

SCIENCE-FICTION  
ADVENTURE IN  
THE FAR FUTURE

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# TRAVELLER

Referee's Aid 1: Among the Trojans

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## REFEREE'S AID I: AMONG THE TROJANS

### CREDITS

#### CLASSIC TRAVELLER

Marc Miller

Loren Wiseman, John Harshman, Frank Chadwick, Darryl Hany, Winston Hamilton, Tony Svajlenka, Scott Renner, Doug Poe, David MacDonald, Wayne Roth, Paul R. Banner.

#### MONGOOSE TRAVELLER

##### AUTHOR

Martin J. Dougherty

##### LAYOUT AND GRAPHIC DESIGN

Will Chapman, Amy Perrett

##### INTERIOR ILLUSTRATIONS

Amy Perrett

### CONTENTS

INTRODUCTION	2
BACKGROUND DATA	3
THE KENDELSEI OUTSYSTEM	7
SPACE TRAVEL IN THE OUTSYSTEM	18
ADVENTURING IN THE OUTSYSTEM	20



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# INTRODUCTION

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This book contains a source material for Traveller. It follows the general style of the original 'Little Black Books' or LBBs published as part of the Classic Traveller product line. The source material in this book is intended for use with a science-fiction game setting that follows the general standards and assumptions of the Third Imperium setting, notably:

- Interstellar travel is by way of the jump drive
- No means of interstellar communication exists other than sending a ship via jump drive
- Interstellar travel is common enough that small starships can be owned and operated by individuals and small companies
- An interstellar society exists which contains mainly humans but also various alien races
- Local conditions, culture and society can vary considerably from one world to another
- Energy weapons are possible but rare; conventional and advanced firearms are the standard weapons in use
- There are no energy shields, tractor beams or teleportation devices available at the 'mainstream' technological level of the setting

This source material is designed to fit into any Traveller game set in the OTU or a similar setting. It does require the Traveller rules, and perhaps some additional source material such as one of the setting books, and in addition you may find it useful to have some or all of the following.

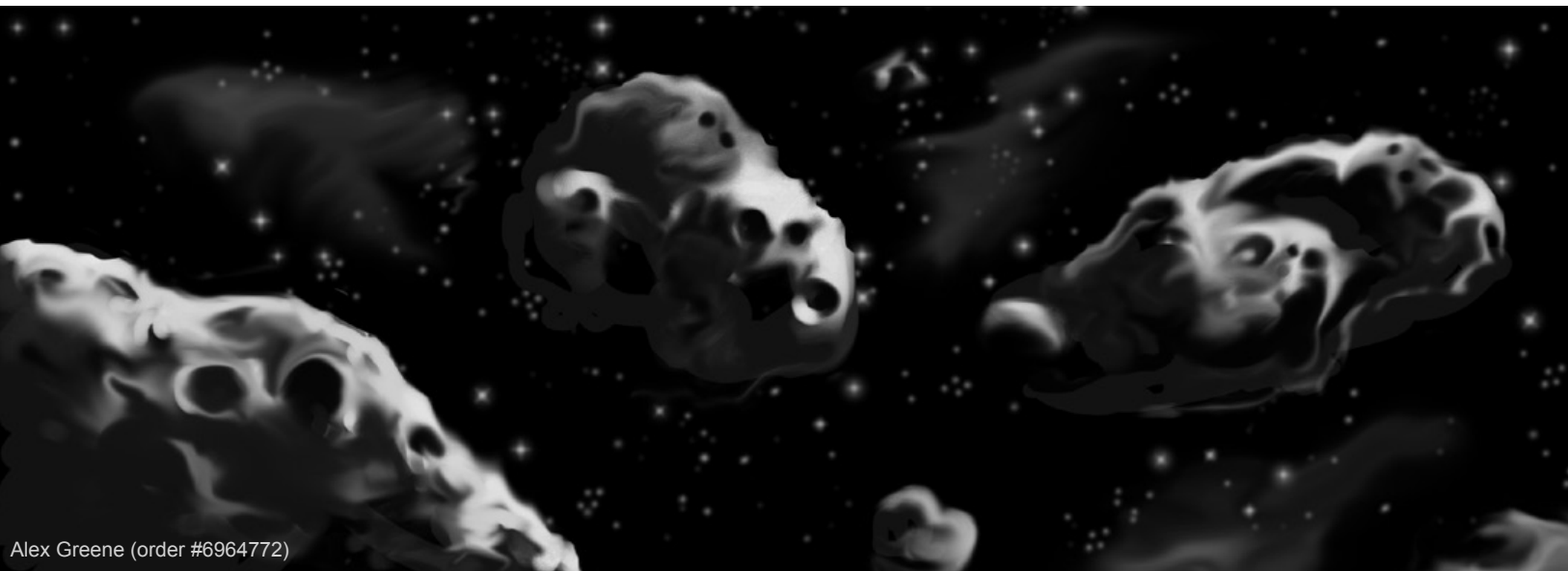
- A whole bunch of entirely ordinary six-sided dice. It can sometimes be helpful if some are of a different color to the others.
- Pencil (or pen) and paper for keeping notes about your character and the adventure. Also laptops, smart phones and various other electronic devices in case the pen thing is a bit old-school for your tastes.

- A calculator, in case mathematics rears its ugly head.
- Munchies and drinks to keep the players pacified.
- Some sort of playing area where you can sit down without passers-by tripping over you.
- Whatever other stuff you normally use when you play a game.

*Among the Trojans* presents a complete and self-contained game setting for Traveller. It can be placed in almost any star system without affecting a setting's canon data on what is there. A wealth of adventure opportunities awaits within the Trojan zones of the gas giant Kendelsei, among her moons, and on the system's outer planets.

Characters do not need a starship to adventure in this environment; it is possible to move between the moons and planetoids by local craft, hitching a ride with friends or paying for passage as necessary. An adventuring group that has the use of a small craft like a cutter or a ship's boat will find this more than sufficient to give access to the many adventure locations in this sourcebook, though long transits aboard small craft are rarely very pleasant!

There are numerous ways of getting a vessel of this sort, including a loan to complete a mission, buying one, rebuilding a damaged craft or even leasing a vessel from its owners. Theft might not be a good option since many local vessels are well-known in the spaceports of the outsystem. It is not likely to be possible for the characters to get far enough away in a non-jump craft that it will not be recognised. However, there are those who specialise in breaking up 'salvaged' craft and building something from them that is hard to trace back to its origins. With the resources available to the Imperial Navy such 'chopped' craft would be easily identifiable but to the casual observer in an outsystem port they would probably not be.



# BACKGROUND DATA

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The following data is provided for the benefit of the referee. How much of it can be determined by the players, and with what degree of accuracy, is a matter for the referee to decide. In many cases a simple search on the ship's computer or any library terminal will suffice to provide at least the bones of the information.

## THE THIRD IMPERIUM

The Third Imperium is a human-dominated empire, subdivided into sectors and subsectors. It is not a vast, monolithic structure; that would be impossible given the time lag inherent in interstellar communications. Instead, the Imperium resembles a vast federation of worlds that agree to certain common practices, and allow the Emperor and his subordinates to deal with foreign policy, military affairs and similar multi-world considerations while maintaining control of their internal affairs.

As distance from the Imperial Core increases, so does the amount of autonomy enjoyed by world governments and Imperial representatives. However, this is uneven. There are hubs of trade and commerce as well as backwaters in many areas. The major worlds often maintain strong cultural and economic ties to the central region of the Imperium, though some have their own flavour entirely. These hub worlds influence local culture in the same way (but on a smaller scale) that the Imperial Core influences the worlds of the periphery.

Between these major hubs, most of which are high-tech, high-population industrialised worlds, run the main trade lanes of the Imperium. These are well patrolled by the Imperial Navy and even when they pass through backwater systems they tend to be fairly safe. Along these lanes move the huge bulk freighters of the major shipping corporations as well as smaller couriers and mail ships. Less affluent worlds off the main trade lanes are not capable of supporting the giant freighters, so are served by smaller vessels, with ever-smaller branches coming off the trade routes. True backwater systems cannot support any regular trade, and see only occasional tramp traders coming through on a speculative basis or on their way somewhere there is better money to be made.

Since there is no means of communication between worlds other than a starship, those systems that do not see many ships tend to be culturally isolated and often well behind the curve in terms of news, fashions and information in general. These systems often do not see more than the occasional navy patrol, and can be hazardous. These backwaters are by no means violent maelstroms of piracy and smuggling, but they

offer those with a reason to hide from the law a place where they are unlikely to be disturbed unless the Navy sweeps in on a clean-up. That does not happen very often, but if a situation gets out of hand the authorities will respond. Most of the rest of the time, life goes on in the backwaters as it always has, and the Imperium is a distant thing.

## MAINWORLDS AND THE OUTSYSTEM

Most star systems are named for their mainworld which is usually the most habitable planet in the system or the one with the best resources. Naturally, most settlement takes place on this world, and in some star systems the mainworld is the only inhabited body. However, it is rare for there not to be some form of settlement elsewhere in the system. This might take the form of a few itinerant Belters setting up a temporary base, or a mining operation on a distant moon. Pirates and smugglers might find a remote base useful, as could researchers or scientists. There might be secret naval resupply or repair installations, hidden archives or stores of emergency supplies in case of some Imperium-wide disaster... almost anything could be located on the worlds, moons and planetoids of a star system.

