Featured Article:

## *Design Notes for Traveller: 1700*

## 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

This issue of *Freelance Traveller* includes a special supplement, something that we've only done twice before in our ten years of publication. Greg Caires has put a lot of work into creating *Traveller: 1700*, an adaptation of Classic *Traveller* to the colonial period of North American history, three-quarters of a century before there was a United States, and almost three centuries before *Traveller* was first released. Greg has written a little bit about its development, and you'll find a link on the magazine page to download the *Traveller: 1700*

PDF. We hope you'll find it interesting; please do send us feedback.

In other news, no matter how much we want to, we are *not* going to crawl into a hole and pull it in after us until the pandemic is over (or until the various governments stop pretending they can do anything about it). After all, *someone* has to keep the flame lit, and this is one way we can stay a community in an era when "getting together" is being treated as uncivilized. ✪

## CD-ROM: GURPS Traveller

*reviewed by Thomas Jones-Low*

*CD-ROM: GURPS Traveller Disk 1—People*. Various authors.
*CD-ROM: GURPS Traveller Disk 2—Starships*. Various authors.
Far Future Enterprises https://farfuture.net
PDF and other files on CD-ROM (~150MB disc 1; ~450MB disc 2)
US$35 each

In 2016 Far Future Enterprises took ownership of the *GURPS Traveller* line as published by Steve Jackson Games. As part of the transfer, FFE published the complete collection of the *GURPS Traveller* books on two CD-ROMs. Although separately purchased, this review will cover both.

Each disk comes in a standard sized CD-ROM case, with a single CD-ROM. Both the case and the disk use a section of the cover of one of the contained *GURPS Traveller* products (*GURPS Humaniti* for Disk 1; *GURPS Starships* for Disk 2) as a cover image. The disks are 'burned' CDs (*vs* 'stamped' CDs like most mass produced music CDs), so plan on keeping them in a cool place out of the sunlight.

I asked Marc directly about this. Computers are increasingly not coming with a CD-ROM drives supplied, so a CD isn't going to be very useful. Marc will, if requested as part of the original order, supply the contents of any FFE CD (not just these) on a USB drive in lieu of the CD-ROM, or provide the contents as a limited time download via DropBox.

The first disk, *Disk 1—People*, collects the 'people' books in the *GURPS Traveller* Line. The main books are: *Humaniti*, *Alien Races 1* (Zhodani and Vargr), *Alien Races 2* (Aslan and K'kree), *Alien Races 3* (Hiver and Droyne), *Alien Races 4* (16 minor races), *Star Mercs*, *Ground Forces*, *Nobles*, *Sword Worlds*, *Rim of Fire*, and *Behind the Claw*.

Also included are the six planetary survey books (*Kamsii*, *Denuli*, *Granicus*, *Glisten*, *Tobiak*, and *Darkmoon*), *Bounty Hunters*, and the *GURPS* update of the adventure *Flare Star*.

The interesting oddity is the copy of *Psionic Institutes*. Labeled for *GURPS* 4th edition it was clearly
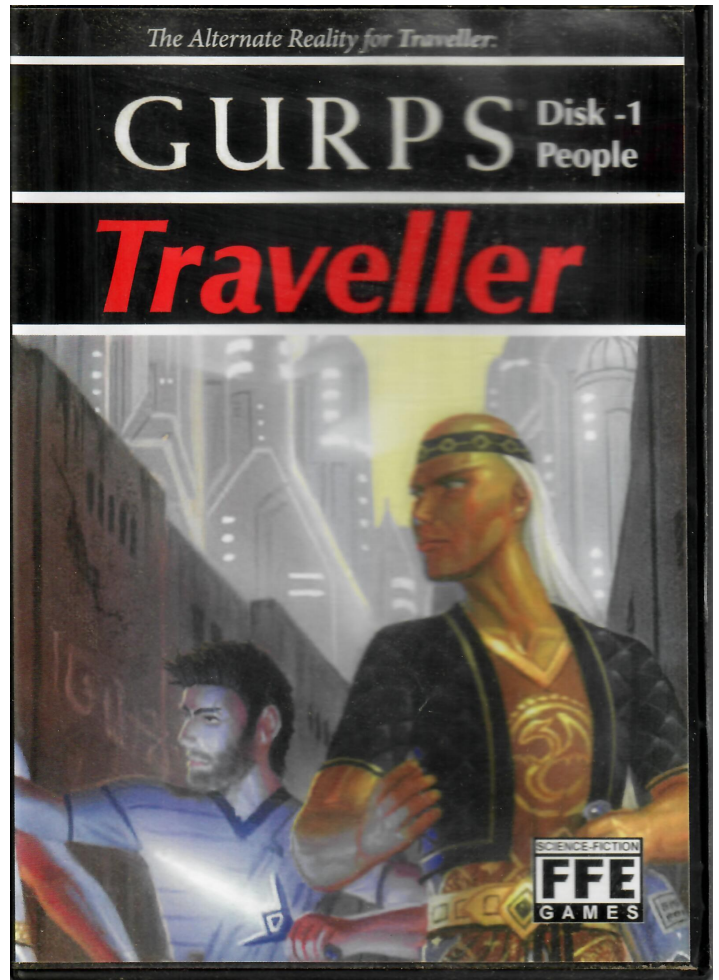


written for the *GURPS* 3rd edition rules. It was one of the books caught in the transition between the two *GURPS* editions.

The second disk, *Disk 2—Starships*, collects the more rules-oriented books (the "crunchy bits") of the *GURPS* collection; *Starships*, *Starports*, *Modular Cutter*, *Far Trader*, and *First In*.

The main contents of the disk are the six deck plans package, containing deck plans for the *Beowulf* free trader, Modular Cutter (and several modules), *Empress Marava* Far Trader, the Assault Cutter, the *Suliman* Scout, and the *Dragon* SDB. The disk includes full size image files in PDFs for the deck plans. There are two copies of each deck plan, one with 1" squares, one with 1" hexes. These were originally printed on 21x23 inch pages. The PDF Files for the deck plans are this size which would require a print shop with a specialized printer to print at full size.

*(Continued from page 2)*

All of the PDF books on both disks are direct PDF productions from the original press files, not scans of the physical books. This means they are all clean, easy to read, and not missing any pages. The individual PDFs are unencumbered, meaning you are free to print or cut/paste from them as needed. They also easy to search individually or all together.

Both disks also contain copies of *GURPS Lite* (a 32 page introduction to the GURPS rules), the *GURPS Traveller* core rules, and the GM screen.

Also included on each disk is a two page history of GDW, a one page ad for FFE and their current products, a two page copy of the FFE Fair Use policy, and a set of JPEG images of the book covers for the books that appear on the respective disks, used by an index page for navigation of the contents.

I always liked the *GURPS Traveller* book as one of the best collections of the history and unique nature of the *Traveller* universe. If you are interested in looking at the *GURPS Traveller* Universe, or just needing to fill out your collection, I recommend the CD-ROM. The deck plans (on Disk 2) in particular are not available individually. ✪
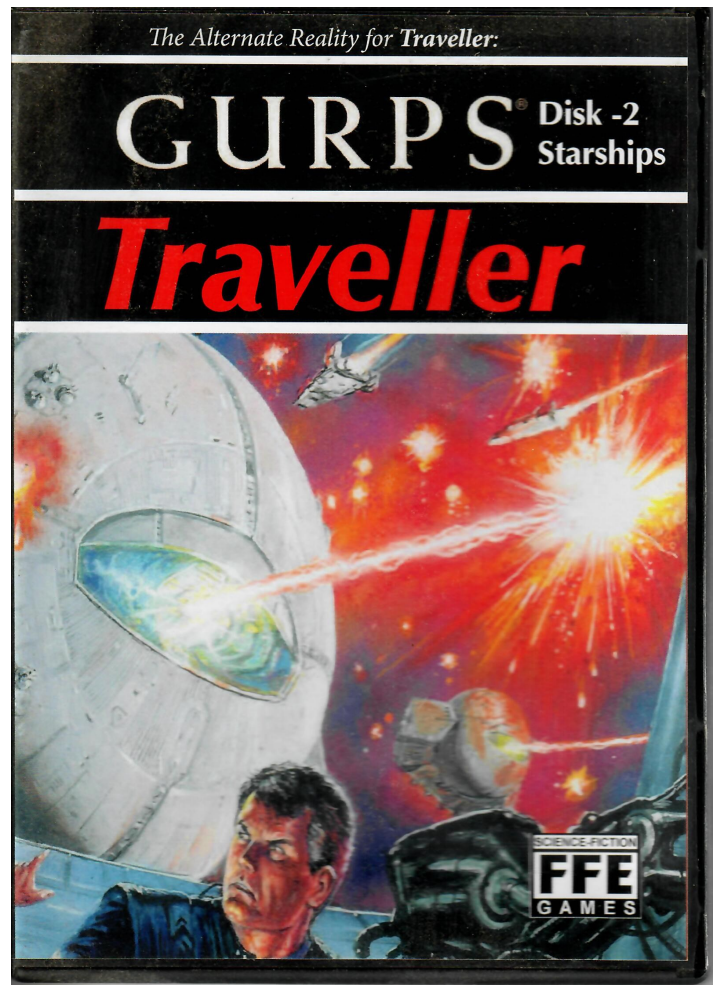


The Alternate Reality for *Traveller*:
GURPS® Disk -2 Starships
*Traveller*
FFE GAMES

## Slice of Life: Clone Technology

*by Mike Cross*

Cloning technology has been both perfected and largely bypassed in the 30th century. The conceit of making exact duplicates of someone never quite managed to pan out, and most uses of cloning technology have been surpassed by vat-grown organics and 3D bio-construction technology. This is not to say that the technology is never used, however. Some groups (like the Joshuas) use it extensively for their population needs, and there are places where offshoots of the technology (like synthmeat production) have built on the prior existence of this technology. There are two major areas where cloning technology is still important: Medicine/bio-replacement and Bio-Con (Biological Construct) growth.

## Medical Cloning

Normal medical cloning technology does not produce entire bodies; instead, genetically neutral tissue, bone marrow, etc., is grown in vats. When a person needs a cloned replacement for whatever reason a unit of the material is taken, gene-modified to match the person's DNA, and then either grown to form in a cloning tank or injected into the damaged

organ and used to repair or replace it in nano-surgery. In cases such as significant injury, where the person has suffered massive damage, whole organs or limbs will be formed in the clone tanks and then implanted by a nano-surgeon.

For more routine procedures, pinhole surgery will be used where the replacement material is injected into the body and nanites injected with it build the new organ in place. Slow-grown or medical cloned tissue has a lifespan to match that of normal people; replacement parts will last as long as the person does and benefit from longevity treatments in the same way as the rest of the individual.

## Limbs

With limbs, it depends on the nature of the injury, but generally everything from the point of injury out is replaced. Where the limb has been severed due to injury, a new limb will often be built first and then attached by nano-surgery in a single procedure. For less severe cases, for example where the bone is repairable but there is massive loss of muscle mass, the bone will be repaired in place and then cloned tissue will be added in strands.

Modern medical clone banks hold large tanks of lung tissue and heart tissue and muscle tissue etc. They also produce cloned bones for general sizes and for every major bone. Things like finger or toe bones can be effectively constructed, provided with proper skin, muscles and ligaments within a few hours and thus 'ready-made' fingers and toes are not normally stored.

Larger bones can take a few hours to 'grow' (although the technique used is actually 3D organic construction) and up to a day to properly fit with surrounding tissue (that has been DNA typed via retrovirus to the patient). Since bones are unique to each individual, they always need to be adjusted to fit, a process ironed out over time and managed with nanotechnology (which often requires no actual

surgery to adjust once the initial procedure has been performed).

The slowest, but absolutely necessary, part of the process is the human intervention of the specialists and physicians. In cases where large numbers of people need to be treated at once, cybernetics are generally used to allow the people to function while waiting for the cloning tanks to catch up with the needed volume. This is generally a question of available processing equipment and experts to provide the best possible outcome.

Many veterans of the largest battles of the Mutant Wars ended up with cybernetic parts since the thousands of casualties from the biggest battles far outstripped the clone stores available. Many of these veterans became used to the metal parts and refused to switch them for clone parts later in the war when these biological replacements became available.

## Cloned Material/Organs

Cloned medical material, from skin and teeth to internal tissue and specific organs, takes anywhere from hours to days to grow to usable form. Some of this material can be batch-produced to provide for many patients. This means that a clone tank can produce, and then store, cubic meters worth of lung tissue.

Then when someone needs a replacement pair of lungs due to long term damage (from inhaling some form of atmospheric contaminant on a mining world for example) they can visit a medical center for replacement treatment or opt for slow non-invasive treatment.

In the case of a quick replacement the person will be scanned and the exact dimensions of his lungs when healthy is determined. Lung tissue is then shaped to the required dimensions while a retrovirus injection modifies the tissue's DNA to match the recipient. Once these are ready the person reports to a surgery center and a nano-surgeon can

remove the damaged lungs and put in the new cloned lungs in less than an hour.

Where the person opts for a slow non-invasive replacement, they report to the nano-surgeon every few days, DNA matched lung tissue is injected into the damaged lungs and nanites rebuild small sections of the lung each visit. This process could require anywhere from five to ten visits over the course of several weeks, but this does avoid the need for full surgery.

Vital organs are generally not batch-produced due to the many problems associated with individual fitting and DNA matching (which can be done afterwards, but in the case of such an important organ as a heart or a liver, surer and slower is better than a "proximate solution" that "may take" even if the chances are extraordinarily high (99%+) that no problems will present. No one wants to be in the 1% failure category and most healthcare facilities are cautious even at this high rate and thus slower growing methods are preferred.

Once again, in the case of emergency situations cybernetics are employed to keep the patient alive while the organ is grown/built. Nerve strands are generally woven into skin or organs as needed using nanotechnology and the basic nerve strands (which are indeed grown in huge lots). Some high-end bio-replacements do grow nerve tissue specifically, and some physicians do claim that these make for better matches, but this is far from proven.

## Body Work (Bio-Cons)

Traditional full-body clones or Bio-Cons are produced in individual cloning tubes where a single body is grown over the course of roughly five years to an equivalent physical age of 18.

This technique requires less skilled labor even though it takes more physical space, time and nutrients (which on the whole, are less expensive). These Bio-Cons are modified both in terms of their gesta-

tion and development (allowing them to "age" to adulthood in five years or so) and have no higher brain functions. Only the most basic automatic functions (such as heartbeat and breathing) are performed by the Bio-Con. Other portions of the brain do not develop.

Normally an individual grower (these are referred to as clone-farms) will have three or more Clone-lines they use. These are often referred to with names like "Cindy" or "Bob" or "Michelangelo" that are registered trademarks. Some of the largest growers might have twenty or more lines and use entire growhouses.

Many growers trade these clone-lines back and forth, so that on a given planet, there may be twenty to two hundred clone-lines (depending on the age of the colony and so-forth) available.

While individual Bio-Cons can certainly be cosmetically altered, either in the final stages of development or 'aftermarket', more often they are not for economic reasons (most AI don't care). Once taken out of the tube and prepared (implanted with the necessary hardware), the cloned body is known as a 'shell'.

Due to the speed that these full body clones are produced; shells have a much shorter lifespan than normal sentient humans. Shells age quite differently from humans and begin to suffer degenerative effects after only 15 years or so of post-tube use. Note that this is time spent in use, not their chronological age. Even with heavy use, there is about 20% of the shell's lifespan spent in cold storage, sometimes much much more. A typical Digital Entity that uses a Bio-Con does so infrequently. Thus, if they store them properly they might get 20 or 30 years of use from them before aging sets in. Bio-Con shells are generally considered to have a maximum 'post-tube' life expectancy of 20 years (use-time) or so. They are sometimes replaced before this due to the cellular degeneration. Shell aging does not quite

look like the aging of a human. A 19-year old shell might look remarkably similar to the shell that emerged from the tube, although viewers often remark that the Bio-Con is somewhat "tired" looking. Shells can be face-sculpted as well, which leads to generally youthful-looking shells for the most part.

In game terms, shells suffer aging effects beginning with their fourth term of use. Roll for aging as normal, but double the penalties associated with failed checks. Combat and high durability models start aging after 12 years/three-terms and suffer triple the effects of aging.

## The Care and Feeding of your Bio-Con

Once the clone body is decanted, control interfaces are installed along with data storage and processors to house the AI or uploaded personality. The body becomes a shell. When an AI or Ghost is uploaded to the shell the whole thing becomes a Bio-Con.

Bio-Cons are just like regular humans. They tire when they are exercised, they hurt when they are injured, and they need food and water to keep them going. The problem is that while a natural-born human or uplift understands that these things are necessary and indeed has lived with these conditions for all their life, a Digital Entity generally has not.

Some AI just starting to use Bio-Cons can "run them down" very easily, because these sensations are new or unique for them (or because they consider their goals to be more of a necessity than 'organic maintenance'). The AI who is a first-time Bio-Con user is more likely to just turn off the sensory input for hunger and get on with the task they need to finish than to take a break for feeding. Most new-owner AI also find the eating process to be endlessly tedious, although some find the taste and texture of foods endlessly fascinating.

Resting the Bio-Con is another tedious kind of activity. Most AI will cut their feed to the Bio-Cons during this time. A minority have found that naps are actually kind of pleasant. Hibernation couches are commonplace; the Bio-Con rests inside for 8 hours or more a day and the system helps extend the useful lifespan with a mixture of vitamin and hormone supplements in tailored doses. Studies show that Bio-Cons who are given regular upkeep in hibernation couches drop their effective use-age from 20-30%.

Bio-Con shells can be tougher than normal human bodies (and can take more damage for a short time) but they tend to suffer long term effects from injuries far more than normal human bodies do because of their shortened lifespan. The shells age more rapidly and expensive procedures are necessary to overcome serious injuries.

Combat model Bio-Con shells can be extremely tough; in heavy armor they can take hits that would drop a small vehicle. However they have an even shorter lifespan and are extremely expensive. Other specialized shells are available as special orders but if something unique is required it needs to be ordered up to five years in advance.

In game terms, AI need to have a Remote Piloting 0 for basic Bio-Con use and maintenance. Referees who notice that the Bio-Cons are getting heavy use should make regular checks before the Bio-Con starts having problems. Ghosts and Dups are generally much more adroit than AI at piloting Bio-Cons, and generally need no extra skills to manage their Bio-Con's needs.

In combat, standard Bio-Cons have two additional points of Endurance for damage-absorbing purposes only and otherwise take damage as normal, but they do not suffer from the "knockout" rule even if this option is used for the other characters.

Also, 15-20 minutes after a combat, the Bio-Con regains d3 (if only one characteristic was damaged) or d3+1 (if two characteristics were damaged) characteristic points as the proximate shock fades. Mini-

mum retained damage however is one-half the damage taken, rounded up; e.g., if a Bio-Con takes three points of damage in combat, 15-20 minutes later they can only restore 1 point of damage from "shock loss" since half of 3 (the damage they took) rounded up is 2 and they must retain at least that many points from the combat damage. Had the Same Bio-Con taken 6 or more points of damage, they retain at least 3 points from the wounds later as the "shock-loss" fades.

For Combat/High-Durability Bio-Cons, the additional points of Endurance they can absorb from damage are equal to one half of their End characteristic. An End 10 Bio-Con has five extra points of damage they can absorb. The amount "regained" after 15-20 minutes remains the same however since it is the same thing (reduction of "shock" because of the control the AI has over the body).

### The Bio-Cons of Ratan

Ratan uses a number of Bio Shells for many roles and entertainments; the Vegas sex industry uses many entertainment shells; and the re-enactment armies use thousands more.

As a result of needing many thousands of such shells the Monument Corporation has built up one of the largest cloning industries in the confederation. As a sideline they quietly export cloned medical tissue and parts to the surrounding sectors and turn a tidy profit doing so.

In 2978 as the result of a terrorist hacking attack the GrossBerlin central traffic control net was taken down. The resulting chaos as grav vehicles stacked five lanes high across more than a dozen routes lost central control and crashed into each other and the surrounding buildings left more than 2,000 permanently dead and well over 20,000 injured. Because of the nature of the high-speed crashes many of the casualties were amputations and internal organ replacements. Even the medical facilities on Terra/Sol were unable to handle so many so fast and emergency requests went to Ratan.

By shipping every single unit of cloned medical material on the planet Ratan could handle almost a thousand casualties. But with that they were still short over a thousand people's worth. To make up the difference they harvested an entire generation of shell bodies for parts and flagged these cases for replacement within the next few years due to the shorter lifespan of the shell clones.

By doing this they were able to handle every single casualty but then found themselves short an entire generation of shell clones. To make up the loss an experimental technique was tried where entire bodies could be built from freshly grown clone tissue. Rather than spend the months needed for bone growth and considering that they would need to replace over a thousand peoples cloned limbs over the next year due to using shell parts they settled on using synthetic bone structures and using nanite surgery to build up organs and muscle structure onto the synthetic skeletons. These units could be produced very fast but had massive problems. They needed regular transfusions of clone blood since they had no bone marrow; they also needed daily doses of drugs ranging from blood pressure regulators to anti biotics.

These "Flash" clones, so called because they could be produced "in a flash", had much shorter lives than even the Bio-Con shells. With care, a flash clone could last 8-9 years; the ones used to replace Ratan's lost generation of shell generation lasted half that time.

However, the tissue could be cloned in months and the flash clone bodies could be built in a matter of weeks after that. In bulk and using the production line cloning facilities on Ratan they are fairly cheap, cheap enough to be single use expendable if need be.

There is a school of thought that says that since they can be produced for less than a quarter of the cost of a Bio-Con shell and last half as long they could be used as budget Bio-Cons. However, Monument's Legal and Scientific departments have advised against this. At this point the technology is wholly owned by Monument and lucrative licensing deals across the Known Galaxy beckon.

There is also the problem of the process itself. Many in the corporation fear making the techniques used to produce the flash clones public even in the most general of terms could have negative connotations.

The techs in the process call the flash clones Frankensteins because of the piecemeal way they are constructed. Visuals of the process are, to put it delicately, unsettling. What the public would call them may knock a few points of the share price of Monument, and even suggesting that may happen is enough to stop this idea dead.

At present Ratan produces slightly more than half of the medical clone material used in not only the entire sector but also in the surrounding three sectors as well, the clone tanks and facilities they have are more advanced than any outside of a Terra/Sol research lab. They also grow 48% of the Bio-Con shells; most of them are customized in some way and the "Made on Ratan" tag says quality of manufacture.

Terra/Sol produces the remaining Bio-Con shells but tends to concentrate on the regular models leaving the luxury end of the business to Ratan.

Flash clones or Frankensteins are produced in batches as needed with a lead time of six months or less. However, these tend to be used for special requests such as the battle of Waterloo several years ago when a customer wanted to play Napoleon and be able to meet any of his soldiers. Monument managed to field 18,000 clones on the day and while the bulk of both armies were Holographic, the would-be Napoleon was able to talk to every member of his entire guard if he wanted to and they were all flash clones.

Flash clones are much less durable than a standard Bio-Con shell. They come with a standard Endurance of '6'. They cannot be made with an Endurance above '8' but the cost of going above '6' basically negates any savings beyond time that the Flash Clone provides the buyer.

