporting part of its temperate woodland ecosystems, Aramis (Spinward Marches 3110) was placed under Imperial interdict and remains under indefinite quarantine. Autonomous orbital weapon platforms established in orbit about Aramis enforce the total travel embargo to and from this world, preventing further outbreaks of *P. squedelium* infestation.

All Imperial officials have since been screened for neurological changes and psionic capability as part of routine medical examinations. Notable psionic damage has been detected in comparatively few of them but some psionic ability has been found in disturbingly high-ranking citizens. Cult involvement is suspected and these individuals and their associates are being duly investigated for cult activity and links to the Zhodani.

Three research institutes have been harbouring secret centres of psionic research. Careful historical reconstruction of the *March Harrier*'s ship's log revealed one on Aramis. Zhodani listening devices were discovered in this research institute but no other evidence of direct Zhodani intervention or contact between the research institute and the Zhodani was found to have taken place.

Outlook and risk management

The cult has now fallen quiet or been eradicated; it is uncertain which. The levels of discontent and lawlessness that permitted the influence of what appears to be one man such impact across the entire Third Imperium is a salutary lesson in how vulnera-

Kurishdam

ble humanity is to the pernicious influence of our galactic enemies.

The presence of any psionic species on a world has been made a reportable event and increased export and import checks have been imposed on all worlds with active *P. squedelium* infestations. This measure alone has greatly increased the number of pest extermination requests. We can only wish similar enthusiasm and dedication was being shown systematically to survey the Imperium for possible psionic threats and infiltration.

The infestation is however now so ubiquitous that it has only been possible to eradicate it from worlds where cultist activity had been reported and otherwise of TL 8 or higher. Many less developed planets are harbouring infestations and suffering without tourism and from careful import/export restrictions. As ever, the poorest are the hardest hit.

The possibility of a weaponised sub-species introduced alongside the rest of the specimens that can instil a still greater psionic capacity than most has been proposed and cannot be dismissed. Once again, concern for liberty has compromised security.

Report filed 090-1113/Subcmdr A.D.M. Arosh

Appendix

A decrypted personal log entry created aboard the free trader *March Harrier* purportedly by the individual known as "Adma". It appears to comprise a draft report to shipmates arguing for the retention or possibly cultivation and breeding of *P. squedelium* specimens but degenerates into religious ramblings consistent with the doctrine of the cult that originated shortly afterwards.

[Excerpt: file: Text/100_Sq_uses][Crypto: TL13]

```
Subject: 100 uses for squeedles
Index to linked files as follows:
```

1. Accelerated healing.
2. Reduced risk of death, including sport related fatalities.
3. Early warning of other psionics and particularly of psionic attack.
4. Enjoy robust physical health without all the running!
5. Biological control for vermin and other pest species.
6. Cures for mania, incessant nagging,* ADHD and terminal psychosis.
7. Reduced jet lag and on-board tedium. Petting squeedles soothes the nerves. All of them.
8. Lose yourself for hours with the perfect ship's pet. Literally.
9. Perfect diplomatic gifts for any Zodani or other psionics we meet.
10. Can be stored in berths until needed for medical or defensive purposes.
11. Perfect living props for HP Lovecraft appreciation events.

The list goes on... and on. The suggestions become stranger and more passionate as Adma writes, rants, and finally, apparently, fantasises…

100. Dream states give forgotten insights into the true nature of reality given freely by squeedles and then stolen from us by the cult who wanted to contain the Truth. Only through the pure truth revealed in psionics, can we behold the full majesty of the Key and the Gate and bring about the necessary ablation of what is to reveal the true glory of what is to come! We must listen to the squeedles, and then we shall grow ears on the inside and hear the truth of all things! Squeedles must be nurtured and shared for the salvation of all sentient-kind. Squeedles be praised!!!

* Something has to be done about the self-denounced heretic!

```
Adma, MD
Willing amanuensis of the inevitable
Praise be to that which hears even that which
has yet to be said!                          ✺
```

The Prop Room: Crochet Instructions for Squeedles

by Jane Polwin

Yarn

- 15g double knit colour A
- 5g double knit colour B

Equipment

- 3.5mm crochet hook
- 4mm crochet hook
- Small handful of toy stuffing
- Pair of googly eyes (must have eyelashes)

Tension does not matter just be consistent

Abbreviations *(English version)*

C = Chain

DC = Double crochet

SC = Single crochet

Pattern

Suggestion: Mark either the first or last chain of each row

Body (*Colour A, use 4mm crochet hook*)

Row 1:   C × 3

Rows 2-10:   DC × 3

Row 11:   2DC in each DC of previous row

Rows 12-13: DC × 6

Row 14:   2DC in each DC of previous row

Rows 15-19: DC × 12

Rows 20-21: SC × 12

Change to 3.5mm crochet hook

Row 22:   *C × 11, turn miss 1st C, SC × 11 (last SC into row 21) SC* repeat 4 times

C × 11, turn miss 1st C, SC × 11 (last SC into row 21) repeat 3 times

Rows 23-24: SC × 12 around inside of tentacles

Cast off leaving a 6 inch tail

Lightly stuff body

Long tentacles (*Colour B, use 3.5mm crochet hook*)

Row 1:   C × 51, turn

Row 2:   Miss 1st chain, SC × 50

Cast off and sew in ends

Fold long tentacles in half then push the fold into the body of the squeedle, finish stuffing the squeedle and then sew up using the tail left over from casting off the body.

Stick on Googly eyes

If you choose to use a finer or chunkier wool change crochet hooks as appropriate.

#39: Creations Coming to Life

I once spent a couple of years living in a tight-knit international community. Early on, I thought it would be great to be able to contribute to the shared ship culture. The most obvious place to do this was in one of the 'fun nights' we'd have each time we sailed between ports. Anyone who wanted to could sing a song, perform a sketch, recite a poem, deliver a comedy act – whatever. Although one snag was the 40-odd nationalities on board which made it hard to find common ground for references or styles of humour and so on.

I started off way too high brow with English poems that for those operating in second (or even third, or fourth languages) were too difficult to understand. I hit the right mark when I tried something from A.A. Milne's *Now We Are Six* (a retelling of 'Forgiven' but with a cockroach which were plentiful on the ship).

But most contributions were ephemeral and came and went. A highlight for me was writing the lyrics of a song for my Swedish cabin mate to perform. Thanks to his skills it went down really well and not only became a firm favourite but was used as the climax for our final 'fun night' eighteen months later.

I'm doubtful I can really contribute something to the *Traveller* community that becomes an in-universe 'thing' that is known and/or used widely. But I can dream.

In the meantime, it's often surprising but great fun to see creations take off. A promotional 'mascot' at work has taken on a life its own and in my group's experience of *The Traveller Adventure*, Jane's squeedles are fast doing the same. This issue of *Freelance Traveller* is some evidence of that.

Colleague and player Jane P was crocheting something in the staff room one day and when I learned what it was, said it would make a fun *Traveller* critter. Well, she was just starting out on her role playing adventures and took this and ran with it. So much so we introduced them in the next session as a minor distraction and bit of colour. But one of the other players couldn't bear to get rid of them as a pest and decided to keep them as pets. So, in a (very sturdy) terrarium our engineer built they lived for weeks of ship time and months if not years of game time.

After Pysadi, as the players had left the anolas behind, I contemplated scrapping the whole psionic bit of TTA. But then it occurred to me that the squeedles could act as stand-ins. And several months after that, with deteriorating mental abilities, the crew sought out a Psionics Institute, found the problem and finally did let the squeedles go.