Since most commercial and other starfaring traffic goes directly to the starport at the mainworld, and most ships leaving the system jump out from close to the starport, many starfarers tend to forget that there is a 'rest of the system'. The outsystem – i.e. the more distant worlds of the star system, orbiting far from the star – tend to be completely forgotten about by everyone except naval strategists and those seeking to skim free fuel from a gas giant planet. The latter practice is not as common as the layman might expect, and not just due to the hazards sometimes encountered in fuel skimming – the cost saving in terms of free fuel is often outweighed by the other costs incurred in transiting from the gas giant to the mainworld after skimming.

Thus most merchant ships move to and from the mainworld, jumping from one to the next. These vessels link star systems together and carry news, information and cultural influences as well as cargo and passengers. Yet there is often another spacefaring economy present in a given star system, one confined to that system alone. A system that has secondary settlements on other worlds needs vessels to transport people and goods between them. It is of course possible to jump between the worlds of a star system but jump drives are expensive and the fuel to run them takes up a lot of space. Sublight vessels can make the same transit more cheaply and efficiently, though this can mean fairly long periods in space when heading out to the most distant reaches of the system.

Thus in a system where only the mainworld is inhabited, the only local traffic will be a few utility vessels around the starports and interface shuttles between the orbital highport and the planetside downport. However, a system that has significant industry located in the outsystem will have vessels constantly on the move between the system's secondary spaceports.

Outsystem industry can take several forms. Factories might be located on distant moons or outsystem planets, though it is often more efficient to concentrate industry at the mainworld if it is owned by mainworld concerns. The most common outsystem installations are mines and mineral extraction sites located on the system's moons, planetoids and outsystem planets, usually feeding their produce back to the main industrial centres. Research installations and support facilities for the outsystem industry are fairly common as well.

The settlements of an outsystem may not owe allegiance to the mainworld. In a well-developed, high-tech system it is likely that the outsystem will be exploited by local firms for the benefit of the mainworld, and outsystem industry might be treated much like modern oil platforms. Personnel in this case will rotate through assignments and whatever support is required will be brought to the industrial site as needed. However, some outsystem settlements are independent or are owned by corporations based in other systems, and in this case local support is necessary. Workers need places to live and to get some recreation, vessels need maintenance and spares are better fabricated locally than shipped in via jump-capable vessels. A local economy can grow up in this manner, independent of the mainworld and its starport, and in this case ships might come direct to the outsystem port rather than the mainworld's starport. This can cause friction between the outsystem population and that of the mainworld, although generally speaking the presence of legitimate settlements in the outsystem is economically beneficial to the mainworld and this can be the basis for a workable partnership.



## BODIES IN THE OUTSYSTEM

The planets of the inner system are relatively close together and receive more energy from the system's primary (star) than those of the outsystem. Gas giant planets and planetoid belts can exist in the inner system, as can airless or nearly-airless 'rockball' worlds. Farther out, i.e. in the outsystem, there is little chance of a world developing life (at least of the sort found on 'garden' worlds like Earth). Breathable atmospheres are extremely unlikely, temperatures tend to be very low, and most bodies tend to be fairly barren.

Gas Giant planets vary considerably in size, with larger examples influencing a wider area with their gravity. In addition to possibly having a ring system, many gas giants have several moons and often cause planetoids to concentrate at their Trojan Points due to the interaction between the giant planet's gravity and that of the system's primary. The Leading Trojan planetoids are located about 60 degrees ahead of the gas giant, preceding it in its orbit, whilst the Trailing Trojans orbit 60 degrees behind. The two Trojan groups follow the same orbit as the gas giant.

Planetoids also occur in belts. A planetoid belt that is the system's 'mainworld' is referred to as an asteroid belt to make the distinction clear, but there is no real difference. A planetoid belt can contain anything from dust and small rocks to dwarf planets, with most planetoids falling somewhere in between. Planetoid belts vary in composition and density, but are rarely dense enough to make navigation very hazardous. It can be tricky and time-consuming to navigate a planetoid belt, but the chances of a collision with a giant space rock are low.

The outsystem may also contain several terrestrial (i.e. rocky rather than gaseous) planets, which will usually have little or no atmosphere and no water. This makes them inhospitable but if there is a reason to build a settlement there then the same technologies that make starships habitable can be used to maintain a settlement. Regular shipments of anything that cannot be recycled or produced locally are necessary, but rockball settlements can be reasonably self-sufficient if they are large enough to contain the necessary facilities.

Gas giant moons vary in size from pebbles to bodies larger than a typical planet. A gas giant with several inhabited moons might have quite a lot of local traffic operating between them, most of which never leaves the vicinity of the gas giant. Thus it is possible to find local vessels operating between moons of a gas giant, longer-range sublight ships plying the routes to and from the mainworld or other inhabited bodies in the system, and then jump-capable ships coming and going via the mainworld's starport.

## BELTERS

Charted Space has always had a social group who were somewhat apart from the mass of humanity. Traditionally miners and prospectors, these people are normally known by the collective noun 'Belters', since they mostly mine planetoids that occur in belts in various systems. However, Belters can be encountered on moons and isolated planetoids, and anywhere else that there is a chance to find a usable mineral deposit. Most Belters are either wandering prospectors or more settled members of an extraction operation, though many individuals do a little of both.

Many 'Belters' have never seen an asteroid belt, but the name has stuck. Perhaps it dates from old Terra, in the days of the miners who worked the Asteroid Belt in the Sol system. Perhaps the name is older, with Vilani roots. Nobody cares, least of all the Belters. Any small group of prospectors, or miners are 'Belters' to outsiders – and often to themselves too. Most have become proud of their nickname. It signifies independence, toughness, resourcefulness and (usually) poverty. However, there is much debate over exactly who is a Belter and who is not.

The term Belter is often used rather indiscriminately and inaccurately by the general population of the Imperium. Many of those who work in a planetoid belt are anything but 'Belters' – for example they may be employees of a mining corporation who would not identify themselves as Belters (and real Belters would not acknowledge them as such) or members of mainstream Imperial society whose homeworld happens to be an asteroid. Others belong to the Belter cultural group but are not miners or prospectors. They might work in a supporting capacity or crew trading ships that operate within the Belter community as well as trading with outsiders. These crews may also dabble in courier work, smuggling, tramp-merchanted, and even piracy as circumstances dictate.

Thus it is reasonable to say that the term Belter is a somewhat nebulous cultural label referring to a general type of person. Some Belters are itinerant, wandering from one star system to another, whilst others live and work a particular belt, moon or rockball world. There is no monolithic Belter culture or society (though there are some fascinating theories about The Great Belter Conspiracy doing the rounds), and no precise definition. However, a Belter knows who is and who is not a fellow Belter. Perhaps the only meaningful definition of a Belter is 'someone who other Belters agree is indeed a Belter'. It is possible to find Belter and non-Belter communities living in the same planetoid belt. Friction is not uncommon, but star systems are very big and co-existence is entirely possible.

The life of a Belter is rarely comfortable, and is often very dangerous. This is particularly true for wandering prospectors, but the lure of the strike drives them on. Sometimes this search for the once-in-a-hundred-lifetimes strike borders upon mania. People from high-tech garden worlds very rarely become Belters; there are simply too many risks compared with too few

opportunities for this to be an attractive option. Most Belters are born of parents who were themselves Belters. This does not mean that the Belter has to be born on some outsystem rockball to earn the name. He or she could just as easily have been born to parents who long ago left their homeworld to ply their trade.

Within the Imperium, many Belters' lack of a homeworld can cause a problem for the authorities, namely registering the child's citizenship. The problem is sometimes solved by adopting the birthworld of one of the parents (this can lead to the peculiar problem of a child registered as a citizen of a world that only her great-grandfather had actually seen). More commonly the new baby is simply registered as an 'Imperial Citizen'. This is a fairly common designation, used for children born on ships and stations belonging to the Imperium rather than a particular world. However, it carries a certain social stigma, a label of 'homeless misplaced person'. Certain high-society fashionables have also adopted the Imperial Citizen label to show their loyalty to the Imperium, but this is simply a fad among the rich and misguided. To most, the Imperial Citizen label marks the individual as part of the underclass.

Some Belters become honorary citizens of whatever mainworld is present in the system to avoid this stigma, though most do not care enough to bother and many worlds will not register Belters as citizens even if they want to.

The economic activity of Belter communities tends to fall into certain categories:

**Prospectors** search for good sources of resources that can be exploited for profit. Some explore asteroids searching for veins of metal or radioactive materials. Others pick over wrecked spacecraft or the ruins left behind by failed settlements, seeking salable technology or just a source of spare parts. Some Belters will prospect for a time then switch over to working a claim as a miner or salvager. Others sell the location for whatever they can get and move on, looking for a new strike.

