

G U R P S®

ALL-STAR JAM™ 2004



STEVE JACKSON GAMES

GURPS

All-Star

Jam 2004

By The Unusual Suspects

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1 2 3 4 5 6 7 8 9 10

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CONTENTS

Introduction	2
1. Ghost-Breaking	3
BY KENNETH HITE	
2. Alchemical Baroque	17
BY PHIL MASTERS	
3. Mythic Babysitting	31
BY ELIZABETH MCCOY AND WALTER MILLIKEN	
4. Meridian	45
BY DAVID PULVER	
5. The Last Spartan	59
BY GENE SEABOLT	
6. Underground	73
BY WILLIAM H. STODDARD	
7. Airships	87
BY BRIAN J. UNDERHILL	
8. Precursors	101
BY JONATHAN WOODWARD	
9. The Chariot Age	115
BY JON F. ZEIGLER	
Index	128

About GURPS

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Page References

Rules and statistics in this book are specifically for the **GURPS Basic Set, Third Edition**. Any page reference that begins with a B refers to the **GURPS Basic Set** – e.g., p. B102 means p. 102 of the **GURPS Basic Set, Third Edition**. Page references that begin with CI indicate **GURPS Compendium I**. Other references may be found on p. CI181 or the updated web list at www.sjgames.com/gurps/abbrevs.html.

INTRODUCTION

Everybody has a Great Campaign Idea that they know they'll never get around to. For a player, it's the campaign that they're certain no GM will ever run. For a GM, it's the campaign that they know they'll never find players for. For a writer, it's the cool idea that they can't imagine any publisher will ever buy. And for a publisher, it's the neat stuff that just couldn't possibly sell enough to pay for itself.

Life is cruel.

This book does nothing to mitigate the basic unfairness of existence, but it *does* have some cool stuff in it. Stuff that probably never would have been published, except Andrew had the idea of saying to ten of our top authors, "How about writing us 10,000 words on *whatever you want*?"

Nobody said no. (Our writers may be crazy, but they're not stupid.) And in due course, there began to arrive . . . Neat Stuff. Airships. Alien babysitting. Ancient Assyria. And that was just the "A"s . . .

So we're happy with this. Will we do it again? Well, maybe. The "2004" in the title should be a hint that we're thinking about it. If you like this collection, let us know, and strongarm your friends into buying copies. If you *don't* like it, we'll know from the sales figures. Life, as I said, is cruel.

One other thing about this book is a departure for us. The cover. We've done the occasional cartoon cover before, but never a caricature. This time, though . . . Why not? The inimitable Greg Hyland, working from photos of all ten of our contributors, put this together. And verily, we did laugh, and verily, we did use it.

Who's who in the picture? You want us to *tell* you? What's the fun in that? There are, after all, clues elsewhere in the book . . .

Read and enjoy. We did.

– Steve Jackson

CHAPTER ONE

GHOST- BREAKING

BY KENNETH HITE



About the Author

Kenneth Hite is the author of *GURPS Horror* and *GURPS Cabal*, among other paranormal works. He lives, surrounded by books of arcane lore, in Chicago. He has never knowingly seen a ghost.

If there are ghosts, then not all of them will be benign. When a living person steps into the world of ghosts, someone has to be on hand to help him out. Ghost hunters look for ghosts. Mediums talk to ghosts. Occultists study ghosts. Ghost-breakers make sure the ghosts don't bite – and bite back if they do.

If you're running or playing in a ghost-breaking campaign or scenario,

it's important to keep two things in mind: environment and mood. All good ghost stories are about locations, as the archetypal haunted house demonstrates. Keep the setting's feel about you; do research on reputed hauntings. The genre begins with the "occult detectives" of the Victorian and pulp steampunk eras, but ghost-breaking is still going strong from *Ghostbusters* to *The X-Files*.

Don't get too hung up on logic, or rules, or looking up Fright Check modifiers. Ghost-breaking is campfire horror, you and your friends against the darkness. Scare each other, and revel (just a bit) in the campy glory of it all, from electric pentacles to proton packs.

And one more thing: don't go into the basement alone.

CHARACTER CONCEPTS

Even if they've become "professional psychic exterminators," ghost-breakers likely entered the trade from another profession. This is a brief, and not exhaustive, list of character ideas.

Anthropologist

"A fascinating demonstration of the Hmong belief in discarnation. Fortunately, such spirits despise mustard seed."

An academic is interested in spiritual phenomena for purely scholarly reasons. He could join the ghost-breakers as a specialist in foreign haunts, or his cross-cultural theories might provide key insights.

Assistant

"Where does the Kirlian camera go, again?"

In the end, every theory rests on the strong back of a graduate student, beautiful daughter, or Watson-like assistant to carry the electric pentacles and take notes.

Detective

"It's just like any other murder investigation, except the guy was killed 100 years ago . . . by a ghost."

People call in a detective to investigate strange noises and lights . . . or to make sure that ghost-breakers aren't running a scam. Eventually, the evidence before his eyes convinces him the situation is real.

Doctor

"Does she have these seizures often?"

If ghosts are the disease, call a doctor. It's handy to have the surgeon right there when you get thrown down a flight of stairs at 1 a.m.

Exorcist

"I cast you out, unclean spirit, along with every specter from Hell, and all your fell companions!"

This man of the cloth opposes evil spirits. His superiors may secretly tolerate or openly denigrate him (or both), but he cannot refuse the call.

Exterminator

"You don't often get glowing, moaning mice that size."

Going from exterminating material vermin to ectoplasmic menaces isn't much of a career change. It's still messy, dangerous, and nothing you can talk about at parties.

Friendly Ghost

"Could you point that proton gun somewhere else?"

Every so often, a dead man sticks around to do the right thing, and lends an immaterial hand to keep the living safe. Other ghosts may despise him as a sellout, however. Friendly ghosts will have the Ghost Form advantage (see p. 6 and pp. UN51-54), but probably won't have spirit travel or probability manipulation.

Ghost Hunter

"Just once, I'd like proof of life after death that didn't want to kill me."

A devoted investigator of spectral phenomena. In the real world, he's usually an amateur hobbyist, but in fiction, he's the discreet professional. Either way, he's probably got a very understanding day job, or a trust fund.

Medium

"I'd like to speak with Aunt Gladys, please."
"NOW YOU WILL ALL DIE!"

Some mediums merely speak with the dead, others channel them in (hopefully) controlled conditions. Charlatans who discover real ghosts, or devoted ladies of peerless virtue, can help with a spectral investigation. Many mediums have a friendly ghost (a "spirit guide") as an Ally.

Parapsychologist

"Promise me you'll let me get some publishable data before you start blasting the place to smithereens."

The parapsychologist is usually distinguished from mediums, exorcists, and even anthropologists by an emphasis on "hard science." He is also an expert with PKE meters, encephalographs, and other gadgets.

Sensitive

"It's even worse when you can see them, Professor."

He sees dead people. A living ghost detector, who often possesses other psychic talents, is invaluable on an investigation but in extra danger during the confrontation.

Tabloid Journalist

"Have any of you seen Elvis – recently, I mean?"

Whether in pursuit of truth, scandal, or both, the tabloid journalist has to work twice as hard on half the money. Ghosts and ghost-breakers both make good copy; it's hard to know who to root for sometimes.

GHOSTS

What are ghosts made of? Before scientific investigation, the question would have seemed ludicrous – ghosts were made of the same matter as souls, no matter whatsoever! But as science divorced itself from religion, spiritual energy needed a new identity; in 1852, Karl von Reichenbach named it the “Odic force.” Eminent physicist Sir William Crookes popularized “psychic force,” which became the default term. Some scholars viewed this force as an immaterial or transmaterial substance similar to “luminiferous ether.” Possibly as a result of J.B. Rhine’s psi research in the 1930s and 1940s, the theory shifted. Rather than a special type of energy such as Odic force or Wilhelm Reich’s “orgone,” ghosts became part of the electromagnetic spectrum, like radio waves or ultraviolet light. Modern ghost hunters usually accept this theory, although some insist on adding “auras,” implying that ghosts are simply “bodiless auras.”

Recently, experiments in plasma physics have bled into parapsychology, and a new theory states ghosts are heretofore-unclassified plasmas, positively ionized electrostatic fields like St. Elmo’s fire. Since natural plasmas appear in ball form, perhaps plasmas explain the sightings of “orbs” – balls of ghostly light. Perhaps such ghosts appear in the winter not because it’s spookier, but because the static content of the air is usually higher in cold, dry weather.

So what are ghosts? The traditional answer, and still the most common theory, is that ghosts are dead souls, walking the earth (see p. 9) rather than moving on. However, theories of ghosts’ natures have changed over the years. Frederic W.H. Myers, co-founder of the Society for Psychical Research, hypothesized that ghosts were “psychic recordings” impressed on a site by the psychic force of people who died there. Later theorists elaborated on this concept, suggesting that some people left imprints on the “psychic ether” that slowly faded over the centuries, but that psychics and sensitives can read the traces in “haunted” locations.

These theories remain current, although elements are replaced with the electromagnetic field, *chi* field, or

“global aura.” “Psychic recordings” go through their actions in a predictable, constant way (like a film loop) and do not interact with witnesses. They also stick to the same place – even if the walls, doorways, floors, or other terrain have been radically altered. This leads some investigators to say that ghosts are actually “leaks” through portals between dimensions, made up of some extradimensional energy that doesn’t map to our dimension’s physics. In this theory, “haunted houses” are actually “etheric windows,” openings to other planes, like ley-line nodes, sacred wells, or cemeteries. Perhaps those living or dying in the portal imprint on the outside energy, combining recording and portal theory.

Alternately, perhaps the witnesses themselves imprint on the portal’s energy, making it show them what they expect to see. In the 1930s, the Freudian psychiatrist and ghost hunter Nandor Fodor believed that many hauntings and similar occurrences were actually powered by, reflective of, and in some measure created by witnesses’ unconscious energies. Fodor’s theory doesn’t require portals, of course, just a supply of whatever energy powers ghosts. In large part, Fodor’s is still the accepted explanation for poltergeist phenomena, just as the recording theory “explains” apparitions or “cyclical hauntings,” and the survival of the dead remains the default theory for the restless ghost.



THE SPIRIT CABINET

No universally accepted typology of ghosts exists; ghost hunters and parapsychologists use terms like *apparition*, *entity*, *ghost*, *haunting*, and *spirit* interchangeably. The following creatures are *Bestiary*-style “monsters,” with the template modified to include Will and Fatigue, rather than *Undead*-style NPCs. This is because in the ghost-breaking genre, the spirit’s personality is a tool for solving the case, rather than a measurement of abilities. A ghost-breaking campaign won’t usually revolve around a recurring spectral NPC, making character stats less useful than quick-reference melee values. GMs wishing to personalize them can add mental advantages and disadvantages, or use *GURPS Undead* or *Spirits* to create full-fledged NPCs from these stock specters.

Also in keeping with the genre, the following ghosts are relatively powerful for their kind. This list is not exhaustive or exclusive; there are many different types of ghosts with many overlapping traits. Unless explicitly noted, however, all ghosts are intangible and hence invulnerable to physical attack. (See below and pp. SPI33-36.) Only magical weapons and attacks, and specialized antispectral weaponry such as the ghost blaster (p. 16) can harm them.

Materialized ghosts can be harmed by physical attacks – though not by suffocation, disease, poison, etc. – which is one reason they don’t materialize very often. The other is the cost: 1 fatigue for every two levels in each physical attribute (ST, DX, and HT),

rounded up. Clothing is free, but weapons or armor must be paid for at 1 fatigue per pound. Full materialization requires the ghost to pay this energy cost every minute. For a translucent but intangible visual manifestation, the ghost need only pay 1 fatigue per 5 seconds, double that to appear solid. Merely making noises (howls, moans, clanking chains, etc.) costs 1 fatigue per 10 seconds; audible speech costs 1 fatigue per second and requires a Will roll to speak intelligibly. Unless otherwise noted, all ghosts can materialize, given enough energy.

Apparition

ST: 3-20	Move/Dodge: 10/10
DX: 14	PD/DR: 6/0
IQ: 8	Size: <1 to 1
HT: 14	Weight: -
Will: 16	Reach: C
Fatigue: 20	Damage: special

Apparitions includes essentially mindless phantoms, such as corpse lights, orbs, will-o'-wisps, and so forth. Some revenants or shades may fade or curdle into apparitions, especially human-seeming spirits such as banshees, spectral hands, or screaming skulls. Many apparitions may be the “psychic recordings” theorized by Myers (see p. 5). Apparitions manifest visually, but seldom materialize.

Special Abilities

Drain: Apparitions feed on energy or emotions. Small apparitions may simply drift through the victim, ignoring armor (this cannot be blocked or parried) for 2 points of intensely cold life-draining damage. Others may feed on fear (gaining 1 point for each 5 points by which a victim fails a Fright

Check), pain (gaining 1 point for every 3 points in pain penalties suffered within eyesight of the apparition), psionic energy, and so forth. They use the gained energy as excess fatigue or to heal hit points.

Strangle: Spectral hands can make strangling attacks (see p. B112) that cannot be parried or blocked and ignore armor. Spectral hands may be very large and have high ST.

Terror: Witnesses to apparitions may be struck by an irrational, supernatural fear, forcing a Fright Check; a new one is necessary if the apparition reappears after an absence of at least one hour. Banshees and phantom skulls are usually the most terrifying, causing Fright Checks at up to a -8 penalty. Unleashing terror costs 1 fatigue per -2 to the victim’s Fright Check. Orbs aren’t terrifying.

Devil-Beast

Devil-Dog
(Black Shuck, Gabriel)

Ratchet, Hellhound, etc.

ST: 16	Move/Dodge: 12/8
DX: 20	PD/DR: 2/2
IQ: 20	Size: 1-2
HT: 14/20	Weight: 100-200 lbs.
Will: 20	Reach: C
Fatigue: 20	Damage: 1d cut (claws), 1d+2 cut (bite)
Skills: Stealth-20; Tracking-20.	

Fiendish Hog

ST: 30	Move/Dodge: 14/7
DX: 16	PD/DR: 2/4
IQ: 18	Size: 2
HT: 15/30	Weight: 300-450 lbs.
Will: 18	Reach: C
Fatigue: 30	Damage: 1d+2 cr
Skills: Tracking-14.	

Horse of Hell
(Hellmount)

ST: 50	Move/Dodge: 18/8
DX: 12	PD/DR: 0/0
IQ: 8	Size: 3
HT: 13/30	Weight: 2,000 lbs.
Will: 16	Reach: C
Fatigue: 30	Damage: 1d+2 cr
Skills: Area Knowledge (Haunt)-15.	