As you can tell, perhaps, from this issue, they've become rather a 'thing' and we hope that by sharing them you might adopt them too – or have similar bright ideas that take on a life of their own. ✹

The *Freelance Traveller* Cookbook

Salt and Pepper Squeedle

recipe by Jane Polwin

(Terran cooks may substitute squid although the flavouring is distinctly different – the basic flavour of squeedle contains subtle hints of bergamot, and the squeedle's diet does have a significant effect – and connoisseurs won't be fooled. It has been suggested that the bergamot overtones may be simulated by marinating the squid in a mixture based on Earl Grey tea.)

The *Freelance Traveller* Cookbook

Ingredients

- approx. 500 millilitres groundnut oil (to a depth of 1cm / ½" in a frying pan)
- 2 tablespoons salt
- 2 tablespoons black peppercorns
- 75 grams cornflour
- 500 grams farmed squeedle (cut into rings, tentacles left unchopped)
- lemon for squeezing

Preparation

Place the oil in a frying pan over a high heat.

Grind the salt and peppercorns in a pestle and mortar until a bit more than bruised but not quite pulverised, and combine this mixture in a freezer bag with the cornflour, adding the squeedle and tossing to coat well but not heavily.

When the oil is very hot—not quite smoking—fry the squeedle (knocking any excess cornflour back in the bag first) in batches (about four, probably) and cook each batch for about a minute or so until crisp on the outside and still sweet and tender within. You probably won't need to turn the squeedle since the oil should bubble up and cook both sides at once, but do if you feel better.

Remove to plates lined with kitchen towel.

After the squeedle has sat for about half a minute, remove the greasy towel—though some chefs dispense with this faddy stage—squeeze lemon over all and eat with your fingers—quickly. ✪

In A Store Near You

Medic's "Red Bag"

by Scott Diamond

Author's Comment: This is an item for players who are the designated medic of the group, or one can be sitting in the ubiquitous Ship's Locker as part of mandatory safety gear required for carrying passengers. Or something like that.

Players playing medic characters should record what they put "in" the bag and mark off consumables. The bag gets more compact as TL increases, but while the tools might get more tech-y they still do the same job for game purposes and for marking off how many supply sets there are. The "average" Red Bag will be about the size of a small duffel or medium sized backpack.

Personal first aid or combat trauma kits can be treated as a single-use item that does the same things as a Red Bag's aid set, but only once.

The kit has all the supplies needed to treat and stabilize wounded personnel. The kit contains scalpels, extra blades, suturing needles and assorted thread (wire and dissolving fiber), scissors, forceps, probes, and tweezers. There are bandages and dress-

ing materials to supply the kit's number of treatments. The kit also has an injection gun for administering medication.

The kit has a limited amount of consumable supplies for treating wounded characters. For every first aid attempt made on a character, a set of supplies is used whether the attempt is successful or not. Included in these sets of supplies are cleaning, dressing, bandaging, and medication materials. Once the kit is empty of these sets the medic cannot treat characters who are severely wounded (two attributes at zero), but may still treat others at a -1DM.

When a character is treated the medic will roll for success. Success results in some attribute points being restored and the character stabilized. While as many rolls can be made as supplies are available, success can only be effective once per combat situation as far as regaining points. It does still need to be made to achieve stabilizing the wounded character if additional wounding occurs that leads to zeroed attributes. In these cases, the character is stabilized and they will not degrade further from bleeding or shock. Recovery will require further, more advanced treatment.

Sets cost 300 Cr. each to replace. The typical "red bag" has ten to fifteen sets, depending on TL (TL10 and below have ten sets; TL11+ have a number of sets equal to TL). The cost of a fully-equipped new "red bag" is the cost of its sets plus Cr500.

The kit also has room for extra medications to be stored for used beyond the ones used in each aid set. The exact medications are up to the user, but generally consist of extra Medical Drug, Medical Slow, Fast, No-Shock, Anti-REM, and various painkillers. List those and their dosages here:

All consumables should be kept track of by the user to ensure proper supplies are available and possibly for billing purposes. A sample record sheet appears to the right, but feel free to create your own.

✺
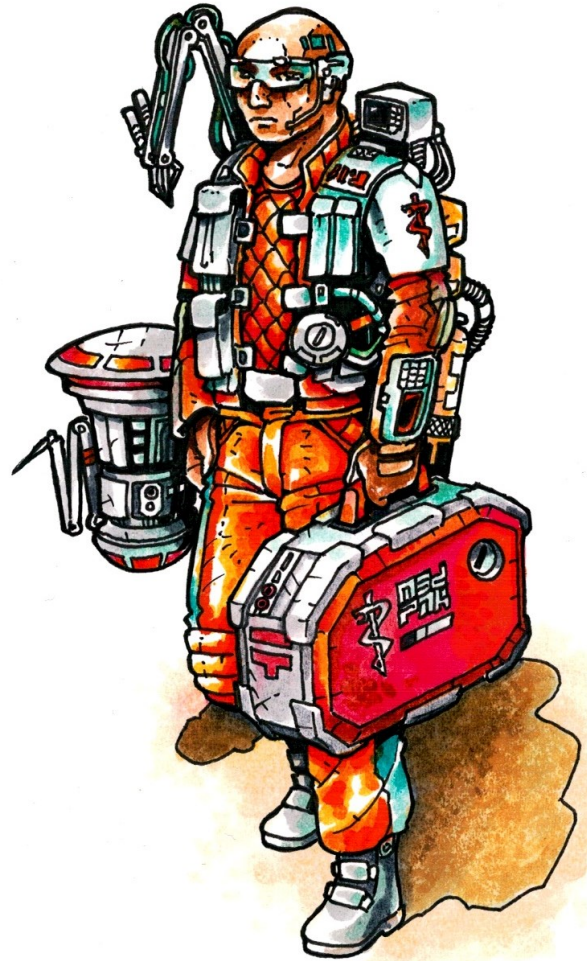
"Red Bag" Record Card

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

TL   10-|11|12|13|14|15

Each box represents one available set.

Additional supplies/medications, doses, cost per use:

Supply	# of uses	Cost per use

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Marquess Jenny Hu

profiled by Sam Swindell

Jenny Hu   5B598D   Age 48   Cr250,000
7.5 Terms, Navy Commander (Rank 4)
Computer-5, Laser Weapons-2, Mechanical-2, Carousing-1, Communications-1, Intrusion-1, Navigation-1, Sensor Ops-1, Wheeled Vehicle-0
Pension 14,000 Cr/Year; Member Travellers' Aid Society; Laser Rifle

The Marquess is a tall, wiry woman who is currently installed in the Highport TAS, in a small but elegant suite. She has a definite feline grace, but is handsome rather than beautiful in the conventional sense. She dresses in high fashion, and is typically present at any major social event at the Highport, in evening wear that is expensive and revealing enough to push the bounds of propriety; pushing, but not exceeding, is made acceptable by the top-rank designers of these creations. She is reserved in conversation, however, but unfailingly civil. She is perpetually and actively engaged in making social connections; she is seen on the arms of a virtually endless parade of men, who are both connected and a bit younger than she. Often handsome, these men are unfailingly complimentary of her but very discrete as to the nature of their relationship; the occasional callow young noble who is her escort will unfailingly be well-heeled and well-connected.

She runs a small computer consulting business in the Highport, at which she is actually never seen, and that rents a small office in the commercial office section of the Highport. Indeed, the office is typically manned by a young man, for limited hours a week, who will make deliveries, and make inspections as appropriate.