**Miners** are the most common of Belters. They extract ore and other precious materials from their surroundings. A few very specialist types of miner exist, such as gas-miners, who extract hydrocarbons from the atmosphere of gas giant planets. Most are rock-diggers who laboriously haul salable ore from asteroids and moons. Mining outfits tend to be larger than prospecting groups, since there is more heavy work to be done and large amounts of ore to be handled.

Some miners do not extract the ore but run processing plants or other secondary industries. Small communities often grow up around the processing and fabrication plants, creating a semi-permanent town which serves as a home base for prospectors or more self-contained mining outfits.

**Salvagers** have perhaps the most dangerous job of all Belters. Wrecked starships usually had a reason to be that way, and installations are no less hazardous. However, a decent find can keep a salvager crew in business for a long time. Some salvagers also offer a freelance rescue or even starship upgrade service, using parts scavenged from wrecks to keep other ships (including their own) flying. Salvagers tread a fine line between legitimate operations and illegal scavenging, and tend to be less well regarded by mainstream society than 'normal' salvage companies. To some, there is little distinction between a Belter salvaging crew and a band of pirates. This impression is correct in some cases.

**Others** work in supporting industries such as ore processing, space-vessel maintenance, food production and all manner of other tasks required to make a society run. Almost all Belters are multi-skilled, and as a rule someone who is an expert in one area but useless at most other things is viewed with suspicion. The concept of someone who cannot pull his or her weight in a range of tasks is alien to the Belters, who may at any moment have to fix machinery, show the kids how patch

a vacc suit, identify some odd-looking ore, stop a leak in the ship's coolant system, bargain with a buyer or an equipment vendor, or chart a safe route to a new prospecting site. They tend only to trust people who can handle themselves without needing nursemaiding, and are not tolerant of those who waste materials, air, time or food.

If generalisations are possible about a fairly diverse group such as Belters, it is reasonable to say that they are hard-working and proud of their achievements, and respect this in others. Most just want is to be left alone to conduct their business, and they are willing to respect other people's affairs. Belter society has very few laws but many customs concerning safety, air wastage and recycling. If these customs are respected then the average Belter will tolerate almost anyone. Winning him (or her) as a friend is a much greater challenge however. The best route is through shared labour, trustworthiness and reliability. The length of time necessary to convince a typical Belter that an outsider is a worthwhile friend is far more than most people are prepared to put in, so Belter society tends to remain very insular.



# THE KENDELSEI OUTSYSTEM

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The large gas giant Kendelsei could be located in any star system that has one or more gas giants. A high-mid-tech to early starfaring (Tech Level 8-10) mainworld located somewhere off the main trade routes is the best candidate. Most traffic in and out of the system via jump goes through the mainworld starport, with some sublight trade taking place between the outsystem communities and the mainworld or other inhabited bodies of the inner system.

Between Kendelsei and the inner system lies an astrographical feature that is sometimes listed in the star charts as a planetoid belt and sometimes not. It is a very sparse but broad region of interplanetary dust and ice crystals, with few bodies larger than a basketball. This not-quite-belt would not constitute a navigational hazard other than if a vessel hurtled through at great speed and essentially pelted itself with dust and gravel, but it does make the use of radar and other instruments less effective. Thus the not-quite-belt is not a hazard to navigation so much as an aggravation and nuisance. It is considered to be the divide between the inner system and the outsystem.

Kendelsei orbits its primary at a fairly great distance, with a large expanse of more or less empty space between it and the inner system. It has several moons, varying in size from a few kilometres across to one that would be considered oversized if it were a planet. Clusters of asteroids orbit at the leading and trailing Trojans.

Beyond Kendelsei there are three planets at increasingly great distances from the primary, and finally a second (much smaller) gas giant. Beyond this is the system's Oort Cloud, a shell of planetoids and comets orbiting at enormous distances from the primary and even from Kendelsei's distant orbit. Though large, the cloud is sparse with planetoids widely separated. As with most systems, the Oort cloud as been only cursorily mapped; getting there sublight would take a very long time for little gain, and vessels capable of jumping there could go somewhere more useful instead.

Representing the star system as a set of subsystems produces the following simple text map. Indented names indicate moons or members of the local group.

## **(Inner System) (Dust Belt)**

### **Kendelsei (Large Gas Giant)**

**Innermost E000100-8**

**Ringmid D110317-9**

**Ringer X110000-0**

**Bob and Candy X000000-0**

**Karbbin XAF9000-0**

**Freedom's Moon D200227**

**Wayward (Gas Giant Moon) X10000-0**

**Ikker (Gas Giant Moon) C323589-9**

### **Leading Trojans**

**Trojan Mining**

**Troy**

**Naval Refuelling Station**

### **Trailing Trojans**

**Spinner**

**Shadow**

**Downen's World**

**Hibbert X785000-0**

**Marbule X9AA0000-0**

**Cuass X210000-0**

**Fencepost (Small Gas Giant)**

**Whoopee!!! (E100160-9)**

## **A NOTE ABOUT MOONS, PLANETS AND SUCH**

Even a fairly small moon is a big place, with plenty of room for additional settlements, miners, prospectors or whatever else might be there. These might go undiscovered even if they are not trying to remain hidden, not least because the people living and working in the outsystem are very dispersed and the chances of an encounter are limited. Obviously, close to the major settlements the terrain is well known and anyone operating there is likely to be spotted, but there are huge expanses of the outsystem's moons and planetoids that may never have been visited or even surveyed from a passing ship.

It may seem strange that some people will know little about even the moon they live on, but for the most part people go about their business in a fairly limited area. They tend to focus on what they need to be doing rather than gathering information and adding it to a general database. Indeed, it may be that some people know about a given place, feature and group but others do not. The 'facts' may vary a lot depending on who you ask.



Away from the places where people live and work, only the most sketchy data is generally available. A detailed star chart with survey data and information on atmosphere, rock composition and the like requires a lot of effort to put together and while the Imperium does have very significant resources it gives a low priority to conducting detailed mapping operations of every moon, planetoid and rockball in Charted Space.

Thus there are some bodies in the outsystem that are nothing more than a dot on the map and a note about orbital inclination and velocity, and others where there is little more in the database than a partial radar map made decades ago from a passing scout ship. There is plenty of room for hidden bases, crashed starships and the like. People only go where there are good reasons to go (such as money to be made or necessary resources to be found); beyond these places could be almost anything the referee wants there to be.

Note that the term 'asteroid belt' is used in Traveller to denote a belt that is the 'mainworld' of a system, and 'planetoid belt' is the term for a belt that is not a mainworld. For clarity, it is general practice to refer to any asteroid that is not part of mainworld belt as a planetoid even though this is not accurate in astrophysical terms.

## KENDELSEI (LARGE GAS GIANT)

Kendelsei is a large gas giant, uninhabitable by humans like all worlds of its type. The atmosphere is composed largely of methane, which is liquid (due to pressure) at great depths. It is not known for certain whether Kendelsei has a solid core, but it is generally thought that it does not. The gas giant radiates quite a lot of heat, which causes its atmosphere to be fairly turbulent – though Kendelsei is less violent than many similarly sized gas giants.

This would make Kendelsei a good candidate for fuel skimming were it located nearer the mainworld, but its remoteness makes the trip too long to be economically viable. Ships making a multi-jump transit sometimes jump from giant to giant, skimming as they go, and bypass several mainworlds along the way. Other than vessels engaged in this kind of transit, Kendelsei is rarely skimmed for fuel by vessels from outside the system.

This does not, however, mean that there is no skimming at this giant world. Quite the opposite; the upper atmosphere is routinely skimmed by 'gas rigs' or 'petrochem rigs' which descend into the atmosphere to take on large quantities of atmospheric gas then return to orbit for safety while it is processed. The resulting liquid hydrogen fuel and various petrochemicals and other useful gases are then sold for commercial and starship use. Much of the water used in the various local settlements also comes from these rigs.

There is no known life in Kendelsei's upper atmosphere, and anything that could live in the depths would be so alien that meaningful contact is highly unlikely. Local space vessels sometimes skim for fuel, and the occasional scientific mission dives into the atmosphere to collect data or samples. None of these craft have ever reported contact with any sort of life, though gas-rig workers will spin tall tales of the things that live in the methane clouds to anyone willing to buy them a drink.

## INNERMOST (GAS GIANT MOON): E000100-8

Innermost is little more than a large planetoid which acts as a 'shepherd' for Kendelsei's ring system. Its gravity helps keep the rings from dispersing, and its orbit defines the inner limit of the ring system. The moon itself is not permanently inhabited. Population estimates are based on the number of people living and working on the surface at any one time, which typically ranges from 100 to about 400. None of these people would refer to Innermost as their homeworld, but the majority dwell in the scattered surface complexes for a few months to a couple of years before moving on.

Innermost's settlement pattern takes the form of a scattering of mining camps and a few supporting industries. The 'starport' is little more than a smoothed-off area of bedrock which has been cleared of obstacles. Since the mining camps are only semi-permanent, the location of the port (or rather ports as each camp has its own landing area) may move from time to time.