Spectral Raven
(Murder Crow)

ST: 6	Move/Dodge: 16/10
DX: 21	PD/DR: 0/0
IQ: 12	Size: <1
HT: 12/15	Weight: 8 lbs.
Will: 12	Reach: C
Fatigue: 15	Damage: 1d-2 cut
Skills: Flight (Winged)-21.	

Ghost Form

The “standard” ghost possesses a 100-point advantage called Ghost Form. In brief, this means the ghost is invisible and intangible, with an array of powers such as magical sight, quasitelepathic communication with the living, dream travel, possession (p. 10), poltergeist effects (p. 9), minor alterations of probability (p. 8), and the ability to materialize (see above). An Ectoplasmic Projection power suitable for ghosts or mediums also appears on pp. SPI70-72.

To use its powers, a ghost must expend fatigue (usually 1 to 5 per action). If you don’t want to worry too much about fatigue costs for “friendly ghosts,” someone else in the party should keep the being’s focus (p. 8) nearby. This advantage appears in *Spirits* (as Spirit Form, pp. SPI33-36) and *Undead* (pp. UN51-54). For games with major ghost characters, these books are recommended.

Ghostly Motives

Part of breaking a ghost often involves figuring out what it wants, and either helping or thwarting it. Some potential ghostly motives include:

Curse: A ghost like the Flying Dutchman may be cursed to appear to fulfill a curse on someone living. Breaking the curse dispels the ghost, or vice versa.

Guardianship: Ghosts often guard things such as their foci (see p. 8), their loved ones, their descendants, or their eldritch master's bones. Either destroying what they guard, or convincing them that other protections are adequate, banishes a guardian ghost.

Ignorance: Some ghosts died too fast or too traumatically, and don't realize they're dead. Convincing a ghost it's dead may be difficult, involving complex roleplaying as well as Psychology rolls.

Love and Lust: Ghosts may be hoping for a rendezvous with another spirit or with a particularly attractive living person. Or that person may be the reincarnation of the past love.

Proper burial: By far the most common ghostly motive – the first “restless ghost” story in the Western tradition concerns this demand. Complications can spring up: for example, it may be hard to find a pagan priest or the correct rites to bury a Viking haunting a Victorian manor. “Unfinished business” may keep ghosts hanging around. For example, a soldier's ghost may be trying to “make it home for Christmas,” and only seeing Christmas celebrated will allow him to move on peacefully.

Scam: Friendly ghosts may be haunting someone or somewhere to drum up business for ghost-breakers or to gather information surreptitiously.

Sheer Malevolence: Some spirits, such as Outsiders (see p. 8), haunt the earth for no reason but malice. Alternately, their agenda is so alien that it merely seems like malevolence. These ghosts must be destroyed.

Vengeance or justice: The prototypical “ghost of a murdered man” seeks the exposure and hanging of his killer – or his killer's descendants. Other ghosts may seek the return of stolen property or the clearing of his name. Of course, the ghost might not be good or true – the “killer” was framed, the property rightfully transferred, or the name accurately besmirched – or it might be mindlessly continuing a blood feud.

This is a spectral animal, sent by infernal powers to torment the living, often in retribution for an ancestor's great evil or as a family curse. The devil-beast is usually a freakishly large specimen, with glowing or fiery eyes. Devil-beasts have much in common with outsiders (see p. 8), but recur so often in lore that they are a separate type. Four of the most common devil-beasts appear here; others include insect or rat swarms, wolves, serpents, owls, and bats.

Special Abilities

Drag to Hell: Devil-beasts can drag their unconscious victims off to Hell – even ravens, which grow to enormous size to do so. If someone is foolish enough to mount a hellmount, it can simply freeze them to its back and ride to Hell with them; conscious victims must defeat the horse in a Quick Contest of Will.

Flame Breath: Devil-beasts can breathe fire in a cone up to 6 hexes, doing $3d+3$ fire damage at a cost of 3 fatigue per use.

Hellish Invulnerability: If reduced to 0 HT, the devil-beast does not die, but vanishes in a puff of brimstone, to appear at the next new moon. Only breaking the curse or an exorcism can permanently end its reign.

Slam: Hellish hogs and horses both make slam attacks (see p. B112) at +3 to ST. After a successful slam attack, a hellhog slashes at the fallen victim with his tusks for $1d+1$ cutting damage; a hellmount tramples for $1d+2$ crushing.

Terror: See *Apparition*, p. 6. Fright Check modifiers for devil-beasts range from -2 to -4. Hellhounds may have a terror-inducing howl as well (-6 or even -8 to Fright Checks).

Vulnerability: As demonic entities, hell-beasts are vulnerable to

consecrated weapons, holy water, and sometimes silver. Many also Dread holy symbols or True Faith, and cannot enter sacred ground. Some devil-beasts, paradoxically, are vulnerable to fire while in material form.

Elemental

ST: 10	Move/Dodge: 10/10
DX: 12	PD/DR: 2/0
IQ: 6	Size: 1
HT: 12	Weight: –
Will: 13	Reach: R
Fatigue: 15	Damage: special

An elemental is a mindless embodiment of a force or emotion such as fear, lust, murder, or suicide. “Slimer” from *Ghostbusters* is a gluttony elemental. Similar to apparitions, elementals usually have more freedom of action, and are more likely to appear humanoid. The term *elemental* as used here and in horror literature more closely matches the *personification* from pp. SPI59-60 than it does traditional magical elementals.

Special Abilities

Compulsion: An elemental must make a Will roll at -2 to resist an opportunity to experience its core behavior – an alcoholic elemental would drink scotch, a lust elemental would molest an attractive stranger, etc.

Inspiration: The elemental's main ability is to inspire its core emotion or sensation in witnesses within 10 yards – or in special circumstances, such as seeing the elemental through a telescope, window, or in a mirror. The witness must succeed in a Quick Contest against the elemental's Will; for most emotions the witness uses his Will (with any applicable advantages or disadvantages), but for a disease elemental he uses HT, etc. On a critical failure, the subject takes a permanent disadvantage to match the inspiration.

Inspiration lasts 3d minutes, after which time the subject can attempt a Will roll, once every 10 minutes, to shake off the effects. At the GM's discretion, slapping, pain, or other stimuli may allow a Will roll early, or even with bonuses.

Possession: If the elemental possesses (see p. 10) the witness, it may add +5 to its Will in inspiration contests. Elementals do not attempt long-term possession, but simply flow through their victim.

Genius Loci

ST: 15	Move/Dodge: 8/8
DX: 10	PD/DR: special
IQ: 13	Size: varies
HT: 10	Weight: –
Will: 20	Reach: R
Fatigue: 30	Damage: special
Skills:	Area Knowledge (Haunt)-17; Throwing-10.

Literally, “the spirit of a place.” Like Hill House in *The Haunting*, a place may be “born bad,” and hence have a malevolent genius loci from the start, or some horrific event such as a massacre may taint it with evil. Genii loci usually do not materialize, acting through matter possession instead. They may be the ghosts who appear at “portals.”

Special Abilities

Heart: Many genii loci have a “heart,” a focus somewhere within their domain such as a sealed crypt, a painting or artifact, their bones under a flagstone, etc. Attacks on the heart can kill the spirit; however, in the same room (or within 30 feet) of their heart, genii loci have doubled ST, DX, and HT, and automatically recover all fatigue spent on the next turn.

Matter Possession: Genii loci possess the matter of their place. A haunted-house spirit can appear anywhere in the house within one turn, animating the furniture, floorboards, paneling, chandeliers, etc. They have the PD or DR of the material they currently possess (see p. B125), but only magic or other specialized attacks ever actually damage the spirit.

Poltergeist Powers: Within their domain, genii loci can use the special abilities of a poltergeist (see p. 9), except Appar, for double the listed fatigue cost.

Probability Alteration: Within their domain, genii loci can channel their wills to affect the outcome of an event. The effects of this power depend on the intended result and the amount of fatigue the ghost spends.

The ghost must first win a Quick Contest of Wills with the subject, unless the ghost is trying to *help* the subject, in which case only an unopposed Will roll is required. On a success, a positive or negative modifier can be applied to any one roll, at 2 fatigue per +/-1 (maximum +/-10, for 20 fatigue). This includes short actions, long actions, or even things

like rolls on the Job Table. Activities not normally resolved by rolls may also be affected, but the GM must assess the outcome. The charts on p. B45 can be useful here.

The spirit can also short out electrical connections, screw up computer files, “lose” tools or equipment, misshelve books, and otherwise interfere with ghost hunting. Anything out of an investigator’s direct sight should be fair game for being messed up, broken, overheated, or lost.

Terror: See *Apparition*, p. 6. With scratching at the door, howling in the chimneys, etc., the ghost can inspire Fright Checks with penalties of -1 to -4.

Outsider

ST: 20-70	Move/Dodge: 8/0
DX: 12	PD/DR: 3/5
IQ: 18	Size: 1-10
HT: 20/40-50	Weight: 100-4,000 lbs.
Will: 23	Reach: C, 1-15
Fatigue: 60-120	Damage: 3d+2 cr#
Skills:	Hidden Lore (Temptations)-15.

An outsider is a being from outside conventional space, even from outside the normal realm of ghosts and spirits. *GURPS Spirits* calls such entities *ultraterrestrials*. Carnacki’s Ab-human enemies, the Aeiirii and Saiitii, are classic outsiders. Their motivations are inscrutable or wholly malevolent; often only specialized rituals repel them, rather than conventional pentagrams or holy symbols. Demons such as Pazuzu from *The Exorcist* can also be modeled as outsiders, although most demons share standard vulnerabilities to exorcism, etc. Demons are also the only outsiders who routinely possess the living.

Special Abilities

Foulness: The hideous stench of an outsider weakens those around it. Within 20 yards of a manifestation, humans must make a Will roll to move further into the smell. Within 10 yards, they must make a HT roll. A success indicates merely a sickly feeling and the loss of 2 hit points. On a failure, the subject is crippled by

Restoring Fatigue

Ghosts restore fatigue normally (p. B134), but some ghosts also have other resources to call on. Most ghosts can tap fatigue from their “haunts,” or from a *focus*: some object important to them, such as their bones, a wedding ring, or a portrait. (In some cases, if the ghost’s focus is destroyed, the ghost is destroyed when it reaches 0 Fatigue.) As a general rule, treat a focus as having the same fatigue as its ghost. It, too, restores fatigue normally, and a ghost within 30 yards of it can tap his focus for 1 fatigue every minute. Other possible sources of extra fatigue include:

Age: As ghosts age, those that don’t fade away get more powerful. Add 1 to the ghost’s permanent Fatigue total for each 25 years of unlife after the first 100 years.

Emotions: Living people’s emotions can power ghosts, especially “psychic-recording” apparitions. See *Drain* under *Apparition*, p. 6.

Etheric leakage: “Portal” ghosts can tap 5 to 30 fatigue per day from their portal. Haunted houses, battlefields, stone circles, and so on may contribute such energy even if portals are not part of the setting.

Smells: The most common way to strengthen a ghost in Mediterranean and other traditions is through the smell of cooking food (1-2 points), liquor and tobacco (3-4 points), blood (1 point per 3 sacrificed or spilled hit points), or incense (1-6 points depending on rarity and power). Such ghosts can tap these amounts each day; this takes 1 minute.

Time: Some ghosts may recover fatigue twice as fast at night, or have double fatigue on powerful nights such as Halloween or the anniversary of their murder.

Worship: If a ghost is worshipped – as ancestral ghosts in Rome, China, and Haiti were and are – it can gain 1 additional fatigue per day per worshipper, up to 100.



vomiting, nausea, and cramps; he loses 1d+2 hit points immediately and is at -3 to all skills and attributes until the lost HT is restored or 1 hour passes, whichever is later. If he remains within the stench, he cannot recover hit points, and must make HT rolls each hour. At the GM's discretion, gas masks may partially or fully block this effect, or full hazardous materials suits may be required. Anything touched by the outsider is fouled; food becomes inedible, books gooily stuck shut, clothing stained, equipment encrusted. This taint cannot be easily removed; alchemy, industrial dry cleaning, and so on *might* work.

Invulnerability to Physical Damage: Even when fully materialized, the unnatural matter of an outsider remains immune to physical attacks from any weapons except those from its home plane – i.e., glowing meteoric rocks, daggers of unknown alloy, etc. In some cases, proper rituals or scientific methods can “attune” Earthly materials to them; these “enchanted” weapons do half damage.

Spectral Attack: Withropy tentacles, elephantine tread, or myriads of needle-sharp teeth, the outsider attacks the living. (Bite attacks are 2d+2 cutting.) Attacks usually require at least partial materialization.

Outsider ST can run to 50 or higher, increasing damage proportionally.

Stifling Air: An outsider can suffocate (see p. B122) anyone in the room with it. This costs 4 fatigue for each 10 seconds.

Terror: See *Apparition*, p. 6; the outsider's incomprehensible form causes Fright Check penalties of -4 to -10.

Poltergeist

ST: 15 **Move/Dodge:** 9/9
DX: 14 **PD/DR:** 6/0
IQ: 8 **Size:** 1
HT: 12 **Weight:** –
Will: 14 **Reach:** C, R
Fatigue: 20+ **Damage:** 1d-2
Skills: Lockpicking-14; Pickpocket-15; Throwing-14. Poltergeists may also have some skills or traits of their human focus.

Poltergeists tend to be projections of a specific person, usually a young child or teenager; they haunt a person, not a place. Most manifestations have the traditional “poltergeist phenomena” of thrown dishes or furniture, bangs on the walls, and apported (materialized from nowhere) rocks or other objects. Poltergeists themselves do not materialize, except to make “rapping” or “knocking” noises.

Special Abilities

Apport: Poltergeists can produce rains of rocks, frogs, or other small objects – 1d-2 crushing damage to those caught in them. Apport cost 2 fatigue outdoors (and can only be done under a cloudless sky), or 6 indoors.

Poltergeist Effects: By spending fatigue, a poltergeist can move objects, throw punches, and perform other physical actions. Each *action* the ghost attempts costs fatigue. The effective ST and DX the ghost applies determines the cost, and *can* exceed the ghost's normal attributes. An action costs 1 fatigue per 4 ST exerted, DX costs 1 fatigue for a base level of 10 and 1 fatigue for every +4 DX. (Note: Other ghosts with “poltergeist effect” powers must spend 1 fatigue per 2 ST, and 1 fatigue for every +2 DX.) With enough fatigue, a ghost can slam doors, use typewriters or computers, or even push or punch people. A direct “shoving” attack does thrust-3 damage based on the ST of the effect.

Terror: See *Apparition*, p. 6. Victims are at -2 to Fright Checks.

Throwing: Poltergeists can throw small objects (cutlery, end tables, toys) as a ranged attack. A thrown object can do up to 1d of damage – usually crushing, but don't leave the knife drawer open . . . Fatigue costs are as for DX, above. GMs may wish to model this ability as Telekinesis with Power equal to the ghost's ST. These attacks can force a Fright Check at a -2 penalty.