She will leave the starport for a minimum salary of Cr 10,000 monthly, plus expenses; her normal consulting fee will be Cr 200 per hour, Cr 1,200 per day, or Cr 4,800 for a 40 hour week. She will typically do the heavy lifting for this, but will never been seen "getting her hands dirty" in public, as it were.

Her young assistant will do any site visits in the Highport, and she will work behind closed doors.

Referee's Information

The Marquess is in fact what she seems, but also much more. She works tirelessly to keep up her apparently extravagant lifestyle, but not at retail prices. Hu typically does not pay full price for her elegant, risqué gowns. She certainly does not pay for her expensive dinners, at which she is invariably escorted. Her escort will usually be enticed into her inner sanctum, where certain highly compromising imagery will be taken of the pair, or even others, of which the escort is certain to be highly ashamed. While the setup is perfect for blackmail, she will never approach her escorts with threats or any direct demands. In fact, showing each their images will be couched in affection, in the form of a conspiratorially erotic viewing.

The marks, because indeed that is precisely what they are, will be asked to be discrete, and will be occasionally led on by a look or warm note from the Marquess; sometimes it is just a knowing glance from her to the mark, while she is gushing to his parents. Some of these she grooms to be of more consistent use, as they provide more repeated favors for her in the form of invitations, information on other nobles, and even the odd delivery. All her marks understand that she is in charge, and that they are not to contact her, but she will contact them. These longer relationships are punctuated by discrete but intense liaisons at her request; all these subsequent contacts are carefully hidden, so as to not seem tawdry. Some of the plainer marks she keeps groomed to provide her financial support, from time-to-time, or larger favors like the use of a yacht for an event.

The Marquess has a handful of more devoted followers over whom she has even greater sway; they will take direct actions, such as placing and retrieving very discrete surveillance devices. The TAS

Up Close and Personal

takes elaborate precautions against intrusions into the privacy of their guests, but she has painstakingly infiltrated and bypassed or corrupted each system at different levels. She is on very friendly terms with members of the staff, has the contract for security system maintenance, and has shadow systems feeding her with information, while concealing her own in the most sophisticated fashion.

In the process, she has collected compromising information on many men and women of power and influence, most of which she will just sit upon against future need. Sometimes she will recruit one of these for her organization, though she picks these very carefully. She pays her computer employee, Hans, only a subsistence wage, though he has other occasional gigs or benefits provided by members of her network. She has his fear, admiration, and complete loyalty, however, with hooks into his family, his legal status, and—of course—his heart.

She is looking to completely compromise someone rich enough to run a multi-million credit black-mail scam on, but is wise enough to know her own limitations. She will need to find just the right target, set of circumstances, opportunity for cleanup, and then the "dirty hands" people who can do the nasty, dangerous bits. She has a few potential targets, but is biding her time. She is comfortable enough in her life, pampered and worshiped, feared and loved, to wait for years. She knows, however, that even with a number of very discrete cosmetic procedures, she is getting no younger, and so there is a motivation to make her "retirement score."

She knows she needs to have members in her network with skills it currently lacks, specifically in weapons, tactics, forensics, investigation, interrogation, and an ability to make connections to the underworld. She will pay such "dirty hands" personnel handsomely out of any large score, up to 50%, but will simultaneously try to betray them, to avoid paying and dispose of as many witnesses as possible. ✪

Critics' Corner

Reach Adventure 3: The Calixcuel Incident

reviewed by Megan Rbertson

This review originally appeared on RPG-Resource.org.uk in January 2018.

This adventure is set on Chalchiutlicue in the Sindal subsector, but could work fine on any planet with substantual amounts of ocean. Basically a visit to the underwater city of Calixcuel does not go quite to plan, the party gets caught up in a series of deadly events and have the opportunity to save the day. Whilst they might be there in the first place for reasons of their own, a good one is supplied to get them there. It's a fairly open adventure with a lot left to the Referee to develop either in advance or as the adventure proceeds, depending on your style of play.

As background, there's a fair bit of information about living and working underwater, *Traveller*-style. This includes a discussion of pressure at depth—I'm a SCUBA diver so it's pretty straightforward, but if you aren't familiar with the concepts the explanation is clear enough for gaming purposes. Suffice to say that spaceships and vac suits are designed to keep standard atmospheres *in*, not the vastly increased pressure of deep water *out*. There's
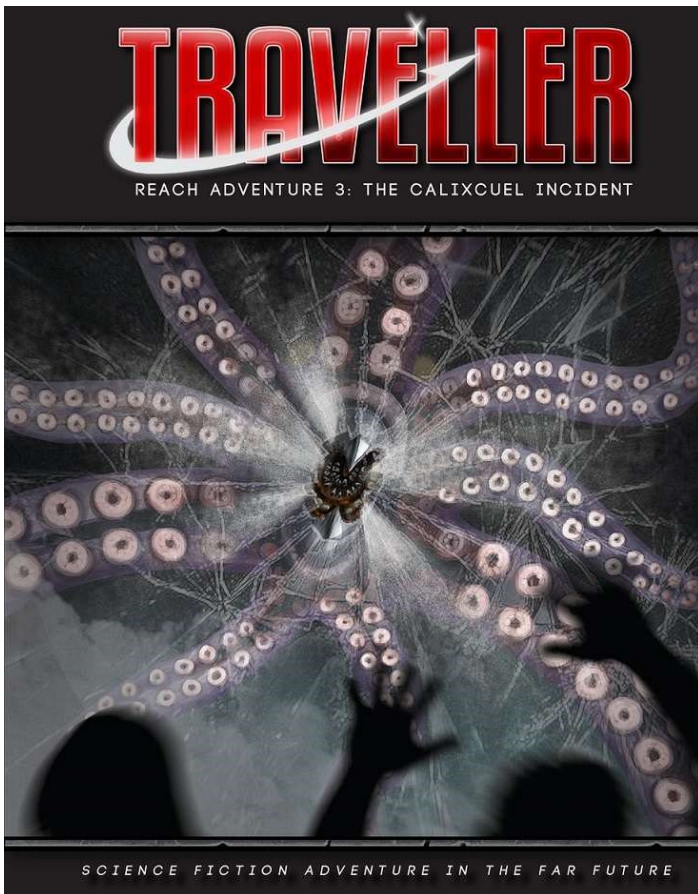
also background on the Sindal subsector and Chal-chiutlicue in particular. It's a water world, and not a very rich one. Most people are more interested in survival than much else, and the world is seriously overcrowded.

The adventure begins with the party in the planet's Downport (a plan for which is provided).

Here, they are invited to meet with a government official who has a job proposition—they need someone good with starship power plants to sort out a second-hand starship reactor that they've acquired and want to use to power an undersea city. From there, they travel to Calixcuel on a submarine to do the job, a trip that takes about eight days. Why they are even on Chalchiutlicue at all is left to you, however.

Once they reach Calixcuel they are greeted with a reception and a guided tour. An overall diagram, but no detailed plans, of the underwater city are provided. It's basically a tall spike resting on the ocean floor. Scarcely have they settled into their quarters, however, than disaster strikes. As 'visiting experts' their assistance will be welcome, of course… and from here on in it is very much up to the party to decide what, if anything, they can do. There are suggestions and descriptions of various parts of the city to help you respond to their choices—read them thoroughly in advance and be ready to go with the flow.

All is very open-ended, the party may choose to attempt to escape or there is a chance that, with the right choices, they'll be able to save the entire city. It makes for a 'disaster movie' sort of adventure and ought to be played that way. It's an episode that will be remembered for a long time to come… ✦

Active Measures

Lanthanum Hunt

by Jim Vassilakos

This adventure was originally written for a Zhodani Base contest in 2015.