Innermost's largest settlement at any given time tends to be the most lucrative mining site, which attracts some supporting industries like ore processing or tool fabrication. A small community of support workers run bars, shops and the like for the miners. Some of the supporting personnel are the world's longest inhabitants; there are rumours of a barkeep or fabrication expert who has been there for twenty years. However, everyone expects to move on at some point. Innermost is a place where people go for a few months to work. Nobody lives there.

Most of the mining operations on-planet are small outfits with perhaps a dozen employees on site. These people live and work for months on end in small prefabricated buildings or mobile mining shelters. They are (for the most part) paid well but their work is fairly high-risk and very stressful. The fact that there is little to do when not working contributes to a sometimes tense environment. Things are a little better in the larger settlements as there is at least a bar or two and enough space to take a short walk without a vacc suit. Nevertheless, Innermost has a reputation for being a fairly grim mining settlement. The only reason to go there is to make money, and few workers come back for a repeat contract.

## RINGMID (GAS GIANT MOON) DI I0317-9

Ringmid is named for its place in the gap between the narrow inner ring system and the wider outer one. It is not especially large as gas giant moons go, with a thin envelope of atmospheric gas. Hydrographics are officially listed as zero, but there is some water to be found in the form of ice. This is difficult to obtain and there is not much of it in any case, so most of the water on planet is imported and carefully recycled.

Ringmid has a population of about four thousand, of whom nearly two-thirds live either in the 'port town' around the minimal spaceport or a few outlying settlements close by. The remainder are scattered in small settlements wherever some resource made building a settlement viable. Unlike Innermost, the settlements on Ringmid are mostly permanent or semi-permanent, almost exclusively with a population of 50 or more people.

Some of these settlements, including the port town, are tunneled into the rock just below the surface with a few buildings aboveground as necessary. Most of the smaller settlements are made up of the usual prefabricated base segments set up and reinforced to make them semi-permanent. Extra micrometeorite shielding, usually in the form of an armoured canopy, has been added to most buildings. This is common on many airless or trace atmosphere worlds but is especially important in the middle of a ring system. The surface is often struck by small fragments from the rings, which poses little threat to a reinforced building but can endanger personnel working in a vacc suit outside.

Virtually the entire population of Ringmid is on contract to PetroRig, LIC, whose local headquarters is located at the port town. PetroRig specializes in extracting petrochemicals and similar useful compounds from gas giant atmospheres, and runs most of the gas rigs operating in Kendelsei's atmosphere. Chemicals are brought to the port town for initial processing and refining by a small fleet of specially adapted shuttles and larger vessels, then shipped out to the buyer aboard larger transports. Several of the independent extraction outfits working the atmosphere of Kendelsei sell their raw chemicals to the refinery on Ringmid rather than arranging transport to market.

Some of Ringmid's produce is provided as fuel or water to the settlements of the outsystem, with the remainder mostly transferred to the mainworld's highport by large sublight tankers. These make the long run to the mainworld and back again on a near-constant basis, stopping only to let the crews have a little downtime before beginning another voyage. The tankers have a modest amount of cargo space allocated to 'general supplies', which is used to bring in necessary and luxury goods for the workforce. One byproduct of this is that Ringmid Port Town (the only name it has ever had) has become something of a marketplace for personnel from the independent gas rigs or from Innermost and the other moons of Kendelsei.

## RINGER (GAS GIANT MOON) XI I0000-0

Ringer is a smallish moon whose slightly inclined orbit takes it through the ring system on a frequent basis. This causes disruption, but not enough to break up the rings. The turbulence caused by Ringer's passage settles down again in time, not least due to the gravitational influence of other moons. It does, however, rearrange the large and small components of the ring system and makes navigation more complex whilst putting on a show that looks very impressive from a safe distance.

Ringer receives numerous collisions on each pass through the rings, against which its trace of atmosphere offers no real protection. Most collisions are with small objects, but every now and then Ringer gets hammered by a big chunk of rock. Not unexpectedly, this has left some very impressive craters and deep cracks in the moon's surface.

There are no permanent inhabitants on Ringer, not least due to the frequent debris storms as it passes through the rings. Expeditions do sometimes visit the moon looking for minerals that can be exploited without excessive danger. Exploration of the deep cracks is also sometimes undertaken, either for mining purposes or by those wanting to find out more about crust formation. There are of course rumours of secret bases, hidden treasures and all manner of other vast riches just waiting to be found. Every year a handful of explorers or prospectors go missing on Ringer. Some claim this as proof of the rumours; most recognize that this is a particularly dangerous place to visit and there will inevitably be casualties among people who go plunging into the crust of a hostile moon.



## BOB AND CANDY (GAS GIANT MOONS) X000000-0

Bob and Candy are two small moons, little more than asteroids really, which share an almost identical orbit at the outer edge of the ring system. Neither is inhabited, though prospectors occasionally take a look for something worth mining. Bob and Candy have a complex interaction. Sometimes they are close to one another, at other times they move apart. The Bob/Candy system as a whole is 'sort of borderline stable... ish' in the words of one Scout Service report, but the path followed by each is quite varied. Without the other, either one would wander off and get lost in deep space or fall into the gas giant, causing local chaos in the process.

## KARBBIN (GAS GIANT MOON) XAF9000-0

Karbbin is a giant moon, possibly anything up to 25,000 km in diameter. This makes it much larger than most planets, though its exact dimensions are very hard to discern even with advanced instruments. Karbbin is surrounded by a thick and dense atmosphere of methane and other gases, beneath which it appears to be mostly covered with ice or frozen liquid of some kind. This may – according to some theories – be of very low density, creating a sort of 'ice-foam' which floats atop a low-density fluid of some kind. Landing on this surface, if surface it really is, would be extremely hazardous.

Small areas of rock do protrude up through the ice, or ice-foam, or whatever it turns out to be, and these are the only suitable landing points on Karbbin. Expeditions through the thick, soupy atmosphere have successfully landed and explored a little, but in most cases their data is not generally available as it was gathered by private research for mining companies or similar entities. It is known that some expeditions have been lost, and the usual wild tales abound of strange alien ruins on the frozen mountain-shores of Karbbin's weird oceans.

At present, little is known about this strange world. There is not much reason to go there, so it is not likely that exploration will be undertaken at any time in the near future.

## HELLHOLE (GAS GIANT MOON) C2BI373-9

Hellhole is, as the name suggests, a very unpleasant place. The atmosphere, such as it is, is mildly corrosive at normal concentrations and significantly more dangerous in low areas where the pressure is a little higher. There are two settlements on Hellhole, giving it a Balkanized rating in the star charts.

The larger of the two settlements is Peak Town, located on a high plateau where the atmosphere is relatively harmless. Peak Town is home to about eight thousand people, who dwell in reinforced surface domes interconnected by sealable personnel tubes. Critical parts of the settlement, such as water storage and power generation, are located underground.

Most of the residents of Peak Town do not leave the relative safety of their plateau, though expeditions are sometimes launched down into the lower reaches to search for or mine minerals. Exposure to the corrosive atmosphere requires extensive equipment maintenance, making local resource extraction something of an expensive business. Only the most promising deposits are mined as a result.

Most of Peak Town's revenue comes in from its (by local standards) high-technology manufacturing base. Peak Town is the main source of high-tech spares for many local groups. Exports include space vessel components, industrial and mining robotics, and electronic systems for a variety of uses. Materials to produce these items are brought in from elsewhere in the outsystem, sometimes on a speculative basis but often on a contracted basis.

Several small local mining firms have an office at Peak Town, as does one of the largest shipping companies in the outsystem. This is not a difficult distinction to achieve, but Peak Shipping is important to the local economy as it transports a fair proportion of the ore and other raw materials moving around, as well as more general freighting and personnel transfers. Peak Shipping has a small repair-and-maintenance yard where a high-quality refit is possible for those that can afford the inflated price.

The other thousand or so inhabitants on Hellhole dwell in a remote underground facility. It is not known how they refer to their home among themselves; outsiders often call it 'the other place' or forget about it entirely. Rumours abound about who dwells in 'the other place', but all that is known for certain is that they are very isolationist. Traders do visit Peak Town from time to time, but do most of their business electronically then pick up the goods and leave.

It is rumoured that these mysterious people are a religious sect or a reclusive wealthy elite hiding out from some disaster or enemy. They are thought to have found their home and moved in rather than built it themselves. The current top theory is that they are a religious group who think the universe is about to end and are hiding in an old naval resupply facility built during the First Imperium era and forgotten about. Speculation then inevitably turns to what archaic but deadly weapons were hidden there, and what the inhabitants of the facility plan to do with them. This theory is about as well-informed as any of the others; in truth nobody outside 'the other place' really knows anything about it.

## KENDELSEI HOME (GAS GIANT MOON) C9A9555-9

Kendelsei Home is a large moon with a thick atmosphere composed mainly of carbon dioxide and nitrogen. Its surface is almost entirely covered in frozen water, with expanses of bare rock here and there. Despite this forbidding landscape, it is one of the least hostile environments in the outsystem and was chosen as the initial site for a mining and prospecting settlement.