They also deteriorate much more significantly than a standard shell. Beginning after their first term (4 years) they must make standard aging rolls every year but double the penalties associated with failed checks. Beginning in their seventh year they must make an aging roll at a minus two. This modifier increases by one every subsequent year. Failing this check means the Flash clone has reached the end of its usable life.

## How Does This Affect My Game?

To be succinct, drastically.

This technology allows for players to participate in 'virtual tourism'. Basically, renting a Bio-Con allows players to explore an area remote from their current location. The only disadvantages are the deposit (these are players after all so the odds of them returning the rental undamaged are pretty low) on the rental and a potential time lag based on distance. Perhaps a -1 or more to initiative.

If you use Artificial Intelligences in your game, it allows them a more human form to use when interacting with the physical world. This makes it possible for an AI to blend in better with normal humans. The quality of the AI's Bio-Con is only limited by their bank account.

## Adventure Seeds

1. The world of Bio-Shells is both scientific and cutthroat. A homebased amateur scientist (think of the Old Earth Trope of a guy developing the first computers in his garage) has developed a

neuromuscular, nanite controlled process that increases the top end of physical characteristics (Strength, Dexterity, Endurance) that a Bio-Shell can be created with.

Needless to say, this is a major advancement that could make this person millions. But various underworld and shady corp types have gotten wind of their invention. The players are asked by our scientist to help protect them and negotiate the sale of their invention.

2. The Outer Belt of the VanKila Kiertotahti system contains a lot of scientific activity. A University of St. Mary of Mars Artificial Intelligence scientist has been researching an asteroid in the belt. He has lost contact with his Bio-Con which he believes has important data stored on it.

Apparently the Bio-Con was attacked by a group of humans (or pirates? The AI is unsure). However the Bio-Con was injured before the AI managed to hide it in a cave system on the asteroid and the AI had to put it into hibernation mode to preserve it. The players are hired to retrieve the Bio-Con. They will have to do it while avoiding or overcoming the group that attacked the Bio-Con.

3. On Terra/Sol a criminal organization has managed to develop a flash clone production facility. The produced flash clones have been invaluable to the criminal organization in robbery, protection and racketeering operations.

The players are hired by Monument Corporation to; *a*) Infiltrate and acquire the blue prints for the Flash Clones (they suspect they were stolen from them), *b*) Acquire any information they can on the source of the blue prints, and *c*) Destroy the factory.

Monument needs outside contractors for this operation to preserve deniability and because enlisting official help would also expose the blue prints to the Orions.                    ✸

## Saphirean Running Owl

*by Benedikt Schwarz*

When asked what they know about the Saphir system, most citizens of the subsector will cite the spectacular "diadem", a belt made of chunks of clear frozen volatiles that projects a breathtakingly scintillating corona radiating outward under the constant bombardment of the solar wind from Saphir's blue-white star, and which can be seen as a brightly shimmering band even in Saphir's day sky. Some of the more knowledgeable may also mention the planet's theocratic society where humans rank themselves in castes depending on the depth of their spiritual and religious commitment. Only a few know Saphir as the home planet of the subsector's (arguably) most popular pet.

The "Running Owl" or "Bearded Owl", *pseudoglaux cursitans*, also called by its Bilanidin name *shugammu*, roams the steppes of Saphir's purposefully undeveloped second continent Solitude. It is symbolically associated with the hermits and anchorites who undertake the spiritual journey to the barren steppes to meditate and gain enlightenment; a necessary step in one's curriculum if aspiring to join one of the higher castes.

Running Owls are large, flightless pseudoavians. Their wings are small and can assist only in short hops; their main locomotion is on the ground employing the long, powerful legs. The feet are large and splayed, with three toes aligned forward and to the sides. A single toe curves upward, terminating in

a long, vicious, sickle-shaped claw with which the Running Owl strikes down its prey. The animal is capable of short bursts of remarkable speed and quick changes of direction in mid-run, chasing down prey much larger than itself.

The body is shingle-covered with feather-like protrusions that are very soft and downy on the back but form a hardened layer of keratin scales around the throat and upper chest. As a mating and territory call, a Running Owl pride rattle these scales against each other by rapidly inflating and deflating the throat, making a sound not unlike an unruly orchestra of Terran maracas. When threatened, the Owl will puff up its throat area, causing the scales to point outwards like spikes.

The mottled "feathers" on the creature's back form two layers of colour, one dark brown, the other a light tawny colour. It is surmised that the secondary eyes assess the surrounding terrain's colour, and that the animal instinctively shifts its "feathers" in response, appearing darker or lighter according to the hue of its surroundings. While not complete mimesis, this natural active camouflage still helps conceal the owl in its native environment and aids in stalking prey.

The large head looks remarkably like that of a Terrestrial great horned owl, with a short beak and a pronounced facial disc shaped like a radar dish that guides soundwaves towards the ear slits and aids in the creature's very acute hearing. The feathery "ear tufts" located on the back of the head are mood indicators and not ears as such. Two prehensile feelers protrude from the upper head and are used to sense air pressure differentials. They are often objects of gentle preening by the mated partner.

The lower pair of eyes, fixed forward, are very light sensitive and able to pinpoint even small prey at very long distances in near pitch darkness. The upper eyes, set in the forehead, lack focus and are only capable of detecting general colour and movement. In concert with the feelers, they are a warning system alerting the Owl to stalkers that try to blind-side it while its attention is fixed on its prey.

## Society

Running Owls hunt in packs or "prides" of up to fifteen creatures each. (Solomani taxonomists like to use the term "parliaments" instead due to the creatures' resemblance to owls.) The strongest mated pair leads the pride, with other pairs following. Pairs bond for life following a period of wooing consisting of displays of fluffed-up plumage and loud hissing. The rank within the pride is determined by fights between the males, with their mated females often joining in. Once per Saphirean year (521.6 standard days), the female gives birth to a litter of two to four young.

A pride of Running Owls uses clever tactics when hunting prey. Scientists compare their intelligence to Terrestrial corvids; some Running Owls have been seen to use sticks to dig for insect larvae or construct shelters or camouflage out of woven

*(Continued from page 10)*

twigs. In captivity, Running Owls can be taught to follow commands, solve simple puzzles and do all sorts of tricks.

| ANIMAL | HITS | SPEED |
|---|---|---|
| Running Owl | 8 | 15m |
| SKILLS | Athletics/Dex-1; Survival-0; Stealth-1; Recon-2 | |
| ATTACKS | Flees if surprised; attacks on 9+ if has surprise; else flees 4-, attacks 11+ <br> Claw (1D+3) | |
| TRAITS | Small (-2); Fast metabolism (+2 to initiative); Glider; Camouflage (+2 to spot in native environment); Heightened senses (+1 to Recon and Survival checks) | |
| BEHAVIOUR | Carnivore/Pouncer | |

| | |
|---|---|
| Morphology | Bilateral symmetry, tetrapod (four-limbed), biped (two hind limbs used for locomotion), winged (two winged forelimbs used for gliding) |
| Biochemistry | C/H/O/N, broadly compatible with human |
| Respiration | Oxygen-nitrogen inhalant, Carbon dioxide exhalant |
| Ecology | Diurnal (active during twilight and night) |
| Habitat | Steppes, light forests |
| Diet and Trophics | Carnivore/pouncer, homeothermic (keeping a constant body temperature) |
| Reproduction | Two genders, moderate sexual dimorphism, conjugal intercourse, viviparous birth (giving birth to live young), iteroparous (reproducing more than once in a lifetime). Progeny are cared for by a mated pair for about a standard year. |
| Lifecycle and ontogeny | One year to sexual maturity. Lifespan of about eight years in the wild, up to thirty years in captivity. |

## Domestication

Captive Owls make good pets (and are popular throughout the subsector). They tend to be skittish due to their very sensitive ears; loud or sudden noises frighten and anger them, and they seem to be very reactive to the mood of humans around them. Their eyes need to be fitted with polarised goggles during the day. Most people who keep one regularly

also file or pare down the claws to avoid injury, although even wild Owls seem not to mind humans overmuch and rarely attack unless one approaches their young. In captivity, the creatures often become very affectionate, and some may completely refuse to be parted from their owners.

## Adventure Seeds

1. A passenger aboard the travellers' ship brought xir pet, a large Running Owl. The poor thing is frightened and angered by the continuous sound of the ship's life support system, and lashes out blindly with its claws. After putting the owner in the sick bay with an ugly slash wound on xir arm, the travellers need to subdue the Owl – and it perches in the corridor right in front of the ship's locker where all the weapons are.

2. A high-ranking Incandescent (high-caste) Saphirean befriended a Running Owl during xir tenure as a hermit on the Solitude continent. Xe has grown very fond of the animal and secretly wants to keep contact with it. Unfortunately, since the Owl is a carnivore, and eating meat or being in the presence of someone eating meat is forbidden to the higher ranks, xe needs someone to feed the creature, buying meat from the outcaste Lemureans and getting it to the compound where it is kept. The job is rather simple, but is made difficult by the fact that the travellers have no direct contact with their employer. Saphireans, by custom, minimise contact with everyone not of their own caste or the caste one tier down, to avoid spiritual pollution: The Incandescent would contact a Luminary, who would instruct an Ordinary, who would instruct an Ascendant, who would instruct an Aspirant, who would instruct a Vagrant, who is finally low enough on the social and spiritual ladder and has enough freedom to associate with meat-eating, weapon-carrying, flirtatious, swearword-using unbelievers like the travellers. Likewise,

any report they make has to travel up the ladder until it reaches the Incandescent's ears.

3.  As 2), but the Luminary-caste middleman plans an intrigue against the Incandescent (revealing a mindset unworthy of his spiritual high rank; if it became known he would be "caste-cropped" down to Ascendant-caste or lower, where such pandering to personal ambition is at least tolerated). Xe will twist the orders from the Incandescent and the travellers' reports, will try to move high-caste persons to where they "inadvertently" witness the travellers bloodying their hands and souls with dead animal meat, and get the travellers to let slip publicly on whose orders they act. Of course, xe also has to rely on middlemen, so the whole intrigue takes on a truly Byzantine intricacy.

4.  A Contact asks the travellers a favour. Xe has to travel to a neighbouring planet, and quarantine regulations forbid xir to take xir Running Owl pet with xir. Could the travellers babysit the Owl while their Contact makes the trip? It's only for three weeks, and xe will be forever grateful. Unfortunately, the pet is not only squeamish with its food and surroundings, but also distraught at being parted from its master. And a distraught and bored Owl may start attacking furniture, slashing cables, or deciding to go for a long walk in search of xir.

5.  As 4), but their Contact goes missing. The Owl, with its keen senses, might be able to find xir – so the travellers need to smuggle it through quarantine onto the planet's surface and conceal it while they go searching for their Contact.

6.  The travellers are hired as smugglers to a low-technology planet. Unfortunately, the job is not as piece-of-cake as it seems. The backwater planet may not be able to afford high-tech densitometers for its customs service, but they employ Running Owls instead. With their ability to sense pressure differentials, they are able to find the secret storage areas on the travellers' smuggler ship. Someone needs to distract the creatures without the customs officials noticing.

7.  On a rural planet, escaped Running Owl pets have "gone wild" and become a plague on the outlying ranching communities. Every night, cattle and springers are getting mauled. The government has put a bounty on Owl heads. There has even been a large-scale military action by imported mercenary units against the creatures, which resulted in little but a lot of wasted ammunition (much like the Great Emu War of Terra's Australian continent). Now the travellers are hired to test out sonic barriers to keep the creatures away. They find out the hard way that the same frequencies that drive off Owls also attract huge armies of a ravenous locust-like arthropod species. And then they have to dive back into the swarm, armed with vacc suits, shotguns and insecticide sprayers, to turn off the sonic emitters again – which are now in the center of a huge cloud of biting, stinging, buzzing critters.

8.  A resident of one of the urban areas surrounding the downport was walking xir Running Owl pet, and it was attacked by a small local creature. Several days later, xe was attacked by xir own pet, which seemed to be in a killing frenzy. A few days later, more such cases crop up all across the city. A rabies-like disease seems to have jumped the species gap and infected the Owls, turning them into killers. Now everyone who keeps a Running Owl as a pet is in danger… and according to last year's census, that's nearly half the planet's population. Meanwhile, the port's extrality line is closed, a quarantine curfew is enforced, and armed Marines patrol the perimeter. The travellers need to sneak across

the line to finish their job / meet their patron / collect crewmembers out slumming. While avoiding getting slashed and bitten by the rabid Owls that roam the back alleys at night.

9. As 8), but the travellers are hired to smuggle persons or goods across the extrality line.

10. As 8), but the disease was engineered by terrorists who use the panic to overthrow the local government / take hostages / commit random acts of violence.

11. As 10), but the travellers are hired to get a vaccine or a qualified team of veterinarians and biologists from a planet in the vicinity. The terrorists try to hinder their efforts; first by ambushing them at the jump point with a corsair ship, then by activating their cell at the destination planet.

They have subverted a few minor officials there, who might throw a few wrenches in the travellers' plans. If that does not stop them, as a last-ditch measure a group of fanatics will be there to try and take them (or their ship) out of the action with suicide bombings.

12. The travellers are traversing the steppes accompanied by their pet (or an alien of diminutive stature). Unfortunately, a pride of feral Running Owls has decided that this specimen looks really tasty. They patiently shadow the travellers' party the whole way, laying complex ambushes and trying to get their claws on that delectable morsel. They are very adept at hiding, but alert travellers may note they are being stalked.  ✸

## Raconteurs' Rest

## Smoke Test: Once In A Blue Moon

*by Michael Capriola and C. A. Pella*

### Chapter Eight

Captain Lubbock waited until the First Mate came off his Bridge watch, then the two of them went aft to the Main Engine Room. The First Assistant Engineer had just gone on watch there to monitor the power levels, life support and sundry other instrumentation. Lubbock didn't pretend to understand it all.

Engineer Sprey was instructing Apprentice Grurrdzarg in the duties of an Engineering watch officer. "Go up to the galley and see if Nguyen needs any help," the Captain ordered the Vargr.

"Yes, Captain." She hurried out the door. Sprey swiveled her chair around to face the two men who loomed over her.

"Our apprentice was seen lurking about on Deck Three at the time you say she was with you," Lubbock said softly.

Sprey started at the grim faces of the Captain and First Mate. "That's not possible. The only time she was out of my sight was when I was cleaning up. And I know she cleaned up as well—she obviously took a shower and changed clothes. And we passed each other in the cargo bay going back and forth from here to Ship's Stores."

"Maybe she showers faster than you," First Mate Smith suggested.

"No, when I got up to Deck One she was just coming out of her cabin. We ate together and then came back down here."

"You're covering for her," Smith declared. "What did she tell you—that she left something in her quarters? Or left a tool on Deck Three?"

"No, sir!"

"C'mon, Pepper," Lubbock coaxed. "I know you're fond of her—we all are. But I must know her exact movements and whereabouts. I'm not looking to punish you for letting her slip away."

Sprey reached between her legs and gripped the edge of her chair. "Nothing like that happened. Arghaz couldn't have gone to Deck three without my knowing about it, and I'd tell you if she had." Sprey glared at her accusers.

*This is getting us nowhere.* "Your first loyalty is to this ship. Friends come sec—"

"I know where my loyalty lies! The crew of *Grendelsbane* is like my family. Arghaz isn't part of that family yet."

"Isn't she? I made her your responsibility, and her misdeeds would shame you. That's it, isn't it? You know that she went down to Deck Three and you are too ashamed to admit it."

"No, sir!" Sprey took a deep breath. "Am I being relieved of my duties, Captain?"

*She's calling our bluff. Do I believe her or not?* "Is she holding something over you?" Sprey snorted in disgust at this suggestion. *Apparently not. So where does that leave me?* "Okay, then. I'm sorry for this interrogation, but I have to be positive."

"I understand, Captain," Sprey mumbled.

*Like hell you do. Your feelings are hurt, and I don't blame you. I owe you one. And I hope to hell you haven't lied.* "That's all then. Carry on."

Lubbock and Smith departed and walked over to the crew lounge outside the Bridge. "Well, Mohammed Ivanovitch, what do you make of that?"

"I think she's telling truth, Captain."

"Absolutely?"

Smith frowned. "Ninety percent sure."

Lubbock nodded. "Let's get the Vargr down here, then." He pulled his commo unit from his pocket and closed the connection to the public ad-dress system. "Will Apprentice Grurrdzarg please report to the Crew Lounge." He put he commo unit away and waited.

The Vargr showed up in good order. Lubbock pulled out a chair. "Sit."

Arghaz wrinkled her brow in surprise but did as he commanded. She rested her arms on the table top.

"Why were you on Deck Three when you claim you were on this deck?"

"I was not."

"So you say. And Pepper backs you up. But when we questioned her she looked uneasy. Very uneasy." *A lie, that, but perhaps a useful one.* "I think she is covering up for you."

Lubbock half-expected a smooth lie, such as *Oh, I broke or misplaced this piece of equipment and Pepper's afraid we'll both get in trouble over it.* Instead, the Vargr just looked confused. "I do not understand her unease, Captain. I did not go Deck Three."

"You had no errand down there after you came back from the Seeker ship?"

"No, Captain. And … the technicians do not like me. I would not go Deck Three without good cause."

*Well, that's the key to it, isn't it? The Vargr could not go unnoticed down there. Farb for one has a fit every time "that shedding creature" goes anywhere near the probe bay.*

Lubbock glanced at Smith who shrugged and said, "Perhaps someone else was there and was mistaken for Arghaz?"

"Who on ship looks like me, First Mate?"

*That tears it. We offered an out, and she didn't bite. The culprit has got to be Technician Rayne.* "Someone probably caught a glimpse of movement and imagined it was you. Anyway, thanks for your time. You can go about your duties."

"You are welcomed by me, Captain." The Vargr leveraged herself to her feet and limped out of the lounge. Once she was gone, Lubbock collapsed into the chair she'd just vacated. "Technician Rayne must have lied."

Smith settled a hip on the edge of the table. "Or, as you said, Rayne imagined she saw the Vargr. The technicians are very edgy of late."

"That's an understatement. But if not the Vargr, then who was it? And why was he or she going to the Jump Room?"

A horrible thought surfaced in the Captain's mind. He jumped to his feet and ran to the Bridge door. He stuck his head inside. "Hua!" The Second Mate's head shot around. "Who's on maintenance duty right now?"

Cheng Hua checked the duty roster. "'Jenghiz.' He's working on the Lower Turret controls."

"Have him meet me in the Jump Room. And thanks."

"Aye, sir."

Lubbock turned started for the hatch and ladder to Deck 3. "You think our saboteur did something to the Jump Drive?" Smith asked him.

"We'll let Fu Quan decide that."

*There is going to be a reckoning*, Vishnu Lubbock promised himself.                    ✪

## The Planet Construction Kit

*reviewed by Jeff Zeitlin*

*The Planet Construction Kit*. Mark Rosenfelder.
Yonagu Books http://www.zompist.com/yonagu.html
371pp., Trade Paperback
US$14.95

The first thing I need to say about this is that it's *not* light reading. Mr Rosenfelder takes his con-worlding seriously, and this book is not only of non-trivial size, but *densely* packed with information. That said, he specifically says that it's not necessary to do *everything* he describes, nor necessarily in as much detail as he describes: He is being 'hyper-complete' (my word, not his) so that you have the tool(s) available *if* you find you need or want them, not because you *must* use them all.

In the very first chapters, he focuses on the idea that you do worldbuilding because you have stories to tell, not for its own sake. He also emphasizes, with examples, that if some aspect of worldbuilding doesn't add to the story, there's no need to do more than just sketch it in, and maybe not even that much.

# Critics' Corner

Storytelling itself is also examined, and the reader is shown errors that conworlders often make, with examples of both good and bad storytelling.

The bulk of the book is a subject-by-subject treatment of many aspect of building a culture and the world it exists in – or perhaps building a world and the culture that exists in it. The treatments are not so in-depth as to make the topics 'impenetrable', but they are certainly more in-depth than any treatment in *Traveller* supplements to date, and some subjects that *Traveller* worldbuilding gives short shrift to (like culture or religion) or ignores entirely (like daily life or history) are given a good treatment here. Interactions between the various subjects are also covered, and illustrative references to both real and literary cultures are included (and literary references may be examples of good worldbuilding or bad). From the Table of Contents, the broad subjects that you get are, in order, **E-Z Fantasy World**, which focusses on a questionnaire for you to answer about the world you want to build; **Storytelling**, giving an overview of what's involved in [good] storytelling, and how to apply this book to it; **Astronomy and Geology**, for understanding how the planet and its sun 'relate' and what a world's climate zones will look like; **Biology**, discussing animals, ecosystems, agriculture, etc., and the relationships between them and the effect on societies that might develop; **History** of the culture(s), discussing how and why they got to where they are 'today'; **Culture**, on the details of a society and its people's relationships to each other; **Daily Life**, where you get to see how the previous chapter is applied to the individual; **Religion** and other belief systems, and how they affect a society's thought processes and attitudes; **Magic** (which can actually be used as guidance to applying *psionics* to a society in *Traveller*); **Technology** from the most basic to the most advanced, and how to apply it to society; **War**, its reasons, attitudes toward it and those who do it, and so on; and the 'cosmetic' chapters of **Making maps**, **Illustrations**, and **3-D Modeling**. The only worldbuilding topic that isn't addressed in this volume is language, but Mr Rosenfelder has written four other books – each about the same size as this one – on *that* topic.

You're not given all this information without guidance, however; remember that **E-Z Fantasy World** chapter, with the questions that you should ask yourself *before* you start working out the details – questions that will let you 'get straight' in your own mind what your target will look like. Other chapters have similar questions for you to work through to think about.

Mr Rosenfelder's writing is clear, and not loaded with jargon (though some technical discussion is unavoidable). Examples (generally from the author's own worldbuilding) are relevant, without a great deal of obscuring detail, and additional explanation and summary is provided where useful and appropriate. It is clear that the author has 'done his homework', and a (partial) list of his sources is included – many of which are also well-written and interesting books not aimed at the academic reader, but nevertheless informative.

This is definitely one book that should be on your bookshelf if you write or run RPGs in the SF or fantasy genre; I've yet to find a better guide to worldbuilding. Well worth the $14.95 and more. ✪

# *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. If you are a fluent speaker of a language other than English—especially (*but not exclusively!*) 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* 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. ✪

## *Mapepire Viper*-class Interceptor

*designed by Geir Lanesskog*

The workhorse of the Duchess's Own Legion is the aptly-named *Mapepire Viper*, a small, fast deadly ship designed to serve customs control, scout, and anti-piracy functions. Though displacing only 200 tons and limited to Jump-2, the *Viper* is faster and more maneuverable than many fighters, able to engage the enemy at very long range, and capable of delivering deadly fusion fire at shorter ranges. Its armor will deflect most turret-sized weaponry and its sensors will detect all but the most stealthy ship. The standard *Viper* is a matte-black menacing presence, visible as a dark shadow on the starfield, but rumors persist of a stealth version designed for surveillance, and some claim, privateering beyond the borders of the Mapepire Cluster.

The Duchess's Own Legion ordered the first *Vipers*, designed by Vroman and Associates of Mapepire Balsayn, in 1068. While each ship's initial crews claimed naming rights for their vessels, the official designation is VI-###, starting with the prototype VI-201, named *Viper*, launched in 1072 and accepted for duty in 1074.