Players' Information

Many centuries ago, Jafa'raltay'yar was a bustling Solomani colony world. It was divided between two religious groups that prayed to the same god, albeit under different names. Unfortunately,

one of these groups took their religion much more seriously than the other, leading to an all-out war. Chemical, biological, and nuclear weapons were all used in the initial phase of hostilities, and over half the population was killed outright. Those who sur-

vived continued the conflict, fighting initially with planes and tanks, then with guns, and finally with sticks and stones. When the fighting ended, less than 1% of the planet's pre-war population remained. Those who hadn't died in direct combat fell victim to radiation, starvation, disease, and various hazards of the alien biosphere. Needless to say, the world was quarantined.

The PCs are passing through the system, simply hoping to refuel at a nearby gas giant, however, the refueling operation is a little bumpy, and although they manage to acquire enough hydrogen to jump on to their next destination, there's now a new problem. Their ship's lanthanum grid is damaged. It can be repaired, but they need lanthanum, and the only conceivable place there would be any would be in the nuked ruins of the old starport. In short, they have to break the quarantine.

Referee's Information:

When the PCs recon the starport from orbit, they'll notice that several pyramidal structures have been built within the starport grounds, many of them built on top of former landing pads. If their sensors have enough magnification to see people, they'll also notice that the whole place is fairly crowded, and that there are roads leading from the starport that are likewise crowded.

It turns out that the two faiths (both splinters of the same religion) have recombined, and while they have retained some aspects of their former selves, there are also some major differences. Central to the current Jafan belief system is the idea that their world was once a paradise, but then powerful beings came, fought amongst themselves, killing almost everyone in the process, before finally returning to the sky. Hence, anyone who comes from the sky is to be feared.

What remains of the old spaceport has become a sacred temple. Every male Jafan must visit it at least once during their lifetime in order to witness the ruins firsthand. Hence, it is always crowded with pilgrims both day and night.

Since the war, the Jafans have progressed back to iron age technology. They are excellent swordsmen, and disputes are often settled by duel. Women, however, have almost no rights and are treated essentially as property by their polygamous husbands.

Although the radiation levels are no longer poisonous, the Jafans still have a lot of residual DNA damage, and in the many generations since the cata-

Active Measures

clysm, they have diverged somewhat from what is considered physically normal for human beings (most notably, they have pointy heads and big ears). Because of their latent genetic damage, mutations are still common, and those who are considered too deformed to be completely human are branded, neutered, and raised as a slave caste. Needless to say, the society is as brutal as nature itself.

There is lanthanum in the spaceport, but getting to it is obviously going to be difficult. The Jafans speak a somewhat devolved version of Galanglic, so communication is certainly possible, but if the PCs simply show up as 'sky people', the Jafans will regard them with fear, suspicion, and even animosity. Due to cultural customs, they will remain excessively polite, but their main goal will be to simply get the PCs to leave, fearful that they will only bring further destruction. Despite their politeness, however, the priests will absolutely try to prevent the PCs from even entering the starport, much less desecrating it by pilfering the required lanthanum.

Blending in will be a problem also because of the physical differences, although the PCs may be able to pose as members of the slave caste, but how this can help get them into the starport is somewhat difficult to imagine.

One obvious way the PCs might accomplish their mission is to threaten the natives with another cataclysm. Once suitably threatened, the Jafans will likely be as manipulable as children, as the last thing they want is a second doomsday. But given their overwhelming numbers, this strategy may require a substantial show of force (i.e., lots of dead Jafans).

Another course of action might be to abduct the high priest, explain the real history to him (that there were never any gods or demons, that the war was started by the Jafans' own ancestors, and that it happened because of religious differences). Of course, even if he comes to believe the truth, he may decide to betray the PCs rather than explain everything to his people, as he has a lot of power being the high priest, and he probably doesn't want to rock the boat by telling everyone the true history.

The PCs may also come up with a completely different solution. As always, subsequent events are to be determined by the Referee. ✪

Doing It My Way

Colonial Shipyard Starter Kit

by Cian Witheren

Author's Note: This was created using Mongoose Traveller 1st Edition/Cepheus Engine rules.

In my attempts to build my own *Traveller* setting, I decided that I wanted primitive societies raiding in spaceships. Rather than go down the route of making the Jump Drive easy to discover at low TLs, I settled on the idea of repurposing a common (IMTU) part of the equipment sent out with well-funded colonies – the Shipyard Starter Kit (SSK, or "Baby's First Kitbash" in some circles), intended to give young colonies a relatively inexpensive method of creating a local space presence.

It has a few issues, namely cost (over MCr35 for the initial kit) and the need for trainers, but that just opens new ideas for plots. Another issue is that it is not meant for use in hostile environments, but can be rebuilt to do so.

Upgrading and downgrading the kit (down to TL9 and up to TL 15) from the standard TL 12 should be a compounded ±25% per TL (each discount or increase is applied separately, e.g. a TL9 kit

would cost MCr35.193 (TL12) × 0.75 (TL11) × 0.75 (TL10) × 0.75 (TL9) = MCr14.848), but your preferred discount/premium may be different (especially if the kit is being built with equipment from a higher TL).

As a side note, I allow spaceports with shipyards to build craft of one class higher at 150% list cost, and two classes higher at 200% list cost (Therefore a Class C port can build a starship, including jump drive, as though it were a Class A port, but at twice the cost, taking twice as long). This kit counts as a Class C shipyard, but much slower.

The SSK is primarily built with collapsible, pre-fabricated buildings, each being effectively a 30dTon module. A few of the modules are actually 30dton cargo containers, primarily for ease of setup. Any of them can actually be built into a locally available building, provided it is large enough. Interior components are starship grade, to allow the specialized manufacturing module (see below) to create new modules. This also allows them to be built into ships, which some colonies prefer.

Notes And Rules

Several modules make reference to *x* per man/hour – this is amount produced per worker, every hour of work. Workers can work up to 8 hours/day, with many colonies running 3 shifts/day if necessary. Some, for full efficiency, stagger shifts to cover for breaks and meals.

Ships (and most equipment) built using this are Dodgy – throw 5- for failure of produced equipment, per activation, or week of use. A worker with higher skill levels (above the *skill*-0 minimum required for all workers), at least 1/shift, reduces the failure chance; 4- for *skill*-1 and 2, 3- for *skill*-3+.

Workers require skills: Engineer-0, Mechanic-0 for general workers, Physical Science-0 (or Trade: Refinery Technician) for Refinery workers. Having a skill at 1+ adds to that worker's output (easily ignored as background)

Modules

Power Module: The heart of the kit, this module, built into a container, can run up to 10 others (6 and 2/3rds if built into a ship, or running full life support for sealed modules) using a Size A Ship Grade Fusion Reactor. Also included is a Fuel Processor, a quarter dton of pumps and hoses for water, power cables and attachments taking up another quarter dton, and a collapsible fuel tank (holds 24dtons, takes up 0.25 when stowed). Another quarter dton is used for maintenance space. When stowed for travel, it can hold up to 24dtons of cargo (usually another building). Cost is MCr8.1675. During regular operations, it requires no workers and is monitored from the Command Module. Can run for 24 weeks before needing to refuel, which is easily done with a local water source.