Today, this small and ramshackle town still remains, but it has been eclipsed by better-funded settlements to the point where it is really just another mining camp. There are many such, mostly with a population of 20-200 people. Most are semi-permanent at best, or temporary facilities that grew into a more permanent settlement without any conscious planning. There are possibly a hundred or more such camps all over Kendelsei Home. Some are corporate facilities run by large and small mining firms or acting as a central processing and support installation for nearby camps. Others are independent and vary considerably in their society and culture. There are also a few small settlements that are not really commercial mining installations as such, but are more places where a group chose to settle and then eked out a living from whatever local resources could be exploited.

In all, about a hundred thousand people dwell in the scattered settlements of Kendelsei Home. Perhaps four times that number call one of the Big Five Towns their home. The largest of these is Marrick City, with a population of about 175,000. The other cities vary from 35,000 at Ynrei Complex to 80,000 in the Ulferson Crater Sprawl.

The Big Five Towns are loosely linked by a cooperation and mutual assistance agreement, but are otherwise independent. Each is primarily an industrial facility with a modest spaceport and supporting facilities, run by a council made up of those that control the critical services. The actual balance of power varies somewhat – Ynrei Complex is a near-dictatorship whilst Alliance Town has so many factions and rival power groups that it frequently approaches democracy or total anarchy – but overall the route to power on Kendelsei Home is to control food production, energy generation, manufacturing or some similarly vital activity.

Numerous small mining and shipping firms are based out of the Big Five, except in the case of AstonCorp. The mining company that set up AstonCorp went out of business decades ago, with power devolving through a partial management buyout and the necessity of keeping the lights on. Although the corporation itself has ceased to exist, the town retains a corporate structure and does not encourage small private enterprises on its territories. Thus although the various sectors of the company

– shipping, energy, fabrication and maintenance, and so forth, have become private empires the illusion of a corporate entity is maintained by ‘the board’, and business is strictly regulated to place any activity in a given sector under the control of the relevant divisional director.

Each of the Big Five maintains links with different groups in the outsystem, and competition for business from independent traders or resource extractors is sometimes rather fierce. Relations between any given Big Five town and the various corporations and other groups in the outsystem improve or cool over time in a game of economic and political manoeuvring designed to give the town’s leaders increased power on Kendelsei Home and across the outsystem. With its larger population and industrial base, Marrick City has a clear advantage but is very far from achieving dominance.

This power game has a military dimension of sorts. Open conflict between the Big Five is very unlikely, but all have (very) small military forces which are sometimes used for posturing or to drop a broad hint. More commonly, these forces are used as a political tool. Thus the handful of obsolete fighters owned and operated by AstonCorp’s ‘Naval Operations Division’ regularly escort ships into and out of the world’s spaceports – whether the owners like it or not – and the ancient System Defence Boat operated out of Ynrei Complex is frequently trumpeted as the only reason the outsystem is not crammed full of pirates and raiders.

The most successful political too; however, is the Marrick Marines. Operating home-built armed shuttles, this force provides detachments to protect friendly settlements and to enforce a basic level of law enforcement in far-off places. The Marrick Marines are seen increasingly as guards aboard merchant and supply ships, or operating rescue vessels that assist ships and installations suffering some disaster. Much political capital has been made of these activities, though opponents of Marrick City argue that the ubiquity of the Marines is tantamount to a military annexation of the outsystem.

The Ulferson Crater Sprawl maintains a small defensive and security force but does not use it for political ends. Instead it has quietly acquired support and resupply contracts for many installations, winning friends through butter rather than guns. Alliance Town has its own collection of military formations but these are typically tiny and ill-equipped. Their operators are usually more involved in jockeying for position in local politics than expanding their influence in the wider arena.

## FREEDOM'S MOON (GAS GIANT MOON) D200227

Freedom's Moon is a typical rockball, about the size of Luna in the Sol system. It has little in the way of easily accessible resources, though prospectors sometimes find something worth mining. As a result of this relatively low value, the moon was initially bypassed by those settling the outsystem – given a choice of airless or otherwise hostile rocks to live on, most chose the ones that offered the chance to make some money. However, the rockball that became Freedom's Moon was attractive to some precisely because nobody else wanted to live there.

The Society for Freedom of Choice (or SFC) was an anarchist collective which tended to attract those with the means to support their idealized way of life. These were not wild-eyed agents of chaos, merely people who believed in a philosophy that nobody has the right to harm others but so long as this is observed, anything goes. After a couple of attempts to secure an enclave on various mainworlds, the SFC pooled its resources and relocated to Freedom's Moon.

Setting up the community on Freedom's Moon presumably involved a lot of polite discussion and frank exchanges of viewpoints, but ultimately this was what everyone wanted and the SFC managed to move in the same general direction long enough to build a small town. In the generations that have since passed, the SFC has managed to retain its general ethos without dissolving into chaos, and its ideals of personal freedom coupled with responsibility for one's own actions have become enshrined in a rather unusual but workable culture.

Freedom's Moon is home to a high proportion of artists, writers and philosophers as well as those with more practical occupations. Some have come to join the colony since its inception, and are accepted so long as they follow the general philosophy of the founders. The SFC are not and were never pacifists. They respect the property and person of others and expect others to do the same but will deal with threats to their way of life if necessary. This includes encouraging bad influences and those who harm others to leave. Encouragement can range from polite requests to go be a nuisance someplace else (nobody has the right to tell anyone what to do, but it is quite acceptable to ask!) or blatant ostracism, through to a collective decision to run the wrongdoer out of town at gunpoint.

This society has been defined as 'participating democracy' and 'pragmatic anarchy' but whatever words are used the SFC has established a way of life that works and makes its adherents happy. Quality of life is generally good, not least because the very rich founders not only sank huge sums into setting up a sustainable colony even on a rockball with few resources, but also left investments that still provide the colony with a modest income which is spent by group consent.

The 1100 members of the SFC govern themselves on almost all matters by a simple vote, though in many cases what actually happens is that whoever is nearest decides how they want to deal with a given situation and everyone else either goes along with it or argues a case for doing something different. Arguments are still going on about the decision a decade ago to offer the colony's one great resource to outsiders. Although many disagree with the idea, the SFC has generated considerable revenue by offering knowledge and education to anyone who wants it. Some SFC members even go offworld to act as tutors, though for the most part the client comes to Freedom's Moon as a guest and stays for as long as want to (or can) pay someone to teach them whatever they know.

SFC tutors are most commonly hired by (or voluntarily offer their services to friends among) the Belter community of the Trailing Trojans. Others prefer not to have anarchists teaching their children but are willing to journey to Freedom's Moon to study science, mathematics, art, philosophy or something more artistic such as painting or music. There are, however, many who consider the SFC to be a bunch of crackpot wizards lurking in some ivory space-tower hatching plans to subvert the governments of nearby settlements. Such individuals consider it suspicious that so many technical experts and others among the brightest and the best of the outsystem's population are being infected with a dangerously individualistic philosophy.

## WAYWARD (GAS GIANT MOON) X10000-0

Wayward is more likely to be a captured body than an original moon of Kendelsei. Its orbit is highly elliptical, taking it inside that of Kendelsei Home at times. More commonly, Wayward is well outside the orbit the other moons except Ikker. There is no known permanent population, but there have been temporary mining expeditions to Wayward in the past. These typically remained for a few months then pulled out, presumably when the deposits were exhausted. Orbital maps of the surface exist, though they are mostly only partial and not accompanied by much in the way of hard data. These maps show a typical rockball moon, with many craters from impacts and no obvious ice or water. Detailed surveys are expensive, so unless there is a pressing reason (such as a prospector making a big strike) then Wayward will probably remain largely unexplored.

## IKKER (GAS GIANT MOON) C323589-9

About the size of Mercury in the Sol system, Ikker is the most populous body in the outsystem. Nearly 400,000 people – about twice as many as on Kendelsei Home – dwell in a single largish city and a number of other settlements. This still leaves most of the planetary surface uninhabited of course, and it is entirely possible that there are other independent groups working claims or living in small settlements scattered across the planet.

Ikker is the name of both the moon and the city. Its population is fairly well unified under an extremely bland bureaucratic government that seems to have rules about everything. This is not uncommon in larger societies on hostile worlds – since most of the populace are basically city-folk who are insulated from their environment, they do not develop the instinctive hazard-assessment skills of the spacer or small-settlement dweller. As a result, stupid mistakes can be made that might kill a lot of people. Ikker's answer is a lot of laws, rules and checklists designed to keep everyone doing what they should and – more importantly perhaps not doing anything that might compromise the long or short-term safety of fellow citizens.

For most of those living in Ikker's city, life is much the same as in any other except that 'going outside' generally translates to visiting one of the large open spaces such as parks that have been created to give the illusion of outdoors. Only a segment of the population ever actually goes out on the planetary surface to work – and nobody strolls around an airless rockball just for fun.

Ikker's main industries, like much of the outsystem, are mining and ore processing plus fabrication using the materials thus obtained. Ikker has a fairly large export trade in items ranging from industrial goods to personal weaponry. In addition, it acts as something of a breadbasket for the outsystem. Huge underground galleries use artificial light to grow cereal crops and even raise a few livestock. Food is a major export, though keeping the artificial farms running is a difficult business requiring imports of minerals and water.