Capable of 9g acceleration, the *Vipers* replaced the older 7g *Mongoose*-class interceptors, many of which were sold as surplus. In 1102, VI-1000, *Eldritch Dream*, entered service. By 1105, a total of 874 *Vipers* had been produced for the Legion, with another 26 on order and in various stages of completion. Of the commissioned ships, 36 had been lost in service or written off for a variety of reasons. Private or foreign buyers have ordered another 48 *Vipers*, designated as VE-2## escorts. Of these, 28 have been delivered, 12 are under construction, and 8 are completed, but final delivery is pending licensing or diplomatic resolution.

The Legion uses *Vipers* as patrol craft within Mapepire's borders and in adjacent systems with mutual defense arrangements. Patrolling in system around mainworlds and common refueling points

such as gas giants and iceballs, *Vipers* generally operate in pairs, and sometimes small squadrons of four to six craft if expecting significant opposition. The *Viper*'s high acceleration allows it to run down nearly any ship it pursues and outrun any ship too large to handle.

In 1097 a squadron of four *Vipers* defeated a mercenary cruiser and three armed troop transports during an attempted coup by foreign interests in the nation of Jannasav on Hunyadi. After outrunning an initial volley of missiles, the *Vipers* charged the intruding vessels, fried the mercenary cruiser with fusion fire and accepted the surrender of the single surviving troop transport, earning the Legion the thanks of the government and permission to station a permanent garrison on the border world.

In 1104, Die Weltbund seized VE-204, *Black Banshee* at Dragonrest, accusing the crew of piracy and transporting them for trial at Brandenburg. The Duchy of Mapepire disavowed any responsibility for VE-204's actions, providing notarized documentation of the bill of sale to a registered military contractor. The crew is appealing their death sentences.

*Specifications, diagrams, and deck plans are on the following pages.* ✪

## 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! ✪

| Mapepire Viper-class Interceptor/Escort | | Disp (dtons) | Cost (MCr) |
|---|---|---|---|
| | | (Mongoose 2nd Edition) | |
| Hull (80 pts) | 200 dtons, streamlined | - | 12.000 |
| | Radiation Shielding | | 5.000 |
| Armour | Crystaliron | 25 | 6.000 |
| Maneuver Drive | Thrust 9g (Power 180) | 18 | 36.000 |
| Jump Drive | Jump-2 (Power 40) | 15 | 22.500 |
| Power Plant | Fusion, TL12 (Provides Power 300) | 20 | 20.000 |
| Fuel Tanks | 1×Jump-2, | 40 | - |
| | 8 wks ops | 4 | - |
| Bridge | Holographic controls | 10 | 1.250 |
| Computer | Model 25 (primary) | - | 10.000 |
| | Model 15 (backup) | - | 2.000 |
| Sensors (Power 7) | Improved (+1) TL13 | 3 | 4.300 |
| | Enhanced Signal Procesing (DM+4) | 2 | 8.000 |
| | Countermeasures Suite (DM+4) | 2 | 4.000 |
| Weapons (Power 33) | 1×triple turret (PPP) LR,HY:VL, 2D+4 | 1 | 5.500 |
| | 1×fusion barbette: M, 5D, RAD | 5 | 4.000 |
| Systems | Fuel Scoop | - | - |
| | Fuel Processors (40 t/day) (Power 2) | 2 | 0.100 |
| | Semsor Station | 1 | 0.500 |
| | Repair Drones | 2 | 0.400 |
| | Aerofins (DM+2) | 10 | 1.000 |
| | Armory | 1 | 0.250 |
| | Breaching Tube | 3 | 3.000 |
| | Forced Linkage Apparatus | 2 | 0.100 |
| Staterooms | Standard×5 | 20 | 2.500 |
| | Low Berths×8 (Poweer 1) | 4 | 0.400 |
| Software | Library, Maneuver/0 | | 0.000 |
| | Jump Control/2 | | 0.200 |
| | Auto-repair/1 | | 5.000 |
| | Fire Control/2 | | 4.000 |
| | Intellect | | 1.000 |
| | Virtual Crew/0 | | 1.000 |
| Common Areas | | 5 | 0.500 |
| Cargo space | | 5 | |
| **Total** | | **200** | **160.500** |
| Crew (Monthly salary) | Pilot | | Cr6000 |
| | Astrogator | | Cr5000 |
| | Engineer×2 (Cr4000 each) | | Cr8000 |
| | Medic | | Cr3000 |
| | Gunner×2 (Cr1000 each) | | Cr2000 |
| Monthly Maint | | | Cr13375 |
| Total Monthly Cost (not including mortgage) | | | Cr37375 |



Mapepire Viper-class Interceptor

1 Bridge
2 Fresher
3 Armory
4 Air Lock
5 Ships Locker
6 Breaching Tube Hatch
7 Stateroom
8 Common Area
9 Turret and Barbette Access
10 Low Berths
11 Cargo Bay
12 Repair Drones
13 Fuel Processors
14 Jump Drive
15 Power Plant
16 Maneuver Drive
17 Avionics and Sensors
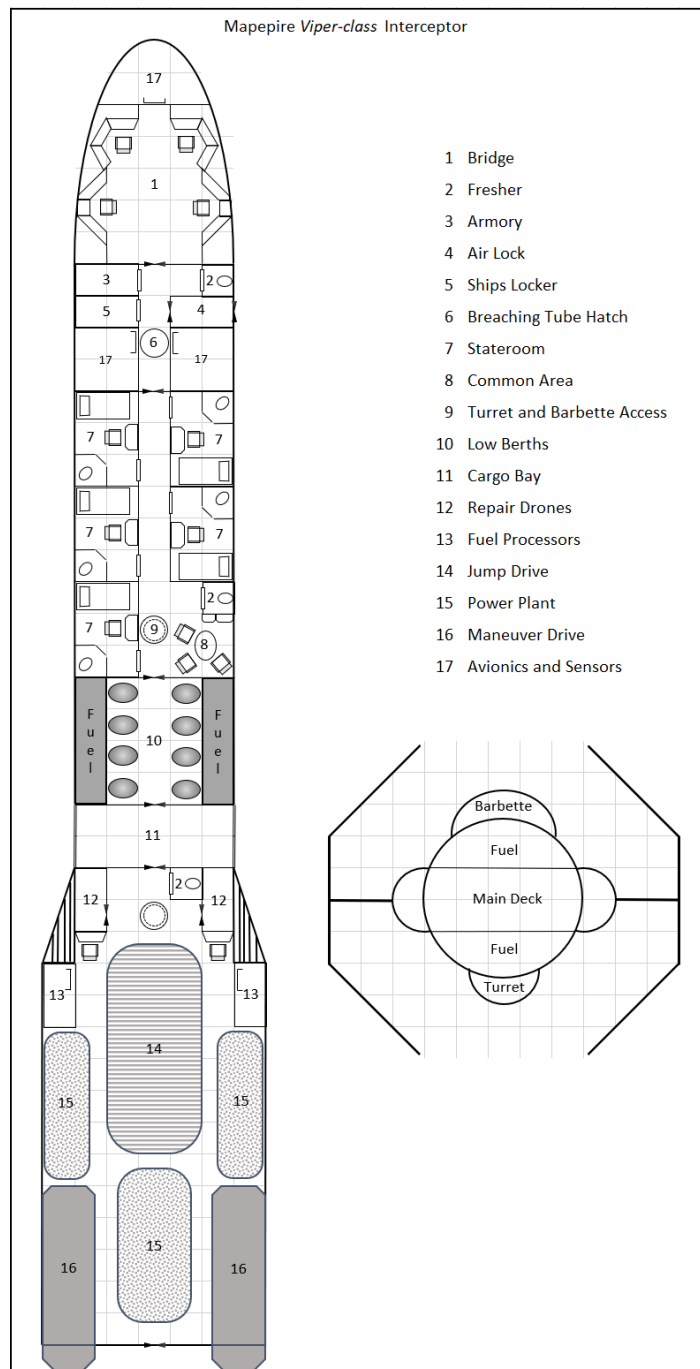
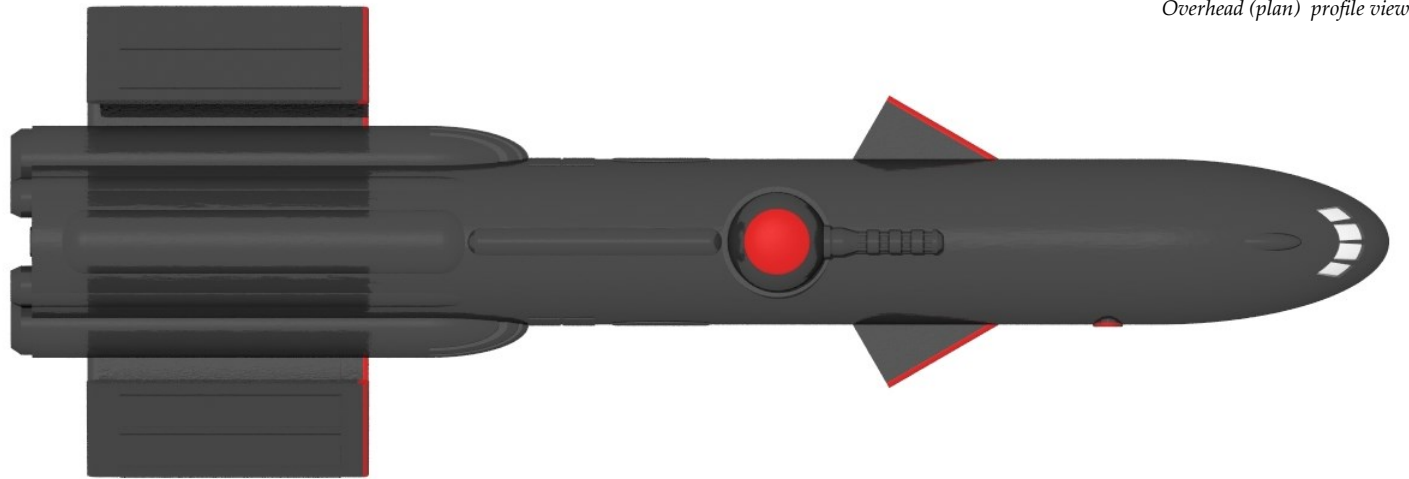*The Mapepire Viper design was submitted by the author as a sample or 'teaser' for an extensive supplement on the Beyond Sector, currently in preparation.*

# The Shipyard

Overhead (plan)  profile view

Foreward profile view

Aft profile view

19

# The "Sappers", Redux

*An Update to the Deep Space Rescue Corps (DSRC) Careers CHARGEN for Classic Traveller*
*by Greg Alan Caires*

*Author's Note: This is an update/continuation of my article "Doing It My Way - Deep Space Rescue Corps: A Career for Classic and Mega-Traveller" that appeared in the October/November 2019 issue of Freelance Traveller (#095)*

## Part Three – The "Sappers" Today

Following the successful rescue and recovery of the 1,800-ton Vargr Merchant Cruiser *Aetheghaeoell* (which rapidly got "Imperialized" to "Ether Gale", but really means *How to Succeed in Business Without Really Trying*) on 273-1108, the Sappers are once again the toast of the Third Imperium. Given the grave irreparable harm that would have occurred should the Sappers have failed to save the "Ether Gale" from impacting the planet Junidy, the Emperor was so pleased by their success that he reinstated his Imperial Charter. Gone now are the furtive glances and cheek-burning shame members of the DSRC felt too often and of late. Rumors abound about the details of the rescue operation, and also of packets of credits changing hands to suppress further rumors about alleged Sternmetal involvement in what appears to be a Vargr Corsair hijacking gone dreadfully wrong.

But before the stationery could be updated, an obscure but ambitious Moot backbencher proffered legislation that would radically change the relationship between the Sappers and those they rescue in the name of the Emperor. During its first century of existence the DSRC was viewed and operated almost as a charity; but with a unanimous vote by all members of the Moot the Imperial Rescue & Recovery Corps has become a valuable revenue stream for the Third Imperium, rescuing whomever they could while salvaging whatever ships were in distress. Previously, recovered ships had been returned to their lawful owners, or to the local systems if those owners were deceased or could not be found.

Now, however, salvaged ships become the property of the Emperor, and the Sappers involved share in the profits. The once-noble calling has become a booming business. With its revised Imperial Charter come Imperial Warrants making Warrant Officers of the Sappers. Those brave sophonts who once did this job solely "So Others May Live" now do it for both money and glory. The Old Breed is gone. Salaries are up, but recruiting is down. The Sappers have regained their popularity – their money remains worthless in virtually all starport bars – but the Corps is now a big business, and viewed as such across Charted Space.

## Part Four – Character Generation: Imperial Rescue & Recovery Corps (IRRC) "Sappers"

### Section 1 – UPP & Terms of Service

1. Roll 2D6 seven times, note the results, remove the lowest number, and assign results to UPP at player's discretion.

2. Roll 1D6 to determine number of terms served by the PC with the IRRC: If the result is 2+, then the PC has at least two terms of service in the Sappers; skip to Section 3 below. If the result is 1, then the PC has only one term of service in the Sappers, and has enjoyed a prior service career. The Player should then roll 1D6-3 to determine the number of Prior Service terms the PC has experienced (any roll modified to less than 1 becomes a 1), and then proceed to Section 2.

### Section 2 – Prior Service

3. Roll 1D6 to determine the PC's prior career:

| 1D6 | Prior career | Automatic Skill |
| --- | --- | --- |
| 1 | Scout | Pilot-1 |
| 2,3,4 | Navy | Zero G-1 |
| 5,6 | Marines | Cutlass- |

4. Determine Prior Service Skills. Do not roll Survival, Commission/Promotion or Re-Enlistment rolls; it is assumed that the PC survived and re-enlisted for the pre-determined number of

terms. It is also assumed the PC did not achieve Commission or Promotion; had they, they likely would have not left their Prior Service for the Sappers. The circumstances of their PCs' departures from Prior Service is left to the players' imaginations.

**Scouts** receive 2 skills per term:

| 1D6 | Personal Development | Service Skills | Advanced Training | Advanced Education (EDU 8+) |
|---|---|---|---|---|
| 1 | +1 STR | Air/Raft | Vehicle | Medical |
| 2 | +1 DEX | Vacc Suit | Mechanical | Navigation |
| 3 | +1 END | Mechanical | Electronic | Engineering |
| 4 | +1 INT | Navigation | Jack-o-Trades | Computer |
| 5 | +1 EDU | Electronics | Gunnery | Pilot |
| 6 | Gambling | Jack-o-Trades | Medical | Pistol |

**Navy** character receive 2 skill rolls during their 1st term, then 1 skill roll per term thereafter:

| 1D6 | Personal Development | Service Skills | Advanced Training | Advanced Education (EDU 8+) |
|---|---|---|---|---|
| 1 | +1 STR | Ship's Boat | Vacc Suit | Medical |
| 2 | +1 DEX | Vacc Suit | Mechanical | Navigation |
| 3 | +1 END | Zero G | Electronic | Engineering |
| 4 | +1 INT | Gunnery | Engineering | Computer |
| 5 | +1 EDU | Blade Combat | Gunnery | Pilot |
| 6 | +1 SOC | Gun Combat | Jack-o-Trades | Admin |

**Marines** receive 2 skill rolls during their 1st term, then 1 skill roll per term thereafter:

| 1D6 | Personal Development | Service Skills | Advanced Training | Advanced Education (EDU 8+) |
|---|---|---|---|---|
| 1 | +1 STR | ATV | Vehicle | Medical |
| 2 | +1 DEX | Vacc Suit | Mechanical | Gunnery |
| 3 | +1 END | Blade Combat | Electronic | Demolitions |
| 4 | Gambling | Gun Combat | Gunnery | Computer |
| 5 | Brawling | Gunnery | Blade Combat | Leader |
| 6 | Blade Combat | Zero G | Gun Combat | Admin |

5. Prior Service Mustering-out benefits – PC earns 1D6 roll per term served in Prior Service. At least one roll must be against the Cash column (See table at the top of the next column).

One 1D6 roll per term served. DM+1 on Cash column if character has Gambling skill.

| 1D6 | Navy Benefits | Cash | Marines Benefits | Cash | Scouts Benefits | Cash |
|---|---|---|---|---|---|---|
| 1 | Lo Passage | 1000 | Lo Passage | 2500 | Lo Passage | 10000 |
| 2 | +1 INT | 2500 | +2 INT | 5000 | +2 INT | 20000 |
| 3 | +2 EDU | 5000 | +1 EDU | 7500 | +2 EDU | 30000 |
| 4 | Blade | 10000 | Blade | 10000 | Blade | 40000 |
| 5 | Mid Passage | 25000 | Mid Passage | 20000 | Gun | 50000 |
| 6 | Hi Passage | 50000 | Hi Passage | 30000 | Mid Passage | 60000 |
| 7 | | 70000 | | 40000 | | 70000 |

## Section 3 – IRRC Service

6. Roll 1D6+1 to determine the number of terms of service the Sapper PC has served. PCs are automatically awarded Rank 0 (Junior Warrant Officer) and accompanying Auto Skills during their 1st term of service in the IRRC. Roll 2D6 during each term of IRRC service (including 1st term) to determine if the PC promoted during that term. Promotion occurs on a 2D6 roll of 8+, modified by +1 if INT is 8+. Skill levels are cumulative so a PC with rank Level 3 who elects Medic-1 and who then rolls Medic on the Service Skills table below results in Medic-2.

| Rank | Title | Auto Skill(s) |
|---|---|---|
| 0 | Junior Warrant Officer | Vacc Suit-1 & Zero G-1 |
| 1 | Warrant Officer | Blade* & Damage Control**-1 |
| 2 | Warrant Officer 2nd Class | Medic-1 or Demolitions-1 |
| 3 | Warrant Officer 1st Class | Leader-1 & Liaison-1 |
| 4 | Chief Warrant Officer | Demolitions-1 or Ship's Boat-1 |
| 5 | Senior Chief Warrant Officer | Instruction-1 |
| 6 | Master Chief Warrant Officer | Admin-1 |

\* *Sappers are equipped with a custom tool – a Sapper's Axe – that includes an electromagnetically attached blade head (front), pike (top) and hammer (rear), and a telescopic shaft, that allows this tool to also be used also as a crowbar (cudgel) or a hatchet. To master the Sapper's Axe, PCs acquire the Blade skill.*

\*\* *Damage Control (DC) is a new skill that allows characters to mitigate the effects of ship-to-ship combat; it can be considered a mix of firefighting, mechanical, electronic, computers and engineering. Characters present in shipboard spaces (bridge, drive room, etc.) when damage occurs use their DC skill level to modify GM's damage rolls in the player's favor. If a PC is not present when the damage occurs, their DC skill can also be used to perform rudimentary repairs on shipboard systems after they are damaged to make them operable, but with limited functionality. Greater functionality may be achieved by more skilled personnel using skills other than DC (e.g., engineering, mechanical, computer, etc.).*

*(Continued from page 21)*

*A note about Warrant Officers.* Warrant officers hold their rank due to Imperial Warrants; they are not Commissioned Officers as with the other branches of Imperial service. Warrant Officers are senior to non-commissioned officers (NCOs) and enlisted personnel (who address them as sir/ma'am) but junior to Commissioned officers (who address they by their full rank title and name (e.g., Master Chief Warrant Officer Shaskuduvilli). Due to their Imperial Charter, Sapper Warrant Officers have situational rank over all other Imperial personnel during rescue and recovery operations; the admiral on the bridge may think he's in charge, but if the Sappers are there, things have gone very badly indeed and he should listen to their instructions. Formally, Sappers address each other as "Mister" (e.g., Mister Shaskuduvilli) to show that they do not stand on ceremony amongst their own. May the Gods help any non-Sapper, regardless of rank, who mistakenly addresses them by that title; by custom only the Emperor may address "his" Sappers as "Mister".

7. Roll 1D6 against the table below twice per term starting with the 2nd term of IRRC service (note: total # of skill levels cannot exceed INT+END). The player may choose which column they are rolling against but can only choose Advanced Education if their PC has an EDU of 8+. Only roll once per term may be against Advanced Education (if permitted by EDU 8+); the second roll may only be against Personnel Development or Service Skills.

| 1D6 | Personal Development | Service Skills | Advanced Training | Advanced Education (EDU 8+) |
|-----|---------------------|----------------|-------------------|-----------------------------|
| 1 | +1 STR | Blade | Ship's Boat | Naval Architect |
| 2 | +1 DEX | Vacc Suit | Medic | Legal |
| 3 | +1 END | Zero G | Demolitions | Gravitics |
| 4 | +1 EDU | Damage Ctrl | Computer | Engineering |
| 5 | Blade Cbt | Liaison | Survival | Navigation |
| 6 | Gambling | Air/Raft | Gun Cbt | Pilot |

8. At the end of each term, Sappers roll to determine their Survival. On a 2D6 roll of 12 the Sapper has been injured and must retire; on a roll of 2 the Sapper has been grounded and must retire; Flight Surgeons have determined that further low-berthing has become too risky, leaving the Sapper vulnerable to traditional low-berth survival rates. All other rolls (3 to 11) have no effect and the Sapper is assumed to have survived. *Note:* These Survival rolls supersede the number of terms of service in the Sappers determined by step 3a above.

Sappers do not roll for Reenlistment. After the rolled number of terms, or age 58 (whichever comes first), Sappers must retire.

9. Roll 2D6 to determine effects of aging during 6th through 10th term of service. Note that due to extended periods in Frozen Watch, Sappers suffer the effects of aging at a slower rate than other PCs. Adjust the character's stats if the aging roll fails. In the table below, apply the aging effect only if the roll in [brackets] is made (that is, -1 STR in term 6 only on a roll of 11+).

| Term (Age) | 6 (42) | 7 (46) | 8 (50) | 9 (54) | 10 (58) |
|------------|--------|--------|--------|--------|---------|
| STR | -1 [11+] | -1 [11+] | -1 [10+] | -1 [10+] | -1 [9+] |
| DEX | -1 [11+] | -1 [10+] | -1 [9+] | -1 [8+] | -2 [8+] |
| END | -1 [12+] | -1 [11+] | -1 [10+] | -1 [9+] | -1 [8+] |

10. Roll 1D6 on the Mustering Out table below for each term served in the Sappers. At least one roll must be against the Cash column.

| 1D6 | Material Benefits | Cash |
|-----|-------------------|------|
| 1 | Gold multifunctional personal timepiece | 25000 |
| 2 | +1 INT | 50000 |
| 3 | +1 EDU | 75000 |
| 4 | Sapper's Axe | 100000 |
| 5 | Middle Passage | 125000 |
| 6 | High Passage | 150000 |
| 7 | +1 SOC | 170000 |

*DM +1 on Cash if character has Gambling skill*
*DM +1 on Material Benefits f character has INT 8+ or EDU 8+*

11. Sappers successfully completing four or more terms with IRRC (not including Prior Service terms) receive an annual pension per the table, right:

| IRRC Terms | Annual Pension |
|---|---|
| 4 | 2000 Cr. |
| 5 | 3500 Cr. |
| 6 | 5000 Cr. |
| 7 | 6500 Cr. |
| 8 | 8000 Cr. |
| 9 | 10500 Cr. |
| 10 | 12000 Cr. |

Conclude CHARGEN by confirming character's current age, number of terms of current and prior service, and total number of skills and skill levels.