Refinery Module: A quick note – this module drinks power like crazy, and counts as two modules for the purposes of computing power consumption. Also built as a container, almost all of its interior space is dedicated to the machinery required: 20dTons of ore refiners, and 10dtons of chemical refiners. There is no cargo space, so all output must be directed to storage units in another building (many colonies add another collapsed building at Cr8500 for this purpose). During transit, the machinery collapses to free up 6dTons of space – 2.5 are used for tanks to store chemical output (total of 2dtons, minus waste space), and 0.5 are used for 20 collapsed crates (0.25dTons each, when assembled). Typically, the storage building is also put in, taking up the remaining 3dTons. Configuring the machinery from storage mode takes 6 hours of work and system checks. Cost is MCr7.6, requires 3 workers per shift. Especially complicated chemical refinement will require a worker with Chemistry-1 or higher to succeed. Processes 0.2dtons of ore per hour, and 0.1dtons of chemicals per hour. Amount of raw ma-

terials required varies by process and yield. Physical Science 1+ adds 0.1dton to ore output (Metallurgy), or 0.05dton to chemical output (Chemistry) per level. Either may be replaced by Trade (Refinery Technician), which adds to both.

Manufacturing Module: Manufacturing Modules come in different types: General, Specialized, and Single, with the starting module being Specialized (Ship Parts). General Modules may produce anything, but at a low rate, Specialized produce a general class of items (Ship Parts, Slug Weapons, Electronics), and Single produce only a single item, or a very narrow specialization (10dTon Light Fighter Parts, ACRs, Hand Computer/2). They are no match for an actual industrial line, requiring hand labor and wasting materials. Production is measured in Cr/Man-hour, with some variations: General produces Cr500/man hour, Specialized produces Cr1000/man hour in its category, but can also retool to produce other items at Cr250/man hour, while Single produces at Cr1500/man hour with no ability to build anything else. Materials required will vary by mass and volume, but 120% of final is the minimum. Cost is MCr7.5085 for all types, allows up to 10 workers per shift (Required Skills: Mechanic-0, plus 1 other related to category, usually Engineering or Trade). Ships as 13dtons. Starter Module can manufacture other modules (hence all modules being built with Ship Grade parts). Having a relevant skill at 1+ adds Cr500 to production.

Teaching Module: Required to train new workers. If training low TL locals, 1 week of teaching is required per TL difference in order for them to familiarize them with the higher TL equipment and concepts before skill training can begin, plus time to get them over the sheer paradigm shift – TL6-8 adds two weeks, TL3-5 adds 4 weeks, and TL2- requires 8 weeks (locals on worlds with semi-frequent interstellar contact do not require this additional time). If any are illiterate, they can be trained in reading and writing in 10-INT weeks. Contains a simulator (for crew training, so the ships have someone onboard), a library (for reference and individual skill training), and 22dtons of classroom. May train up to 15 workers per class. Cost MCr9.0085, requires teachers (Minimum Instruction-1, plus relevant skills at 2+). Ships as 10dTons. Higher levels of Instruction decrease the familiarization time by 1 week per level, but does not decrease training time.

Command Module: The control center of the entire operation, plus the Air Traffic Control for the assumed starport field next door. Contains the ATC center, a briefing room, two offices, along with a lounge, kitchen, and freshers. Cost is MCr2.9085, requires only as much crew as is needed for ATC purposes (usually 3), plus cooks to feed workers, and a few bureaucrats (for big operations). Ships as 8.5dTons.

Construction Hanger: Not included in the base kit. Requires a minimum of 1 worker per 5dTons of craft, up to 1 worker per dTon, building at a rate of Cr10,000/man-hour. Cost is Cr50,000 times the maximum tonnage it will handle, up to 500dtons. Without a construction hanger, maximum tonnage is 200dtons, with a construction rate of Cr500/man-hour. For power consumption, double the maximum tonnage it can build, then divide by 30 and round up to the nearest whole number (a 500dton hanger will count as 17 modules). Mechanic 1+ or Engineer 1+ adds Cr500 to construction rate with a hanger, Cr50 without. Standard design discounts do not apply, unless there is a reliable source of offworld parts.

Use in A Campaign

At the most basic level, this is a background item, explaining the sheer number of Class C ports with shipyards. Moving higher up the usage scale, it provides a source of spare parts, and maybe a few plot points, such as Pirate Ports. At the higher end, a campaign can center around such a complex. For

such campaigns, being part of a colony is the obvious idea – but the more interesting one is playing warlord on a primitive planet. In such an instance, consider allowing players to train in Instruction – it may be the only way they can train enough workers. Such a campaign would keep careful track of material sources, workers, and local politics.

In the Third Imperium, the SSK is tightly controlled, since it can easily allow a group of scoundrels to take over a primitive planet, a barbarian warlord to go raiding across the stars, or a pirate gang to set up an untraceable repair facility. To get one, the players would have to be part of a legitimate colony effort, successfully pretend to be part of a colony, steal one, or find a construction facility that will build them one with no questions asked. It will have to be paid in full, as almost no bank will finance these.

Under normal conditions, the first major project is a belter singleship to easily provide large amounts of raw ore, as any system has a large number of asteroids, even without a belt. After the trainers have trained their replacements, they will help build a starship to mark the end of their contract, and leave. Sometimes they take a crew to fly it back, other times the ship is their final pay (another campaign idea). At least one crew of trainers built a starter kit into their ship, and travel around, building more as they see fit.

Campaign Seed: The players are all relatively young people on a primitive planet (TL1-3). Recently, a group of warlords from the stars came in, conquered their area, and are now forcibly recruiting for pirate crews… Players should start with the Barbarian career, and modify it to reflect what their prior career was – Broker and Streetwise for a Merchant type, swapping out two other skills from basic training, is one example. Go through 1-2 terms, then add a training package reflecting the demands of their new lords. Go forth and wreak havoc – make sure to bring back the pretty loot. ✶

Smoke Test: Once In A Blue Moon

by Michael Capriola and C. A. Pella

Chapter Two

Authors' note: rather than confuse you with an in-joke, we'll tell you now that the name "Zhang" is pronounced "Jong." Honestly. That's what our friend Zhang Hui claims.

The outmost of six gas giants orbited Larsen's Star at a distance of nearly thirty-eight AU, virtually the last viable orbit for a G0-IV star. This far out cryogenic conditions gave the planet's atmosphere a blue-green hue with only faint banding. The planet measured 65,000 kilometers in diameter, too small for more than a few cyclonic storms or upwellings. There were a dozen small moons, but only two above 100km in diameter. The target, called Blue Moon because of its coloring, had a diameter of 6400 km and orbited its primary at a distance of 580,000km. The probe supposedly orbited Blue Moon.

Grendelsbane came out of micro-Jump.

"We're over six million kilometers from the target," Second Mate Cheng Hua announced after studying her instruments. "Radiation levels aren't too bad this far out. The innermost moons are getting a good dose, though. Nothing to concern us."

Smith performed his calculations. "Just under twenty hours travel time, Captain."

Lubbock flicked the intercom switch. "Captain to Engine Room. Are the engines powered up?"

"We'll have full power in five minutes, Captain," Chief Garcia answered.

"Good. Signal the bridge when they're ready. Captain out." Lubbock turned to his First Mate. "Moe, plot the course and align us with the attitude jets. When the engines are ready, punch us up to one gravity acceleration. Then set the alarm for twenty minutes prior to turn-around."

"Aye, sir."

Five minutes later the *Grendelsbane* was roaring towards an interception with Blue Moon. Lubbock checked the duty roster.

"I have the watch. I'll see you in four hours, Moe." Smith and Cheng unfastened their seat belts and departed the control room.