Revenant

ST: 13 **Move/Dodge:** 6/6
DX: 14 **PD/DR:** 0/0
IQ: 16 **Size:** 1
HT: 12 **Weight:** –
Will: 18 **Reach:** C
Fatigue: 18 **Damage:** special
Skills: All relevant skills of its former life.

A revenant is the phantom of a returned or restless dead person. This is the traditional “ghost,” as opposed to the rotting corpse defined as a revenant on pp. UN73-74. ST, DX, IQ, and HT match the ghost's characteristics in life; many advantages and disadvantages may also carry over (see p. UN45 and *GURPS Undead* in general). Some revenants have Terror attacks (see p. 6); the Fright Check modifier depends on the gruesomeness of their death.

Ghostly Spoor

The Society for Psychical Research uses the "MNOPP" mnemonic to classify the five most-common spectral phenomena: *Movement* of objects, *inexplicable Noises*, *Optical effects*, *Pushes* and other tactile sensations, and, least common, an uncanny *Presence*. Many of the specific effects below map to this mnemonic; GMs may wish to escalate a haunting by running "up the scale," or reserve "P powers" for only the most powerful entities.

Animals: Dogs, horses, and other beasts often detect ghosts earlier than humans, and become restive and skittish. Some animals, such as whippoorwills, swarm or flock toward ghosts, however.

Cold spots: Ghosts tend to make the surrounding air colder; perhaps as they focus local electromagnetic energy to manifest themselves, they drain heat.

Electrical activity: Inexplicable blackouts and blown fuses, or mysterious powering-up of unpowered items, could be evidence for ghosts having an electromagnetic or electrostatic makeup.

Lights: A very common type of ghost sighting; even normal lights sometimes alter or fade in the presence of ghosts – for instance, candles burn blue.

Slamming doors: Doors in haunted houses seldom stay open or shut.

Trismos: This is the keening wail or moan that ghosts emit in ancient Greek stories. It inspires a Fright Check at -2.

Weird weather: Ghosts seem to appear when the weather is oppressive, either stiflingly hot, storming, or in the depths of winter. Often, ghosts accompany "devil winds" or other freak occurrences.

previously successful possession of a particular subject gives the ghost +1 to its roll, to a maximum +3.

When a person is possessed, the ghost's energy infuses his body with greater strength, speed, and endurance. The possessed body's ST is raised by 1/5 the ghost's ST (Fatigue is not increased), and its DX and HT are raised by 1/8 the ghost's DX and HT, respectively.

Shade

ST: 13	Move/Dodge: 7/7
DX: 14	PD/DR: 0/0
IQ: 15	Size: 1
HT: 14	Weight: -
Will: 19	Reach: C
Fatigue: 22	Damage: 1d
Skills: Intimidation-16; Mimicry-15; Shapeshifting-15; all relevant skills of its former life.	

A shade is an angry ghost, usually one whose body, memory, or name has been denied respect. The quintessential shades are the Roman *manes*, but this template also works for ghosts "too ornery for Hell" or "too wicked to die." It differs from the revenant in being malevolent, and from the elemental in having been a specific individual in life.

Special Abilities

Icy Touch: A shade's icy claws do 1d cold damage. This attack cannot be parried or blocked, and armor does not defend against it.

Materialization Restriction: A shade can only materialize within 50 feet of its focus, or by being directly summoned. Shades can also appear in dreams, with a Will roll and the expenditure of 1 fatigue.

Terror: See *Apparition*, p. 6. Victims are at -4 to Fright Checks, -6 if the terror attack comes during a dream.

GHOST-BREAKING

Athenodorus of Tarsus performed the first recorded ghost-breaking in the first century A.D. when he reburied the body of a ghost that was haunting his house in Athens. Later philosophers, churchmen, and sorcerers occasionally appear in the records laying ghosts to rest and banishing specters. In 1662, Joseph Glanvil, the Chaplain in Ordinary to Charles II, investigated a poltergeist case in

Wiltshire, the so-called "Tedworth Drummer." He took witnesses' reports and tried his best to rule out natural explanations. The most prestigious premodern ghost-breaker, however, was Prosper Lambertini, who investigated auras, miracles, and possession for the Vatican until becoming Pope Benedict XIV in 1740.

In the next century, ad hoc investigators like Lambertini and Benjamin

Franklin – who looked into Mesmer's claims for the French Academy – were succeeded by organizations. Sir William Crookes investigated spirit phenomena, beginning with the medium Daniel Dunglas Home in 1869, and became a founding member of the Society for Psychical Research in 1882. However, groups such as the SPR, its American incarnation the ASPR (founded in 1885), and others

soon founded on technical issues and personality conflicts. By the 1920s, the magician Harry Houdini began to expose fraudulent mediums, while the ghost hunter Harry Price began to investigate honest ghost stories. The “steampunk” era of optimistically extending science to the spectral realms had ended, and with it the golden age of ghost-breaking.

But there were just as many hauntings as ever.

GHOST-BREAKING METHODS

No matter the milieu, from ancient Greece to postmodern America, there will always be a need for ghost-breaking. Although every haunting is different, there are a few consistent basic ingredients.

Investigation

A spectral investigation begins with a physical survey of the site and intensive research. Investigators

should dig into the location’s history – not just for ghostly reports, but also for gruesome murders, spurned lovers, or decadent tenants, any one of which could spawn a specter. Newspaper archives, interviews and testimony, or plans and sketches might contain valuable clues. This is a good time to spot priest’s holes or other secret chambers. These steps involve Research, History, Area Knowledge, Interrogation, and other skills.

An investigation should include at least one sitting, with the ghost-breakers waiting for the entity to manifest. Any equipment should be set up and ready to record ghostly phenomena, and with thread, wax, or tape the investigators should seal off as many rooms as possible, eliminating them from consideration. Rolls for apparatus use, as well as Architecture or Carpentry to investigate the house, may be required.

Communication

A critical step in ghost-breaking is finding out what will make the ghost go away. The traditional way to contact a ghost is a séance, at which a

medium invokes the local spirit and hopefully enters a dialogue with it while everyone else holds hands around the table to form a “circle of power.” GMs can treat the traditional séance as a ceremonial casting of the Summon Spirit spell (p. M72), and the hand-circle as a ritual with the same effect (and energy cost from the group) as a Pentagram. Breaking the circle breaks either spell. Optionally, the GM can assume that the Performance/Ritual (Spiritualist) skill grants those spells in ceremonial form. See *GURPS Spirits* for more detailed coverage of spirit magic.

Another method of contacting the spirits is automatic writing, in which trance mediums take dictation from spirits, or allow possessing spirits to write out their messages. The British journalist W.T. Stead ran Julia’s Bureau – named for his ghostly partner, Julia Ames – an automatic-writing message service, between 1909 and his death on the *Titanic* in 1912. Some spiritualists still practice automatic writing, but the Ouija board and, later, electronic voice phenomena (EVP) muscled it out of the modern consciousness.

In 1936, Attila von Salzay attempted to use a record cutter to capture ghost voices on phonograph records; UFO cultist George Hunt Williamson used reel-to-reel magnetic tape in the 1950s for similar purposes. But EVP remained obscure until Latvian psychologist Konstantin Raudive documented 100,000 recorded voices between 1965 and 1971. EVP is still occasionally called “Raudive voices” in his honor. EVP voices are inaudible during recording, manifesting indistinctly and faintly when played back. EVP seekers use all manner of recording equipment to gather ghost voices. According to a German medium channeling the ghost of Thomas Edison, tuning your television to 740 MHz – possible with an Electronics (Communications) roll – can sensitize it to spirit communication. Television opens up new vistas for EVP, as does digital sound analysis.

Once communication has been established, the heroes can use Psychology, Diplomacy, Interrogation, and even Acting to find out a ghost’s purpose, nature, and weaknesses, if any. This might spark another round of research, or move things right into the showdown.

It’s Only the Wind

It’s not always ghosts. Sometimes, it’s only the wind, or perhaps one of these explanations:

Animals: Rats might make rustling or rapping sounds, and spectral sightings might be cranes, owls, or other nocturnal birds with large, reflective eyes.

Drafts: Haunted houses are usually old houses. Old houses are drafty, have doors that blow shut, floors that don’t stay level (causing objects to move), and weird cold spots.

Groundwater: Guy Lambert, president of the SPR from 1955 to 1958, noticed that the majority of haunted-house reports in Britain, Europe, and America came from houses within three miles of tidal water. Groundwater can undermine foundations (causing creaks and tilts), create white fog patches, and cause cool floors and rooms.

Hallucinations and lies: From witnesses who want attention to people who aren’t taking their medication, there’s no shortage of reasons someone sees a ghost.

Magnetism: Geomagnetic effects are poorly understood even now, but have been linked to “earth light” phenomena in the 1990s. Much of the “electromagnetic ghost” theory can also be explained by natural variations in local magnetism.

Old Man Withers: And, of course, someone might be spreading ghost stories and even faking phenomena for malicious or criminal reasons – such as to cover up their hidden gold-smuggling operation.

Subsonics: Infrasound causes anxiety, sorrow, and chills in test subjects. It can extinguish candles and send shivers down the spine. And it can be caused by the wind in long pipes, earth tremors, and stormy weather.

Conventional Gear

In addition to specialized technology such as electric pentacles or Kirlian goggles, conventional “investigator” gear can greatly assist ghost-breakers. Most real-life ghost-hunters use little more than Harry Price’s “articles for observers”: colored chalk and pencils, thread, a notebook, a good watch, a candle and matches, a flashlight, a flask of brandy, and sandwiches. Price added that a camera can be used; most ghost-hunters recommend using high-speed film cameras (800 ASA film or better) rather than digital ones, as the actual negative can be studied. However, a backup digital camera, or even a camcorder, is increasingly common. Add a tape or DAT recorder for spooky noises or EVP. Cell phones (or headset radios, walkie-talkies, etc.), glow sticks, light-intensifier goggles and starlight scopes, parabolic mikes, and similar gear also come in handy when stumbling around a dark house at night. Steampunk ghost-breakers might have TL(5+1) versions of any or all of this technology, of course. Other modern ghost-hunting equipment includes:

Compass: Detects swings in magnetic fields. \$20, 0.2 lbs.

Electrostatic Generator: A Van de Graff or Wimshurst machine generates hundreds of thousands of volts worth of ions, to detect potential electrostatic phenomena such as ghosts. \$200, 4.5 lbs.

EMF Meter: Senses electrical and magnetic fields, and radio emissions. Ghosts tend to register in the 2 to 8 milligauss range. Commercial EMF detectors work at relatively short (1 to 5 foot) ranges. \$90, 0.5 lbs.

Stroboscope: If ghosts “flicker” in and out of human perception, then strobe lights may reveal them or help in photographing them. \$150, 2.5 lbs. Ghosts may also appear in fluorescent light.

Thermal Detection Device: This point-and-shoot IR sensor is good for finding “cold spots” or “warm spots” at up to 150 yards, and thus for detecting ghosts or invisible creatures. \$200, 1 lb. A unit with a built-in computer can distinguish living beings, such as fellow investigators, from other heat sources and costs around \$600. A simple noncontact thermometer can pinpoint temperatures at half that distance. \$150, 0.3 lbs.

Tone Generator: Emitting an audible tone can set up a standing wave tuned to, or resonant with, an electromagnetic ghost’s frequency. This might make a ghost easier to spot or force it to manifest. \$90, 4.5 lbs.

Confrontation

After investigation and communication, friendly or weak ghosts can usually be removed or sent on peacefully. But the ghost-breaker really earns his keep when he faces down the powerful, malevolent entities, which show up so often in stories. The key skill here is Exorcism (see p. CI153 or p. UN108 for details). If that doesn’t take, it’s time to get out the unlicensed nuclear accelerators.

GHOST-BREAKING TOOLS

The dowsing rod, ghost sword, Ouija board, necrophone, Kirlian camera, Spiricom, and infinite video imaging (though not its cliffhanging ancestor) are all historical items or techniques. (Their efficacy remains unproven.) Prices are given in modern-day **GURPS** dollars. The costs will vary with era, or for prototype, experimental, mass-market, or military-grade versions.

Common Wards and Weapons

A number of traditional materials repel or harm ghosts. These may be Allergic Susceptibilities, Dreads, Vulnerabilities, or Weaknesses for various ghosts.



Asafetida: This aromatic plant, the main ingredient in Worcestershire sauce, was used in medieval European and Persian magic to drive away evil spirits. In a postmodern game, a protective circle drawn in Worcestershire sauce might work just as well or even better than a chalked pentagram!

Bells: Especially in the East, ghosts hate loud noises, such as bells, rattles, and fireworks. Medieval ghosts cannot stand the sound of church bells, and must return to the spirit plane when they ring. Modern ghost-breakers might use recordings of church bells to drive ghosts out of a room.

Fire: Cleanses as it destroys, usually only used against fully materialized spirits. Some ghosts dread holy candles, hearth fires, or blacksmith fires.

Garlic: This healthy herb repels evil in many cultures.

Hawthorn: In Druidic and Christian traditions, hawthorn is effective against spirits and evil magic.

Holy Symbols: Especially in Christian folklore, brandishing a crucifix, icon, or other holy symbol protects against the undead. In folklore, any use of holy symbols or prayer gives protection; in fiction, True Faith is usually required as well.

Images: Chinese ghosts flee from the image of something they fear. If the ghost had a Phobia in life, it might retain it after death.

Iron: Seen for millennia as a magical metal, iron repels evil, including Satan himself in some stories. An iron horseshoe hung over the door keeps the room safe from ghosts. Even the blacksmith himself may repel spirits. Modern ghosts seem to have gotten over this allergy.

Running Water: Ghosts traditionally cannot cross running water, but spirits in haunted houses seem unaffected by plumbing.

Silver: More common in fiction than in folklore as an undead repellent.

Sunlight: Ghosts almost never appear in the daytime in fiction, although there are many daylight ghost experiences. Cocks'-crow or other announcements of the dawn also drive away ghosts.

Dowsing Rod **TL0**

Dowsing is one of the oldest methods for detecting supernatural energy. A dowsing rod is a forked stick, usually of willow, witch-hazel, or whalebone. Modern ghost hunters use

coat-hanger dowsing rods with no apparent loss of effectiveness, but the GM may impose penalties for mundane materials. According to modern parapsychological theory, anyone can dowse. Dowsing detects the direction of the nearest, strongest spirit; it is a Mental/Hard skill defaulting to IQ-6. Dowsing falls off with range; rolls are at -1 to skill at 2 yards, -2 at 4 yards, -3 at 8 yards, etc. Each 10 ST of the spirit dowsed, however, adds a +1 bonus to Dowsing skill.