## Final Thoughts

Sappers are hardened, hearty, almost foolhardy spacers sworn to their devotion to save sophonts from near certain death amidst the hard vacuum of deep space. They approach this duty serenely, without gallows humor, secure in the knowledge that they will either survive, or die a hero's death. They rush into starship spaces intelligence sophonts are trying to escape. They do not give up their lives cheaply or easily, only when doing so means others will live. They are the perfect people to have beside you in a crisis, and should be played accordingly.

*Author's note:* The Sappers will return at North Texas RPG Con during June 2020 in Dallas, Texas. Players wishing to create Sapper characters for use at the game run there are encouraged to do so. Please remember to keep your PCs as active members of the IRRC by ending CHARGEN prior to their mustering out.                                                  ✺

# Terrain Generation by Hand

*by Jeff Zeitlin, based on notes submitted by Andrew Morris*

Although there are many programs out there for terrain generation, most of which can superimpose any sort of grid over the terrain, or which allow the terrain to be imported into a program which does, there's still occasionally a place and/or need for manual terrain generation. Andrew Morris has provided two methods (the names are his) that give reasonable results while requiring only pencil, paper, and a few dice.

## Method 1: "Fractal"

Define the different land forms you wish to use and distinguish on the map. Mr Morris defined seven, based on altitude (table, right), but you may define more or fewer, and based on other factors (e.g., vegetation or biomes).

| | |
|---|---|
| -2 | Deep Ocean |
| -1 | Shallow Ocean |
| 0 | Mixed Land and Water |
| 1 | Plaina |
| 2 | Rolling Plains |
| 3 | Hills |
| 4 | Mountains |

Apply the following algorithm:

A] Take a triangle, and assign one of the landforms to each corner.

B] For each side:

1] Take the average A of the values of the two landforms

2] Roll a die

| 1D | Integer | Fraction |
|---|---|---|
| 1 | -1 | -1.5 |
| 2 | -1 | -0.5 |
| 3 | 0 | -0.5 |
| 4 | 0 | +0.5 |
| 5 | +1 | +0.5 |
| 6 | +1 | +1.5 |

a] if A is an integer, look up the die roll in column 1 [*1D*] of the table, and take the value from column 2 [*Integer*]

b] if A is not a whole number, look up the die roll in column 1 [*1D*], and take the value from column 3 [*Fraction*]

3] Add the number from the indicated column to the value of A

4] Assign this result to the midpoint of the line.

C] Add new lines connecting the midpoints whose values you just determined. This will create four new triangles nested in the original one.

D] Repeat steps B] and C] until you have reached the desired granularity for the map.

This is not statistically balanced, but it is fine for generating *Traveller*-style hex maps.

Three iterations will get to *Traveller* icosahedral world-map resolution for a bit more than one triangle. Note that this method gives the centers of the hexes. For non-triangular areas, divide the area into triangles and use this method for each triangle, remembering to preserve the already-generated edges of each triangle.

**Example**

Let's generate a section of a continent through three iterations. We'll use Andrew's terrains from the beginning of this article. Arbitrarily, we'll start with the top of the triangle being "Hills" (3), the lower left corner being "Rolling Plains" (2), and the lower right being "Shallow Ocean" (-1).
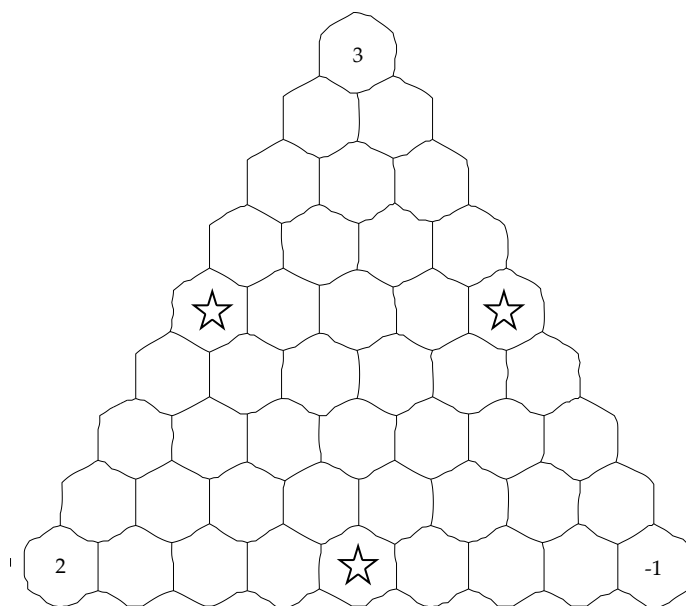


***Iteration 1:*** (*Note: we will calculate averages and add rolls from left to right, and top to bottom.*) The midpoints of the three sides of the triangles are the hexagons marked with stars. The averages are 2.5

*(Continued from page 24)*

(3+2÷2), 1 (3-1÷2), and 0.5 (2-1÷2). We roll 2, 5, and 6, so we add –0.5, +1, and +1.5, giving 2, 2, and 2 (coincidentally). Our "map" is now as shown, with the next spaces to be calculated marked by stars.
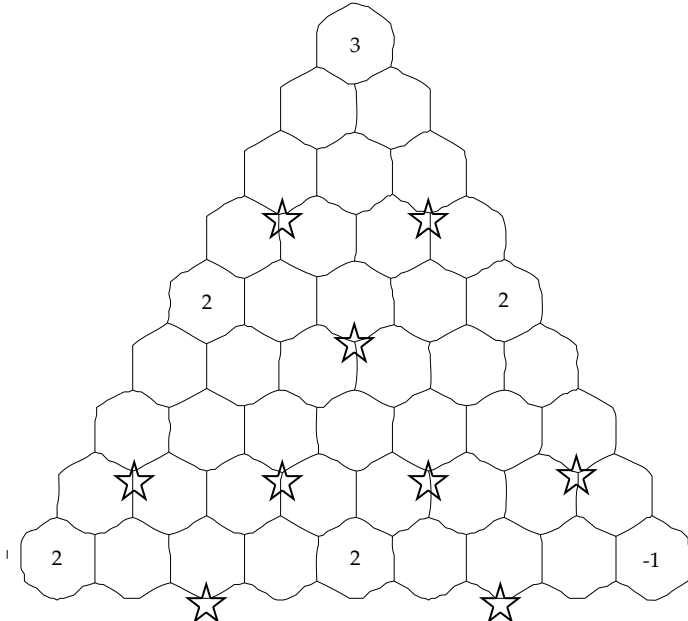


***Iteration 2:*** Each iteration will be dealing with three times the number of spaces as the previous one. Again, working left-to-right and top to bottom, the averages are (I won't include the computations) 2.5, 2.5, 2, 2, 2, 2, 0.5, 2, 0.5. We roll 5, 6, 2, 4, 6, 4, 5, 2, and 1, making the increments +0.5, +1.5, -1, 0,+1, 0, +0.5, -1, -1.5, and the grid fills in as follows:
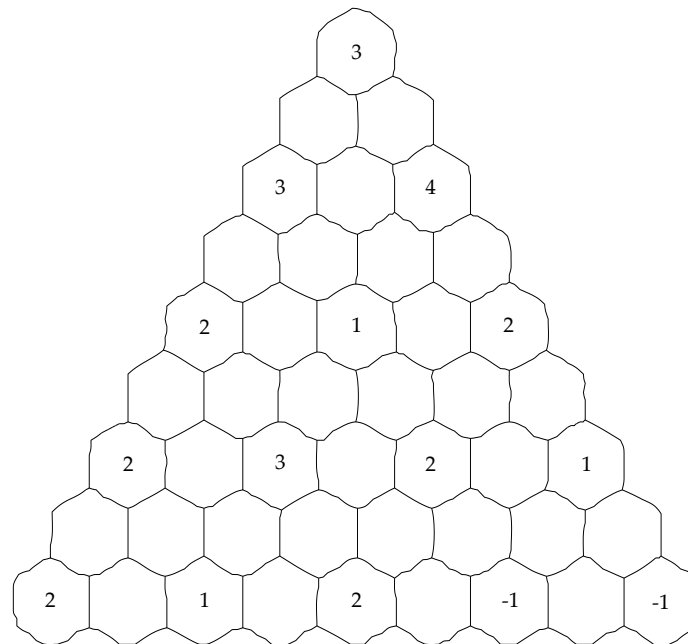


***Iteration 3:*** All of the remaining spaces will be filled in, using the same procedure. The final result:
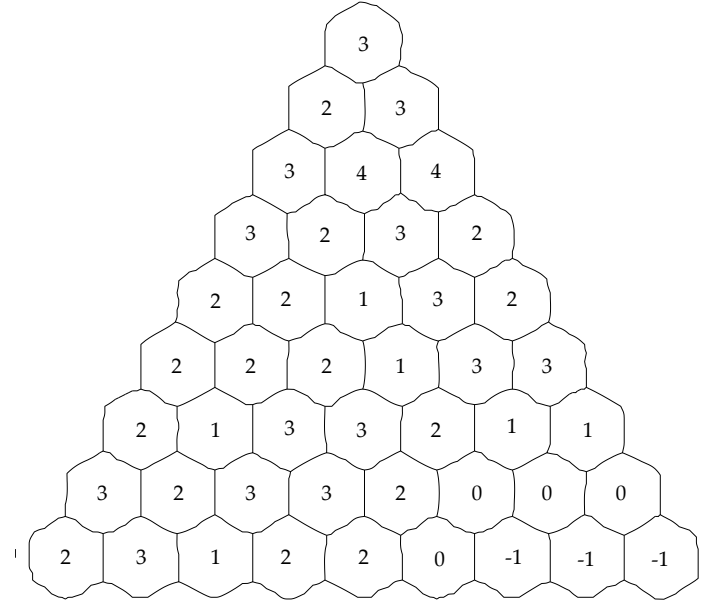


The result isn't unreasonable for "real" land, and you can color it in or add detail:
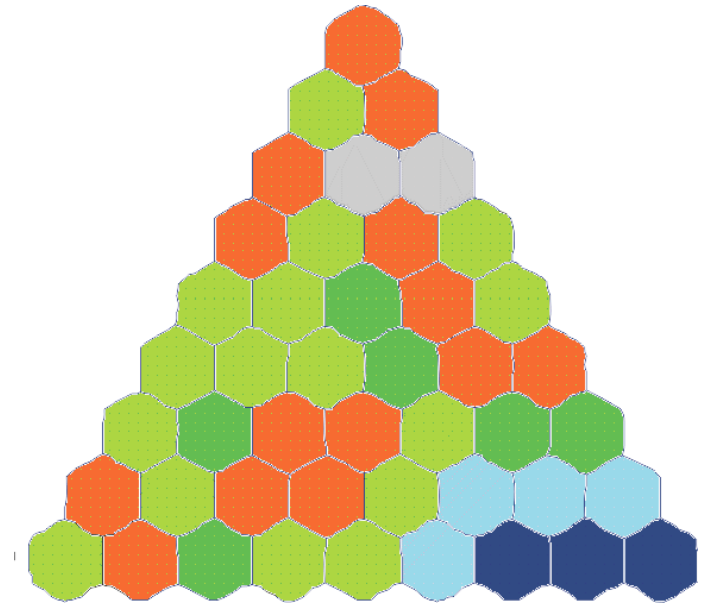


Here, I've just done some simple coloring: dark blue for –1 (shallow ocean), light blue for 0 (mixed land and water), dark green for 1 (plains), light green for 2 (rolling plains), orange for 3 (hills), and grey for 4 (mountains). If you wanted, you could perhaps draw coastlines and islands in the light blue areas, or even run the process through a few more iterations and develop more detailed transitions,

*(Continued from page 25)*

which might also give you an idea of ridge lines, river valleys, and so on. Don't feel obligated to stick with the example range of terrains, either; you can add more, or use completely different criteria for different kinds of maps (for example, population density).

## Method 2: "Islands"

This is not so well developed but seems robust enough. It is great if you like rivers, since every downward slope inevitably leads to the sea.

Start with any kind of mesh—it doesn't even have to be a "regular" shape. Then, apply the following algorithm:

A] Assign negative heights to the outermost points on the mesh.

B] Start with the point with lowest height ($H$) that has at least one adjacent point with no height

assigned and work your way up. For each neighboring point with no height assigned, roll a random increment $i$, and assign the point a height of $H+i$. When all of the points adjacent to the chosen point have been assigned heights, repeat the process, choosing the point with lowest height $H$ and unassigned neighbors. Note that the random increment $i$ cannot be negative, but zero is an acceptable value.

The rate at which the land rises is slower than you might expect because the gradient is always taken from the lowest point.

A bit of experimentation showed that an example with reasonably illustrative results would be unreasonably complex to show in this article, so no example for this algorithm will be provided. ✪

## After-Action Report: Squadron Strike Playtest

*by Ken Burnside*

*Editor's Note: Ken runs these sessions for playtesting and teaching the game on Thursdays at 17:00 UTC; see https://vtt.mikezekim.com/learn for more information.*

### Thursday, 23 April, 1:00 PM EDT

*Traveller* with the Brits! We had a rematch with revised versions of the *Ghalak* and *Beijing*, this time with a *Ghalak* and a *Sloan* versus two *Beijings*, with the Imperials interposing themselves against Solomani Scum™ set on hitting commercial shipping!

Our now regular Thursday evening (6pm GMT) game saw another Imperial versus Solomani match-up…

The Imperials had been hunting down Solomani convoy raiders. They received a tip-off of where they

may strike next – the Imperials got lucky and engaged the Solomani.

I was flying the Imperials this week and had a *Ghalak* CA and a *PF Sloan*; I was tasked with stopping two Solomani *Beijing* Strike Cruisers, flown by my nemesis, Paul. This was the second time we had flown these ships and we both knew their capabilities.

The *Ghalak* CA is a solid SI-17 ship with a good variety of weapons including a huge array of banked laser – more on them later… The *PF Sloan* which most of you will know if you have played through the *Traveller* tutorials.

The *Beijing* CS is an interesting ship to pilot. It has a spinal meson with a single window firing arc

*(Continued from page 26)*

and two turn cool-down. The meson is supported by a large missile battery and a few turret lasers. It has three points of nose armour which can stop all *Ghalak*'s 24 banked lasers at all but very close range.

## The Battle

A cautious approach from both sides was taken, both of us realising that range was the key to our success. The Imperials had slightly better thrust, which was enough to ensure the first pass was at around 10 hexes. The Solomani targeted the smaller *PF Sloan* and severely damaged it. The Imperials concentrated on one of the *Beijings* and with the mighty firepower of the *Ghalak* took it down, in no small part from the shredding of all its sand by multiple banked lasers. Both sides launched significant missile salvos. The *Ghalak* had to help out the *Sloan* by intercepting as many missiles as it could that were targeting the smaller ship, however it was not enough and the *PF Sloan* was crippled with few systems still functioning. The *Sloan* tried to open the distance from the remaining *Beijing*, and with only a single functioning laser had to pivot to throw sand out from its last remaining caster. It wasn't enough and the *PF Sloan* went down under a hail of missiles. In retrospect I should have kept it closer to the *Ghalak* so it could have been covered by its banked lasers.

The ships separated but not before the *Beijing*'s meson tore through the *Ghalak*, taking out its main Spinal Particle beam and meson screen – with only one hull substitution available I kept the meson screen hoping I would be able to repair the particle weapon – which I later did. Paul tried to tempt me into a chase, which I wasn't tempted by at all considering his 25-range meson weapon! Eventually we began a second pass but again with the *Ghalak*'s greater thrust the *Beijing* could not keep the range open enough to give it an advantage. The *Ghalak* survived the *Beijing*'s spinal attack without taking too

much damage and then as the range closed to two hexes the might of the *Ghalak* was shown as it destroyed the last remaining *Beijing*.

## Aftermath

Both Paul and I have now had a chance to fly both the *Ghalak* CA and the *Beijing*. The Imperial CA is everything you would expect it to be; big, tough, weapons everywhere. It does take quite a few APs to fight effectively and Paul was unlucky that his mesons did not take out any of its bridge. I was on the receiving end of the *Ghalak*'s power last week and its ability to shred sand with its banked lasers makes it a most formidable foe.

I flew a *Beijing* last week and realised how important its 3-nose armour was – it is enough to deflect most laser shots from anything over range 6. However, Paul was unlucky with his first ship I hit as there were many hits on his SSD 10 section that stripped away most of the nose shielding. With the armour gone a *Beijing* finds it very difficult to fight effectively. ✪

# Confessions of a Newbie Referee

**A Column by Timothy Collinson**

## #45: Half a Million Words!

Assuming our worthy editor publishes this Confession, or indeed any other words of mine, I've just calculated the rather astonishing statistic that it will include the half millionth word of *Traveller* material I've had published. That doesn't even include the first two editions of *The Traveller Bibliography*, nor *The Traveller Periodical Bibliography* (all written before I kept formal statistics), nor any contributions to the *Traveller* Mailing List. That latter means that the 100,000 words I've now written in reports from *The Traveller Adventure* aren't included either. If you include those and the various things I have in the pipeline but not yet published, it's actually nearer a million words. And then there's the folder of works in progress which seems to get larger rather than smaller.

But all the same, half a million words! Of course, I'm not claiming they're *good* words and they are often not in the right order, but my spreadsheet dates back to February 2011 so that's not quite a decade. Say 50,000 words a year. I'm slacking really, aren't I? I often fail to meet my perhaps rather hopeful goal of a thousand words a day, but I rarely fail to write *something* daily.

Surprised though I am to stumble across this factoid (and at just the right time for it to be a nice round number), it would be timely to thank the various editors and publishers who've accepted my work. Mr Zeitlin of course can shoulder a lot of the blame but there is also Andy Lilly of British Isles *Traveller* Support, Brett Kruger of *Into the Deep*, Mongoose Publishing, 13Mann in Germany and of course the late, great Loren Wiseman editing the online JTAS. A huge thank you to them all for their encouragement, advice and general patience with my queries or corrections. Sometimes their encouragement took the form of simply publishing something as submitted, sometimes it was in the form of helpful editorial advice, sometimes it was in the form of a cheque which is encouragement enough. I should also thank readers who've been kind enough to say positive things which are rarer than I'd like but enormously helpful.

My confession? If you'd asked me a decade ago whether I could come anywhere close to this, I'd have probably said no, don't be silly. A little like my drumming where I still find it quite hard to see myself as "a drummer"; the same is true of writing. But like the journey of a thousand miles beginning with a single step, my encouragement to anyone else wanting to write is this: don't wait for the perfect time; don't wait for the perfect place; don't wait for the perfect pen/notebook/laptop. Just write. Decide it's what you're going to do and carve out a little time – preferably each day – just to write. Even if it's only a few hundred words as a goal, it soon mounts up. Put aside some TV; put aside some social media. Make a start; keep it up.✪

# Raconteurs' Rest

## A Cepheus Vignette

*by Felbrigg Herriot*

"The FGMP-15 is an awesome weapon, and I've melted battalions with it in my time. On Kartum-9 I found its limits. Would you believe we were flying cover over a beach full of tourists, on an unsettled world? The sea, purple by the way, started boiling a few hundred meters off the beach and the pilot swooped us in low for a closer look. I nearly crapped myself when huge tentacles burst out of the water and grabbed for the flitter, actually reached up for us! You better believe I was burning them with the empee. The pilot pulled back and dumped us on the sand. The creature was massive; it broached onto the beach and I burned out the empee's entire battery on it, but it wouldn't die. Even as I was torching it, it was reaching for some of the tourists that hadn't fled. Now, buy me another beer, and I'll tell you how we stopped the monster."  ✪

*…Continued from previous issue*
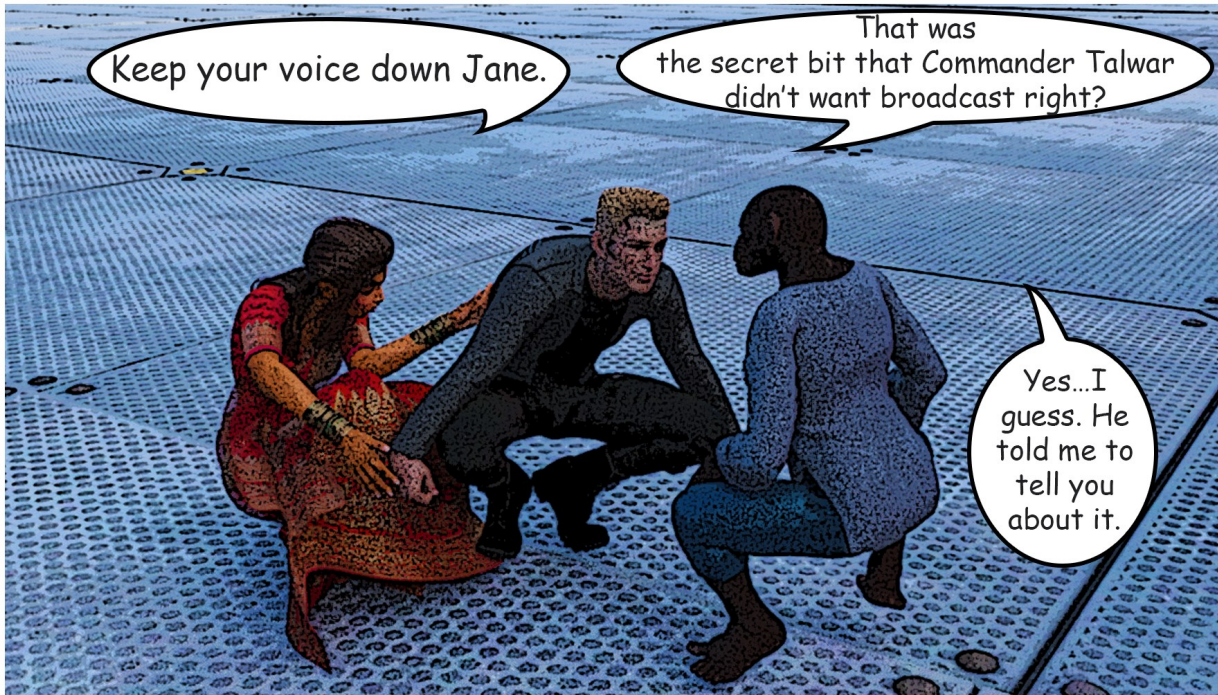
## 43 Space Opera Adventure Seeds

*reviewed by Jeff Zeitlin*

*43 Space Opera Adventure Seeds.* Jason Anderson
Polgarus Games (*no website found*)
11pp., PDF
US$1.75/UK£1.40

One of the strengths of *Traveller* is that it allows the players and referees to adopt their own style of SF campaign, from grittily realistic to high space opera, even verging on technofantasy. It can also be a weakness, as that flexibility doesn't have any "inherent" support for generating ideas, and sometimes, even the most creative referee may find xirself at a loss for an idea.

One can make up for this lack by purchasing and running pre-generated adventures or pre-generated campaigns; there have been many offerings in this class, and they fill a need, otherwise they wouldn't sell. But sometimes those are 'overkill'. They're more than what the referee needs (or wants), or the core idea just doesn't appeal. Enter the Adventure Seed: A quick outline of a situation, just a paragraph or two, enough to (hopefully) catch a referee's fancy and trigger xir creative energies without overspecifying the situation or response to it. Those sell, too, because they also fill a need.