————————————

Nine and a half hours later:

"What's your favorite bounce band?" Cheng Hua asked technician April Rayne.

Lubbock seated himself at their table and laid out his microwaved meal. Isabelle Nguyen and technician Jackson Stevens were also at the table. Stevens was reading from a book-pad while munching a sandwich. Nguyen had just come from cleaning passenger cabins with the able assistance of Arghaz Grurrdzarg. The Vargr now assisted Engineer Sprey with sundry maintenance tasks. Lubbock had to admit that the Vargr appeared tireless and worked just as hard as Sprey, almost as if the two of them were in competition.

"My favorite bounce band?" Rayne seemed to consider the question before answering. "I'd have to say The Rubber Band. Yours?"

"I prefer Rasputin's Beard."

"Yeah, they're pretty good."

"Who's Rasputin?" Nguyen asked.

"Wasn't he an African god-king?" Rayne answered.

"You're thinking of Ra-Safari," Cheng said.

"Oh, yeah. But it was Ras-Tafari."

"Whatever. Rasputin was an astrologer for the wife of a pre-spaceflight emperor on old Terra. I think it was the emperor Reagan. The one who had a pet chimp named Bozo."

"Which empire?"

"He was from California, so it must have been the Second Mexican Empire."

"Sheesh. You must have aced your history exams in school."

Cheng smiled and shrugged. "I don't like to brag, but ancient history was always my good subject. Aside from math."

Nguyen turned to Stevens. "Whatcha reading?"

"A novel by the Mezotechnic Era author and artist David Sim. He's one of the few writers of note from that period whose work is still relevant today."

"And Erica Jong," Rayne added.

"Erica Zhang?" Rayne repeated. "She must have been Han on her father's side. Which makes sense, since the Han produced the greatest writers in ancient times."

"No, it was the Europeans," Stevens countered. "Shakespeare, for example. Or the Hellenic playwrights."

"Or Anton Chekhov," said Rayne.

"What do you think, Captain?" Cheng asked.

Lubbock lowered his fork. "All I know about the Ancients is that they came down out of the trees to be hunters and tool-makers. They later invented agriculture which led to every other advance, like mathematics and machinery. They learned to build

spaceships. That, in a nutshell, is what our ancestors did. Anything else is trivial when compared to that. It doesn't matter who painted the Cistern Chapel—"

"Sistine Chapel."

"Sistine Chapel. If it hadn't been for a bunch of primates climbing down out of the trees to invent agriculture it wouldn't have happened. We wouldn't be sitting here if not for those nameless and unsung ancestors."

Cheng raised her cup of green tea. "A toast to them, the nameless inventors of farming and their legacy of farmer's daughter jokes."

Lubbock grinned and raised his glass of tisane. "Hear, hear!"

"Well then, Captain. I guess you're the wrong person to ask for a monologue on a comparison of the sonnets of Shakespeare and Penelope Tiem," Stevens ventured.

"Speaking of Tiem," Lubbock said, "I served on a subsidized freighter named *Penelope Tiem*. You'd think a ship named after the foremost contemporary poet would have seen several romantic adventures, but mostly we hauled processed ore to the factories at New Newcity in the binary system of Fuxi-Nuwa, and brought back silk and bamboo to Larsen's Star. Pretty dull."

"Except for shore leaves," Cheng suggested. "You must have had a good time in New Newcity judging by what I saw of off-duty spacers and their antics when I was a kid. I remember watching my aunt busting drunken spacehands over the head with a cricket bat and tossing them out of her bar. I was about nine at the time."

"You hung around bars at the age of nine?" Rayne asked, astonished.

"I didn't 'hang around,' I worked for my aunt as a cocktail waitress and scut worker."

"My folks ran a steak house," Lubbock said. "Pop figured the family wouldn't eat up the profits

if we were selling beef. One of our neighbors had the same idea. He was Moslem, so his diner specialized in pork buns. Most of his customers were Han and Nihon. His family, though, wouldn't touch the stuff."

"Our First Mate is like that," Nguyen said with a frown. "I do wonders with pork, but he won't touch it because god would be cross with him. And I have to take the beef out of the beef teriyaki I give the Captain."

"I love your substitute-beef teriyaki, Isabelle."

"Then why are you eating a ready-make curry instead of letting me make your lunch?"

"You weren't here, and I'm not one to make my subordinates drop whatever they're doing to wait on me."

"Thank you, Captain. In a crew of six officers and one Able-bodied Spacehand (and one new Apprentice), I appreciate every consideration from any of you officers."

"It's always wise to be considerate to the cook," Cheng noted. "Belly aches are such a bother."

A two-tone whistle sounded over the ship's speakers, followed my Mohammed Smith's voice. "Attention, crew! Coming up on turn-around. All crew to posts. And thank you for flying *Grendelsbane* Spacelines."

"A real comedian," snorted Nguyen, as the crew members rose from their places.

"You over-estimate his talent," Cheng retorted as she followed Lubbock to the access hatch.

Once on the Bridge, Lubbock and Cheng buckled into their seats and scanned their consoles. The Captain confirmed the course.

"Fifteen minutes to turn-around," the First Mate announced.

"Roger that. Captain to Engine Room. Fifteen minutes to engine shutdown."

(Continued from page 56)

"Fifteen minutes to engine shutdown. Aye, sir," Garcia replied.

"Three million kilometers to target," Cheng announced. "Too far to get a reading on the probe, but the 'scope shows a point of light moving across the face of the moon. Must be it."

"Nice to know it's still there," the Captain said with a wry smile. He checked his navigational computer once again. Still on course.

"Ten minutes to engine shutdown."

"Now, that's odd," Cheng muttered.

Lubbock twisted around in his seat. Cheng's workstation was to the left and behind Smith's. "What's odd?"

"There are two points of light moving across the face of the moon. Looks like two objects orbiting Blue Moon."

"Might be a stray asteroid," Smith suggested.

"They might both be asteroids, then, and we can't even see the probe yet."

"No sense worrying about it," Lubbock said. "We're still too far away for instrument scanning. When we get within two hundred forty thousand klicks we'll use the AESA on them."

"One minute to engine shutdown," Garcia announced over the intercom. "Cutting power to port and starboard engines on my mark… *Now*."

The low throb that permeated the ship suddenly ceased. After a full day of this background noise, it was suddenly noticeable by its absence. "First Mate: pivot the ship one-eight-zero degrees."

"Roger. Pivoting the ship one-eight-zero degrees."

The *Grendelsbane* turned slowly at the gentle nudging of its attitude jets. Lubbock stole a glance at the shifting of the star patterns in his window before focusing on his piloting readout. As the cross hairs came up on 180 he ordered All-Stop.

"All-Stop, aye," Smith answered, and cut the attitude jets.

"Captain to Engine Room: Commence engine ignition."

"Roger. Engines on."

The low throb was back in the deck beneath Lubbock's feet. The ship was now braking at 1-G. Another 9.84 hours and three million kilometers to target. "Back to watch schedule, folks. You've got the duty, Hua."

Smith gave up his seat to Cheng. "Well, Moe, I've got four hours before my watch begins," Lubbock said as he rose. "Care for a game of backgammon?"

———————————

The call over the intercom brought Vishnu Lubbock out of the shower, water still glistening on his dark skin. "Captain, here. What's up, bridge?"

"We're within lidar range on the AESA, Captain." Smith's voice, and he sounded worried. "I'm getting a reading that suggests one of the objects is a Scout-slash-Courier class ship. Possibly a Seeker."

"Balls on a heifer!"