Much of Ikker's water is locally sourced from deep basins under the planetary surface, but some comes from farther afield such as the gas rigs of Kendelsei. Recycling is highly efficient, but with food grown and exported on such a scale there are always losses to be replenished. Ikker is essential to the settlements of the outsystem – they would survive without it, but prosperity and quality of life would be greatly diminished.

Ikker's spaceport sees traffic from much of the outsystem, though few vessels visit from the mainworld despite this being the main trade port for the outsystem. A few ships jump directly to Ikker rather than going to the mainworld, but these are typically corporate ships connected with businesses operating in the outsystem. Some exports are made directly in this manner, but most of Ikker's industrial output is used locally. This is probably just as well, as it reduces friction with the mainworld and its starport.

Thus Ikker is the trade hub for local traffic, but does little business beyond the outsystem. Its shops have a limited range of goods on offer, but quality is generally good and prices are less inflated than when buying the same items from the traders who circulate among the mining camps and small settlements of the other moons.

## THE LEADING TROJANS ('THE TROJANS')

Orbiting about 60 degrees ahead of Kendelsei, the Leading Trojans are a collection of planetoids which vary in size from dust and ice particles to the size of a small moon. The Leading Trojans are usually simply referred to as The Trojans by the people of the Mainworld (and therefore anyone who has read the official system writeup in the starcharts) since most interactions between the mainworld and the outsystem are with the inhabitants of the Trojans.

The Leading Trojans are mined by local concerns as well as companies based at the highport or the mainworld. There is a significant population scattered among small mining camps, but very few of these people would call themselves inhabitants – and fewer still would consider the label 'Belter' to be anything but an insult. They are employees of firms operating in the Trojans, not people who call the Trojans home.

The largest of these firms is Trojan Mining Incorporated, which has at least a dozen mining sites and a central 'corp town' with a population of around nine thousand. Again, few of these people consider the Trojans home – they are paid to work there or are dependents of those that are. Their town is simply called Trojan Mining, and has a reasonable set of recreation facilities at its spaceport. Here, produce from the mines is offloaded into the selection and processing centre and supply vessels are sent out to the field camps.

Trojan Mining's spaceport receives few vessels from the rest of the outsystem, but sees regular traffic to and from the mainworld. These vessels are typically slow, sublight craft which ply to and from the highport on a constant rotation. The port also serves as a central point for other, smaller, mining companies including several independent outfits and privately owned prospecting vessels. Some of these border upon the traditional definition of Belters but are generally not considered to be such by 'real' Belters. They are part of the mainworld's economy rather than being independent.

There are other commercial concerns operating in the Leading Trojans. Most are small prospecting and mining outfits, which tend to deal with the outsystem (typically via Ikker) rather than the mainworld. This causes friction with the mainworld-backed companies and the mainworld government, not least because the government would like to regulate and tax these concerns. There have been incidents where independent claims were 'jumped' by mainworld-backed companies, on the grounds that they only recognise claims registered through the proper authorities in the inner system and the independents are barred from using the central claims registry unless they also use the 'official' starport and facilities of the Leading Trojans (at Trojan Mining) and also pay tax to the government.

Incidents are quite rare, and in practice many of the independents do use the port at Trojan Mining on an unofficial basis. There is also a collection of semi-independents who will do business with the mainworld or the outsystem at different times. Various factions are trying to win over these semi-independents into permanent alliances or contracts, but few have so far committed themselves.

There are also three installations or colonies in the Leading Trojans. The largest, with a population of fifty thousand, owes allegiance to the mainworld government. Named (perhaps inevitably) Troy, the Trojan colony was set up on a large planetoid for fairly complex political reasons. It has little industry and is heavily supported from the mainworld. This means that it costs a great deal to maintain and provides virtually no economic benefit, but it cannot be withdrawn without the government losing face.

Troy has a small spaceport, which is only open to 'official' vessels from the mainworld. Few make the direct transit; for contractual and economic reasons most non-urgent supply runs and other traffic goes via Trojan Mining. Materials, supplies and personnel bound for Troy are typically carried to Trojan Mining aboard a large sublight freighter then trans-shipped aboard smaller vessels. Troy sometimes plays host to Trojan Mining personnel taking a short vacation – even a basic colony like Troy is a metropolis filled with wondrous entertainment to someone who has been working in a mining camp for the past two months.

Troy is 'mainworld territory', and as such its inhabitants are considered to be citizens of the mainworld even if they were born on Troy and have never left. However, there is a growing sense of identity among the people of Troy that they are 'Trojans', not mainworld citizens. The term Trojans is extended to anyone living and working in the Leading Trojans (but not the Belters of the Trailing Trojans) and even to some other inhabitants of the outsystem who dwell on nearby moons. It is possible that this new sense of identity might lead to a move towards independence, but since Troy is completely reliant on the mainworld for supplies and equipment it would be necessary to build an economy first. This would be a huge undertaking, starting almost completely from scratch.

The Leading Trojans also contains a very small Imperial enclave. This consists of nothing more than a small facility located on one of the planetoids at the outer fringe. Huge tanks have been hollowed out of the planetoid's interior to create a liquid hydrogen storage facility, which is kept topped up by a handful of fuel shuttles that skim from Kendelsei and process the fuel during their return trip. The shuttles are armed (albeit to a minimum standard) to protect the installation, and any vessel approaching is warned that missile launchers on the asteroid will be used to defend it.

The Imperial Navy maintains emergency refuelling stations of this sort in some systems for its rapid-reaction forces and fast couriers to use. Operating and guarding them is an exquisitely boring posting most of the time, with occasional scrambles to get a task force refueled as it passes. Most refuelling stations are secret, and this one is too, at least officially. However, everyone in the Trojans knows it is there, though few are aware of the precise location.

Most of the activity around the refuelling station is mundane. Couriers come past every few days or weeks and whilst refuelling one and getting it on its way is an urgent and rapid process, it is also routine. Warships do sometimes come past, but again there is nothing to suppose a crisis is underway if a destroyer visits. Vessels heading out to a patrol deployment or transiting to join a different task force often use refuelling facilities rather than starports to avoid observation and possible reporting by spies. However, if a large task force were to come into the Trojans for fuel, this would usually indicate a serious incident somewhere.

The naval personnel at the installation probably number around thirty to fifty. They rarely interact with other inhabitants of the outsystem, though occasionally a fuel shuttle might assist a distressed vessel or be retasked to do some customs-and-inspection work. This often happens shortly after a destroyer comes through carrying the sort of captain who likes stirring up others, and rarely persists for long since the shuttles are needed for their main task.

The third enclave in the Leading Trojans is a sort-of-colony of about two thousand people who have taken over an asteroid deep within the cluster. They are cordially distant towards most other inhabitants of the outsystem, but buy quite a lot of machine parts and electronic equipment using ore mined from near their new home. According to rumour these people are busy converting their asteroid home into a space vessel, possibly even a starship, for some long voyage. Whether this is true or simply a wild rumour is at this time unknown. These mysterious 'other Trojans' do most of their business at Trojan Mining but are equally happy to deal with the Belters of the Trailing Trojans or the people of Kendelsei's moons.

## THE TRAILING TROJANS (‘THE OTHER TROJANS’ OR ‘TRAILING CLUSTER’)

The Trailing Trojans is a collection of planetoids and dwarf planets orbiting 60 degrees behind Kendelsei (i.e. they follow it around in its orbit, along broadly the same path). As with the Leading Trojans, the gravitic interactions of these planetoids causes them to shift around in a complex pattern that is probably predictable to an advanced computer running charting software, but which can confuse lesser navigators. The shift is not great over a period of days or weeks, but old charts are likely to lead an outsider astray as they look for a particular rock.

Unlike the Leading Trojans, the Trailing cluster is not of much interest to the mainworld. It is culturally and socially much more a part of the outsystem, and is inhabited mainly by Belters (in the true sense of the world). This is one reason why many people on the mainworld think there is only one set of Trojan planetoids in the system – they hear about events in the Leading Trojans but little about the Belters and their doings. Indeed, whilst most people on the mainworld know there is a Belter population in the system, they are vague about where it is and generally assume that the Belters are scattered all over the outsystem. This is not completely untrue, but it does not reflect the reality of the situation.

The Trailing Trojans are composed of the usual mix of planetoids, supplying common minerals like iron, nickel and copper as well as rarer elements such as iridium and uranium. Ice is another important resource, mundane as it may seem to an outsider. Ice can be melted for water, which in turn is cracked to provide hydrogen (for fuel) and oxygen to support the population. Recycling can only do so much, so regular ‘ice runs’ from the planetoid fields are vital to the long-term survival of the Belter community.

There are three known dwarf planets within the Trailing Trojans. A dwarf planet is essentially a body large enough to be considered a planet under other circumstances but which has not cleared its locality of asteroids, i.e. it is not the main occupant of its orbit but simply a large body among a collection of many variously-sized planetoids.