This booklet is the latter: a small collection of ideas that aren't overspecified, suitable for a Space Opera style of campaign. Most can be easily adjusted to support other types of campaigns, as well, although there are a few that really only fit high space opera or technofantasy. These are just the basic scenarios, posing the 'problem'; you don't get any suggested denouements as in the 'standard' *Traveller*-format adventure seed. Most are generic enough that it's sometimes even possible to combine two or more of these seeds into a more complex adventure idea. You don't get any development of any of the ideas; they can be played as single-locale episodes in a longer campaign (perhaps filling in those two days on Carsten a little more momentously), or as enig-

mas or potential threats that can lead to multi-world mini-campaigns. Many scenarios also allow for development with the characters on either side of the law, so you can play to your party's predilictions— or manipulate them into the opposite!

The layout of the PDF is acceptable, but page filling is irregular; several pages have sufficient white space that might have allowed for additional seeds without increasing the final page count. There is no apparent effort to classify and group the seeds, and a little rearrangement might well have also allowed additional seeds in the same number of pages. There are artwork credits on the first page, but no artwork for the credits to apply to.

As with any list of adventure seeds, this is a publication aimed squarely at the referee – players who don't referee need not apply. For the price, it's not a bad value, but as with any similar publication, whether to purchase it depends on how likely you are to need it – or want it. ✪

## Navigation in *Traveller*

*by Dan Corrin*

This series will explore a number of concepts with navigation in *Traveller*. The rules are often unclear and the science and/or reasoning behind them not ideal. In your own *Traveller* universe, you can (of course) ignore or alter these as you see fit. The previous articles in this series covered the 100-diameter limit, running vs standing jumps, calculating jump vectors, and jump masking and interstellar courses; a future planned topic is exploratory navigation.

## Part 5: In-System Navigation

As discussed in previous articles, in-system travel is required a lot more than books seem to indicate. Travel to a world's 100D will not provide a viable jump solution in many cases. Longer travel times are going to be normal, and we need to be able to somewhat accurately determine how long this takes.

Piracy is also a long-time staple of *Traveller*. Ships not near patrolled planets run the risk of pirates trying to get some free income. As described, the accuracy of a jump is poor at best; pirates cannot be waiting at a "jump point" for incoming traffic, and outgoing starships also have a fair amount of leeway to determine where they will jump. We need to know if and how fast a pirate can intercept a ship.

When a ship comes out of jump space it will have some velocity computed based on the relative motions of the stars and the velocity of the ship in relation to the source star (independent of standing or running jumps). Besides having that velocity there are no other effects from the jump. That is, the jump doesn't magically affect the ship's velocity vector – jumping within a system just changes the ship's location, not its speed or direction of travel.

In our world with no constant-acceleration drives, travel from one planet to another is usually done via Hohmann transfer; a very low energy course that can only be attempted when planets are aligned properly, e.g., in an Earth-Mars Hohmann

transfer, Mars needs to be 45° in front of Earth. The ship leaves on a 4 AU curved course that eventually intersects Mars' orbit 8.5 months later requiring only about a 3km/s velocity delta or 5 minutes of thrust from a Manoeuver-1 ship. Other transfers can be made with slingshot effects around planets gaining (or losing) velocity. (The energy comes from the planet's energy at a proportional rate; the effect on any planet is unmeasurable). These allow for quite a variety of operations, albeit over a long time. The Messenger probe made 6 gravity assists over a 7 year period to arrive at Mercury.

*Traveller*, of course, has long-term constant acceleration ships. No *Traveller* starship is going to be spending 250 days doing nothing waiting to rendezvous with a different planet. With the same configuration between Earth and Mars (45°), the straight-line course is about 1AU. A ship can point itself about 6,000,000 km in front of where Mars is at that moment and accelerate for about 34.3 hours and decelerate just a bit longer time. As they need to slow down from Earth's orbital velocity of 30 km/s to Mars' 24 km/s an extra 10 minutes of thrust is required. In that 68.7 hours Mars will have moved about 5,938,000km and the ship can then plot an orbital insertion vector.

Somewhat counter-intuitively travelling at twice the acceleration (M-2 ship) will not arrive in 1/2 the time. The same Earth-Mars trip would take about 48.6 hours (70% of the time) at 2G. At 6G the trip would take 28hours (40% of the time). The higher G ships would also need to aim closer to the planet as the trip is shorter.

Similarly slingshot and atmosphere braking manoeuvres are primarily for ships with no real drives, though a slingshot can change a high-speed ship's vector that might take many hours of 1G thrust. In the above Earth-Mars manoeuvre the ship may be going at the required 24 km/s but it is at a significant

angle to Mars' orbit. A slingshot (Gravity assist) can correct the course to be along the orbital line.

Most *Traveller* systems show travel times using equation [7] (*see box below*) – accelerate for half the distance and then turn-over so the ship is pointing the other direction and decelerate the remaining half. Using the constant acceleration formula (equation [8]) accelerating all the way to the destination results in a shorter time, but at the end of the journey one doesn't want to be travelling at 1200 km/s and unable to interact with the destination (unless firing a few missiles is your goal).

In-system travel is slow, despite being much faster than real-world travel. Micro-jumps (jumping in-system) can be much faster. A jump takes 168 hours (7 days) ±10%. At 1G a 168-hour trip (with turnover) will cover 900 million km, or about 6 AU and easily get a ship to Jupiter, but if you needed to travel from Earth to Saturn (8 to 11 AU, depending on where in their orbits the two planets are), jumping would be faster (albeit taking more fuel).

Gas Giant refueling is seen as a cheap way for ships to get fuel, rather than paying local star ports or star bases for refined fuel. The captain needs to consider just how far away that Gas Giant is. For Sol, Earth (and the Sun's 100D limit) are both near 1AU, while Jupiter is 5-5.5 AU from the sun. Depending on planetary alignment, that means that the straight-line distance between Earth and Jupiter can be 4 to 6.5AU. Likely better to pay for the fuel than take the extra 6 days. Similarly, getting ice from the asteroids will still add 3.5 days in the Sol system. Of course, some planets like Regina in the Spinward Marches actually orbit a gas giant.

As long as all the units of all the values agree the equations will work; you do not need to use any particular system of units (like SI). Constants, such as G force, also must be expressed in units that agree with the other values. As most calculations use kilometers (km) (instead of meters, m) we would want to use 0.0098 km/s$^2$ as our 1G value, and while travel times in hours are more applicable, we can use 127137.6 km/h$^2$. Mixed units (e.g., 1G = 35.304 kilometers per hour per second (one second of acceleration gives a 35 km/h speed change)) can be used *carefully*; they are more likely to cause problems than make the solution easier.

## Equations Referenced

| Description | Formula | |
|---|---|---|
| Equations of motion in a straight line | $V_1 = V_0 + at$ | [1] |
| $D$=distance, $t$=time, $V$=velocity $a$ = acceleration | *Solve for t:* $\quad t = (V_1-V_0)/a$ | [2] |
| a 0 subscript (e.g., $V_0$) is initial; a 1 subscript (e.g., $V_1$) is | $D_1 = D_0 + V_0t + \frac{1}{2} at^2$ | [3] |
| final. | $D_1 = D_0+\frac{1}{2}(V_0+V_1)t$ | [4] |
| | $D_1 = D_0 + V_1t - \frac{1}{2}at^2$ | [5] |
| | $V_1 = \sqrt{(V_0^2 + 2a(D_1-D_0))}$ | [6] |
| Constant acceleration time with no net velocity change – standard *Traveller* formula | $t = 2\sqrt{(D/a)}; V_1 = V_0 = 0$ | [7] |
| Constant acceleration – velocity change | $t = \sqrt{(2D/a)}; V_1 = at, V_0 = 0$ | [8] |
| Simple interception: $a_P$ = pursuer acceleration; $a_t$ = target acceleration | $t = 2V_0/(a_p - a_t)$ | [9] |
| Interception at a distance and acceleration to optimize pursuer speed. | $t = (V_0\pm\sqrt{(2D_0(a_t - a_p) + V_0^2)})/(a_p - a_t)$ | [10] |
| | $a_p = a_t + V_0^2/2D_0$ | [11] |

## Piracy

In order for piracy to be effective the pirates need to be able to intercept a starship before it gets to a point where it can get assistance from the local government. Some planets are low-tech and/or don't have ships outside of orbit (e.g., for customs inspections); in these cases a pirate could lurk out at about 10 planetary diameters (Geosynchronous orbit for Earth is about 3 planetary diameters) and intercept their targets easily.

In order for pirates to make good on their attack, they need to be able to board the target spacecraft; this can be after a successful attack, or as part of it. A ship at the half-way point (or just entering the system – using a running jump) will be at its maximum velocity; disabling a ship's engines when it is travelling at 150km/s would require 4.25 hours at 1G acceleration to match course and it will have travelled 2,300,000 km towards the planet (180 Earth planetary diameters). As long as the pirates have significantly higher manoeuvre drives and are closer to the planet they should have no issue intercepting.

While there is no "optimum" jump *point* that starships use to enter/leave jumpspace (and as mentioned earlier they will be at maximum velocity at this point), there is an optimum *region*, a general direction (cone-shaped) from which the jump manoeuvre is optimized. This location is not fixed, but changes based on where the source and destination planets are in their orbits, and of course is different for each star system and will be millions of kilometers across.

Also as mentioned in a previous article, most jumps (~89% of trips to worlds in the habitable zone) will be to the star's 100D limit. This increased travel time makes the pirates' job much easier, as they can hang out ¾ of the way from the star's 100D limit to the planet and have a good chance of intercepting a ship, assuming of course that the pirate's maneuver drive is better. System patrols can also match this location, but they need to be in *every* location; that is if there are 3 nearby star systems and 2 points of interest in a system, patrols need to be in at least 6 places.

The target ship will be on a high-velocity vector towards the planet, ideally slowing down all the way to near the planet. Turning is very much out of the question, but accelerating instead could make interception difficult for the pirates. The pirates can almost certainly plot a course to intercept if they can detect the ship, but matching velocities so that they have more than one or two shots and are able to board will be more difficult and depend on the actions of the ship's captain.

## General Rules

Rules for this are very difficult to abstract, because a number of very important values are situationally dependent. The relative velocities of the two stars and both planets, as well as the distance to the jump point, will determine the initial velocity which could make interception easy or difficult. Inaccuracies in navigation should also add some additional uncertainty to the initial situation.

Assuming that the data for the stellar and planetary locations and vectors are known, there is further complication as these examples only use straight line, single-dimension equations (which is acceptable if at least one of the source or destination planets has large choice of their vector, e.g., there is no masking). The ship can plot a course that can be quite linear. Otherwise the vector will need to be split out into 3 components: radial and orbital on the ecliptic and a stellar polar component. The latter is the easiest to minimize and solving the problem in 2 dimensions would likely give acceptable results, however no one is likely to do the math required to be totally accurate.

*(Continued from page 40)*

There is one simple approximation that can be applied. We previously discussed how a running jump can reduce travel time by 30%; we can actually look at the entire travel through both systems and a jump as one. Let's assume one is going from Regina (10.3 million km to the jump point) to a planet masked by its star and a 5 million km trip. Standard *Traveller* would calculate 2 standing trips for 18 hrs (Regina to jump entry), and 12 hrs (jump exit to destination) = 30hrs. Two running trips would be outbound-accelerating for 12.7 hrs and inbound-decelerating for 8.9 hrs = 21.6 hrs, and is what we suggested last time; however, due to the difference in times accelerating and decelerating the net speed change is significant, possibly offset by stellar/planetary motion, but could be off by 100s of km/s and result in a flyby of the target world. A more general solution is to calculate one trip of 15.3 million km which gives 21.9 hrs – accelerate for 11 hours, turn around and decelerate for 1.7 hours more then jump and continue decelerating to the target.

In summary, we can estimate a trip using a running jump by taking the total distance in both systems and use the normal *Traveller* travel time (eq. [7]), instead calculating the time on each side of the jump. Piracy is quite possible as long as the pirate has a significantly higher manoeuvre drive and the ship does not use the planet's 100D limit for approach. Gas giant refueling is likely too long of a detour to make it worthwhile.

## The Math

The formulas used are in the box on page 39. Let's look at a real-world example. Epsilon Eridani (ε Eri, Shulimik in *Traveller*) is about 3.2pc from Sol (4 hexes in *Traveller*), chosen as it is close to the ecliptic and thus the jump route will be masked by Sol's 100D limit about 40% of the time. It has a relative motion from sol of 962 mas/yr or 460.5 million km/yr = 14.6km/s plus 15.5km/s radial velocity. Us-

ing Pythagoras gives it 21.3km/s (away at an angle). As its (real world) planets are more than 3AU from the star, the jump will be from the planet's 100D limit. We are also assuming no origin stellar masking which is a really insignificant possibility at 3AU. Assuming the main planet ε Eri II is a LGG the travel distance to 100D (planetary) would be about 8.5 million km. Using eq. [8] and 1G acceleration that gives a time of 41700s and a running jump velocity of 409 km/s. Furthermore the ship can jump from any direction as it is only a planetary 100D limit. Planets near or inside the stellar 100D limit will have little effective choice on direction.

Running jumps help with the transit time by not "zeroing" the velocity relative to the original planet, but not all directions are equivalent. If the course is not masked by the star then any angle is permitted allowing for the greatest flexibility of vectors in the destination system. Consider Venus at 0.72AU it is within the 100D limit of the Sun (0.93AU or if you use the revised values from the first article in the series 0.96AU). Travelling to the point closest on the 100D limit is about 36 million km (24 hrs) and only allow jumping with a narrow range of vectors. Any significant change in vector will require travelling millions of additional km and will not save that much time on the other end, to the extreme of selecting the opposite vector requiring a 251 million km trip (63 hrs).

If the earth is on the near-side of the sun with respect to ε Eri and not masked then the best solution would be to jump to the 100D limit of Earth and have a 1.2 million km trip to the planet – in which case the running jump is far too fast. At 4pc distance this level of accuracy is frankly impossible – unequal heating of the ship's surface would give more than a 2.5 million km error, besides as previously mentioned the vast majority of trips wouldn't even have this as an option. To further drive this point home (as it has quite an impact in *Traveller*), a 300m

bulk carrier on the ocean needs to adjust its course from Boston to NY when leaving Europe, which it can do any point in the trip, (1 degree). This means the rear of the ship need to move about 2.5 m to correct the course. A 300m *Traveller* ship needing to change course from just missing to intersecting a 100D planetary at 4pc (1 mas) would need to move its rear by 2 microns – ¼ of a red blood cell.
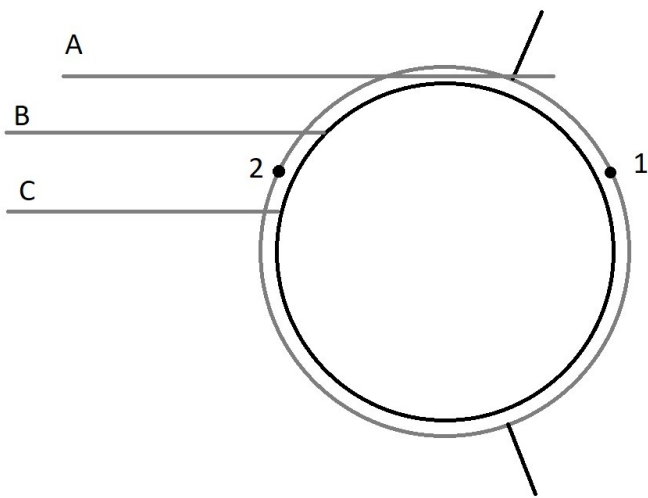


In this diagram ε Eri is to the left. (*Author's note: this is schematic, not to scale.*) There are two positions for the planet (1) masked by the inner circle representing the 100D limit of Sol, and (2) not masked. Three vectors in from ε Eri (A) which just skirts the 100D limit and ends somewhere in front of position (1) just outside of the orbital path with a timed exit from jumpspace. (B) which impacts the 100D limit just behind position (2) and (C) which impacts just ahead of position (2). The lines are shown parallel as the other star is so far away, but actually would have an angle of about 125 mas (0.00003 degrees) with respect to one another. This further illustrates how small angular perturbations can cause large differences several parsecs away. This is in 3D of course so one could plot other courses (not shown) above/below the planet. Which would in effect be a circle projected onto the 100D sphere of the star.

Earth has an orbital speed of 30 km/s so in order to enter orbit a ship needs to be at that speed along the vector that Earth is currently using. In general, approaching from in front of the planet is slightly quicker despite having to slow down to 0 and reverse back up to 30km/s rather than just slow down to 30 initially, but this is where a slingshot to change direction is useful and results in a better overall speed.

The first step is determining the parameters of the running jump. Leaving a size 2 planet outside of the star's 100D limit will have an open vector direction but a sub-100 km/s (plus stellar motion) velocity. A gas giant will also typically be open to any course and a 250-500 km/s potential velocity. A masked planet, say Venus in Sol or Earth in configuration (1) in the diagram will have a very limited vector, but speeds up to the 750-1500 km/s range.

We then compare this to the destination planet parameters, which may limit the maximum entry speed as there is less time to decelerate to the planet. In our example the travel time from Sol's 100D limit to Earth is 6 million km or a bit more depending on how close the course is. This limits the max speed as entering not too much faster than 343 km/s, where our maximum exit speed was 409 km/s. These speeds are determined by equation [8].

To calculate the exact time, we would now need to do a lot of math that no-one who was not in a space ship would do. Besides splitting into 3 components, these values are all highly dependent on the exact geometry of the two systems (unknown) and where the jump came out (semi-random) and as the planet is not travelling in a straight line (the time scales are long enough that making the approximation of an orbit as a line will give poor results), translating everything to polar coordinates would likely be advised.

Course (B) and (C) in the diagram are close to the planet, and 343 vs 409 km/s are close enough

that we can just assume that the integrated travel time calculation is good enough.

Course (A) is much longer about 110 million km, and could still use the integrated travel time, but with any constraints on leaving there would be an additional estimate of the speed lost due to course correction. A 30° course difference from a straight line would likely have a sin(30°) = 0.5 or 50% correction to the 409 km/s vector. Using [eq 2] (409*50%)/a = 5.8 hour more time.

Let's look at pirates in the case of course A. The reasonable area where the ship could appear is likely in a 40 million km polar arc near the 100D limit of Sol and likely up to 40 million km wide as well – any of these positions would provide reasonably similar solutions to approach Earth at most adding a few hours to the trip. Potential pirates have a large area in which to hide. Assuming that there is no patrols nearby and the pirates in a manoeuvre-2 detect a ship inbound it will take them 5.75 hours to reach the 408 km/s entry speed from a relative standstill, however by that time the target ship has not only covered more distance, but is now travelling at 612 km/s as it is still accelerating. We could iteratively figure out where the pirates would intercept the ship, but we can use [eq 3] for each ship expressing the distance from the jump entrance: The pirates are $D1 = D0 + 0t + \frac{1}{2} apt$, while the target is $D1 = 0 + 408t + \frac{1}{2} att$. The pirate will intercept when D1 is the same for both thus we have $D0 + \frac{1}{2} apt = V0t + \frac{1}{2} att$ this gives us [eq 9 and 10]. We assume that D0 is 0 for the pirate though it may be millions of km away at the jump point, the intercept course will be plotted to intersect the path of the target, and will be effectively the same length. Using [eq 9] gives us a solution of 23 hours.

The target captain has options available to him, while it is difficult and ineffective to change the course, they can choose to continue accelerating/decelerating or not. In the previous example the ship

is past the turn-over point and is decelerating to Earth – so in fact we would need to adjust the time downwards. They can stay their course, or they can accelerate. In this particular example at the intercept point the pirates have a speed of 1622 km/s and the target 1219 km/s likely only enough time for a few shots, and if the target is armed staying the course could be best. On the other hand switching over to acceleration as soon as the pirates are detected will mess up their speed at the planet, but will draw out the intercept to much closer to the planet where presumably help is available.

Should the pirates be closer to the planet they can actually get better results. [eq 10] has two solutions (the +/- in the formula). Let's say the pirates are 8 million km closer (D is positive) we solve to get 8.77 or 14.3 hrs. The first number is where the ship overtakes the pirates (remember the course is 2D so they don't really "pass" the pirate ship), the second is when the pirates intercept. If we increase D0 to 12 million km, the radical is the root of a negative number, which is impossible – this means that the pirate ship due to its superior acceleration pulls away from the target before they ever cross paths. Of course the acceleration doesn't need to be at max. Using [eq 11] we can calculate that the optimum acceleration for the pirate is in fact ap = 1.71 G. Re-working the intercept formula and we get 16.4 hours. Not only that the speeds are much closer together limiting the options for the target.

For a final example lets look at an interplanetary pirate interception. The target leaves Earth for Jupiter and there is a pirate in the asteroid belt. Jupiter is 5 AU from earth's orbit on average. The asteroid belt is about 2.3 AU from Jupiter. The target has passed the turn-over point and is decelerating towards Jupiter. Their speed at the turn-over 2.5 AU (374 million km) from Jupiter is 2707 km/s after some 76.7 hours. Putting the values in and remembering that *at* is negative we get 2 numbers: 3.3 hrs (when the target

*(Continued from page 43)*

passes the asteroid belt) and 47.86 hours. The speeds at this point are 3377 km/s for the pirate and 1018 km/s for the target – a very short encounter time. So the pirate wants to accelerate at max for some time, then accelerate slower to encounter at a later point with less difference in velocity. There are no simple formulae for this; it is better for the referee to plot courses and determine position and speeds iteratively using the provided formula.

Piracy in *Traveller* is quite possible, particularly as ships don't usually travel in from a planet's 100d limit. Computing anything accurately requires a lot of math, but we can approximate to within a half-hour quite easily with the provided equations.  ✧

## Aeon Flyer *Stinger* G/Bike series

*designed by Geir Lanesskog*

The Aeon Flyer Consortium specializes in high-performance stylish grav vehicles that are as much status symbol as transport machinery. The *Stinger* series of g/bike has been the premiere g/bike model line for more than two centuries.

The entry level SZ-100 is an old design, but the base unit costs more than twice as much as a typical g/bike. Among serious enthusiasts and celebrities, owners of the SZ-100 are considered to be posers and pale imitations of true *Stinger* riders. However, there exists a considerable subculture of SZ-100 riders who have heavily modified their bikes, improving the electronics and automation to the point where the vehicle can compare with a more advanced model in all but speed.

The most current top-of-the-line *Stinger* model is the SZ-580Z, which carries a base price of more than Cr 200,000. The SZ-580Z is capable of supersonic flight and comes standard with an advanced autopilot and a sophisticated customizable personality unit. The vehicle can literally fly itself and can be instructed to perform complex tasks autonomously. Enthusiasts are loath to admit it, but the autopilot's skill is superior to most riders, and only a machine is capable of avoidance maneuvers at supersonic speed. The rider is more passenger than driver in most circumstances. The ability to exceed the speed of sound in most atmospheres is academic, as local regulations tend to limit supersonic flight to well-defined corridors and many jurisdictions require autopilot control and velocities below 200 kph in urban areas.