Psychics or sensitives may have a much lower default, or they may have a power (such as ESP) and require a dowsing rod. This is a 10% limitation – needing specialized rods, such as whalebone or witch-hazel, is a 20% limitation. If wandering around for a while is also necessary, that is the Preparation Required limitation (see p. CI111).

The weight and cost of a coat-hanger dowsing rod are both negligible; dowsing rods of specialized materials may cost up to \$100 for exotic woods or rare bones.

Ghost Sword **TL1**

In the *Odyssey*, Odysseus used his sword to menace recently summoned shades. Chinese ghost-hunters have made “ghost swords” a standard part of their equipment for millennia. A ghost sword has been enchanted or engraved with the proper runes and rituals to reach into the spirit world; it

harms ghosts as if they were conventional, material entities.

A ghost sword costs \$6,250 per pound of sword weight, plus the cost of the sword itself.

Specchia Tormenta **TL(4+1)**

An unknown Italian craftsman designed the “mirror of torment” in the mid-16th century, based on sorcerous geometries. Once the mirror catches a ghost’s reflection, it must make a ST roll at -10 or be trapped inside it. Breaking the mirror frees the ghost. Each mirror can only hold one ghost; putting a new ghost in drives the old ghost out. There are rumors of a lost Leonardo masterpiece – entitled *Ulysses in Hades* or *The Vale of Purgatory* – painted using perspectives and ratios derived from the same equations. This painting, if it existed, would be priceless, and able to contain thousands of ghosts. An original 16th-century *specchia tormenta* (at least 17 were made) weighs 1 to 10 lbs., and sells for at least \$100,000. Later Venetian glaziers made copies as best they could; the finest of these are the “Hapsburg mirrors,” made between 1790 and 1840. GMs should reduce the ST penalties, and the cost, of these knock-offs.

Moreton Jar **TL(4+n)**

This variant on the Leyden jar (an early capacitor) is named for the pseudonymous early 18th-century ghost investigator “Andrew Moreton.” An arrangement of magnets and oiled silver plates inside a cut-crystal bell jar creates the “attractive force” that draws ghosts down a braided silk cord and into the jar, where they are trapped. The cord must be in contact with the ghost (tangible or intangible) at the moment of activation; a fully materialized ghost may make a Will roll to avoid dematerialization and entrapment. The Moreton jar requires a Mechanic (Electrical)/TL(4+n) roll to activate. A failure “shorts out” the jar (freeing any ghosts trapped within it); on a critical failure, the jar explodes, doing 1d damage to everyone in a 2 hex radius.

A 10 cf. Moreton jar can hold 20 ST of ghosts, weighs 55 lbs. and costs \$2,200. The jar cannot be overfilled. Adjust size, weight, and price accordingly for larger or smaller ST capacity jars.

Talking Board TL5

Beginning in the 1850s, French spiritualists used automatic-writing techniques to communicate with ghosts. The most common was a wooden planchette (a small board on casters or legs) with a pencil attached, which wrote via the medium's hand on paper placed beneath it. In 1890, the Baltimore inventor Elijah Bond applied for a patent for a "new planchette" which omitted the pencil, and replaced the paper with a board preprinted with the alphabet, the numbers 1 to 0, and the words "Yes" and "No." In 1891 Charles Kennard bought Bond's patent and marketed his planchette as the "Ouija Board." He claimed that "ouija" was the Egyptian word for "good luck," according to spirits he contacted with the board. His business partner William Fuld took over in 1901, and drove the Ouija Novelty Co. to new heights until his mysterious death in a fall from a flagpole in 1927.

Talking boards (the general name) allow sitters to contact ghosts without the Medium advantage or any other special powers. The ghosts nudge the planchette (via the sitters' hands) to spell out messages – but there is no guarantee that the messages will be accurate, polite, or from any specific spirit unless the board is used with a summoning or compelling ritual. *Wooden talking board*: \$40, 2 lbs.

Electric Pentacle

TL(5+1)

Invented by Thomas Carnacki in 1907, the electric pentacle marks the beginning of truly scientific ghost-breaking equipment. Forty mercury-vapor tubes set in a pentagram shape, wired in parallel to an induction coil, powered by two 2.2 kW lead-acid batteries will repel spirits as the Pentagram spell (see p. M62). The key is the specific wavelengths of blue light emitted by the tubes, which Carnacki determined to be those most resistant to spectral force. No ghost can cross the light barrier without winning a Quick Contest of Will versus the barrier's Power. Even fully materialized spirits or possessed humans cannot cross the pentacle, or throw any object at the tubes. However, the tubes are delicate, requiring an hour and a successful Mechanic (Electrical)/TL(5+1) roll to set up. Any critical failure on a

physical skill by the person inside or near the pentacle is likely to break a tube, and hence the barrier.

A 40-tube electric pentacle has a Power of 30, weighs 20 lbs., and costs \$2,500. It is 10.5 ft. in diameter (33 ft. in circumference), and has enough room in the central, protected pentagon for one person, who sits on the battery pack. More tubes allow larger pentacles. Power can be increased by simply increasing the amount of electricity, either by more batteries, better batteries, induction coils, or transformers.

Necrophone TL(5+n)

In the October 1920 issue of *Scientific American*, Thomas Edison announced that he was working on a machine to contact the dead. No plans or prototypes were discovered in his laboratory after his death in 1931. In a séance ten years later, Edison directed two electrical engineers to the blueprints. Edison's necrophone is a sensitive electrical valve, powered by a chemical electrolyte solution, which amplifies spirit voices captured by a large, trumpet-shaped aluminum dish-aerial apparatus. The ghosts speak through a microphone hooked up to the valve. Tuning the necrophone to a specific spirit requires something connected to that spirit or a summoning ritual. The ghost is not required to answer. A necrophone can also passively pick up ghostly "chatter" in an area, much like EVP. Using the necrophone requires an Electronics Operation (Communications)/TL(5+n) roll.

The necrophone uses 0.2 kW, weighs 22 lbs., and costs \$800.

Shanghai Sandwich

TL(6+1)

During his fringe researches in the late 1920s, Philo Farnsworth ran across the optical formulas used in the *specchia tormenta* (see p. 13), and adapted them using Crookes tubes and selenium plates. He created a modern ghost trap, which boils down to a television camera filming its own screen. Any ghosts caught between camera and screen are trapped between them, unable to move or use their powers without making a ST -10 roll. (Fully materialized ghosts make the roll at -4.) The transmitter and receiver need only to be in line of sight; breaking this breaks the trap. Activating the equipment is a simple Electronics Operation

(Communications)/TL(6+1) roll with a +6 bonus. Hard-boiled ghost-breakers used this "Shanghai sandwich" in the 1930s and 1940s. It may be named after the "hall of mirrors" in the Orson Welles film *Lady of Shanghai*, or perhaps for the old custom of "shanghaiing" (kidnapping) unwilling sailors.

A descendant of this technology, infinite video imaging (IVI), has come into use with the advent of cheap video cameras and television sets. However, without the special tubes used in the Shanghai sandwich, IVI can only capture images, not actual ghosts, on videotape – a video equivalent of EVP. An IVI setup is easy; anyone who can work a camera can do it.

Farnsworth's Crookes transmitter: 2 kW, \$40,000, 650 lbs. *Selenium receiver*: 0.2 kW, \$1,600, 60 lbs.

Kirlian Camera TL6

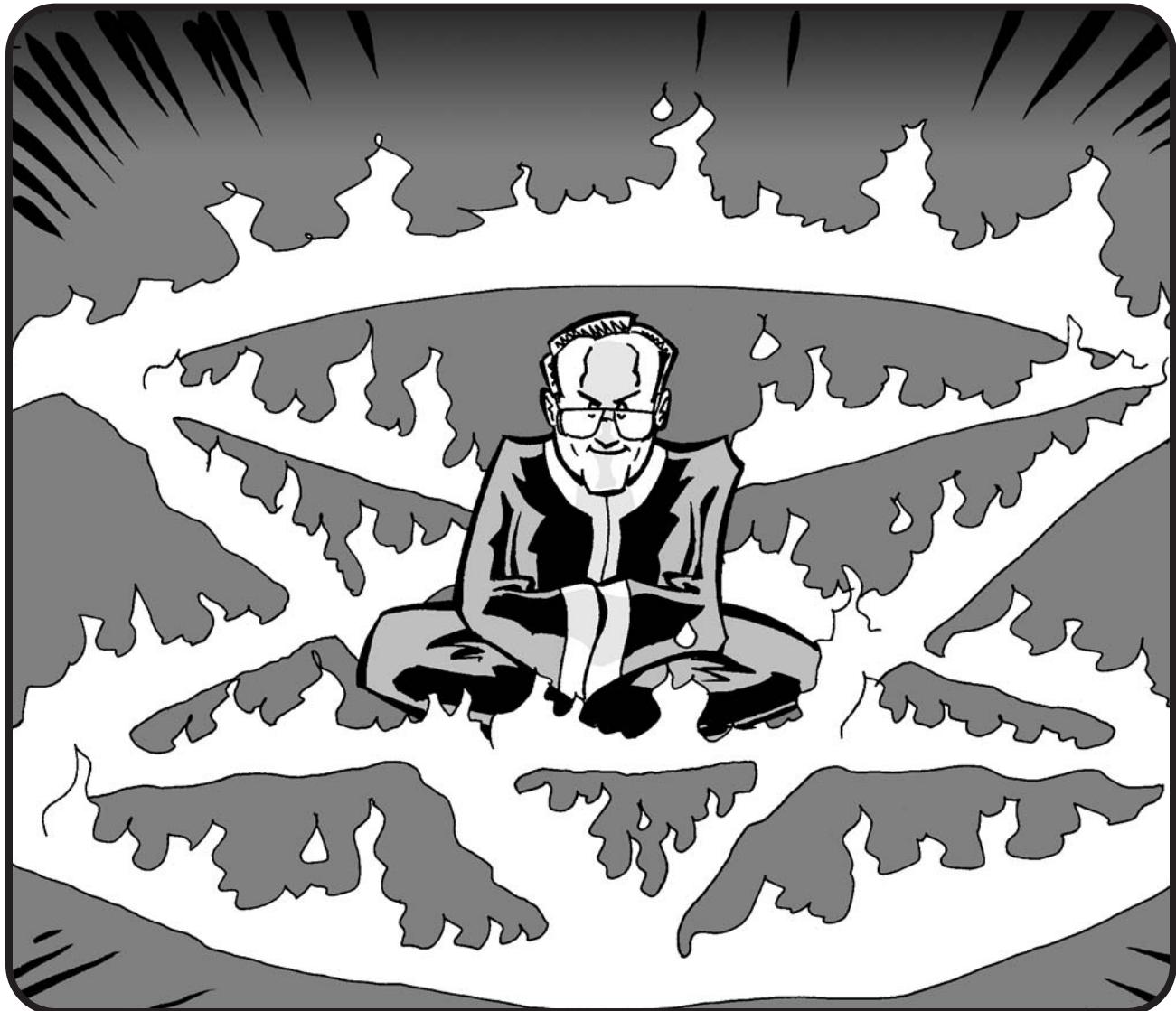
Semyon and Valentina Kirlian developed Kirlian photography in 1939 Soviet Kazakhstan. The technique involved placing an organism or object on a photographic plate and subjecting it to a high-voltage, high-frequency electric discharge. Developing the plate reveals a halo or aura with a successful Photography (Spirit) roll. The plate can be set anywhere a ghost is likely to appear, and the camera triggered remotely. Kirlian photographs require low-speed film; the shutter stays open for up to three seconds. They reveal any spirits, and the aura of any living or undead beings in contact with the plate, as the 35-point version of Awareness. Interpreting photos may require further tests of Psionics, Occultism, or Spirit Lore, at the GM's discretion.

A no-frills TL6 Kirlian camera with polarized film costs \$595 and weighs 3 lbs. A modular TL7 camera with a frequency tuner, tabletop electrode plate, and real-time polarized viewer costs \$1,200 and weighs 6.5 lbs. A late-TL7 Kirlian digital camera with "liquid sample" attachments and real-time motion-capture technology costs \$9,700 and weighs 11 lbs. This includes rudimentary aura-analysis software (Psionics-12, or +2 to skill).

EM Aura Reverser

TL(6+n)

Building on Carnacki's work, a New York parapsychologist created the EM aura reverser in 1970. Essentially a "spiritual jammer," the



reverser drains power from any living or undead being within its spherical range. Each minute the reverser is operating, its range increases by 3 yards (to a maximum of 100), and it drains 1 HT from its victims. Lead, or any other radiation shielding, will protect against the reverser as per the rules on pp. CII145-146. Setting up the reverser, and checking wavelengths against local conditions, requires three hours and an Electronics (Psychotronics)/TL(6+n) or Psionics/TL(6+n) skill roll. 380 cf, \$70,000, 500 lbs.

Spiricom **TL7**

In 1980, electrical engineer George Meek and medium Bill O'Neill built Spiricom, a machine for communication with the dead. They used it to speak with deceased NASA scientist George Mueller, who helped them perfect the Spiricom Mark IV by 1982.

This system uses multiple-frequency tone generators to isolate ghostly voices from a room's "white noise" and apparently creates a spiritual "carrier wave" to speak with or summon a specific spirit. Ascended and evolved spirits come in on the 29.5 MHz band or higher. Tuning the Spiricom to lower frequencies contacts baser, even inhuman, spirits. Operating the Spiricom requires 1d6x10 minutes of tuning and a successful Electronics (Communications)/TL7 roll. Spiricom technology functions far more reliably with a medium or psychic operator; without a medium, attempts to contact a specific spirit are at -6 to skill.

Spiricom Mark IV system: 20 cf, \$3,200, 80 lbs. Meek and O'Neill have released the plans for free, so a successful Engineering (Psychotronics) roll might let ghost-breakers on a budget build one for less.

Kirlian Goggles

TL(7+1)

Using advanced remote Kirlian technology, these active-sensing goggles send out repeated high-frequency bursts similar to those used to irradiate Kirlian photography subjects. The specialized optics in the goggle mount translate the return signals and reveal the presence of spirits or invisible entities. Most living things' auras are too weak to be read by these goggles, and masking software eliminates them where possible to give clear readings. The wearer gains the 15-point Awareness advantage.

Kirlian goggles: \$9,000, 5 lbs. Military-grade Kirlian goggles also have light intensification, granting Night Vision; these cost \$16,000 and weigh 1.5 lbs.

Ghost Blaster

TL(7+2)

The core technology of this bleeding-edge device was developed in a Columbia University laboratory in the mid-1980s and has proven itself in private industry and government applications since. A miniature nuclear accelerator (the equivalent of two D power cells) in a backpack unit creates a protonic field, shunted through a magnetic hose into a handheld projector, which streams the resulting particle beam toward a spectral target. The beam can simply blast matter, ectoplasm, and ghosts or create a stasis field to hold ghosts in place. Creating a stasis field requires at least two blasters hitting the same target, both set for stasis. Damage of both beams is averaged to produce the stasis field's Power. A ghost can make a Will roll against the field's Power to escape it each turn, until the running total of the field's Power is higher than the ghost's ST+Will. At that point, it cannot move outside the field, and the blaster users can maneuver the ghost into a given position with a weapon skill roll at +4.