The three dwarf planets of the Trailing Trojans are Spinner, Shadow and Downen’s World. Spinner is the smallest, only just qualifying for the distinction of dwarf planet. It is a flattened, oblate spheroid as a result of a very rapid spin which makes it virtually impossible to land on and thus no use for mining or habitation. Spinner may eventually tear itself apart – its spin already includes a degree of wobble that seems to be increasing – and if so would disrupt the Trailing Trojans by

changing the gravitational patterns that dictate the planetoids’ complex movements. Lumps of rock flying off across the system would also potentially be a hazard, but for the Belters of the Trailing Trojans the pressing question is what would happen to their homes if one of the three main gravity wells of the cluster suddenly became a number of much smaller ones.

Shadow’s rather sinister name actually comes from the fact that the dwarf planet is mostly in shadow, and receives less stellar energy than other bodies in the cluster. At such a great distance from the system’s primary, the amount of energy received is already small, but even so the reduction is significant enough that Shadow and several nearby planetoids have a greater proportion of ice than many others in the belt. Indeed, there are several ‘ice mountains’ composed mostly of ice and a little rock. This region of the Trailing Trojans is very sparsely inhabited – it is hard to build a home on ice – but is routinely mined for ice to supply Belter settlements with water and fuel.

The main Belter settlement is at Downen’s World, a dwarf planet with a diameter of just under 1,300 km. The dwarf planet’s name is normally shortened to ‘Downen’ by those Belters who do not refer to it simply as home. Downen’s World has a rather basic spaceport with gated tunnels leading into the interior. Parts of the overgrown planetoid were deliberately excavated to create living space, whilst in other cases people moved into mining tunnels after the mineral deposits ran out, widening and expanding the tunnels to create several small living zones.

The first thing that strikes visitors to Downen (or to smaller Belter settlements) is the smell. Water is not always plentiful and even if everyone showered regularly the life settlements’ support equipment cannot fully get rid of the smells of people cooking and generally living in a confined space for decades on end. Many visitors are also struck with a sense of claustrophobia – Belters tend to live in small spaces and be very tidy with their possessions, but others less used to the narrow corridors and small rooms may feel oppressed. This tightness is partially due to efficiency – smaller spaces are easier to heat, light and create in the first place – and also for survival-related reasons. A narrow tunnel is easier to shore up in the event of a structural problem or to plug if air is being lost. There is also the non-trivial consideration that boring holes through a planetoid weakens it, and nobody wants their home to suddenly disintegrate and leave them floating in deep space.

Downen is still mined, but most of the very valuable deposits (gold and lesser metals for the most part) were exhausted long ago. A few mines are still open in remote parts of the planetoid, but for the most part Downen’s World has become a living-place and a trade port rather than a mining camp. It offers a range of secondary industries from fabrication to food production, and its repair-and-construction facilities are probably the only ones available to the Belters without paying sums they cannot afford to non-Belter companies.



The main market at Downen's World is sufficiently prosperous that traders from outside the Trailing Trojans often come there to buy and sell. These are rarely from outside the system, but itinerant traders from elsewhere in the outsystem are a fairly common sight. Most have friends on Downen and are welcome there after building a good relationship with the Belters. Anyone turning up without an introduction might find a rather standoffish reception until they have won a few locals over, and that can take several visits at least.

The Belters of the Trailing Trojans are dirt-poor but proud and independent. They share a vague bond of cultural kinship with Belters from other star systems, and are more welcoming to them than other outsiders, but there is no concept of an Imperium-wide 'Belter Nation' – to the Belters of the Trailing Trojans 'us' means Belters of the Trailing Trojans and nobody else.

Perhaps seven thousand Belters dwell on Downen, with an unknown number scattered throughout the rest of the Trailing Trojans. At least another three to five thousand dwell in smaller settlements which rely on Downen's World as a trade hub, with common estimates claiming about 25,000 Belters live in the system. The Belters themselves do not know how many there are, nor is any given Belter all that sure where more than a handful of settlements are located.

The exception to this is the occasional 'great navigator' among the Belters, who has a knack of predicting the location of any given rock from old data with the most rudimentary of calculations. These men and women are living legends among the Belter community, and are both admired and carefully protected. There are rumours that the great navigators know about secret places and big mineral strikes concealed from others, but this seems rather unlikely.

Corporate and other non-Belter mining vessels do sometimes enter the Trailing Trojans, which causes some resentment among the Belters. There is little chance of conflict unless a claim is jumped, but this has happened from time to time. The Belters do not register their claims outside their own people (indeed, they are often prevented from doing so), so honest mistakes are possible. However, the journey to the Trailing Trojans is quite lengthy, so most corporate vessels go to Kendelsei's moons or the Leading Trojans where infrastructure to support their operations is already in place. The Belters are not inclined to support outsider operations, so taking the ore to market or for processing is more expensive in their territory than most commercial interest consider viable.

## HIBBERT X785000-0

Hibbert is a rather hostile world a little smaller than Terra in the Sol system. Its official atmosphere designation is 'dense' but this does not reflect the fact that it is entirely unbreathable. Similarly, the hydrographics indicator should not be taken to mean that Hibbert is covered in seas. Its water is mostly frozen and is mixed with a variety of unpleasant chemicals. This is not atypical of outsystem worlds that have an atmosphere of sorts; the gas envelope does offer the world some protection from extremes of cold and from meteoric bombardment, but this does not make it a fun place to visit. There are records of a couple of orbital mapping expeditions several years ago, but Hibbert is not desirable real estate and has probably not been visited since.

## MARBULE X9AA000-0

'Marbule' is almost certainly a mis-spelling of 'marble', which this planet resembles from a distance. It is possible that this world once had a different orbit and may have been much warmer, in which case there might be relics concealed deep under its icy surface. They would not be easy to access however, even if they could be located. The very dense atmosphere is partially frozen, subliming when the temperature rises a little and then freezing again. The surface is covered almost entirely in a thick layer of water ice, topped with various gases which have frozen out of the atmosphere in layers according to their freezing points. This means that the atmosphere's composition can change on a local basis as geysers of gas sublime out of the surface, creating turbulence which subsides quickly. This is all very impressive, but it has not attracted many visitors other than a vid-documentary team a few years back who won prizes for their coverage of the gas-fountains of Marbule.

## CUASS X210000-0

Cuass is a 'frozen rockball' in spacer terms; a small planet very far from its primary with no water and only a thin wisp of atmospheric gas. Unsurprisingly perhaps, few ship crews consider it worth crawling all the way out here. The occasional Belter or other prospector makes a landing, but there are no records of large mineral strikes to suggest that it was worth the time and trouble. Cuass thus remains one of those out of the way places where nobody goes. This might make it attractive as a secure scientific research station at some point in the future, but for now it is just another barren rock in space... as far as anyone knows.

## FENCEPOST (SMALL GAS GIANT)

The origins of Fencepost's name are obscure. Indeed, this small gas giant is officially listed only by a code number in the star catalogues. The usual assumption is that the world's remote location places it at the 'outer fence' of the system or something similar. Even when aligned on the same side of the primary as Kendelsei, Fencepost is many times farther from her larger cousin than Kendelsei is from the mainworld. There is very little reason to visit.

Fencepost has one known moon, which is also listed in the star charts by a code number. It has been given the rather whimsical nickname of Whoopee!!! (complete with three exclamation points) due to its highly eccentric orbit. Whoopee!!! is almost certainly a captured body originating outside the system. Its orbit is extremely elliptical and steeply angled as well as being retrograde, i.e. Whoopee!!! orbits at a sharp angle to the system's ecliptic and in a near-opposite direction to Fencepost's rotation. This orbit may or may not be stable; it is possible that Whoopee!!! may someday slingshot itself back out into interstellar space or tear through the rest of the system perhaps disrupting other bodies in their orbits. It might even smack into another planet or be captured by one as a moon; at present there is insufficient data to know for sure.

Whoopee!!! is inhabited by a party of (by all accounts) extremely bored Scout Service researchers who make long and often inane broadcasts on the common comms channels. Their mission is apparently to study Fencepost and her wayward moon, and to make observations of the system's Oort cloud. According to a popular tale, as Whoopee!!! passes close to Fencepost the combination of radiation from the gas giant and high acceleration due to gravity makes Whoopee!!! uninhabitable. The researchers take to their ship for a few days to bypass the worst of the effects then return to clean up whatever is broken. This is of course done whilst lamenting that they have the worst job in the universe to anyone who will tune into their broadcasts.

The Scout Service expedition to Whoopee!!! has been in place for several years now, but has not been visited by ships from Kendelsei's vicinity. Scout Service vessels or chartered merchant ships resupply the base by jumping directly to it. This does mean that the half-dozen Scouts assigned to Whoopee!!! do not see anyone different for months at a time. Some have been rotated out, but at least one has been stationed on Whoopee!!! since the broadcasts began some years ago.

Communication with the Scouts is possible, though it needs a powerful transmitter and willingness to wait during the lengthy communications lag. The Scouts are almost pathetically eager to talk to anyone they can, and have a number of 'comms-buddies' among the outsystem communities. Their antics have taken on the aspect of some bizarre reality vid show, and are watched by a surprisingly large number of people throughout the system.