All *Stinger*s come equipped with a gravchute ejection system. Recommended rider attire is rated as a vacc suit, though most riders ensure their suits and helmets are suitably stylish, which often precludes carrying all but a minimal supply of oxygen. Common upgrades include the computer and entertainment systems and hull modifications to ensure that the vehicle uniquely stands out.  ✧
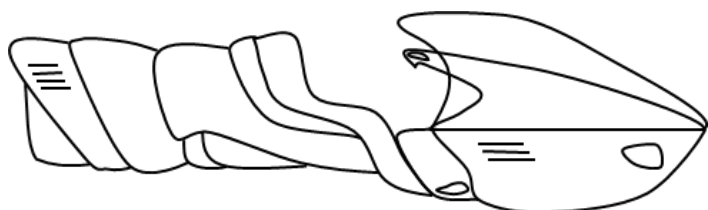


Aeon Flyer *Stinger* SZ-100



Aeon Flyer *Stinger* SZ-580

## Aeon Flyer *Stinger* SZ-100 G/Bike

| | |
|---|---|
| TL | 12 |
| Skill | Flyer(grav) |
| Agility | +4 |
| Speed (Cruise) | Subsonic (Very Fast) (1200\|800 kph) |
| Range (Cruise) | 3000\|4500km |
| Crew | 1 |
| Passengers | 0\|0 |
| Cargo | 0kg\|0kg |
| Hull | 2 |
| Shipping | 0.5 |
| Cost | 89,150 |

**Armor**

| | |
|---|---|
| Front | 4 |
| Rear | 4 |
| Sides | 4 |

### Equipment and Weapons

Improved Controls, Autopilot(Basic), Communications system (improved, increased range), Ejection Seat, Navigation System (basic), Sensors (basic)

No weapon

### Traits

| | | |
|---|---|---|
| Autopilot (skill level) | +0 | Open Vehicle, Streamlined |
| Communications (range) | 5000 km | |
| Navigation DM | +1 | |
| Sensors DM | +0 | |
| Camouflage DM | +0 | |
| Stealth DM | +0 | |

## Aeon Flyer *Stinger* SZ-580Z G/Bike

| | |
|---|---|
| TL | 13 |
| Skill | Flyer(grav) |
| Agility | +6 |
| Speed (Cruise) | Supersonic (Subsonic) (2400\|1200 kph) |
| Range (Cruise) | 4000\|6000km |
| Crew | 1 |
| Passengers | 0\|0 |
| Cargo | 0kg\|0kg |
| Hull | 2 |
| Shipping | 0.5 |
| Cost | 202,750 |

**Armor**

| | |
|---|---|
| Front | 4 |
| Rear | 4 |
| Sides | 4 |

### Equipment and Weapons

Advanced controls, Autopilot(advanced), Communications system (advanced, increased range, encryption), Computer/3, Ejection Seat, Entertainment System(HiFi), Fire Extinguisher, Navigation System(advanced), Sensors(advanced)

No weapon

### Traits

| | | |
|---|---|---|
| Autopilot (skill level) | +3 | Open Vehicle, Streamlined |
| Communications (range) | 10000 km | |
| Navigation DM | +4 | |
| Sensors DM | +2 | |
| Camouflage DM | +0 | |
| Stealth DM | +0 | |

## Design Notes for *Traveller*: 1700

*by Greg Caires*

Classic *Traveller* (CT) was my first role playing game and despite dalliances with others, it has remained the true love I return to again and again. I recognize it is imperfect – the space combat rules in *Book 2* are personally incomprehensible, and I know that many dislike the rules about armor affecting a PC's ability to hit an adversary. Regardless, I find many of the rules to be simple, elegant, and suitable for use beyond the science fiction genre. Somewhere during the past four decades I learned, and internalized, that CT's best attribute is its adaptability to other settings unconstrained by the "Official" *Traveller* Universe or even "Adventures in the Far Future" in one form or another.

Inspired by Paul Elliott's *Mercator* (see *Freelance Traveller*, #4, April 2010) and based on my long-term interest in Colonial American History, I've created a ruleset for those who want try adventuring in the distant past – the Chesapeake Bay *circa* 1700 CE (Common Era, formerly called "anno domini" (AD) to avoid divisiveness). I call it *Traveller: 1700* (T:17). In its creation and format, I have tried to emulate the original as much as possible to help readers more easily understand what I've written. As with all *Traveller* rulesets, it begins with Character Generation. While the 17th century was a dangerous place with a much shorter life expectation, these Character Generation rules are constructed to be fun while remaining true to the concept of the mini-game without the frustrating possibility of character death. Once generated, your characters should be well suited to explore, trade, fight and prosper in and around Virginia colony decades prior to that bit of unpleasantness revolting against the British Empire.

With but a little imagination, elements from many existing CT adventures can be adapted to Colonial North America: *Shadows* could be set among those odd earthen mounds of unknown but likely native origin along the Ohio river. The *Annic Nova* could just as easily be an unmanned sailing ship found adrift off the Virginia Capes. *Twilight's Peak* could be reshaped to tell the tale of pre-Columbian visitors to North America. *Prison Planet* is universally applicable regardless of time or place. And *Horde* could be the story of Chamax bursting out of the Shenandoah valley and threatening the placid idylls of Tidewater because they are just so damn scary.

And if you prefer to use another ruleset than CT, please feel free to take this adaptation and adapt it further for compatibility with your preferred *Traveller* ruleset. I hope I have provided enough rules, descriptions and other elements – rumors, patrons, encounters – to get you up and running your own T:17 games as quickly and easily as possible. I welcome both your feedback and encourage you to further expand this setting with your own writings, ideally provided for publishing in the pages of *Freelance Traveller*. Jeff has been good to me, good to many of us, and keeping his noble pursuit alive with fresh material helps continue the decades-long run of success *Traveller* has enjoyed.

I intend to run a T:17 game at TravellerCon USA in October 2020 at Lancaster, Pennsylvania. Please feel free to bring along any characters you have made for inclusion in that game, and/or let me know what problems you might have discovered or improvements you can suggest to further refine the world of, and rules for Traveller: 1700.

*Editor's Note: I do not have permission from the author to print contact information. However, if you send your comments to me at* editor@freelancetraveller.com, *I will most assuredly pass them on to Greg. Please ensure that you include an email address that you are willing to release to Greg, and also that you put "T:17" or "Traveller: 1700" in the subject line.*

Traveller: 1700 *may be downloaded separately from this issue of the magazine; please use the link in the table of contents for this issue on the website. It is formatted to A5 size as the closest standard size to the original Classic* Traveller *"Little Black Books".*                                    ✪

# Three Quick Books

*A trio of capsule reviews by Timothy Collinson*

A quick look at three novels I've read recently, not so much to review them formally but to point to their usefulness to a *Traveller* referee. Two have been discussed on the *Traveller* Mailing List previously but have been tweaked here. It wasn't until I put this together I spotted a recent theme to my reading of late. For fuller details/reviews see any number of possibilities on the internet.

## Places in the Darkness

*Places in the Darkness*. Chris Brookmyre.
Original publication: 2017 (Orbit)
Current Availability: Paperback, ebook, audiobook.

First up, a look at a novel so gripping in the last few pages I missed my bus stop! It has certainly made my commute fly by these last few days.

Given that this is set on a supposedly utopian space station, this is a remarkably dark novel that's an investigation into the first murder on a near future, near Earth station.

The relevance for *Traveller* particularly, was if you're looking for good descriptions (and NPCs) of an orbital station type setting. Although it's near Earth and near future in the book, it would be easily usable as atmosphere or setting for highports in the Imperium. Especially if you want to flesh out—pun slightly intended—the seedier aspects of such a location. Think Downbelow on *Babylon 5*.

As for the plot, it might be a bit tricky but I suspect a good referee could plagiarize much of it wholesale with some adaptation if you want an investigative/thriller-type *noir* with 'big' implications. (And dodgy corporations).

It is also good for a couple of main characters—both women—who are no holds barred kick-something-or-other types including a cop that walks both sides of the law. Some swearing if you find that objectionable but given the lowlifes the book is usually depicting it's appropriate enough even if the

writer for the most part demonstrates how good he is by not needing it—and there's a nice pay off to it at the very end. All the relationships in the book seem to be lesbian which might say something about the author (and there were at least two passages I thought gave away 'male writing female') but of course might give further grist to an Imperial world that's just a step away from "familiar".

So it would be difficult to read this without finding ideas galore to pinch for your refereeing or your next character. And if not, it's a pretty tightly plotted high octane novel to enjoy on the way.

## Red Moon

*Red Moon*. Kim Stanley Robinson.
Original publication: 2018 (Orbit/Little, Brown)
Current Availability: Paperback, ebook, audiobook

Firstly, I can't wholeheartedly recommend this despite it being by Kim Stanley Robinson. It's probably at least 150 pages too long, it massively breaks the rule of 'show, don't tell', the main three characters have a huge lack of agency, and it finishes, not quite in mid-sentence, but it might as well do. (So I suspect there may be more to come. *Green Moon*? *Blue Moon*?) The 'telling' and the agency are definitely the biggest faults of the book. I have no idea how/why *The* (London) *Times* reviewed this as "a masterpiece" as my paperback says on the cover. It has a major 'gadget' (quantum communicator) that seems at first to be key to the book but then disappointingly very little is made of. (Yes, I know rules like 'show don't tell' are meant to be broken and can be broken by masters, but this doesn't do it to good effect. Some chapters are inserted just as exposition and there is a huge chunk in the middle of the book which is nothing but.)

*Red Moon* also has a lot of what we saw from Robinson in the *Mars* trilogy regarding politics and political philosophy and revolution. That might be a

plus or a minus for you depending on your interest. (That and some ignorance and clear anti-faith writing is what made me vow not to reread the *Mars* trilogy—at least not for a long while). (I should say in his defence that I really enjoyed *Aurora* which was about a generation ship and about as hard science as I've read on the subject in fiction although it was very depressing).

On the upside the three main characters of *Red Moon* are interestingly different from your typical "heroes", very different from each other, and fascinatingly thrown together. Any of them could be a *Traveller* NPC or even Patron or perhaps most interestingly a trio acting as a Patron needing help from PCs—maybe 'as written'.

You get lots of detail/insight into Chinese culture and language (and politics) which is unusual and makes a change from the more usual Western-centric novels I might typically read. Of course, I can't speak to whether it's accurate but it feels as if KSR has done some research or had a good advisor (though none is acknowledged).

As for *Traveller*, it's a bit too near-Earth, near-future to be hugely usable, but if you do want mid-tech enclosed habitats there's some good stuff there. There are two excellently envisaged (and described) environments that would easily make interesting places for PCs to visit. You certainly might rethink how characters cope with low grav environments—which in my experience of *Traveller* games tends to get rather elided over (perhaps too easily). There's an AI presence which can be best be described as 'nascent', so if you don't want full AI in your game but like the idea of something new/emergent/basic it may provide food for thought. And if you've sat at the feet of Johnn Four and his Roleplaying Tips with ideas about more than one baddie—sorry faction, there's some great stuff here about multiple agencies not talking to each other and thus giving wiggle room for PCs to get up to their stuff… (There's a

wonderfully not intentionally funny bit that reminds me of *The Life of Brian* segment about the various People's Liberation Front of whereever.)

Oh, and it has some pretty dreadful poetry but I'll forgive it this as I may have attempted similar myself in some writing I won't point you to… ☺

In short, if you've not got enough to read and you're looking for some hard science ideas and lots of political science inspiration, it might be worth your time. Otherwise, give *Misjump* by Mark Long a go. I'm halfway through thanks to Jeff Z's recommendation in *Freelance Traveller* (January/February 2020) and am loving its *Traveller*yness.

## A Study in Honor

*A Study in Honor*. Claire O'Dell.
Original publication: 2018 (Harper Voyager)
Current availability: paperback, ebook, audiobook

A slightly more unusual title for 'relevance to *Traveller*' but firstly, I found it in the science fiction section of a bookshop. Yes, there are still such things if you look. And yes, this is exactly why I love browsing physically which the internet never quite replicates. I might never have found this otherwise. Having said that, it's perhaps only marginally SF as the novel is set in the very near future – next year or two rather than, say, 2300 which I might ordinarily mean by the term.

Secondly, as Jeff Z kindly let me merge two of my interests in the March/April 2019 issue of *Freelance Traveller*, it kind of counts as *Traveller* by extension of those articles!

Anyway, it's Sherlock Holmes so of course I picked it up to buy. But it's not like any Conan Doyle you might know; even the multitude of later pastiches that burden my attic. As I discovered a chapter or two in (I avoid reading back cover blurbs), Watson and Holmes are both black, both women and both live in the Washington DC of a very broken USA which is, sadly, all too believable.

(Warning for those of passionate or partisan tendencies: present day names and politics get (usually unfavourable) mentions). One note on its US-centric writing: non-US readers might want to look up "VA" beforehand as it's never explained and is central to the novel. (The US Department of Veteran Affairs, often informally called "the Veterans' Administration). (*See https://en.wikipedia.org/wiki/United_States_Department_of_Veterans_Affairs or https://www.va.gov/*) One feature of the book that seems unusual these days and is very welcome is that it doesn't outstay its welcome. At not even 300 pages it doesn't get so lost in its own cleverness you're wishing it would just stop.

The novel focuses on Janet Watson, a veteran military doctor, so Sara Holmes doesn't appear for a good while and is perhaps only doing Sherlock Holmesy type stuff in the latter half of the book (I'd have liked more of her but maybe there are future novels to come and to be fair Holmes is missing from quite large chunks of Doyle's four novels). (Bother, I've just looked it up on Amazon and discovered there is a second one already: *The Hound of Justice*. Hang on, I'm just off to the bookshop…) Watson suffers from PTSD which makes for somewhat disturbing/depressing reading at times, but otherwise it's a real page turner as she is introduced to Holmes via Jacob Bell and goes on to join forces in uncovering… stuff. If you're half recognizing the name Bell, he was the real life doctor who Doyle supposed modelled Holmes on; other familiar names pop up as well so it's fun spotting those.

It's relevance to *Traveller*? Well, aside from the good writing and the well-drawn characters which may be inspirational, if you're going down the route of introducing a 'shlock' type character as I suggest in *Freelance Traveller*, then here's a way of doing it in higher tech settings than the Victorian of the original (or even the present day London of *Sherlock* or New York of *Elementary*). Holmes isn't brilliant through rote learning and observation but thanks to training as an 'agent', money and the use of earbuds and lace gloves. Those last two items clearly give access, via some other tech, to the kind of *ubersearchengine* familiar from *Person of Interest*.

The plot could easily be recycled into an adventure for one or two PCs (perhaps more characters with work from the Referee) on a divided or dystopian world. Referees would have to introduce their own settings' analogue of race relations if they wanted to follow the plot closely. On the other hand, that aspect could be ignored although it should be noted that race is also pretty central to the book – it's not just Holmes & Watson identified as black for the sake of variety or political correctness. (Though having said that, it seems the author is white so I would have to leave the veracity of the character descriptions, inner monologues and situations for others to dissect, but from my perspective it felt very accurate to what seems to be the American experience). Of course, expunging that aspect would be absolutely antithetical to Janet Watson's whole character. You've been warned.

Additionally, elements of the plot could inform any balkanized world (or world with a civil war) in giving some background flavour. There's not really enough of that, however, to warrant buying this just for that purpose.

It is possible to argue that *A Study in Honor* is so removed from anything familiar in Doyle that there was no point in labelling the characters as Watson and Holmes. Certainly for the first third of the novel this would be fair. But if there's going to be a series of them, it's reasonable enough to set up the characters' backgrounds and as the chase really gets going it begins to feel more familiar. Personally, I'm really glad I stumbled across the book and would recommend it as a good novel in its own right and an interesting take on a pair of beloved characters.    ✪

# Which Careers Give Which Skills?

*by Timothy Collinson*

Part of the fun of *Traveller* is creating characters using random die rolls and then explaining or interpreting the results. However, on occasion you might want a PC or a detailed NPC who has specific skills. In this event it can be useful to know how best to direct their careers to obtain those particular skills. The following offers a look-up table for each skill (and characteristic improvement).

Lists are given for classic *Traveller*, *Cepheus Engine*, Mongoose *Traveller* 1st Edition, and Mongoose *Traveller* 2nd Edition.

An example of how to read this can be seen in **Advocate** for Mongoose *Traveller* 2nd Edition. The entry appears as

*Advocate: Agent×2; Army; Citizen×2,R4,E3; Entertainer; Marine; Merchant×2,E8; Noble×4,R3,M4,E6; Rogue; Scholar,E10; Prisoner×0,R4,E10; SP:Diplomat, Trader, Investigator*

This indicates that the skill is offered twice in the Agent Skills & Training tables, once in the Army, twice as a Citizen as well as receiving it at Rank 4 and potentially receiving it in Event 3. Entertainer and Marines both offer it once while in the Merchants it can be received twice and as Event 8. Nobles have four opportunities to receive it in Skills & Training, get it at Rank 3 and it can be obtained in Mishap 4 and Event 6. Rogues have one offering as do Scholars, but the latter can also collect it in Event 10. Prisoners can't get it from the Skills & Training table, but do receive it at Rank 4 and may get it in Event 10. The skill is also on offer in the Diplomat skill package as well as the Trader and Investigator packages.

In the listings below, a skill is obtained from the listed career's Skills and Training tables; if the skill appears without a ×*n* notation, it is available once; the notation indicates that is is available *n* times. ×0 means that it is *not* available in the skill tables; see the other codes for its availability.

Other codes that may appear are as follows:

R*n*: On achievement of Rank *n*. The notation R*m*/*n* means Enlisted Rank *m* or Officer Rank *n*.

M*n*: Mishap *n*

E*n*: Event *n*

L*n*: Life Event *n*

O: Mustering-Out

O*: Mustering-Out, on second or subsequent receipt of relevant equipment benefit

H: Homeworld (Cepheus Engine) or Background (Mongoose 2nd Ed.)

H:*x*: Homeworld where Trade Code includes *x* (Mongoose 1st Ed.)

Ed: Primary (Cepheus Engine) or Background (Mongoose 1st Ed.) Education

SP:*x*: Appears in Skill Package *x* (Mongoose 1st and 2nd Ed.)

## Classic *Traveller*

*+1 STR: Navy; Marines; Army; Scouts; Merchant×2; Other; Barbarian; Bureaucrat; Rogue; Noble; Scientist×2; Hunter; Pirate; Belter; Sailor; Diplomat; Doctor×2; Flyer*

*+1 DEX: Navy; Marines; Army; Scouts; Merchant; Other; Barbarian; Bureaucrat; Rogue; Noble; Scientist; Hunter; Pirate; Belter; Sailor; Diplomat; Doctor; Flyer*

*+1 END: Navy; Marines; Army; Scouts; Merchant; Other; Barbarian; Bureaucrat; Rogue; Scientist; Hunter; Noble; Pirate; Belter; Sailor; Diplomat; Doctor; Flyer*

*+1 INT: Navy,O; Marines×0,O; Army×0,O; Scouts,O; Merchants×0,O; Other×0,O; Barbarian, Noble, Scientist×0,R0; Pirate×0,O; Belter×0,O; Diplomat,O; Pirate*

*+1 EDU: Navy,O; Marines×0,O; Army,O; Scouts,O; Merchants×0,O; Other×0,O; Barbarian, Rogue, Noble, Sailor,O; Diplomat,O; Doctor×0,O×2; Flyer×0,O;*

*+1 SOC: Navy,R5,R6,O; Marines×0,O; Army×0,O; Barbarian, Bureaucrat×0,O; Rogue×0,O; Scientist×0,O; Sailor×0,O; Diplomat×0,O; Flyer×0,O; Pirate*

*Admin: Navy; Marines; Army; Scouts; Barbarian; Bureaucrat,R0; Rogue; Scientist; Pirate; Belter; Sailor; Diplomat×0,R3; Doctor*

**Air/Raft:** *Scouts; Rogue; Noble; Sailor; Diplomat*

**Aircraft:** *Flyer×0,R0*

**ATV:** *Marines; Army; Bureaucrat; Rogue; Belter; Sailor*

**Blade Combat:** *Navy,O\*; Marines×4,O\*; Army×2; Merchant,O\*; Other×2; Barbarian,R2,O\*×3; Bureaucrat×4; Rogue×2,O\*; Noble,O\*; Scientist; Scouts×0,O\*; Hunter×2,O\*×3; Pirate,O\*; Belter×4,O\*; Sailor×2,O\*×2; Doctor,O\*; Flyer×2,O\*×2*

**Brawling:** *Army; Marines; Other×3; Bureaucrat; Rogue; Hunter×3; Pirate×0,R0; Belter; Sailor; Flyer×3*

**Bribery:** *Merchant; Other; Scientist; Hunter; Doctor; Flyer*

**Computer:** *Navy; Marines; Army; Scouts; Other; Barbarian; Bureaucrat; Rogue; Noble; Scientist,R0; Hunter; Pirate; Belter; Sailor; Diplomat; Doctor; Flyer*

**Cutlass:** *Marine×0,R0 [Note: This is a specialization of Blade Combat]*

**Electronics:** *Navy; Marines; Army; Scouts×2; Merchant×2; Other×2; Barbarian; Bureaucrat; Rogue; Scientist×2; Noble×2; Hunter×2; Pirate; Belter; Sailor; Doctor×2; Diplomat×2; Flyer×2*

**Engineering:** *Navy×2; Scouts; Barbarian×2; Noble; Scientist; Pirate×2; Diplomat; Doctor*

**Forgery:** *Other×2; Hunter×2; Flyer×2*

**Forward Observer:** *Navy; Barbarian; Rogue; Pirate; Sailor*

**Gambling:** *Marines; Army; Other×2; Bureaucrat; Rogue; Hunter×2; Belter; Sailor; Flyer×2*

**Gun Combat:** *Navy; Marines×3; Army×3,O\*; Scouts,O\*; Merchant,O\*; Other,O\*; Noble,O\*; Barbarian; Bureaucrat×3; Rogue×2,O\*; Scientist,O\*; Hunter,O\*×3; Pirate,O\*; Belter×2,O\*; Sailor×3,O\*×2; Diplomat,O\*; Doctor,O\*; Flyer,O\*×2*

**Gunnery:** *Navy×2; Scouts; Merchant; Barbarian×2; Noble; Scientist; Pirate×2; Diplomat; Doctor*

**Hunting:** *Hunter×0,R0*

**Jack-of-all-Trades:** *Navy; Scouts×2; Merchant; Other; Barbarian; Noble×3; Scientist; Hunter; Pirate; Diplomat×3; Doctor; Flyer*

**Leader:** *Marines; Army; Bureaucrat; Rogue; Barbarian×0,R5; Belter; Sailor*

**Liaison:** *Diplomat×0,R0*

**Mechanical:** *Navy; Marines; Army; Scouts×2; Other; Merchant; Barbarian; Bureaucrat; Rogue; Noble×2; Scientist; Hunter; Pirate; Belter; Sailor; Diplomat×2; Doctor; Flyer*

**Medical:** *Navy; Marines; Army; Scouts×2; Other; Merchant; Barbarian; Bureaucrat; Rogue; Noble×2; Scientist×2; Hunter; Pirate; Belter; Sailor; Diplomat×2; Doctor×2,R0; Flyer*