Firing a ghost blaster is a Beam Weapons (Blaster) roll at -4 or a Guns (Flamethrower) roll at -6. Users can walk the burst (see p. HT78) of a ghost blaster. The ghost blaster has the following characteristics: Malf 16, Damage imp. 5d, SS 9, Acc 8, Max 190, RoF 4, Shots 30, Rcl. -4, \$23,000, 43 lbs. (includes backpack unit).

PKE Trap **TL(7+n)**

Harnesses psychokinetic energy (PKE) created by a Kirlian transformer hooked up to a B power cell to trap ghosts. The trap resembles a large shoebox, triggered with a pedal or remote signal, it opens and any ghosts in a 4-hex cone over the trap's opening are drawn into it. A ghost must succeed at a Quick Contest of ST versus the trap's Power of 20 to escape the PKE field. A ghost already restrained by a stasis field, pentacle, etc. cannot escape the field. \$500, 10 lbs. Holds one ghost.

A ghost blaster can simply blast matter, ectoplasm, or ghosts or create a stasis field to hold ghosts in place.

Inspirational Material

GMs can use their own etheric backyards, or consult compendia such as Dennis William Hauck's *Haunted Places: The National Directory* (Penguin, 1996) or John and Anne Spencer's *Ghost Hunters' Guide to Britain* (HarperCollins, 2000). For further reading and viewing, investigate the following:

Dead Print

Finucane, R.C. *Ghosts: Appearances of the Dead & Cultural Transformation* (Prometheus Books, 1996). Rigorous historical discussion of the variance in ghost beliefs from ancient Greece to modernity.

Guiley, Rosemary Ellen. *The Encyclopedia of Ghosts and Spirits* (Facts on File, 2000).

Hodgson, William Hope. *Carnacki the Ghost-Finder* (Eveleigh Nash, 1913). Edwardian occult adventure with a whiff of steampunk. Along with the Jackson and Matheson novels cited below, the key work in the ghost-breaking genre.

James, M.R. *Complete Ghost Stories* (Penguin, 1987). Between 1904 and 1926, medievalist M.R. James published some of the finest ghost stories ever in English. Although few of them present any actual ghost-breaking, they are solid reading, especially for campaigns set in the Victorian or Edwardian eras.

Kardec, Allan. *The Book on Mediums* (Weiser Books, 1970). Reprint of the 1874 masterpiece that became the basis for spirit religions in Brazil and Europe.

Lee, Tanith. *Kill the Dead* (DAW, 1980). Medieval fantasy ghost-breaking.

Underwood, Peter. *The Ghost Hunter's Guide* (Blandford Press, 1986). The dean of British ghost-hunting presents a calm, intelligent overview from a believer's perspective.

Warren, Joshua P. *How to Hunt Ghosts* (Simon & Schuster, 2003). Probably the best modern ghost-hunting manual.

Visual Phenomena

The Exorcist (William Friedkin, 1973). Not a true ghost-breaking, but the atmospheric effects (and the example of a Catholic exorcism) are invaluable. Based on the 1971 William Peter Blatty novel.

The Frighteners (Peter Jackson, 1996). A well-meaning ghost-breaker and his friendly ghosts slide into deadly horror.

Ghostbusters (Ivan Reitman, 1984). Paradigmatic modern, cynical, high-tech ghost-breakers encounter apocalyptic outsiders in this comic masterpiece.

The Haunting (Robert Wise, 1963). This intellectual, introverted psychological horror picture also contains 20 minutes or so of the purest terror ever on film. Based on the superb 1959 Shirley Jackson novel *The Haunting of Hill House*.

The Legend of Hell House (John Hough, 1973). Brilliant premise and over-the-top action in a classic postwar ghost-breaking. Adapted by Richard Matheson from his 1971 novel *Hell House*.

Session 9 (Brad Anderson, 2001). Environmental cleanup crew encounters psychological and supernatural horrors while removing asbestos from an abandoned insane asylum. An atmospheric triumph.

Thirteen Ghosts (Steve Beck, 2001). Remake of the 1960 William Castle B-movie about a mad ghost collector and his insane, sorcerous house. The first 10 minutes and the production design justify the entire film.

CHAPTER TWO

ALCHEMICAL BAROQUE

BY PHIL MASTERS

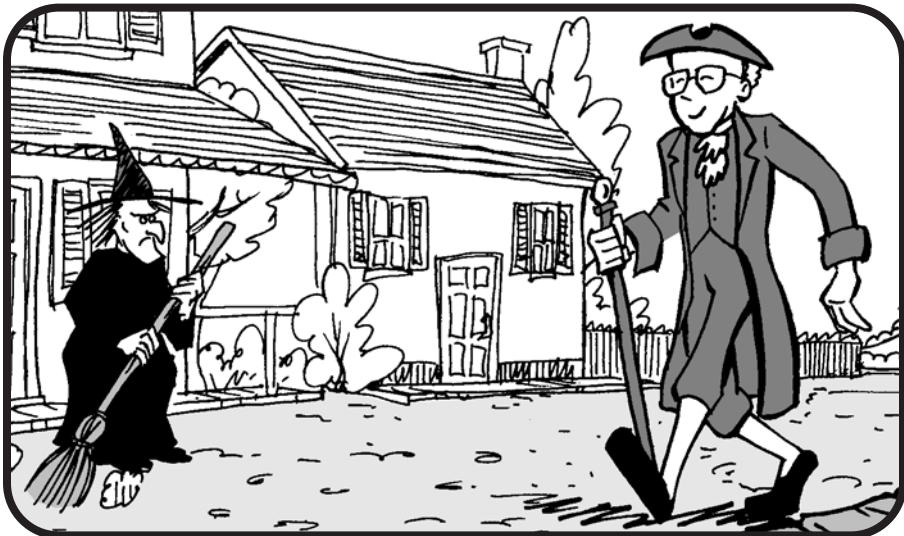


About the Author

Phil Masters is a British writer who has been gaming for longer than he cares to remember. His **GURPS** books include *Arabian Nights*, *Atlantis*, and the collaborative *Discworld* and *Hellboy* roleplaying games. He has also worked for White Wolf, Atlas, Hero, Hogshead, and several magazines now gone to the great slushpile in the sky.

Welcome to a fairytale world of muskets, ghosts, and strange magics. It's *Alchemical* because the magic of the setting has a formal, quasi-scientific flavor, and *Baroque* because stories set here should have a sense of baroque period style – a fever dream of our own world as of the early 18th century.

In addition to the *Basic Set* and *Compendium I*, GMs will need *GURPS Magic* for Alchemy rules (pp. M98-102), and *GURPS Spirits* for creatures and magic. *GURPS High-Tech* and *GURPS Bestiary* might be useful, but aren't essential.



THE WORLD

Although this setting is conceived as an entire world, this treatment focuses on one region, based on Europe's culture, climate, and society. Other regions are described from that perspective; the more distant they are, the more vague the impression. Likewise, although there's a substantial historical past, the description is kept loose.

"Common folk" know that a wider world exists, and that history goes back centuries, but are vague about the details. Other parts of the world and its past *could* be developed, but that isn't done here.

OVERVIEW

This treatment focuses on the *Known Lands*, the lands about which PCs can be expected to know a reasonable amount. (There are plenty of other inhabited regions, and explorers from the Known Lands have visited many of them.) The Known Lands are divided into numerous states and one fairly substantial empire. Most but not all governments are monarchies; some are downright feudal (though these are considered rather backward). Aristocracies still wield considerable influence, but monarchs are claiming ever-more-absolute power, and revolutionary movements aren't unknown.

Most of the population lives in villages or small towns. Country-dwellers are often free peasants, although they usually rent rather than

own their land, and there are a few outright (downtrodden) serfs. Every village worthy of the name has a blacksmith (invariably a big, amiable fellow) and an inn.

Towns are centers of trade, commerce, and small-scale manufacturing, governed by mayors or councils of burghers. Larger towns and cities center around palaces and other government buildings, or great universities. Most crafts are dominated by urban guilds; a poor lad who wants to make something of himself usually has to persuade a guild-master to take him on as a 'prentice.

Technology

This setting is early TL5 (with less-advanced communities on the fringes). As a consequence, heroes of most tales and campaigns will not be sword-wielding barbarians but soldiers wielding muskets and bayonets, sturdy peasant lads, and the occasional younger son of the nobility with an old sword. (Or village witch-girls, 'prentice warlocks, and venturesome students of philosophy.)

Most nations have small standing armies, hastily enlarged in time of war, consisting of reasonably well-drilled infantry wielding musket and bayonet (plus a few grenadiers), dashing cavalry armed with sword or lance, and small artillery trains. Generals like to give the impression that tactics is a sophisticated and subtle art, but only a few talented commanders go beyond rote methods.

Civilian technology is very much at the handicrafts level; there are large workshops in wealthier towns, but no real mass production. The best craftsmen do very fine work indeed; jewelers, watchmakers, and the most skilled artillerymen are the setting's leading technologists. Every town has at least one printing press, and most people can read a little, but printing remains quite slow, and books are expensive. Still, many farmers have one or two around the house, for show, and villages of average size or larger may boast one-teacher schools.

The Supernatural

Supernatural powers exist in this setting. Most villages have a witch or cunning-man, although he usually has only weak, subtle powers, and sometimes is downright fraudulent. Religious belief – in a single, transcendent, vaguely imagined God – is universal (although some philosophers have such *strange* ideas that they're regarded as atheists), and every village has its church and its priest. However, priests don't necessarily possess any sort of overt supernatural powers.

Magical beings – ghosts, fairies, and devils – are regarded with extreme nervousness, as those which aren't actively malevolent are still extremely whimsical or simply disturbing. (This makes life hard for the significant minority of fairy folk who are compulsively benevolent.) One thing which makes people not only believe in the power of religion, but

be devoutly grateful for it, is that these beings tend to avoid holy ground and religious symbols.

Magic is, to some extent, a *science*. Natural philosophers, alchemists, and some physicians study these matters methodically and analytically. The results they achieve are sometimes impressive, sometimes catastrophic. A few of them have even constructed magical clockwork devices.

Cosmology

The world is round, and revolves around the sun; every peasant knows and accepts this. Beyond that, however, ideas get fuzzy, even among scholars. Theologians speak of the universe as a giant clockwork or a great work of architecture, shaped by God – and these aren't necessarily metaphors. Many philosophers also speak of “the crystal spheres of the heavens,” and while they may not literally believe in physical spheres, they may imagine a system of magical forces and manifest symbols which come down to much the same thing. Mostly, all this is a matter of abstruse theory with no impact on people's routine lives, but some hubristic visionaries are talking about going off to investigate in person.

Ghosts exist in a shadowy realm “overlying” the material world (an “outer spirit world”; see **GURPS Spirits**, p. SPI25), and can perceive physical reality without being perceived, except by characters with the Medium advantage. Fairies might be said to operate in a *different* “outer spirit world,” but this has no distinct characteristics and cannot be accessed by magic; for practical purposes, fairies in spirit form are in the material world, but invisible and intangible. There are also numerous fairy realms and “hidden lands” which appear to be other-dimensional “inner spirit worlds”; whether these are all linked or related, forming a single great “inner world,” or whether each is a distinct “pocket dimension” is unclear, but their inhabitants are generally unable to move quickly from one fairy palace or glade to another. In some cases, the passage of time in fairy realms differs markedly from that in the human world; a night in fairyland may equate to a year, a decade, or even a century in human time.

Lastly, there appear to be “inner” spirit worlds where human souls go

Napoleonic Overlap

GURPS Age of Napoleon covers the very end of the real-world historical period which inspired this setting. Its information on prices, social status, and jobs can equally be used for games set in the Known Lands.

For that matter, decline followed by revolution in the Solar Empire could easily lead to an era of great wars, complete with (magical) espionage and secret (alchemical) weapons . . .

after death. The Heavens open to virtuous souls remain a high mystery, spoken of only in metaphors by theologians; it's *impossible* for magic to contact one who has gone there. On the other hand, there is certainly a Hell, a place of punishment for the wicked and the home of countless devils.

Mundane Wildlife

The flora and fauna of the Known Lands are much like those of Europe in our world, except that large animals tend to be slightly more common and bolder. The most formidable creatures are wolves, wild boar, and some large wild cattle. However, because some fairies take the form of mundane animals, while ordinary creatures are occasionally possessed by minor spirits or “augmented” physically or mentally by contact with supernatural forces, no one is usually *too* surprised to encounter magical or talking animals.

Cats are also somewhat unusual; see p. 26.

HISTORY (IN BRIEF)

The ages after God created the world were a time of myth and legend, when prophets and superhuman heroes were commonplace, and God spoke directly to humanity. However, accounts of these eras are scarce and, it is observed by cynics, often contradictory. Actual history begins with the classical Golden Empires, which spread across much of the Known Lands and Sutherlands, fought great wars with each other, laid down the principles of philosophy, and built the Gogian Wall (p. 21).

But weariness and decadence eroded even the greatest of the Golden Empires, which eventually fell to civil wars and invasions over the Wall. After what are now known

as the Centuries of Darkness, many feudal kingdoms arose. This was an age of knights and wizards, when swords and plate armor were the key to power.

Eventually an unknown alchemist-philosopher developed gunpowder, which could bring down the proudest knight or the strongest castle. Other philosophers began propounding strange ideas about law and government, ultimately leading to the fall of kings in some lands. On the other hand, cunning political theories from the cities and islands of the south enabled the creation of the Solar Empire, so named because it revolves around its emperor as the planets revolve around the sun.

The Empire expanded rapidly for a while, but eventually ran into determined resistance. It was forced to adopt more cautious policies when the nations on its borders adopted a pact: any invasion of one of their territories by the Empire would cause the others to launch raids and incursions on the Empire's other borders. In truth, all these powers together are not strong enough to stop the Empire from conquering any other land if it *really* wants to – but they can make such wars intolerably expensive. Furthermore, the Solar Emperor dares not strengthen his army as much as he'd like, as its commanders would then become dangerously powerful – and while they're in the field, they aren't safely under his eye in the Palace of the Sun.

Today, the Known Lands are in a delicate and unstable balance, with spies and agitators lurking everywhere, and a détente that occasionally flares into border wars. An age of global exploration is underway, and the wealth beginning to flow back is causing upheaval. Life for the peasants in the fields is not much affected by this, in truth – but it may be, in time.