"Shall I attempt contact, sir?"

"Not yet. Wait 'til I get there. Inform Farb, though." Hayao Farb, the tech team leader, was not going to be pleased. There were many reasons for a Seeker to be at this precise point in space and time, not the least of which was an attempt to hijack the probe. He thought it over as he rapidly dried himself, then hit the intercom button.

"Captain to bridge. Let's assume a cautionary position. Send Isabelle and one of the engineers to fire control stations, but don't alarm our passengers. Tell the gunners not to power up their weapons, though—not until we know what's up with the Seeker." *And may my namesake preserve us all.* ✪

Grampain-class Heavy Liner

designed by Warren Henderson

The Type LK *Grampain*-class heavy liner is a member of a two-ship class designed to move large numbers of people economically. Using an unstreamlined custom 5000 ton hull, it mounts Jump Drive Z, Maneuver Drive W, and Power Plant Z giving performance of Jump-2 and 1G acceleration. Fuel tankage of 1020 tons supports 1 jump-2 and 4 weeks normal operation. Adjacent to the bridge is a model/2 computer. There are no provisions for mounting weapons. There are 460 passenger staterooms; 10 Officer's staterooms; 48 small craft cabins for the crew and 1000 low berths; 3 shuttles and 633 tons general cargo. There is 210 tons of expanded High passenger amenities 25 tons expanded middle passage amenities and a 10 ton low passage clinic. The ship has a crew of 58 consisting of a Captain; XO; Navigator; Ship's Doctor; Chief Engineer; Pursuer and 3 shuttle pilots for officers and 3 clerks; 7 Engineers; 13 medics; 3 flight engineers and 27 stewards. The ship can carry 210 High Passengers; 250 Middle Passengers and 1000 low passengers. It costs MCr2,138.998 to build; construction time is 36 months.

The *Grampain* and *Hesperian* were built with a number of non-standard features that were viewed with skepticism in the industry. With standard passage rates for levels of accommodation star voyages had become somewhat mundane and the owning megacorporation had tasked its marketing department to look into a way to capture an increased occupancy rate on high volume runs. It was determined that a way to make passage on a specific ship more desirable as opposed to passage with a certain company would be the most effective way to do this. Calling up the most nostalgic and sanitized version of the Age of Steam liners plans where drawn up with areas that did not directly provide revenue (Staterooms and Cargo) which would be fitted out to reinforce the illusion of stepping back in history, ship's uniforms were styled to resemble the fashions of the past and while the vessels were under construction a series of media channels were used to generate interest in the era. The expanded high and middle passage facilities are large open spaces that are not usually seen on starships in passenger spaces, the low passage expanded space is not tricked out to bring about the past though it is a state of the art medical facility with specialized equipment relating to cold sleep resulting in a significant reduction in cold sleep related injuries (DM +1 on revival rolls). An internal marketing campaign was directed at ship crews in the company to create an elite cachet about serving on one of these vessels which is why they were built with individual small crew cabins instead of the more common dual occupancy full sized stateroom. All these factors resulted in two ships that have almost 100% occupancy ratings at all times. The design is not more widespread partially to keep the mystique and mostly because a chain of high population worlds no more than 2 parsecs apart is not common.   ✦

Your Input Helps

Freelance Traveller is always looking for new material to include. Please email us with submissions and ideas at ***editor@freelancetraveller.com***, the main editorial address.

Size matters to us, not to you. Concentrate on making your article the best it can be. We'll offer suggestions that we think can fill gaps or improve an article; please take them in the spirit intended—we're *not* saying your writing is bad; we just want *Freelance Traveller* to be the best *it* can be, too!   ✦

Agent of the Imperium

reviewed by Mark Poles

This review originally appeared on the reviewer's LiveJournal in October 2016.

Agent of the Imperium. Marc W. Miller
Original publication: 2015 (Far Future Enterprises)
Current Availability: Trade Paperback, eBook (both Amazon)

OK, before I get to the review, I need to get a disclaimer out of the way. This is a novel based on the *Traveller* RPG, written by the game's creator, Marc Miller. It was funded by a Kickstarter, which I backed. And Mr Miller is an online friend of mine. In fact, for a time, The Shop on the Borderlands was the only place outside of the US where you could buy a paperback or hardback copy.

So, I would have bought this book whatever. I like *Traveller*esque science fiction (I may have mentioned that once or twice in the past), and obviously this is *Traveller*esque. However, the first thing that surprised me is that Miller didn't just write a novel about a free trader crew odd-jobbing around the Spinward Marches (in other words, the classic *Traveller* campaign format) or a mercenary company fighting bush wars on frontier planets against Zhodani-backed separatists (the other classic *Traveller* campaign format). Instead, this is something rather more ambitious. Here's the blurb:

Jonathan Bland is a Decider, empowered by the Emperor himself to deal with the inevitable crises of empire. In the service of the Empire, he has killed more people than anyone in the history of Humanity, to save a hundred times as many. He died centuries ago, but they reactivate his recorded personality whenever a new threat appears. When the crisis is over, they expect he will meekly return to oblivion.

He has other ideas.

The chronicle of Bland reveals secrets of the history of the star-spanning Third Imperium and spans 400 years from early Imperium (about year 300) through the mid-post Civil War period (about year 700) touching known

and unknown events you may have encountered in your own reading of the Imperium: everyday events, political intrigue, deadly dangers, Arbellatra, Capital, Encyclopediopolis, the Karand's Palace, and a Tigress-*class Dreadnought.*

If you know the Traveller *science-fiction role-playing game, then some of this is already familiar; if not, no matter; this story introduces the vast human-dominated interstellar empire of the far future in ways only the designer and chronicler of this particular universe can.*

With its episodic nature, the work it most reminded me of was Asimov's *Foundation* series, or at least the first two or three books. Neither author dwells too much on characterisation, preferring to get on with setting, plot and action. Each of Bland's activations is pretty much a self-contained short story, at least at first. As you get further into the book, longer term plot arcs make themselves felt in quite a subtle way. It's really a cleverly structured work of science fiction.

And that brings me to the second thing that surprised me about this book—it's a very accomplished piece of writing for a debut novelist. Really good in fact. Not coming from a major publisher probably counted against it in terms of awards, but it was shortlsted for the Dragon and got some Hugo buzz (although ultimately didn't make the shortlist). I read it not long after reading the much-hyped and much-awarded *Ancillary Justice* which I thought was pretty mediocre, to be honest. This is in the same space opera sub-genre and was far, far better. In fact, it's the best novel I've read so far this year. Highly recommended. Consider it essential if you play or have played *Traveller*, and highly recommended if you don't or haven't but you like ambitious, high concept space opera.

And now a plug: you can still buy it from The Shop on the Borderlands! (and not from many other bookshops, at least outside of eBook formats) ✪

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Please, give us your opinion! We've provided several ways you can do so:

- e-mail: *feedback@freelancetraveller.com*.
- feedback form at *http://www.freelancetraveller.com/infocenter/feedback/ftfbf.html*.
- Forums:
  Traveller Fanzine section of SFRPG: *http://www.sfrpg-discussion.net/phpBB3/viewforum.php?f=36*
  Lone Star at Citizens of the Imperium: *http://www.travellerrpg.com/CotI/Discuss/forumdisplay.php?f=13*
  Note: you must be registered with the forums to be able to use this method.