**Navigation:** *Navy; Scouts×2; Merchant; Barbarian; Noble×2; Scientist×2; Pirate; Diplomat×2; Doctor×2*

**Pilot:** *Navy; Scouts,R0; Merchants×0,R4; Barbarian; Noble; Scientist; Pirate,R4; Diplomat; Doctor*

**Revolver:** *Marine×0,R1 [Note: This is a specialization of Gun Combat]*

**Rifle:** *Army×0,R0 [Note: This is a specialization of Gun Combat]*

**Ship's Boat:** *Navy; Barbarian; Pirate*

**SMG:** *Army×0,R1 [Note: This is a specialization of Gun Combat]*

**Steward:** *Merchant; Scientist; Doctor*

**Streetwise:** *Merchant; Other×2; Rogue×0,R0; Hunter×2; Scientist; Doctor; Flyer×2*

**Sword:** *Barbarian×0,R0 [Note: This is a specialization of Blade Combat]*

**Tactics:** *Marines×3; Army×3; Bureaucrat×3; Rogue×3; Belter×3; Sailor×3*

**Vacc Suit:** *Navy×2; Marines; Scouts; Merchant; Barbarian×2; Bureaucrat; Noble; Scientist; Pirate×2; Belter,R0; Diplomat; Doctor*

**Vehicle:** *Marines; Army; Scouts; Merchant; Other; Bureaucrat; Rogue; Noble; Scientist; Hunter; Belter; Sailor; Diplomat; Doctor; Flyer*

**Watercraft:** *Sailor×0,R0*

**TAS (Travellers' Aid Society membership):** *Navy×0,O; Marines×0,O; Rogue×0,O; Noble×0,O*

## Cepheus Engine

**+1 STR:** *Aero Defense; Barbarian; Belter; Colonist; Drifter; Hunter; Marine; Maritime Def; Mercenary; Merchant; Navy; Physician; Pirate; Rogue; Scientist; Scout; Surf Defense; Technician*

**+1 DEX:** *Athlete; Aero Defense; Agent; Barbarian; Belter; Bureaucrat; Colonist; Diplomat; Drifter; Entertainer; Hunter;*

*Marine; Maritime Def; Mercenary; Merchant; Navy; Noble; Physician; Pirate; Rogue; Scientist; Scout; Surf Defense; Technician*

**+1 END:** *Aero Defense; Agent; Barbarian,O; Belter; Bureaucrat; Colonist; Diplomat; Drifter; Hunter; Marine; Maritime Def; Mercenary; Merchant; Navy; Physician; Pirate; Rogue; Scientist; Scout; Surf Defense; Technician*

**+1 INT:** *Athlete,O; Agent,O; Barbarian,O; Belter×0,O; Bureaucrat,O; Colonist,O; Diplomat; Drifter×0,O; Entertainer; Hunter,O; Marine; Mercenary,O; Noble,O; Physician,O; Pirate×0,O; Rogue×0,O; Scientist,O; Surf Defense×0,O; Technician,O*

**+1 EDU:** *Athlete; Aero Defense×0,O; Agent; Bureaucrat,O; Diplomat,O; Entertainer,O; Marine,O; Maritime Def×0,O; Merchant×0,O; Navy,O; Noble,O; Physician,O; Scientist,O; Scout,O; Technician,O*

**+1 SOC:** *Athlete; Aero Defense×0,O; Agent×0,O; Colonist×0,O; Diplomat×0,O; Entertainer,O; Marine×0,O; Maritime Def×0,O; Mercenary×0,O; Navy×0,O; Noble; Pirate×0,O; Rogue×0,O; Scientist×0,O; Surf Defense×0,O; Technician×0,O*

**Admin:** *Ed; Athlete; Agent,R4; Bureaucrat×3,R0; Colonist; Diplomat,R3; Entertainer; Hunter; Noble; Physician; Scientist×2; Technician,R4*

**Advocate:** *Ed; Athlete; Aero Defense; Agent; Barbarian; Belter; Bureaucrat,R4; Colonist; Diplomat; Entertainer; Hunter; Marine; Maritime Def; Mercenary; Merchant; Navy; Noble,R4; Physician,R4; Pirate; Rogue; Scientist; Scout; Surf Defense; Technician*

**Aircraft:** *Aero Defense,R0*

**Animals:** *H:Agric,Garden,Poor; Ed; Barbarian×2; Colonist×3; Hunter×2; Noble; Scientist; Technician*

**Athletics:** *Athlete×3,R0; Aero Defense; Agent; Barbarian; Bureaucrat; Colonist×2; Diplomat; Entertainer; Hunter; Maritime Def; Noble; Surf Defense*

**Battle Dress:** *Marine; Mercenary; Surf Defense*

**Bribery:** *Agent; Bureaucrat; Diplomat×2; Drifter×2; Entertainer×2; Pirate; Rogue×2; Scientist*

**Broker:** *H:Ind; Barbarian; Merchant; Rogue*

**Carousing:** *H:Rich; Ed; Athlete×2; Agent; Bureaucrat×2; Colonist; Diplomat×2; Diplomat; Entertainer×4,R0; Merchant; Noble×3,R0; Physician*

**Comms:** *Ed; Aero Defense; Belter×2; Hunter; Marine; Maritime Def; Mercenary; Merchant; Navy; Pirate; Scout; Surf Defense*

**Computer:** *H:High Tech; Ed; Athlete×3; Aero Defense; Agent×2; Belter; Bureaucrat×3; Diplomat×2; Drifter; Entertainer×2; Marine; Maritime Def; Navy; Noble×2; Physician×3; Pirate; Rogue×2; Scientist×2,R3; Scout; Surf Defense; Technician×2,R0*

**Demolitions:** *Belter; Marine; Maritime Def; Scout; Surf Defense*

**Electronics:** *Ed; Aero Defense; Belter; Colonist; Drifter; Hunter; Marine; Maritime Def; Physician; Pirate; Rogue; Scientist; Scout; Technician×2*

**Engineering:** *Ed; Belter; Colonist; Drifter; Mercenary; Merchant×2; Navy×2; Pirate; Scout; Technician*

**Gambling:** *Athlete×2; Belter; Drifter×2; Entertainer×2; Mercenary×2; Noble; Pirate; Rogue*

**Gravitics:** *Aero Defense; Marine; Mercenary; Navy; Pirate; Rogue; Technician*

**Gun Combat:** *H:No,Low,Med Law; Aero Defense×2,O*; Agent,O*; Barbarian×2,O*×2; Belter,O*; Colonist×2,O*; Drifter,O*×2; Hunter×2,O*; Marine×2,O*; Maritime Def×2,O*×2; Mercenary×2,R0,O*; Merchant,O*; Navy,O*; Noble; Physician; Pirate,O*; Rogue,R2,O*×2; Scientist; Scout,O*; Surf Defense×2,R0,O*×2; Technician*

**Gunnery:** *Aero Defense×2; Belter; Marine; Maritime Def; Mercenary; Merchant; Navy; Pirate,R0; Scout×2; Surf Defense*

**Jack o'Trades:** *Aero Defense; Barbarian; Colonist; Drifter; Maritime Def; Merchant; Navy; Physician; Pirate; Rogue; Scientist; Scout; Surf Defense; Technician*

**Leadership:** *Athlete; Aero Defense,R3; Agent×3; Barbarian; Bureaucrat×2; Diplomat; Maritime Def,R3; Navy; Noble; Physician; Surf Defense,R3*

**Liaison:** *Athlete; Agent; Bureaucrat; Colonist,R3; Diplomat×3,R0; Drifter; Entertainer; Hunter; Noble×2*

**Life Sciences:** *Ed*

**Linguistics:** *Ed; Athlete; Agent; Barbarian; Bureaucrat; Colonist; Diplomat×2; Entertainer; Hunter; Noble; Physician; Scientist; Scout; Technician×2*

**Mechanics:** *Ed; Barbarian; Colonist; Drifter; Hunter; Maritime Def; Mercenary; Physician; Rogue; Surf Defense; Technician*

**Medicine:** *Ed; Athlete; Aero Defense; Agent; Barbarian; Belter; Bureaucrat; Colonist; Diplomat; Drifter; Entertainer; Hunter; Marine; Maritime Def; Mercenary; Merchant×2; Navy; Noble; Physician×4,R0; Pirate; Rogue; Scientist×2; Scout×2; Surf Defense; Technician×2*

**Melee Combat:** *H:High Law; Athlete,O*; Aero Defense×2,O*×2; Agent,O*; Barbarian×2,R0,O*×2; Belter,O*; Colonist×0,O*; Drifter×3,O*×2; Entertainer; Hunter,O*; Marine×3,O*; Maritime Def×2,O*×2; Mercenary×3,O*; Merchant×2,O*; Navy×3,O*; Noble×2; Pirate×2,O*; Rogue,O*×2; Scout,O*; Surf Defense×3,O*×2*

**Navigation:** *Belter; Marine; Mercenary; Merchant×2; Navy×2; Pirate; Scientist; Scout×2*

**Perception:** *Bureaucrat*

**Physical Sciences:** *Ed*

**Piloting:** *Aero Defense; Belter; Merchant,R3; Navy; Pirate,R2; Scout,R0*

**Prospecting:** *Belter×2*

**Recon:** *Aero Defense; Agent; Barbarian×2; Drifter×2; Entertainer; Hunter×2; Marine; Maritime Def; Mercenary; Pirate; Rogue×2; Scout; Surf Defense*

**Sciences:** *Athlete; Belter; Entertainer; Mercenary; Merchant; Noble; Physician×3; Scientist×3,R0; Technician×2*

**Social Sciences:** *Ed*

**Space Sciences:** *Ed*

**Steward:** *Bureaucrat; Diplomat; Merchant,R0*

**Streetwise:** *H:High Pop; Agent,R0; Drifter×2; Pirate; Rogue,R0*

**Survival:** *H:Desert,Low Tech; Aero Defense; Agent; Barbarian; Colonist,R0; Hunter,R0; Marine; Maritime Def; Surf Defense*

**Tactics:** *Aero Defense; Barbarian×2; Belter; Drifter; Hunter; Marine,R3; Maritime Def; Mercenary,R3; Merchant; Navy,R3; Pirate; Rogue; Scout; Surf Defense*

**Vehicle:** *Athlete; Aero Defense; Agent; Belter; Bureaucrat×2; Colonist×2; Diplomat×2; Drifter; Entertainer; Hunter×2; Marine; Maritime Def; Mercenary; Merchant; Navy; Noble; Pirate; Rogue×2; Scientist; Scout; Surf Defense×2*

**Watercraft:** *H:Fluid,Water; Maritime Def×2,R0*

**Zero-G:** *H:Asteroid,Ice,Vacc; Athlete; Belter×2,R0; Marine×0,R0; Mercenary; Merchant; Navy×0,R0; Pirate*

**Explorers' Society Membership:** *Athlete×0,O; Agent×0,O; Diplomat×0,O; Entertainer×0,O; Marine×0,O; Merchant×0,O; Navy×0,O; Noble×0,O; Physician×0,O; Scout×0,O*

## Mongoose *Traveller* 1st Edition

**+1 STR:** *Army; Drifter; Entertainer×0,R3; Marines; Merchants; Navy; Scouts; Psion*

**+1 DEX:** *Agent; Army; Drifter; Entertainer,R1; Marines; Merchants; Navy; Nobility; Rogue,O; Scholar; Psion; Scouts*

**+1 END:** *Agent; Army,O; Drifter×2; Marines,R5,O; Merchants; Navy,R4; Rogue; Scholar; Scouts; Psion*

**+1 INT:** *Agent,O; Army×0,O; Citizen,O; Entertainer,O; Marines×0,O; Merchants,O; Drifter; Navy,O; Scholar,O; Scouts,O; Psion; Rogue×0,O*

**+1 EDU:** *Army×0,O; Citizen,O; Drifter×0,O; Entertainer,O; Marines×0,O; Merchants×0,O; Navy,O; Nobility; Scholar,O; Scouts,O; Psion*

**+1 SOC:** *Agent×0,R6,O; Army×0,R6,O; Citizen×0,R6; Entertainer,R5/6,E3,O×3; Marines×0,R5,O; Merchants×0,R5; Navy,R5/6,O; Nobility,O×2; Scholar,O; Psion×0,E4*

**+1 PSI:** *Psion,E8*

**Admin:** *Ed; Agent×0,R5; Army,E10; Citizen,R2; Marines; Merchants×2,E8; Navy×2; Nobility×3,R1,E6; Scholar,E10; SP:Investigator*

**Advocate:** *Ed; Agent×2; Army; Citizen×2,R4,E3; Entertainer; Marines; Merchants×2,E8; Nobility×4,R3,M4,E6; Rogue; Scholar,E10; SP:Trader, Diplomat, Investigator*

**Animals (any):** *H:Agric,Gard,Poor; Citizen; Drifter; Merchants×0,E4*

**Animals (riding):** *Army×0,E3; Nobility×0,E4; Scouts×0,E4*

**Animals (training):** *Army×0,E3; Scouts×0,E4*

**Art (any):** *Ed; Citizen; Entertainer×4,R1; Nobility×0,E4; Scholar; Psion×0,E4*

**Art (writing or holography):** *Entertainer*

**Art (acting, dance or instrument):** *Entertainer*

**Astrogation:** *Drifter; Merchants; Navy×2; Rogue; Scouts×2,E6; SP:Trader, Starship, Explorer*

**Athletics (any):** *Agent; Army×2; Citizen; Drifter×2; Marines; Rogue×2; Psion×0,E4*

**Athletics (co-ordination):** *Entertainer; Rogue; Scholar×0,M4*

**Athletics (endurance):** *Entertainer; Scholar×0,M4*

# The Prep Room

**Battle Dress:** *Army×0,O\*; Marines×4,O\*×2; Rogue×0,O\*; Psion*

**Broker:** *Citizen; Merchants×2,R1; Nobility; SP:Trader, Criminal*

**Carouse:** *H:Rich; Ed; Citizen; Drifter; Entertainer×4,E4; Merchants×0,E11; Nobility×3,R2,E4,E8,E10; Rogue*

**Comms:** *Ed; Agent×2,O\*; Army×2; Citizen×0,E10; Entertainer,R1; Marines,E8; Merchants; Navy; Nobility×2; Rogue,E4; Scholar×2,O\*; Scouts×2; Psion; SP:Traveller, Mercenary, Starship, Diplomat*

**Computers:** *H:High Tech; Ed; Agent×3,O\*; Citizen×2,E10; Entertainer; Merchants; Navy; Nobility; Rogue×2,E4; Scholar×4,Rk5,E4,O\*; Scouts; Psion; SP:Diplomat, Investigator*

**Deception:** *Agent×2,R1,M4,E3; Army×0,E10; Citizen×0,E8; Drifter,R3; Entertainer×3; Marines×0,E3; Merchants; Navy×0,E3; Nobility×3,E3,E8; Rogue×2,M4; Psion,R1; SP:Diplomat, Criminal*

**Diplomat:** *Army; Citizen; Entertainer; Merchants×0,E8; Navy×0,E8; Nobility; Scholar; Scouts*

**Drive (any):** *Ed; Agent,E10; Army×3; Citizen×4,E4; Marines; Merchants; Rogue*

**Engineer (any):** *Ed; Army,E3; Citizen,R6,E4,E10; Marines; Merchants×2,E4; Navy×3,E6; Rogue,R5; Scholar×2,E4; Scouts; SP:Starship*

**Explosives:** *Army×2; Citizen×0,E3; Marines*

**Flyer (any):** *Agent×0,E10; Army×2; Citizen,E4; Marines; Navy,O\*; Nobility*

**Gambler:** *Army; Citizen; Entertainer; Marines; Navy×0,E3; Nobility; Rogue,E10*

**Gun Combat (any):** *Agent×3,R4,O\*; Army×2,E6,O\*; Citizen×0,R6,O\*; Drifter,O\*; Marines×6,E8,O\*; Merchants×0,M3,O\*; Navy×2,O\*; Rogue×4,R3,E8,O\*; Scouts,O\*×2; Psion×2,Rk1,O\*; SP:Traveller, Mercenary×2, Explorer, Investigator*

**Gun Combat (slug rifle):** *Army*

**Gun Combat (energy rifle):** *Army*

**Gunner (any):** *Agent×0,E10; Army; Marines; Merchants; Navy×3,E6; Rogue,R1,M4; SP:Traveller, Starship*

**Heavy Weapons (any):** *Army×2; Marines×3; SP:Mercenary*

**Investigate:** *Agent×4,R4/2,E11; Army×0,E10; Entertainer,R3/2,E10; Merchants×0,E8; Nobility; Rogue; Scholar×3,R3,E4; SP:Investigator*

**JoaT:** *Agent×0,E3; Citizen×2; Drifter,E4; Merchants×0,R3; Nobility,R6; Scouts×2*

**Language (any):** *Ed; Citizen; Nobility; Scholar×2; Psion*

**Leadership:** *Army,R3/1,E6; Citizen; Drifter×0,R4; Marines×2,R3/1,E6,E8; Navy,R2; Nobility×0,R5,E3,E11; Psion×0,R2; SP:Mercenary*

**Life Science:** *Ed; Scholar×0,R3; Scouts,E4; Psion*

**Life Science (biology):** *L12.2*

**Life Science (psionicology):** *Psion×0,R1*

**Mechanic:** *Army×2; Citizen,R4,E4; Drifter,R3; Marines; Merchants×2,R1; Navy×3,R1; Rogue×0,E4; Scouts,E6; SP:Starship*

**Medic:** *Ed; Agent; Army×2; Citizen; Marines×3; Rogue; Scholar×3,R1,E4; Scouts; Psion×2; SP:Traveller, Mercenary, Trader, Starship, Explorer, Criminal*

**Melee (any):** *Agent×2,O\*; Army×2,O\*; Citizen; Drifter×0,E4,O\*; Marines×0,O\*; Navy,O\*; Rogue×2,R3,E8,O\*; Scouts×0,O\*×2; Psion*

**Melee (blade):** *Drifter,R2; Marines×4; Merchants,O\*; Navy,R1; Nobility,E3,O\*; Rogue*

**Melee (unarmed):** *Army; Drifter; Marines*

**Navigation:** *Army; Citizen×0,R4; Navy; Rogue×0,R5; Scouts×2,E6*

**Persuade:** *Agent,E3; Army×0,E4; Citizen×0,E3; Entertainer×2,R4,M5,E4; Merchants×2,R1; Nobility×2,R4,E6,E8,E10; Rogue×2,R1; Scholar,E10; Scouts; Psion; SP:Traveller, Diplomat, Investigator, Criminal*

**Physical Science (any):** *Ed; Scholar×0,R1*

**Pilot (any):** *Agent×0,E10; Entertainer×0,M5; Marines; Merchants,R4,M3; Navy×3,E6,O\*; Rogue,R1; Scouts×0,R3; SP:Traveller, Trader, Starship, Explorer, Criminal*

**Pilot (small craft):** *Drifter; Navy; Rogue×0,M4; Scouts×3,E6*

**Pilot (spacecraft):** *Merchants×2; Rogue×0,M4; Scouts×3*

**Pilot (capital ship):** *Merchants*

**Recon:** *Agent×3; Army×3,R1,M3,E3,E4,E10; Citizen; Drifter×2; Entertainer,E10; Marines,E8; Navy×0,E8; Rogue,R5; Scouts,E4; Psion; SP:Explorer*

**Remote Operations:** *Agent; Navy; Rogue*

**Science (any):** *Agent×0,O\*; Citizen; Entertainer; Scholar×6,M3,E3×2,E4,E10,O\**

**Seafarer (any):** *H:Fluid,Water; Drifter*

**Sensors:** *Agent×0,O\*; Army×2; Citizen×0,E10; Marines; Merchants; Navy×2,E6; Rogue×0,E4; Scholar×2,O\*; Scouts×3,E3; SP:Traveller, Mercenary, Trader, Starship, Explorer, Investigator, Criminal*

**Social Science (any):** *Ed; Merchants,E4; Scholar×0,R1/5; Psion*

**Space Science (any):** *Ed; Scouts; Psion*

**Stealth:** *Agent×4; Army,E4; Drifter×3; Entertainer×2,E10; Marines,M3,E3; Rogue×2,R1,E8; Scouts; Psion,E4; SP:Traveller, Mercenary, Explorer, Diplomat, Investigator, Criminal*

**Steward:** *Citizen; Entertainer,E4; Merchants; Navy×0,E8; Nobility,E10*

**Streetwise:** *H:High Pop; Agent×3,R1; Army×0,E4; Citizen,E3,E8; Drifter×2,R1,E4; Entertainer×3,M5,E10; Marines×0,E3; Merchants×2,R3,E3; Nobility,M6,E4; Rogue×3,R3/5,E8; Scouts, Psion,R1; SP:Trader, Diplomat, Investigator, Criminal*

**Survival:** *H:Des,Low Tech; Army,M3; Citizen,R2; Drifter×3,R1,E4; Entertainer×0,M5; Marines,M3,E3; Scholar,M4; Scouts,E4; Psion×0,Rk1,E4; SP:Explorer*

**Tactics (any):** *Agent×0,E3; Marines×2,R3,E11; Nobility×0,E3,E8; Psion×0,R5*

**Tactics (military):** *Army×2,R3,E11; Marines,E6; Rogue×0,E11*

**Tactics (naval):** *Navy×2,R4,E11*

**Trade (any):** *H:Ind; Ed; Citizen×3,R2; Entertainer; Merchants×0,E4*

**Trader (belter):** *Drifter×0,R3*

**Vacc Suit:** *H:Ice,Vacc; Army×0,E3,O\*; Drifter,R1; Marines×0,E4,O\*; Merchants×3; Navy×2,R2; Rogue,O\*; Scouts,R1*

**Zero-G:** *H:Ast; Drifter; Marines,E4; Merchants×2; Navy×2; Rogue×0,M4; Scouts*

**Psionic Talents**: *All in Psion career; number is number of times appearing in tables*

*Awareness×3; Clairvoyance×2; Telekinesis×2; Telepathy×4; Teleportation×2; Any Psionic Talent×0,R3/4*

**Level in any skill already possessed:** *Agent×0,E6; Army×0,E8; Citizen×0,M5; Drifter×0,E10; Entertainer×0,E8; Merchants×0,E9; Navy×0,E5; Scholar×0,E8*

**Level in any skill you choose:** *Agent×0,M2; Scouts×0,E10; Psion,E9*

**Any skill you choose at Level 1:** *Citizen×0,E6; Marines×0,E5; Scholar×0,E6*

**Any skill from career x:** *Agent×0,E8; Navy×0,M4*

**TAS:** *Agent×0,O; Citizen×0,O; Marines×0,O; Navy×0,O; Nobility×0,O; Psion×0,O*

## Mongoose *Traveller* 2nd Edition

**+1 STR:** *Army; Drifter; Entertainer×0,R3; Marine; Merchant; Navy; Noble; Scout; Prisoner,O; Psion*

**+1 DEX:** *Agent; Army; Drifter; Entertainer,R1; Marine; Merchant; Navy; Noble; Rogue,O; Scholar; Scout; Psion*

**+1 END:** *Agent; Army,O; Drifter; Marine,R5,O; Merchant; Navy,R4; Noble; Rogue; Scholar; Scout; Prisoner,R6,O; Psion*

**+1 INT:** *Agent,O; Army×0,O; Citizen,O; Entertainer,O; Marine×0,O; Merchant,O; Navy,O; Rogue×0,O; Scholar,O; Scout,O; Psion*