GAZETTEER

The main regions of the Known Lands are:

THE GREEN ARCHIPELAGO

The westernmost of the Known Lands, the Green Archipelago consists of a few large islands (up to 150 miles in length), dozens more which are smaller but still substantial enough, and hundreds of tiny rocks and outcrops. The largest islands lie nearest to the continent, and their inhabitants sometimes don't think of themselves as living on islands at all (after all, most of them can go for years without even seeing the sea). The term "Islanders" indicates the inhabitants of remote outlying parts, who are seen as rude, rather primitive, violent, rebellious, and unconventional in religion.

The Archipelago produces the finest sailors and navigators of the Known Lands, and possesses a large and successful merchant fleet and a smaller but formidable navy. Both merchantmen and military are used for global exploration.

The government is known as the *Domiciliary Republic*. Once, the islands were ruled by a weak monarchy. The nobility, well able to defend their individual holdings against royal power, treated the king or queen as an equal, not a superior. Hence, the legal

maxim grew up that "a lord's house is always a castle, and a castle is always a palace." However, social unrest and the growth of a merchant class in the last two centuries left the old aristocracy weakened and facing many new "upstart houses." The old lords mustered around the king, and a civil war ensued – which the upstarts won. They deposed the king and drew up new laws which bore an (intentional) resemblance to the old laws, but which were actually quite different. Nowadays, anyone with the wealth to build a great house and muster followers (and servants) from the surrounding district can claim the status of a lord, becoming part of the loose confederation which rules the Archipelago from the disorganized Parliament in the old royal palace.

"Domiciliaries" are proud of their "traditional" (decades-old) freedoms – even though most of them are firmly under the thumb of great-householders – and are happy to fight wars against any foreigner who criticizes the system. One reason why "Islanders" are so despised by other Domiciliaries is that most of the smaller islands are too poor to support a great house, and hence have no representation in Parliament. Islanders, in turn, see themselves as free of "great lords," giving loyalty instead to an incomprehensible system of clans and families (and in a few cases to powerful and

proud local fairies); they also positively revel in fighting, making life difficult for Parliamentary tax-gathering ships.

International Relations: Although the Green Archipelago is threatened by the Empire of the Sun, which lusts for its trading wealth and despises its lack of a king, its fleet keeps it relatively safe. Hence, the Domiciliaries sometimes seem smug. However, they are crucial to the pact which keeps the Empire in check; any time the Empire goes to war, Domiciliary ships enthusiastically turn privateer, playing havoc with Imperial trade.

THE SOLAR EMPIRE

This is a nation with pretensions to imperial status. The Great Majestic Solar Empire is ruled from the Palace of the Sun, an awe-inspiring building which, with its outbuildings and stables, holds the population of a full-sized town. Although the Palace is the scene of seemingly unending balls, masques, and entertainments, the government which operates from the same location is far from frivolous. Courtiers compete for influence and the ear of the king, and cultivate subtlety, deviousness, and amorality.

Most of the rest of the Empire consists of rich farmlands, dominated by lords whose power is only mitigated by the fact that most of them spend most of their time at the Palace. Unfortunately for their tenants, they traditionally leave their estates in the hands of mean-spirited, paranoid bailiffs, who excuse all sorts of ill treatment of the peasantry by saying that they're "merely serving their lords." There is also a degree of prejudice against conquered peoples, although the Empire imposes a uniform culture across its lands.

The Empire's infantrymen are the best-drilled in the Known Lands, and its cavalry are dashing and brave, if undisciplined. However, the Solar Emperor fears ambition among his generals and rotates command of every part of the army regularly – so, while the commanders know the standard tactical manuals from cover to cover, few of them have the experience

Swashbuckling?

The Known Lands are in *some* senses a swashbuckling setting, and the time period covered by *GURPS Swashbucklers* runs up to the 18th century. However, combining these things is not automatically a good idea.

Use of *Swashbucklers* will focus the game on intricate melee combat, implying that the typical hero is a master swordsman. The "default" hero of the Known Lands, on the other hand, is a lucky peasant lad, a quick-witted soldier with a musket, or a ritualistic magician. Much of the flavor of the setting comes from its being based on a historical period when firearms were supplanting swords. Combat should be quick and simple, leaving more time for magical wonders or social climbing.

Still, slender swords *are* part of the milieu; GMs who want to mix fencing with fairy stories can do so. The most appropriate style, especially for the Solar Empire, is Smallsword (French School) (pp. SW30-31); old-fashioned fighters might use the Transitional French School (p. SW30). "Italian" or "Spanish" styles might be known in the Golden Archipelago; indeed, the knights of those islands might have a monopoly on advanced fencing techniques, or at least the cinematic versions.

or sense of independence to try anything innovative. The Solar Navy is poorly funded and lacks status in this status-obsessed society.

International Relations: The Empire desires power above all, with traditions of conquest and diplomacy. Rendered cautious by the Great Pact, it preserves a façade of politeness and sweet reason while running countless devious plots.

The Cities of the Southern Plains

On the southern edge of the Empire, on the dusty plains facing the sea and the Golden Archipelago, a number of city-states preserve a precarious independence, as much because they aren't worth the effort as anything else. They're old and rundown, full of large, shabby houses, but they preserve grand traditions of philosophy and scholarship dating back to the days of the Golden Empires.

THE GOLDEN ARCHIPELAGO

South of the mainland, sun-drenched islands lie scattered across a shallow sea. They are ruled by a number of old, slightly backward states, which dream of their Golden Era. Most of the people survive by fishing or agriculture; their farms get by, despite thin soils. There is also a fair amount of local trade, conducted by small ships using a combination of sail and oars. Government, such as it is, is mostly the work of a large class of impoverished knights, fiercely protective of their honor and given to dueling.

The Solar Empire makes occasional attempts at conquest and has absorbed a few islands. The more powerful Golden Dukes are now part of the Great Pact, and their ships, few and small as they may be, are a match for the Solar Navy, with pilots who know the tricky local reefs and currents. The Solar espionage service desperately wants better charts of this region.

Golden Archipelago fairies seem especially curious and tricky to visitors. In fact, they are simply *different*, including a large number of chimeras, goat-legged "fauns," fish-tailed mermaids, and so on. Many claim to have dwelled on the same spot for



centuries, and some have very friendly relationships with neighboring humans, although others are proud and dangerous.

International Relations: Recognizing the Solar threat, the wisest Golden Dukes try to cultivate Domiciliary allies and even friendships in the Sutherlands. However, many are complacent and introspective. They ought to ally with the Cities of the Southern Plains; unfortunately, ancient rivalries and enmities prevent this.

THE WOODLAND DUKEDOMS

The eastern edge of the Known Lands fades into sinister forests, broken only by high mountain ranges. The forests in the north and east suffer long, snowy winters; those in the south are simply dark and entangled.

Human communities do scratch out a living in clearings and valleys here. Where great rivers carve through the lands, the narrow alluvial plains can be quite fertile. However, this terrain does not promote the growth of mighty kingdoms; the region is a patchwork of baronies and dukedoms. Each town, even each village, seems to be dominated by a glowering castle – and a significant proportion are in the hands of fairy folk, who either rule openly or manipulate matters from behind the scenes. The nobles whose castles stand on the great rivers are wealthier and more cosmopolitan, but, perhaps as a result, greedier. They charge heavy tolls, and are often little more than river pirates. The forests and riverside rocks are also the haunts of dark-natured fairies, adding to the region's bad reputation. Even the kinder fairy

folk tend to be melancholy and melodramatic.

International Relations: Caught between the Solar Empire and the Transgogian nomads, thinking (anachronistically) that the seas to south and north are swarming with pirates, the Woodlanders are deeply suspicious of foreigners. It's said that even those dukes who have signed up to the Great Pact have only done so for the excuse to raid Solar territory. Some petty statelets deep within the forests barely acknowledge that a wider world exists, let alone have dealings with it.

The Gogian Wall

To the east, the woodlands and hills of the dukedoms flatten out into the Transgogian Plains (see p. 22). The division between the two regions has a marker: the vast stone Gogian Wall, the greatest creation of the Golden Empires. Between 30' and 50' high and 40' thick, running for thousands of miles, punctuated only by occasional gatehouses, the Wall is said to have been built when the Empires realized that they could never conquer the tumultuous Transgogians. It should have served to protect the settled lands forever.

Unfortunately, the Golden Empires no longer exist to maintain it. The nomads still have difficulty crossing it, but in some places, powerful chiefs of local tribes have destroyed sections or thrown earthen ramps up and over it. The gatehouses are usually occupied by strong nobles, or at least tax-farming lordlings who use them as customs posts and bar invasion forces as bad for business, but lords are often corruptible. Sometimes the gatehouses have been captured or left unoccupied until some woodlander duke has seen the advantage to retaking and restoring them.

THE WHITE ARCHIPELAGO

The northernmost human-inhabited realms are a long chain of islands, stretching from the coast of the continent toward the pole. They are inhabited by hardy, dour folk, who scratch a living as farmers or go out in small boats to fish the dangerous sub-arctic seas. In the small port towns, houses have triply thick wooden walls to keep out the cold.

The Archipelago is ruled by a monarch known as the White King. However, northern folk are independent by nature, and cannot afford much in the way of taxes – even the White King's palace is simply an especially large wooden house. Most islands are governed by barons who are barely distinguishable from their subjects. But the poverty of this land should not be overstated; hard work and careful building keep its people comfortable in their furs.

Several smaller islands are ruled either by powerful, cold-natured fairies, or by witches or warlocks with great powers over the climate. Wise northerners avoid them.

International Relations: Northerners can seem introverted, although they aren't actually xenophobic; they appreciate the benefits of trade, and are friendly when you get to know them. All this is reflected in their diplomacy. The White King has signed the Great Pact, although whether he could raise much of a military force is doubtful – as is the question of whether the Solar Empire would even be interested in extending its conquests into this region.

BEYOND THE KNOWN LANDS

While the people of the Known Lands are unclear about regions beyond their own, their ideas aren't *totally* inaccurate . . .

The Sutherlands

South of the Golden Archipelago lies a land of deserts and oases, occupied by dusky-skinned people who mostly seem to be desert nomads or

Optional Alchemy Rules

GURPS Wizards includes additional optional rules for alchemy (p. WI18). However, GMs should be cautious about using these in Alchemical Baroque games; they tend to make alchemists more specialized, aggressive, and combat-oriented, whereas Alchemical Baroque magic-wielders are versatile, scholarly lab-rats.

Certainly, alchemist “gadgeteering” can explain who invents new potions, but such inventions should be rare. *Instant Alchemy* should certainly be prohibited, except in games which deliberately ignore the setting's intended style.

merchants. (In truth, the majority are peasants, much as elsewhere.) They are ruled by sultans and sheiks. The strongest states sometimes fight wars with the Known Lands. Although their military technology is rather behind the times, determination, magic, and strategic skill make them formidable.

Their religion is a wildly divergent form of Architecturalism (p. 24); rather than building spires toward Heaven, their temples have great domes, in respectful emulation of the sky. However, they regard both Known Lands Architecturalists and Horologicalists as equally misguided. The dominant magical creatures of the region are *genies*; use the djinn template (pp. SPI54-55).

The Transgogian Plains

Beyond the Gogian Wall are vast steppes, home to a race of nomads with green skins and sharply pointed ears. These people are fully human, however; the differences are literally only skin deep. They are horsemen and warriors, who like to raid their neighbors. The worst problems come when some great chief unites the tribes, declares himself Emperor of the World, and sets out on a campaign of conquest. This hasn't happened for a while, though, and the people of the Known Lands *think* that their new muskets and cannons would ward off such an invasion; nomads can't easily adopt modern technology.

Transgogian characters should be *very* rare in the Known Lands, but any who do appear should have an Unnatural Feature (green skin), a Social Stigma, and in most cases a level of Primitive. Most Transgogians encountered in their homelands have Claustrophobia; they find buildings other than flimsy tents intolerable and despise settled folk, calling them

“burrowers” and “less-men.” However, those who travel abroad may lack this phobia, or at least only have it at quirk level. Nomad characters should also have good levels of Riding and combat/weapon skills.

The Pole

Beyond the White Archipelago lies a blasted land of ice, snow, and glassy black rocks – which was all that anybody needed to know for a long time. A few years ago, however, explorers ventured into this territory and brought back a strange tale. Although they came nowhere near the pole, they came close enough to see what was located there: a great and perfectly regular tower, rising up around 200 miles. The tower had a dazzling light on the top, casting permanent illumination, and possibly some warmth, on the regions nearby. Examination by telescope showed that the tower had the look of gray stone, but no more.

The natural philosophers of the Known Lands have scores of competing theories as to how this tower came to be, and what purpose it serves for men or God. Some are arranging expeditions to investigate the tower more closely, while others are nervous that the very idea is blasphemous.

Far Beyond the Seas

Elsewhere on the globe, it is claimed, are some *very* strange lands. Many are apparently inhabited and ruled by fairy beings. Reports speak of kingdoms of giants, of tiny folk, and of talking animals; flying islands; empires ruled by insane immortals; jungles and deserts occupied by tribal peoples who worship strange gods and wield strange magics; and places where the very laws of nature seem to be different. If PCs go roving far, GMs should feel not only entitled, but duty-bound, to throw almost *anything* at them.

MAGIC AND FAITH

The Known Lands place plenty of supernatural power in the hands of mortals. How closely the different manifestations of this power are related is a matter of debate among philosophers, but not everyone cares; there is something to be said for just using whatever works.

FORMAL MAGIC

Magic, as worked by humans, is built around two aspects: matter and spirit. Matter magic is expressed in the form of herbal and alchemical concoctions (and the very occasional artifact), while spirit magic is worked through lengthy rituals. However, the two, while seemingly very distinct, are entwined in a way which puzzles even their practitioners; no one can advance in one without advancing in the other. It seems that effective magic demands a detailed and practiced insight into both matters of the spirit and the subtleties of the physical universe. This pattern is repeated in all schools and styles of magic.

The two general types of magic-workers encountered in the Known Lands are, first, witches and cunning-men, who brew herbal potions and have dealings with minor nature spirits; second, natural philosophers and master warlocks, who study the high arts of alchemy and perform ritual magic to commune with arcane entities. The difference between the styles is substantial; the underlying principles are identical.

(If uncanny foreign wizards appear in games, GMs should give them their own paired specializations of Ritual Magic and Alchemy, setting limitations and prerequisites comparable to those applying to witches and natural philosophers.)

Ritual (Spirit) Magic

This uses the Ritual Magic system in *GURPS Spirits* (pp. SPI81-106), with the following special conditions:

Ritual Magic Skill may never differ by more than two levels from the character's Alchemy skill, which takes mandatory specializations in this setting. *Ritual Magic (Witchcraft)* is used by witches, cunning-men, and some

rustic warlocks, and must be within two levels of Alchemy (Potion-Brewing). *Ritual Magic (Esoteric Philosophy)*, employed by natural philosophers, a few physicians, and the more urbanized sort of warlock, cannot differ by more than 2 from Alchemy (Philosophic Mysteries), and has full Literacy, Philosophy (Neoclassical)-12, and Theology-12 as prerequisites.

others' dreams" simply make deep telepathic contact with those people's dreaming minds, and the Dream Sanctum ritual merely protects against other Dream rituals.