Traveller on the Internet   IRC: The #Traveller and #LoneStar channels

Freelance Traveller sponsors channels for *Traveller* fans on the Undernet and Otherworlders IRC networks, and the two channels are "bridged" so that if you're visiting either, you can see what's going on in the other, and talk to people there. For more information about both channels, see our informational pages at *http://www.freelancetraveller.com/infocenter/travnet.html#IRC* and *http://www.freelancetraveller.com/infocenter/travchat/index.html*. Come talk "live" with other *Traveller* fans about anything at all, *Traveller* or not, and make both channels "jumping" places to hang out!

You can also run "play-by-IRC" game sessions in either channel; please stop in and ask the channel operators (FreeTrav) to schedule it, so we can ensure that the 'bridge' and the 'bartender' are set into a nondisruptive mode.

Please watch the Traveller Mailing List, the Mongoose Traveller forum, and the Lone Star section of the Citizens of the Imperium forum for announcements of Topical Talks!

News About Traveller

Recent *Traveller* (and *Traveller*-compatible) Releases

May/June 2019

- **13Mann Verlag** has released *Traveller Crew for Hire: Engineers*.
- **Aaron Mulder** has released *Space Oddity (3D-printable tiles)*.
- **Alphecca Publishing** has released *P-95 Orbital Response Boat*, *Ka-701 Gonolek Marine Support Fighter*.
- **Azukail Games** has released *No Questions Asked (3Deep)*.
- **Baggage Books** has released *Xuan Nu: Three Clusters World Book 03*.
- **El Cheapo Products** has released *El Cheapo Portraits—Navy Folk*.
- **Fat Goblin Games** has released *Publisher's Choice—Science Fiction: Space Dwarf*, *Publisher's Choice—Science Fiction: Ysoki*.
- **Gamer Printshop** has released *Threat Report #1: The Nelid race of Telepathic Worms*, *Massive Map Tile Set: Starships and Stations Corridors and Bays*.
- **Gypsy Knights Games** has released *Interface: Cybernetics in Clement Sector*, *Long Road to Redemption*, *21 Vehicles 2nd Edition*.
- **Jon Brazer Enterprises** has released *Foreven Worlds Single Ship: Galleon Megatanker (MGT 2e)*.
- **MaggottIISS** has released the following titles in their *R U Ready 4 War?* series: *Deneb Sector Subsector Guides*: *A Pretoria*, *B Lamas*, *C Antra*, *D Million*, *E Sabine*, the following *Gvurrdon Sector Subsector Guides*: *M Lianic*, *N Spurl*, *O Uthe*, *P Firgr*, the following *Core Sector Subsector Guides*: *A Apge*, *B Perite*, *C Ameros*, *D Shinkan*, *E Sanches*, *F Mekee*, the following *Corridor Sector Subsector Guides*: *A Khouth*, *B Khukish*, *C Lemish*, *D The Narrows*, *E Ian*, *F Strand*, *Lishun Sector Subsector Guides*: *J Taccis*, *K Simen*, *L Ot Zell*, *M Shuun*, *N Welling*, *O Strashna*, *Tuglikki Sector Subsector Guide M Anfharsgzo*, and *Ziarfrplians Subsector Guide P Zdiadlevepra*.
- **Michael Brown** has released *The Kronos War*, *Flotsam's Flight*, *Burst Transmission Vol. 1*, *Career: First Responder*, *Gigsters*, *LOCALE: Cities*.
- **Mongoose Publishing** has released *Reach Adventure 6: Exodus*, and the following *Traveller* fiction: "The King is Dead", "The Frozen Watch", "The Dimenos Problem", "The Span of the Stars", "Girl's Gotta Eat", "Rachando", "Taken on the Run", "Widowed".
- **Moon Toad Press** has released *Cepheus Engine Vehicle Design Guide*, *Traveller Ship Font*.
- **Okumarts Games** has released *Retro Space Set Eight: Space Amazons*, *Retro Space Set Nine: Alien Exploreres*.
- **Old School Role Playing** has released *Hydra*.
- **Stellagama Publishing** has released *Cepheus Quantum*.
- **Stu Driver** has released the following titles under the TAS imprint: *Annic Nova—Evacuation*, *Just a Miner Problem*.   ✹

Submission Guidelines

Content

Freelance Traveller supports *Traveller* in all of its incarnations, rulesets and settings, both. However, there are some limitations on the combination of ruleset and setting that we will enforce:

We refer to the rules defined in Classic *Traveller*, *Mega-Traveller*, *Marc Miller's Traveller* (T4), *Traveller⁵*, and both editions of Mongoose *Traveller* as "Classic Compatible" or "2D6". This includes Sceaptune Games' *Hyperlite*, and Samardan Press' *Cepheus Engine*. For these rulesets, any setting, whether official, commercially-published-but-unofficial, or house setting, will be supported. A partial list of published settings supported under 2D6 *Traveller* includes the Third Imperium setting (including polities other than the Third Imperium proper), Reign of Discordia, Clement Sector, Hyperlite, Twilight Sector, Orbital, 2300AD, Foreven Sector, Mindjammer, and I'm sure I've missed others.

Other rulesets, such as **GURPS** *Traveller*, *Traveller²⁰/SF20*, *FATE*, *Hero System*, and so on are different enough from 2D6 *Traveller* to make conversion more difficult, and will only be supported for the Third Imperium setting (including polities other than the Third Imperium proper)—we feel that combining these rulesets with a non-Third Imperium setting makes the game something other than *Traveller*. The Third Imperium setting includes *all* eras and polities of the Third Imperium, however, so mixing (for example) the "Milieu Zero" Third Imperium with *FATE* rules would be fair game, as would be playing out some of the Zhodani core expeditions using *SF20*.

Send us any type of article—house rules and rulemixes; animals you've created for encounters; adventures (both long form and short); after-action writeups of conventions or your gaming night; equipment; vehicles; starships; other consumer goods; character profiles (NPC or PC); reviews of *Traveller* products, of products for other games that you feel can be "mined" for use in *Traveller*, of fiction (or non-game non-fiction) that "feels" like *Traveller*, or presents ideas that would be of interest to *Traveller* players or referees; new races or organizations or societies; artwork; or pretty much anything else you can think of. Articles on real-world science are of interest, when accompanied by rules for applying that science to *Traveller*. Tools and techniques you use for preparing for a session or a game are also welcome. We're also compiling a "*Freelance Traveller* Cookbook"; quick and interesting recipes for snacking before, during, or after sessions go here.

Published *Traveller* has generally been kept to a rating approximating the MPAA "PG-13" rating, or the ESRB "T" rating, and *Freelance Traveller* respects that, but does not draw a hard line. Mature themes may be addressed, but explicit or excessively violent/bloody material will not be accepted for publication.

Where To Send It, and What To Send

Except in very rare cases, all submissions must be through email, sent to either editor@freelancetraveller.com or submissions@freelancetraveller.com. All submissions should include the submission itself and a full name and valid contact information for the submitter. If you wish the material published under a "handle", please give the preferred handle and explain why publication under your real name is not acceptable—we prefer to publish under the real name, but realize that this can be a problem in some cases.

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Formats

Text material can be submitted in any common textual or word-processing format, but we prefer (in no particular order) Microsoft Office, Open Office or one of its forks (we currently use Libre Office), RTF, minimally-formatted HTML, Markdown (including CommonMark and Github-flavored) or plain text, all with full Unicode support. Our readership is principally English-speaking, however, so foreign languages and scripts should be used sparingly, and if not intended as purely decorative, an English transcription of pronunciation (and possibly a definition in English as well) should be included.

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Avoid submitting in XPS or PDF format; these are generally seen as "output-only" formats, and trying to extract material in usable form from these formats is problematical.