**+1 EDU:** *Army×0,O; Citizen,O; Drifter×0,O; Entertainer×0,O; Marine×0,O; Merchant×0,O; Navy,O; Scholar,O; Scout,O; Prisoner; Psion*

**+1 SOC:** *Agent×0,R6,O; Army×0,R6,O; Citizen×0,R6; Entertainer,R5/6,E3,O×3; Marine×0,R5,O; Merchant×0,R5; Navy,R5/6,O; Noble×0,O×2,E3; Scholar,O; Psion×0,E5*

**+1 PSI:** *Psion,E8*

**Admin:** *H; Agent×0,R5; Army,E10; Citizen,R2; Marine; Merchant×2,E8; Navy×2; Noble×3,R1,E6; Scholar,E10; Prisoner,E10; SP:Diplomat, Investigator*

**Advocate:** *Agent×2; Army; Citizen×2,R4,E3; Entertainer; Marine; Merchant×2,E8; Noble×4,R3,M4,E6; Rogue; Scholar,E10; Prisoner×0,R4,E10; SP:Diplomat, Trader, Investigator*

**Animals (any):** *H; Citizen; Drifter; Merchant×0,E4*

**Animals (riding):** *Army×0,E3; Noble×0,E4; Scout×0,E4 [Note: 'Riding' isn't a specialty that's listed and 'Handling' isn't offered in any career; presumably all instances of this should be 'Handling']*

# The Prep Room

**Animals (training):** *Army×0,E3; Scout×0,E4*

**Art (any):** *H; Citizen; Entertainer×2,R1; Noble,E4; Scholar; Psion,E4*

**Art (writing or holography):** *Entertainer [Note: 'Writing' should be 'Write']*

**Art (acting, dance, singing, or instrument):** *Entertainer [note that MgT2 rules have 'Performer' and 'Instrument' as specialities]*

**Astrogation:** *Drifter; Merchant; Navy×2; Rogue; Scout×2,E6; SP:Explorer, Trader, Starship*

**Athletics (any):** *H; Agent; Army×2; Citizen; Drifter; Entertainer; Marine×2; Merchant; Navy; Rogue×3; Scout; Prisoner,R2,E4; Psion×0,E4*

**Athletics (strength):** *Prisoner×3*

**Athletics (dexterity):** *Marine×0,E4; Rogue×0,M4; Scholar×0,M4*

**Athletics (endurance):** *Scholar×0,M4*

**Broker:** *Citizen; Entertainer; Merchant×2,R1,E5; Noble; Rogue; Prisoner; SP:Trader, Criminal*

**Carouse:** *H; Citizen; Drifter; Entertainer×4,E4; Merchant×0,E11; Noble×2,R2,E4,E8,E10; Rogue*

**Deception:** *Agent×2,R1,M4,E3; Army×0,E10; Citizen×0,E8; Drifter,R3; Entertainer×3,E3; Marine×0,E3; Merchant×2; Navy×0,E3; Noble×0,E3,E8; Rogue×2,M4; Prisoner×2,O×2,E5; Psion,R3; SP:Traveller, Diplomat, Investigator, Criminal*

**Diplomat:** *Army; Citizen×2,E11; Entertainer,E8; Merchant×0,E8; Navy×0,E8; Noble×4,R5,M4,E10; Scholar,E10; Scout,M4,E11; SP:Diplomat, Trader*

**Drive (any):** *H; Agent,E10; Army×3; Citizen×4,E4; Drifter; Entertainer×2; Marine; Merchant; Navy; Rogue; Scholar*

**Electronics (any):** *H; Agent; Army×2; Citizen,E4,E10; Entertainer; Marine×3; Merchant×3,E4; Navy×5,E6; Noble×2; Rogue×2,E4; Scholar×5,E4,O*; Scout×4,E6; Prisoner×0,E10; Psion; SP:Traveller, Explorer, Mercenary, Diplomat, Trader, Investigator, Starship, Criminal*

**Electronics (comms):** *Agent; Army; Entertainer×0,R1; Marine×0,E8*

**Electronics (computers):** *Agent; Citizen×2; Entertainer; Scholar×0,R2*

**Electronics (sensors):** *Army; Scout×0,E3*

**Engineer (any):** *Army,E3; Citizen,R6,E4,E10; Marine; Merchant×2,E4; Navy×3,E6; Rogue,R5; Scholar×2,Rk4; Scout; SP:Starship*

**Explosives:** *Agent; Army×2; Citizen×0,E3; Marine; Scout*

**Flyer (any):** *H; Agent,E10; Army; Citizen,E4; Marine; Navy×3; Noble; Scout*

**Gambler:** *Army; Citizen; Entertainer; Marine; Merchant×0,E5; Navy×0,E3; Noble×2; Rogue,E10; Prisoner*

**Gun Combat (any):** *Agent×3,R4,O*; Army×2,R0,E6,O*; Citizen×0,R6,O*; Drifter,O*×2; Marine×4,R0,R1,E8,O*; Merchant×0,M3,O*; Navy×2,O*; Noble; Rogue×3,R3,E8,O*; Scout,O*×2; Psion×2,R1,O*; SP:Traveller, Explorer, Mercenary×2, Investigator*

**Gunner (any):** *Agent×0,E10; Army; Marine; Merchant; Navy×3,E6; Rogue,R1,M4; SP:Traveller, Starship*

**Heavy Weapons (any):** *Army×2; Marine×3; SP:Mercenary*

**Investigate:** *Agent×4,R4/2,E11; Army×0,E10; Entertainer,R3/2,E10; Merchant×0,E8; Noble; Rogue; Scholar×3,R3,E4; Prisoner; SP:Investigator*

**JoaT:** *Agent×0,E3; Citizen×2; Drifter,E4; Entertainer,R3; Merchants×0,R3; Noble,R6; Scout×2; Prisoner*

**Language (any):** *H; Agent; Citizen; Drifter; Entertainer; Merchant; Noble; Scholar×2; Psion*

**Leadership:** *Army,R3/1,E6; Citizen; Drifter×0,R4; Marine,R3/1,E6,E8; Navy,R2; Noble×2,R5,E3,E11; Psion×0,R2; SP:Mercenary*

**Mechanic:** *H; Army×2; Citizen,R4,E4; Drifter,R3; Marine; Merchant×2,R1; Navy×3,R1; Rogue×0,E4; Scout,E6; Prisoner,E4; Psion; SP:Starship*

**Medic:** *H; Agent; Army×2; Citizen; Marine×2; Rogue; Scholar×3,R1,E4; Scout; Psion×2; SP:Traveller, Explorer, Mercenary, Trader, Starship, Criminal*

**Melee (any):** *Agent×2,O*; Army×3,O*; Citizen; Drifter×0,E4,O*×2; Marine×0,O*; Navy,O*; Noble; Rogue×3,R3,E8,O*; Scout×0,O*×2; Prisoner×0,O; Psion*

**Melee (blade):** *Drifter,R2; Marine×3,R0; Merchant×0,O*; Navy,R1; Noble×0,E3,O*; Prisoner,O**

**Melee (unarmed):** *Drifter; Marine; Prisoner×5,R0,E4,E5*

**Navigation:** *Army; Citizen×0,R4; Marine; Navy; Rogue,R5; Scholar; Scout×2,E6*

**Persuade:** *Agent×0,E3; Army×0,E4; Citizen×0,E3; Entertainer×2,R4,M5,E4; Merchant×2,R1; Noble×2,R4,E6,E8,E10; Rogue,R1; Scholar,E10; Scout; Prisoner×2,O×2,E5; Psion; SP:Traveller, Diplomat, Investigator, Criminal*

**Pilot (any):** *Agent×0,E10; Entertainer×0,M5; Marine; Merchant×2,R4,M3; Navy×3,E6; Rogue,R1; Scout×3,R3; SP:Traveller, Explorer, Trader, Starship, Criminal*

**Pilot (small craft):** *Drifter; Navy; Rogue×0,M4; Scout,E6*

**Pilot (spacecraft):** *Merchant; Rogue×0,M4; Scout×2*

**Profession (any):** *H; Army; Citizen×2,R2; Drifter×2; Entertainer,E4; Prisoner*

**Profession (belter):** *Drifter×0,R3*

**Recon:** *Agent×3; Army×3,R1,M3,E3,E4,E10; Citizen; Drifter×2; Entertainer,E10; Marine,E8; Navy×0,E8; Rogue×2,R5; Scout,E4; Prisoner×0,O; Psion; SP:Explorer, Mercenary*

**Science (any):** *H; Citizen; Entertainer; Merchant; Scholar×7,R1/3,R5,M3,E3,E4,E11,O*; Scout×2,E4; Psion×2; L12.2*

**Science (psionicology):** *Psion×0,R1*

**Seafarer (any):** *H; Scout*

**Seafarer (personal or sails):** *Drifter [Note: 'Sails' should read 'Sail']*

**Stealth:** *Agent×3; Army,E4; Drifter×3,E8; Entertainer,E10; Marine,M3,E3; Rogue×2,R1,E8; Scout; Prisoner×2,O×2,E5; Psion,E4; SP:Traveller, Explorer, Mercenary, Diplomat, Investigator, Criminal*

**Steward:** *Citizen; Entertainer,E4; Merchant; Navy×0,E8; Noble,E10; Prisoner×0,E10*

**Streetwise:** *H; Agent×3,R1; Army×0,E4; Citizen,E3,E8; Drifter×2,R1,E4; Entertainer×3,M5,E10; Marine×0,E3; Merchant×3,R3,E3; Noble,R4; Rogue×3,R3/5,E8; Scout; Prisoner×3,O; Psion,R1; SP:Diplomat, Trader, Investigator, Criminal*

**Survival:** *H; Army,M3; Citizen,R2; Drifter×3,R1,E4; Entertainer×0,M5; Marine,M3,E3; Scholar,M4; Scout,E4; Prisoner; Psion×0,R1,E4; SP:Explorer*

**Tactics (any):** *Agent×0,E3; Marine,R3; Noble×0,E3,E8; Psion×0,R5; SP:Starship*

**Tactics (military):** *Army×2,R3,E11; Marine,E6,E11; Rogue×0,E11*

**Tactics (naval):** *Navy,M3,E11,R4*

**Vacc Suit:** *H; Agent; Army×0,E3; Drifter,R1; Marine×4,E4; Merchant×3; Navy×2,R2; Rogue; Scholar; Scout,R1; Psion*

**Psionic Talents:** *All in Psion career; number indicates number of times the skill appears in the tables*

*Awareness×3; Clairvoyance×2; Telekinesis×2; Telepathy×4; Teleportation×2; Any Talent,R3/6*

**Improve any skill already possessed:** *Agent×0,E6; Army×0,E8; Citizen×0,M5; Drifter×0,E10; Entertainer×0,E8; Merchant×0,E9; Navy×0,E5; Scholar×0,E8*

**Level in any skill you choose:** *Agent×0,M2*

**Any skill you choose at Level 1:** *Citizen×0,E6; Marine×0,E5; Scholar×0,E6; Prisoner×0,E6 but not JoaT; Psion×0,E9 but not JoaT*

**Level in skill from career x:** *Agent×0,E8; Navy×0,M4*

**TAS:** *Agent×0,O; Citizen×0,O; Marines×0,O; Navy×0,O; Nobility×0,O; Psion×0,O*

✸

## The Sylan Extraction

*by Jim Vassilakos*

**Location:**  Syl/Reidain (Foreven 2724)
               B510874-C  Na  (PBG)904

**Patron:**    Johannis Arnaund, Journalist/Researcher

**Required skills and equipment:** Starship

### Players' Information:

Syl, the fourth moon of the gas giant Askew, has been a productive mining colony for several centuries and is currently the home of a number subterranean company towns, all of them locked in endless competition. Each corporate enclave tries to produce

the best ore at the lowest price, but over the centuries, a sizable population of non-aligned Sylans has taken root in abandoned steam and aqueduct tunnels (known collectively as the Agrippa). These Agrippans are effectively Syl's riff-raff, living by their wits, often doing the worst jobs for the lowest pay, and sometimes even serving as independent mercenaries whenever a corporate war breaks out, which is fairly often. Some Agrippans, unhappy with this arrangement, have joined together as the Sylan Liberation Front (SLF), a group that seeks to undermine corporate control of Syl and ultimately create a participating democracy among all of Syl's people in order to effectively regulate and rein in the corporations. Needless to say, the SLF is considered an outlaw organization among all of Syl's competing corporations, and anyone associated with the group may be considered a terrorist.

The PCs will likely be visiting Syl to pick up or drop off cargo. While in the starport bar, they meet Johannis Arnaund, a rather inebriated fellow with a strange accent who seems to be somewhat disgruntled with Syl's current state of affairs. He appears to be drowning his misery with alcohol, and while talking politics, he will wax eloquent about how the Sylans (Agrippans and Corpies alike) are all effectively prisoners to the corporate elite. The Corpies work in constant fear of being fired, because if they are fired they'll become Agrippans, who are, in turn, essentially treated as human refuse. Sure, the consumers get a great price on the mined minerals, but what is the real cost in terms of human misery and broken lives?

If asked about himself, Johanes will say that he's from the Spinward Marches and that he came to the Foreven Sector in order to study and write about governance, corporatism, and sophont rights along the Imperium's spinward frontier. He has written extensively as an independent journalist and social commentator, but despite his work, he remains rela-

tively obscure. Earlier this year, he came to Syl and met with certain members of the SLF, whose names he obscured in his notes by referring to them as A, B, C, D, etc. …. However, as he returned to the starport, his notes were confiscated by Sternmetal Corporation's security grunts, and he realized immediately that although they didn't have the names of these people he met with, they'd be able to use security camera footage and data logs to figure out who they are. Hence, he sent a number of warning messages out via the public boards, but he's very worried that these people will eventually by rounded up by Sternmetal or one of the other corporations.

"I will not be able to live with myself," he states in one of his more lucid moments, "if my stupid lack of precautions causes these noble, brave, freedom fighters to suffer further."

To this end, if the PCs will find these people and provide them with passage off-world, he will gladly pay three times the normal rate, and he can be talked up even higher.

## Referee's Information:

The passengers can be smuggled past security inside of large, hollowed engine parts that can be obtained from a local scrap yard. These parts will need to be welded shut around the human cargo so that they can't be easily opened by the guards.

The hard part will be in locating these people and communicating with them, but given Mr. Arnaund's help, this is much more doable. The problem, he says, is that now that Sternmetal is on to him, they will be paying careful attention to anywhere he goes, and his life might even be in jeopardy if they think he constitutes a threat.

Possible variants are as follows (roll d6 or choose):

1. All is as it seems, but Arnaund is secretly in love with one of the SLF leaders, a woman by the

name of Este. He will be very eager to meet with her in person, possibly putting the whole operation at risk.

2. The operation is already at risk, as Mr. Arnaund's table was bugged by Sternmetal security before the PCs even showed up.

3. Arnaund, having fallen on hard times, has effectively sold his soul to Sternmetal security and is helping them to entrap unsavory merchants in order to impound their starships, imprison their crews, and then employ them in hazardous duty in the lower mines.

4. As #3, but the SLF was secretly created by Sternmetal in order to gather subversive elements and conduct terrorist operations against the other mining companies. These "leaders" who are to be extracted are members who were up-and-coming in the organization who advocated hitting Sternmetal itself rather than just hitting the smaller corporate enclaves, something the SLF's senior leaders obviously couldn't allow. Hence, this extraction is being conducted so that these people can be effectively neutralized off-world so as to not create a rift within the SLF itself. Arnaund's plan, then, is that after the ship reaches orbit with its human cargo, it'll be stopped by a Sternmetal SDB, thoroughly searched, and then Sternmetal will deal with the PCs however they wish.

5. These supposed SLF members are actually Zhodani agents/agitators whose covers were compromised after a recent terrorist operation, and Mr. Arnaund is, among other things, a Zhodani agent who is trying to get them out on short notice. The PCs, therefore, are effectively useful idiots in case the extraction should fail.

6. As #5, but the Zhodani agents are not satisfied to merely have escaped Syl. They also want a starship of their very own to get back to Consulate space, and the PCs' ship would do quite nicely. ✪



**ELGATO-PERALTA** (*Fernando Pereira Costa, Jr.*)
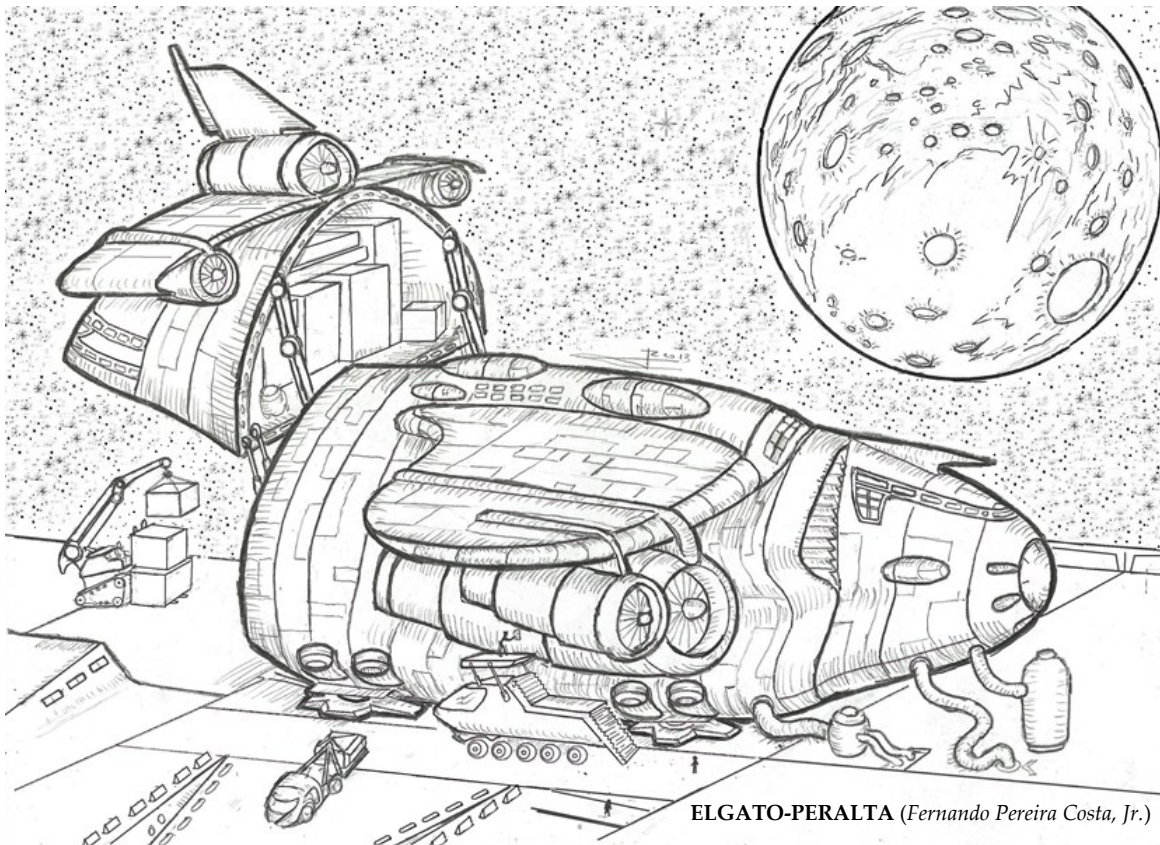
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# Traveller on the Internet                   IRC: The #Traveller and #LoneStar channels

*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 2020*

- **Bill Roper** has released *Knights of Solaris*, .
- **Felbrigg Herriot** has released *Cepheus Vignettes*, .
- **FSpace Publications** has released *BSL35T-1b Ships Boat ship plans sheet* (300dpi, 600dpi, and inch-grid editions, separately), *BHF35TFBG-A2b Modular Heavy Fighter plans 3/4 inch sheet* (300dpi and 600dpi editions separately), .
- **Gadfly Games** has released *Dungeon Geomorphs 1 - Basic Corridors and Rooms, Dungeon Geomorphs 2 - Water!*, .
- **Gamer Printshop** has released *Massive Map Tile Set: Starships & Stations Corridors and Bays*, .
- **Gareth Lazelle** has released *MgT Traveller Mass Attack Tables* (TAS),*MgT Traveller Ship and Space Combat Tokens* (TAS), .
- **Grey Matter Games** has released *Deadly Missions 5th Edition: SUGAR AND SPIES SET ONE, Deadly Missions 5th Edition: DUNGEON WARS*, .
- **Independence Games** (*formerly **Gypsy Knights Games***) has released *Copeline-class Merchant Vessel, Ensemble Cast*, .
- **Jon Brazer Enterprises** has released *Star Battles: Nebulae and Asteroids Space Map Pack for Fantasy Grounds*, .
- **Leland Andercheck** has released *MegaCorps, Marines, and Monsters: Digital Tileset*, .
- **March Harrier Publishing** has released *Generation X*, .
- **Michael Brown** has released *2d6 Powers, With Malice Aforethought, The Case Against John Victor, Port of Call: Iris, Thunder In the Night, Burst Transmissions, vol. 3, Port of Call: Rock Dread, Locale: Desiderium* (this is an adult-rated product), *Ten Cents a Mile, The Uncorrupted, Repose, Port of Call: Midgard, Weather, Danger on Roritura, Dossier: Xan Armanis, Port of Call: Mutandis*.
- **Mongoose Publishing** has released *The Once and Future Prince, Journal of the Travellers' Aid Society Volume 6, Drinaxian Companion*, .
- **Moon Toad Publishing** has released *Quick Ship File: Hugin Class Trader*, .
- **Old School Role Playing** has released *Lightning, .The Zero Gravity Olympics, Disturbed Minds, Boarding Action*, .
- **Paul Harris** has released *Printable Weapons Sheet*, .
- **Robert Eaglestone** has released *XBoat No. 1*, .
- **Stellagama Publishing** has released *The Sword of Cepheus Character Sheet*, .
- **Zozer Games** has released *Gunboats and Shuttles*, .                                                  ⬤

# 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*, *MegaTraveller*, *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 nonfiction) 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.

## Rights

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The right applies to *Freelance Traveller* magazine itself, not to specific individuals associated with it. If the current management of *Freelance Traveller* finds it necessary to withdraw from association with the magazine or the *Traveller* community (not gonna happen as far as we can see), and others take over the operation of the magazine and website, the rights granted above stay with the magazine and permit the then-current operators to exercise those rights.

## 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.

Graphics should be submitted in an appropriate format for the subject matter—in most cases, that will be GIF, JPEG, or PNG at 100dpi or higher. If it's principally line-drawing material, it may be more appropriate to submit it in a vector format; most common vector formats can be imported by our tool of choice, CorelDRAW! X4 or X6. Please try to leave some space around the edges for cropping, especially for covers. We publish in PDF in US Letter and ISO A4 sizes, and columns in the magazine are roughly 3.5 inches (actually a little more) wide.

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.