- For characters using Ritual Magic (Esoteric Philosophy), skill with the Path of Health cannot exceed skill in Physician/TL5, and skill with the Path of Nature cannot exceed skill in Naturalist.

Alchemy

Alchemy uses the rules in *GURPS Magic* (pp. M98-102) with the following special conditions and variations:

This setting is treated as normal mana for purposes of alchemy. Use the costs listed for "common magic" campaigns. Also, ignore the mythological names for elixirs; Known Lands mythology is not that of our world.

Alchemy Skill has two mandatory specializations. *Alchemy (Potion-Brewing)* may never differ by more than 2 levels from the character's Ritual Magic (Witchcraft) skill, and cannot exceed the character's Herbalist skill. *Alchemy (Philosophic Mysteries)* cannot differ by more than 2 levels from Ritual Magic (Esoteric Philosophy), and cannot exceed the average of the character's Chemistry/TL5, Philosophy (Neoclassical), and Physics/TL5 skills.

Formularies are sold openly, but good ones are rare and expensive, despite the existence of the printing press. The problem is that there is no standard alchemical notation, and many of the best alchemists seem to be crazy, or at least eccentric and willfully obscure. Hence, there are a lot of poor formularies around. Only a few booksellers know how to identify the good ones – and the good ones sell at a premium. The typical base cost is \$200 per formula. Cheaper books exist, but for each -10% reduction in price (to a maximum of -70%), apply a -1 to any attempt to make an elixir using formulas from the book. An alchemist may add such formulas to his personal list when advancing in Alchemy skill, but takes the penalty whenever making that elixir until he can find and study a better text. There are no secret formulas (and no central "Alchemist's Guild").

It seems that effective magic demands a detailed and practiced insight into both matters of the spirit and the subtleties of the physical universe.

Sacred Space mostly consists of locations consecrated by magic-users for their own use. A few covens of witches or warlocks have secret temples which grant +1 or +2 to rituals; anything better is rare or nonexistent. (The same sacred spaces turn out to work equally well for both traditions, to the puzzlement of some practitioners.) Churches do not qualify as sacred space, cannot be consecrated for this purpose (unless first deconsecrated as churches by a priest), and impose a penalty of -8 on anyone foolish enough to attempt rituals within their confines.

Known Rituals: All the paths and rituals detailed in *GURPS Spirits* are available, with the following special features:

- The Path of Cunning has no default from Ritual Magic (Esoteric Philosophy). Characters with that specialization can only use this path if they specifically learn it.
- The Path of Dreams works as listed, but the "Dream World" is not a spirit world. Characters who "enter

Magic Items

Magic items can be found in the Known Lands, but few of them resemble those in conventional fantasy games.

Aside from alchemical elixirs and levitation devices, a few items may be created by or related to ritual spirit magic; see pp. SPI91-92. However, fetishes are rare. Binding ghosts is widely classified as illegal necromancy and is generally seen as immoral; other spirits (such as fairies) tend to be too powerful to bind or to have vengeful allies who *will* seek to free them.

Fairies are occasionally able to create or acquire strange items with unnatural properties, and these are sometimes given to or otherwise acquired by mortals. (This is the best way to explain the presence, here and there, of the odd magic sword.) However, fairy artifacts tend to be *very* strange, and are often loaded down with prohibitions, bizarre conditions, and outright curses.

Some university libraries hold formularies, but access tends to be limited to members of the institution in good standing or high-status visitors vouched for by a member. ("Donations to library funds" can help.) Libraries permit *study* of books, but not removal – certainly not for use during elixir creation in chemical-filled, dangerous laboratories! Gaining access to many libraries should be a minor adventure in itself, and the quality of their books can be determined at whim by the GM. Also, most Known Lands library catalogs give -3 or worse Research rolls.

Characters who use Alchemy (Potion-Brewing) mostly learn alchemical formulas from each other, rather than from books. (Actually, some witches are illiterate.) When attempting to make elixirs using a formulary, such a character takes an additional -2 penalty. A witch advancing in Alchemy skill and wanting to learn new formulas will usually have to seek out an NPC teacher and persuade her to give lessons.

Attempts to analyze potions using Alchemy (Potion-Brewing) are at -3. This is a pragmatic, nonanalytical version of the skill.

Elixirs of *Fire Resistance*, *Transformation*, *Flight*, and *Invisibility* may be made up as unguents; indeed, this is the *only* form in which they can be made using Alchemy (Potion-Brewing). However, the unguent must be applied all over the user's body. Thus, witches and cunning-men (and their customers) often have to strip more or less naked to use such powders. They can dress again afterward if

they choose (unless they are transformed into a different shape . . . and note that clothes will not be rendered invisible or fire-resistant), but some consider this a waste of valuable effect duration.

Also, when an *Elixir of Flight* is made using Alchemy (Potion-Brewing), it grants rather unstable abilities. The user makes any Flight (Unwinged) skill rolls (including those from default) at -3. When attempting to land, he must roll against this skill or suffer a fall of 1d yards. These problems may be negated if he uses a moderately bulky "prop," selected when first learning the skill, to stabilize his flight; most witches favor broomsticks, but some prefer weirder options, such as giant pestles and mortars.

Elixirs of *Youth* and *Regeneration* are notoriously unreliable. Anyone using one must make a HT roll at +2. On a normal failure, the potion doesn't work; on a critical failure, the user ages 1d years and takes 1d damage. There are *no* Elixirs of *Resurrection*, *Reanimation*, or *Foreknowledge*.

The secret of transforming lead into gold is as much a mystery here as anywhere else (although plenty of natural philosophers claim to be coming close), and the skill gives no default to Chemistry. Natural philosophers have to learn Chemistry before they learn Alchemy, and witches are rustic potion-brewers, not scientists.

Levitational Salts are an alchemical potion, requiring \$1,000 in materials and 15 weeks, giving a market price of \$3,700; the skill required is Alchemy (Philosophic Mysteries) at -1. Porous

materials treated with this preparation will rise when exposed to the air, provided that the sun is not in the sky (visible or otherwise!). Each dose can be used to treat 25 square feet, and the substance provides 5 lbs. of lift per square foot. If the material is folded over on itself, the effect is seriously diminished; the outer hull of a vehicle is all that can be usefully treated. This permits the creation of very flimsy flying devices, usually propelled by sails or drawn by harnessed birds.

Recently, an alchemist in the Green Archipelago has created a *machine* which can fly by day or night, albeit better after dark. The clockwork at the heart of this "Spherical Chariot" (so named because its creator's declared intention is to use it to investigate the functioning of the celestial spheres at first hand) is made of strange alloys, and can direct energies through its metal structure to lift and move the vehicle; it appears to slide along shafts of moonlight. Operated by an expert, the mechanism can also, somehow, interfere with the operation of similar devices nearby. The Domiciliary Republic is struggling to keep the Chariot's design closely secret, but rumors suggest that either spies have obtained the crucial information, or alchemists elsewhere are recreating the invention from first principles.

RELIGION

In the past, all of the Known Lands shared a common (if vague and abstruse) faith. However, over the centuries, this has divided into sects, and today there is a religious undercurrent to international conflicts.

The most important sects are the *Architecturalists* and the *Horologicalists*. The former, strongest in the Solar Empire and the south, hold that the universe was created by God the Architect, and that humanity has a duty to embellish its fabric and to emulate the deity by building many magnificent buildings. Architecturalists are fond of churches and cathedrals with great spires, which they see as reflecting and emulating the Creator's most impressive handiwork. The faith also assumes that God, like any architect, may occasionally return and adjust his handiwork, allowing the occasional miracle. The favorite portable Architecturalist symbol is a detailed miniature painting – a map or

landscape image. Dedicated Architecturalists suspect any clockwork device of representing the Horological Heresy, although most permit such mechanisms for purely secular purposes.

Conversely, the Horologicalists of the north and west see the universe as a *mechanism*, a great clock which God created, wound up, and left running. Because the mechanism is perfect, he doesn't need to manifest his power to sustain it – although attempted damage is blasphemous nonetheless. Very respectful study of the clockwork is a lawful way to understand God better. Horological churches tend to be plain and unembellished, to emphasize their difference from Architecturalist constructions, although some have striking clocks of great precision, seen as holy symbols. (However, a small

subsect, the Humble Horologicalists, see any clock as a blasphemous imitation of perfection.) Devout Horologicalists regard painted art as symbolic of Architecturalist vanity.

The Power of Faith

While priests hold that the power of religious artifacts and prayers over the spirit world is a divine mystery, some philosophers have analyzed the matter objectively. They conclude that saying that this power comes from God is as good a theory as any, but God seems much more impartial between various sects than the sects themselves would suggest. Some downright atheistic scholars wonder if the power of mortal belief is effective by itself.

Certainly, anything which clearly and specifically symbolizes religion to a group of worshippers – a church, the sound of its bells, a religious service, or a holy symbol – causes difficulties to many spirits, and severe pain to devils. A very few humans (with the True Faith advantage in ***GURPS*** terms) manifest this power directly, by virtue of personal holiness. Burial with proper ceremonies *sometimes* prevents a dead soul from returning as a ghost, although this is unreliable.

All this is slightly more useful than it sounds. For example, *some* diseases in this setting (about one in six) actually involve the presence of malevolent spirits. In such cases, religious ceremonies, holy symbols, etc., may give the patient from +1 to +4 on HT rolls, and attending doctors the same bonus to Physician.

NONHUMANS

With the exception of domestic cats, all nonhuman sapient beings in this setting are explicitly supernatural – spirits, either intangible or permanently garbed in flesh.

Ghosts

If a person dies with some great mission unfulfilled or a pressing need for vengeance, or in especially bizarre circumstances, he *may* become a ghost, or at least leave a residue of psychic energy. Determining whether this happens if a character dies in play is left to the GM; even if a PC becomes a ghost, it should usually be played as an NPC. (If the GM really wants to roll dice at such times, a Will roll at -5 might enable a spirit to stay around. GMs can impose further modifiers for proper burial rites or lack thereof, pressing vows, an overwhelming need for revenge, and so on.)

Ghosts are spirits with access to the "outer spirit world" and a range of spirit powers. Use the Apparition and Ghost templates in ***GURPS Spirits*** (pp. SPI50 and SPI59), but with the No Spirit Travel limitation on their Spirit Form, reducing package costs by 10 points (most ghosts simply cannot access any inner spirit worlds). However, ghosts are very diverse, and may have the full range of enhancements and limitations on Spirit Form. GMs may also give them other advantages and special powers, possibly

represented for convenience by knacks (pp. M96-97).

Although ghosts are the only actual undead in this setting, their sheer range of powers brings them close to other fantasy undead. For example, a ghost with a limited version of the Animation enhancement could animate its old body, functioning as a zombie or skeleton, while a "vampire" might be a ghost with high levels of the Physical Form enhancement and the Bite advantage.

Fairies

Enigmatic, whimsical, often powerful, fairies exist on the border between flesh and spirit. Some grant wishes; others steal babies. Their physical forms are to some extent malleable projections, but many lesser fairies are fixed to one shape; the effort of manifesting physically drains their powers so much that they can't change back. There are even reports from far-off lands of whole races of permanently manifested fairies, whose current generations have never been anything other than physical beings. Fairies who take physical form, permanently or temporarily, often seek to imitate human forms, but do so imperfectly. Quite a few have a serious problem with size; hence, some become giants, and others become "little people."

The reasons why minor fairies adopt physical forms vary; mostly, it's because weak spirits can't accomplish very much or experience much sensation. A physical body may be vulnerable, but it can have lots of fun. Curiously, also, while spirit-fairies are physically repelled by iron and utterly terrified by the symbols of human religion, those who adopt permanent physical forms often lose such constraints.

Fairies have access to various "inner spirit worlds." Most who retain the ability to become intangible can travel to at least one such realm, and even those who are locked into a physical shape sometimes know of hidden gates or paths. The most powerful fairies rule such realms as absolute monarchs. A few, usually the darkest and most twisted, can also enter the "outer spirit world" of ghosts and phantoms. Some *might* be able to travel to Hell, but all absolutely refuse to do so; devils enjoy pulling their butterfly wings off far too much.

Although they are often whimsical, fairies may fixate on one particular issue or individual. Also, sometimes, powerful fairies assign lesser "subjects" to specific tasks. The fairy then follows the object of its attention around in invisible spirit form, using poltergeist, probability alteration, and materialization powers to help or hinder. The victims of "fairy curses" (or "fairy blessings") may be driven mad.

There are a vast variety of fairies; the following are just some well-known examples. Note that all types often have many more mental disadvantages in addition to those listed.

Flower Fairies manifest as tiny humans with gauzy wings and colorful costumes. Use the Faerie template on p. SPI57, with the Vulnerability to Iron replaced with a Severe Phobia regarding religious symbols (devout prayers, holy ground, the sound of church bells, humans with True Faith, etc.), worth the same -20 points, and the following additions: ST -8 [-70]; DX +3 [30]; Beautiful [15]; Extra Fatigue 18 [54]; Flight (Winged, -25%) [30]; Inconvenient Size [-15]; Reduced Move (Ground) -4 [-20]; Short Arms [-10]. *105 points.*

Fairy Queens are coldly beautiful beings who rule fairy realms. They have the power to use their abilities very dramatically if they wish. Use the Faerie template, with the Physical Form enhancement added to Spirit Form (+80 points), the Vulnerability replaced with the same Severe Phobia as flower fairies, and the following additions: ST -2 [-15]; DX +3 [30]; Very Beautiful [25]; Extra Fatigue 30 [90]; Flight [40]; Callous [-6]; Clueless [-10]; Reduced Move (Ground) -1 [-5]. *320 points.*

Ogres are fairies who have burned out their spirit powers taking a large physical form, reducing their minds to a parody of intelligence in the process. Treat them as a normal material race; they could even be used as PCs, although they're stupid and dull. They have ST +15 with the limitations No Jumping Bonus (-5%) and Doesn't Affect Skill Defaults (-5%) [135]; DX -1 [-10]; IQ -3 [-20]; HT +3 [30]; Acute Hearing +5 [10]; Acute Taste/Smell +7 [14]; Combat Reflexes [15]; Discriminatory Smell [15]; DR 4 [12]; Extra Hit Points 12 [60]; High Pain Threshold [10]; Medium [10]; Alcohol Intolerance [-1]; Attentive [-1]; Bad Temper [-10]; Dull [-1]; Impulsiveness [-10]; Inconvenient Size [-10]; Low Empathy [-15]; Monstrous Appearance [-25]; Reduced Manual Dexterity 4 [-12]; and Social Stigma (Barbarian) [-15]. Most carry clubs or other crude weapons, and are competent with these and with Brawling skill. *181 points.*

(Fairies with more power who adopt similar forms may become giants, with vast ST and high DR, PD, and hit points. Some even preserve a little intelligence in the process.)