# SPACE TRAVEL IN THE OUTSYSTEM

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As noted elsewhere, most traffic from outside the system goes to the mainworld, though jump-capable ships do sometimes visit the ports of the outsystem. Far more commonly, vessels plying the long reach from the mainworld or operating among the moons and planetoids of the outsystem are not jump capable. Many are standard small craft or vessels that were once jump capable but whose drives wore out. These elderly starships avoided the scrapyards to find a new career as sublight freighters and transports. Thus it is not uncommon to see a Subsidized Merchant sitting on an outsystem landing pad, but it would be unwise to assume that this vessel still has a functioning jump drive.

Many of these vessels, however old, are in good repair and receive at least occasional refits in a proper yard. Others, typically but by no means exclusively Belter vessels, are ramshackle conversions of old craft cobbled together from whatever parts were available last time something broke. Many such ships have composite powerplants, with three or more disparate systems straining to power life support and drives. Such a plant may resemble a dog's dinner to a 'proper' starship engineer, but the locals have made them work because there is no alternative. Other critical systems may be a similar mishmash of scavenged components.

Sensor equipment, particularly among Belter ships is generally of a short-ranged and somewhat specialist nature. Drives are heavily modified to be as power-efficient as possible. This means that a craft might only be capable of half its rated thrust capability, but at a very high level of efficiency. Controls and instruments are functional, but not fancy. Engineering is generally a mess of rebuilt wiring and conduits, but the dangers posed by loose objects and sharp edges in zero-g impose a set of unwritten safety rules. Emergency equipment in particular tends to be regularly maintained and sees quite frequent use aboard the most ramshackle craft.

Many of these vessels are constantly tinkered with by their owners who seek to improve performance, repair breakdowns or simply to optimise the ship for the latest task. Thus wiring tends to be easily accessible – hanging out of panels much of the time – as are vital components. Much shipboard engineering is performed on a rule-of-thumb or local practice basis, i.e. many crewmembers know which part of their own ship to hit, short or twiddle, but would not be able to operate a craft they were less familiar with. Temporary fixes are common, many of them remaining in place for years until the next major breakdown.

Almost all ships of this type are in a state of constant running repairs, and to an outsider many starship operations look more like damage control exercises. Passengers may be dismayed by wildly variable thrust during liftoff, and will be hardly reassured

when an engineer announces, 'oh, the main thrusters always run a bit rough on takeoff' and sets to bashing on a sticky feeder-valve with a large spanner. The Imperial authorities enforce a standard set of safety regulations, but many of the vessels of the outsystem might go decades without an Imperial official setting eyes upon them.

Despite their ramshackle nature, these craft are kept in as good order as possible, and are reasonably reliable given an experienced crew familiar with the individual ship's quirks. The locals' lives depend upon their ships, and although their condition would make the most broken-down Free Trader look luxurious, the ships work... mostly. Travelling on a Belter ship would be a terrifying experience for most Imperial citizens all the same.

Ships owned and operated by local shipping firms or the mining concerns tend to be much newer and in better repair. Collectively known as 'corporates' these vessels are much more like what a traveller in the Imperium would expect from a space vessel. Most have a complete set of emergency and maintenance equipment and generally function properly. They are much less 'interesting' to travel aboard than a Belter or other non-corporate ship.

## PROSPECTING AND MINING SHIPS

The vessels that carry out the prospecting and mining tasks which make up most of the commercial activity in-system are for the most part the product of endless tinkering with existing designs. Among the Belters no two ships are exactly alike, and in some cases the original ship can be only just made out among all the add-ons and alterations. Mining ships are very rarely streamlined – there is no need – though many are configured for the most effective use of volume when mated to an asteroid, as this is the way most of their time is spent.

Most of the Belters' ships are small, with prospecting vessels lying mainly in the 50-200t range and extraction vessels averaging 150-500 tons. There are very few larger ships, and these are mostly base vessels operating smaller craft rather than the extraction vessel itself. Corporate (i.e. non-Belter) mining ships tend to be somewhat larger, although many prospecting crews work from a ship's boat or other short-duration vessel since they have a permanent home to return to. Those who both live and work aboard a space vessel need a larger one than someone who simply uses it as transport.

Most mining ships are not armed, though a re-tuned mining laser makes a reasonable weapon at close range. A few also have ore catapults which might see desperate and not very effective use as weapons. Mining ships are generally configured for long cruises or deployments away from their home communities, and thus many have larger common areas or crew quarters than might be expected. Of course, these quarters are typically shared with spare parts, odd pieces of equipment and assorted paraphernalia of the 'might come in handy some day' type. All loose objects are obsessively secured.

## TRADERS AND TRANSPORT SHIPS

Most of the vessels plying between the moons of the outsystem or operating in the Leading Trojans tend to be fairly standard small craft, such as cutters and ship's boats. The smallest of these small craft are unsuitable for long missions, but a cutter or similar craft has enough space to permit fairly long transits. However, the majority of vessels moving between the moons and the Trojans, or plying the routes to the inner system, are larger than 100 tons. A fairly large proportion of these are old Free Traders and Subsidised Merchants whose jump drive became too expensive to keep running.

As a general rule, a 'transport' in outsystem parlance is tasked with carrying materials or personnel for the purposes of its owner or whoever has leased cargo space aboard it, whereas a 'trader' is an independent ship that pays its own way. This is usually by the standard free trader methods – freighting for a fee, speculative trading, carrying passengers and the occasional charter. There is really no difference between the sublight traders of the outsystem and the jump-capable merchants of the Imperial spacelanes.

Several bulk freighters (by local standards) in the 2,000-5,000 ton range make the run to and from the mainworld to the outsystem. They rarely leave their straight to-and-from supply route, taking them from the inner system to Trojan Mining in the Leading Trojans. The most common deviation to for a supply freighter to go straight to Troy; any other destination would be highly unusual. These freighters carry necessities plus an array of luxury items which then find their way to the end marketplace by way of smaller vessels.

Thus the main trade arteries of the outsystem are from the inner system to Trojan Mining and thence (or occasionally direct) to Troy, and from Trojan Mining to Ikker or Kendelsei Home. Ikker is the main trade hub of the outsystem proper, from which smaller vessels spread out among the moons or make the transit out to the Trailing Trojans.

A few smaller ships ply the spaceways between tiny Belter outposts, carrying contracted-for supplies or speculative cargo. There are few passengers requiring transport in the outsystem, other than personnel on contract to the mining concerns, and fewer still among the Trailing Trojans. Nevertheless the occasional one brings in a bit of extra revenue for a vessel passing that way.

Some outsystem traders have a more or less fixed route whilst others wander as they please, carrying out the odd prospecting or salvage operation as they go. These free traders are the only contact with the outside universe years on end for many of the smaller Belter operations, and the only source of fuel, air and supplies. Many are old friends of the Belters they serve, while others are sharp dealers out to gouge everyone for whatever they can get.

## SPECIALIST VESSELS AND OUTSIDERS

'Outsiders' are not hard to spot in the outsystem. Free traders sometimes come to Trojan Mining or Ikker rather than the mainworld, sometimes on a charter and sometimes seeking a new market. Scout vessels are also relatively common. These are typically scout/couriers assigned to 'rock plotting' missions, i.e. maintaining and updating the star charts, though other vessels have been spotted.

Navy ships also occasionally pass through the ports of the outsystem. Those on a transit elsewhere typically take on fuel at the station in the Leading Trojans, but sometimes a navy vessel makes a patrol or a marine ship lands personnel in response to a report of piracy, smuggling or other illegal activity. These are rare visits though, and would always provoke comment. The multimission fuel shuttles from the Leading Trojans refuelling station area common sight however, and would not attract interest when carrying out their usual duties.

The only other likely outsiders are new 'corporates' such as mining ships or transports, or perhaps a scientific vessel on contact to a mining company. Such new arrivals would stand out among the vessels of the outsystem, at least until word got around about them.

# ADVENTURING IN THE OUTSYSTEM

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The Outsystem offers a range of adventuring possibilities. There are many places to explore – or which a client or patron might be willing to pay someone to explore in search of rumoured riches, crashed starships, stashed treasure or something more exotic. With so many different groups in the area, conflict of one sort or another is more or less inevitable. This could range from a barfights to a long-term plot concerning a plan to drive out the Belters, or for Troy to secede as the capital of a new outsystem state. This could trigger what would inevitably be called the Trojan War...

It is also worth noting that with so many sublight ships plying the spacelanes, there are opportunities for piracy and hijacking that might not exist close to a well-protected mainworld. Indeed, it might be that these outsystem spacelanes are the only place

where a 'career' pirate could operate with any chance of survival. There are of course plenty of places for pirates to set up a base, perhaps posing as a private mining firm. Those with jump-capable ships might attack vessels in other systems then sell their plunder in the marketplaces of Ikker, quite likely to unsuspecting buyers.

There is also the possibility for Big Mystery type adventures. An alien structure on a forgotten moon; a mission to penetrate the icy surface of Marbule; a plunge into the depths of Kendelsei's atmosphere in search of creatures that may live there. A group of travellers could spend a lot of time in the outsystem without ever visiting the mainworld.

Who needs a planet to have adventures?