Cats

Known Lands domestic cats appear much like those in our world, but some of them are rather different. This is not actually supernatural; they aren't spirits, fairy beings, or possessed, just an unusual natural species (although this setting can stretch the definition of "natural"). Smarter cats often associate with witches, leading to talk of "familiars," but in fact this is simply a way for them to get interesting conversations from people who don't mind talking to nonhuman beings, in exchange for use of their exceptional senses.

A typical cat in the Known Lands is, in fact, identical to those of our world, apart from being somewhat more intelligent and slightly longer-lived, and possessing an innate sense for supernatural phenomena. However, some are far more intelligent, or otherwise exceptional. To reflect this, Known Lands cats may be treated as characters, with the following racial package:

Cat (Intelligent)

-14 points

Attributes: ST -6 [-50]; DX +4 [45]; IQ -4 [-30]; HT +3 [30].

Advantages: Acute Hearing +2 [4]; Acute Taste and Smell +2 [4]; Alertness +6 [30]; Attractive [5]; Catfall [10]; Claws [15]; Combat Reflexes [15]; Decreased Life Support [10]; Discriminatory Smell [15]; Double-Jointed [5]; Early Maturation 3 [15]; Enhanced Move 1/2 (Running) [5]; Faz Sense (3-hex range, -20%) [8]; Four Legs [5]; Medium [10]; Night Vision [10]; Perfect Balance [15]; Sharp Teeth [5]; Ultrahearing [5].

Disadvantages: Horizontal [-10]; Inconvenient Size [-15]; Mute [-25]; No Fine Manipulators [-30]; Phobia (Water, mild) [-5]; Poverty (Dead Broke) [-25]; Reduced Hit Points -8 [-40]; Short Arms [-10]; Short Lifespan 3 [-30]; Sleepy (50%) [-10]; Social Stigma (Valuable Property) [-10]; Stubbornness [-5].

Racial Skills: Acrobatics at DX [4]; Jumping at DX [1]; Stealth at DX+2 [8]; Climbing at DX [2].

Cats' Climbing skill has a special effect; they are at +3 when climbing up, but -3 when climbing down.

Some cat characters buy their IQ up significantly, or have fortune-related advantages such as Luck or Serendipity. A very few buy off Mute, sometimes replacing it with Disturbing Voice.

Cats can make interesting Allies or even PCs. Although many are selfish, even solipsistic, they aren't usually actively evil. On the other hand, a truly villainous cat can be dangerous, ruthless, and sadistic.

Supernatural Animals

Some fairies assume animal form; in doing so, they may accidentally reduce themselves to animal intellect, or have even more trouble with consistency. Thus, they may become oversized or oddly colored animals, or *chimeras*, merging body parts and characteristics from several different species. Also, occasionally, spirits of various types possess natural animals and become permanently bonded. Hence, all sorts of strange animals infest the woods and wildernesses of the Known Lands, displaying unnatural size, coloration, powers, intelligence, or numbers of legs or heads.

GMs can take the details for any natural species and adjust them at whim. See *GURPS Bestiary* for templates enabling several species to be treated as characters, and guidelines on creating more.

Dragons are a dangerous type of chimera – an oversized reptile with the wings of a bat or bird. Contrary to legend, dragons cannot breathe fire, but often possess acidic or poison Venom (p. CI71), which they may spit (add the Ranged enhancement). A typical dragon has ST 50-100, DX 11, IQ 7, HT 13, 30-60 hit points, PD 3, DR 5, Dodge 6, and a Move of 7 on the ground or 15 in the air; however, there is a lot of variation.

Arcane and Nature Spirits

Some “wild” spirits transcend the capricious nature of fairies. They are usually closely associated with natural phenomena or locations. In addition, natural philosophers sometimes make contact with spiritual beings associated with “higher realms” and even abstract concepts.

Encounters with such beings should be rare and unnerving; most have great power and regard themselves as beyond mortal concerns. However, some are sympathetic, few are actually malicious, and they are a key to higher levels of magic. Each should be defined as an individual, based on the Animal Spirit, Personification, or Spirit of Place templates in *GURPS Spirits*.

Devils

While the “higher metaphysics” of the Known Lands remains obscure, Hell and its devils are demonstrably real. These beings are malicious and dangerous, although less formidable individually than their counterparts in many fantasy settings.

They are spirits who can sometimes travel to the mortal world (or the spirit

Languages

Major languages in the Known Lands are *Greenspeech* in the Green Archipelago, *La Langue* in the Solar Empire, *Norderwerten* in the Woodland Dukedoms and White Archipelago, and *Modern Golden* in the Golden Archipelago and the Southern Plains. Other languages and dialects may be found in minor kingdom and remote provinces. Scholars frequently study *Old Gold* (also known as the *Classical Tongue*), as used in the Golden Empires, though no one speaks it as a native today.

Merchants and explorers sometimes have a smattering of *Sutherlander* or the Transgogian tribal dialects. The remote corners of the world have dozens more languages, of course.

realm of ghosts). When they manifest physically, they can only manage one shape; a bright red humanoid figure, between 2 inches and 6 feet tall, with wings, short horns, and a chittering voice. In this guise, they scurry around, often seeming comical, even pathetic. However, they have an infinite capacity for petty malice.

Dealings with devils are a major taboo *everywhere*. However, they are competent tempters, and cautionary tales may dwell a little too much on the short-term benefits which mask the danger, so this is taboo is frequently broken. Hubristic warlocks and philosophers adopt overly subtle

metaphysical ideas or think they can outwit Hell, and talk themselves into disaster. Other people are just plain evil.

Such devils are ST 2-7, DX 12, IQ 10, and HT 12, with 4-14 hit points, 15-30 fatigue points, PD 1, DR 9, Dodge 6, and a Move of 8 both on the ground and flying. They have the Spirit Form advantage with the Physical Form and Unlimited Lifespan enhancements but no Shapeshifting skill, and a powerful Dread of anything holy or sacred (3-hex radius); even their powers cannot penetrate the protected zone.

CHARACTERS

Most “Alchemical Baroque” PCs should be human; a 100-point base is perfectly reasonable. Indeed, lower starting points may be appropriate for fairytale “peasant lads making good.” Campaigns centered on great courts should have PCs of 150 to 250 points (with a lot of those points going into Status and Wealth), and can also produce formidable wielders of magic. The default level of Literacy in this setting is Semi-Literacy (p. CI29).

Occult or paranormal advantages related to spell-based magic are unavailable to humans, as are Magic Resistance, Awareness, Second Sight, Shapeshifter, and Spirit Empathy. Likewise, most “paranormal religious” advantages, such as Blessed, Divine Favor, and Faith Healing, are banned, although True Faith is permitted. Channeling and Medium are available, but aren’t mandatory for witches or natural philosophers, and indeed seem quite rare even in those professions. (Some natural philoso-

phers hire talented mediums as assistants, tolerating their frequent eccentricities.) Witches, natural philosophers, and the like may have Ritual Aptitude; Ritual Adept is also known, but has a prerequisite of Ritual Magic skill at 18+. (It may be purchased with experience points after that level is achieved.) Faerie Empathy is useful for those who have dealings with the fairies, and Destiny seems downright common.

COMMON CHARACTER TYPES

The following are plausible “adventurer” character types:

Aristocrat

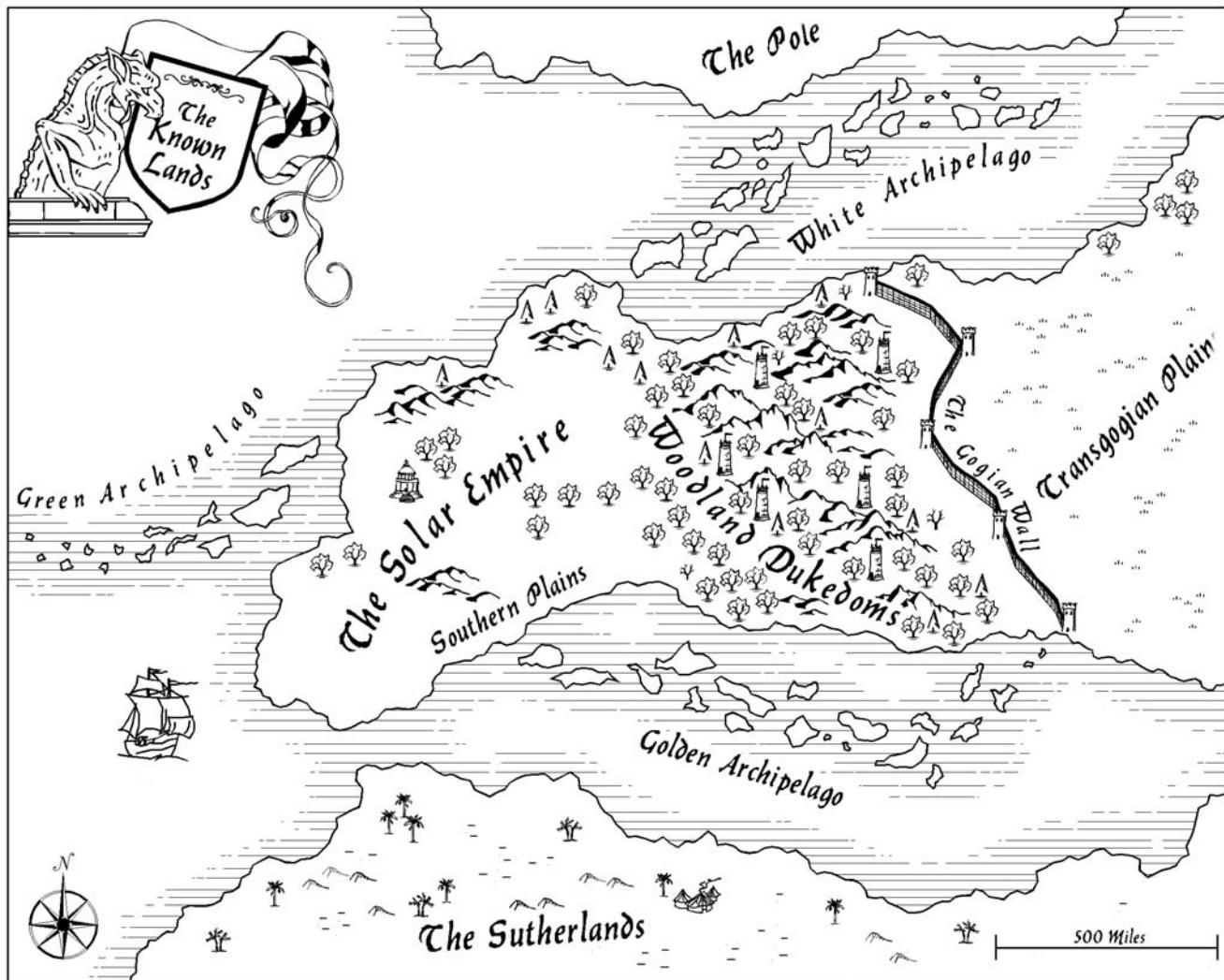
Younger sons of the nobility routinely set out to make their own way

in the world, for instance by pursuing a military career or making a good marriage. Even oldest or only sons may have to pursue quests, petition at court on behalf of their families, or fight for their country or their family name.

An aristocrat has Status and usually Wealth, and in most cases has been trained to run an estate or to fight as a cavalryman. The Gentleman’s Code of Honor is common, though not universal.

Natural Philosopher/Master Warlock

Students of higher and arcane powers, natural philosophers may be drawn into adventures which demand their specialized knowledge and skills, or the need for funds may lead them to the mercenary life of the freelance warlock.



In addition to the advantages and skills appropriate to their profession, scholars have enough standing in society to qualify for positive Status. Most also have a range of scholarly mental skills, and are often Curious.

Peasant Lad

The archetypical fairytale hero, the sturdy young peasant may be boldly seeking fortune, or he may be a "holy fool," with a strange Destiny. Average to low Status, negligible Wealth, and a lack of sophisticated knowledge leave PCs with plenty of points to spend on attributes or advantages such as Fit or Toughness.

Peddler

Wandering between villages, with one eye out for profit and the other scanning for danger, peddlers often have adventures even if they aren't looking for trouble. A good IQ, Area Knowledge, and Fast-Talk as well as Merchant skill can go a surprisingly long way.

Sailor

Bold to the point of recklessness, sailors are adventurers by default. They need Sailor, Seamanship, and Boating skills, of course; many possess Gunner (naval cannon) and Fearlessness. Merchant seamen may learn Merchant skill; military sailors may acquire Axe/Mace, Black Powder Weapons (flintlock pistol or shotgun), or Shortsword. Either may have learned some specialization of Survival. Carousing and Brawling fill the time between voyages, sometimes leading to Alcoholism. Officers may know Fencing, Leadership, Navigation, Shiphandling, Tactics, or social skills to go with their Rank and Status, while ships' surgeons and carpenters have their own professional requirements.

Servant

Some servant PCs will be faithful companions to higher-Status characters; others may be downtrodden kitchen skivvies. (The luckiest of those

have fairy godmother Patrons.) Again, low Status and Wealth leave plenty of points for assorted talents, and perhaps some job-related skills.

Soldier

While the serving soldier has little time out of barracks and away from the drill square, even in peacetime, the veteran bound for home, the straggler cut off from the army, the hero given leave as a reward, and the deserter all make fine PCs (especially if they somehow keep hold of their weapons).

Military training implies good physical attributes, advantages such as Combat Reflexes and Fit, and skill in Savoir-Faire (Military) and Tactics (which may be specialized in Drill, representing rote learning in standardized maneuvers and techniques; see p. WA10) as well as in weapons. An ordinary footman will have Black Powder Weapons (flintlock musket) and Spear, while a grenadier will have good strength, perhaps strictly average intelligence (or at least little imagination) combined with Strong Will or

Fearlessness, and Throwing and Shortsword skills. Cavalrymen will have Riding, Broadsword, and maybe Black Powder Weapons (flintlock pistol) or Lance. Artillerymen will have Gunner (cannon) and probably some combination of Animal Handling, Armoury, and Teamster.

NCOs and Officers: Along with appropriate Rank (if they are still with the colors), sergeants add Intimidation, Leadership, and possibly Teaching, while commissioned officers have Status, Broadsword or Fencing, Riding, Savoir-Faire, and *maybe* Leadership, Strategy, and Tactics.

Student

While the natural philosopher has mastered powerful arts, the student still has the freshness and vitality of youth. His mental skills may be patchy, but his IQ may suggest some promise, and his physical attributes can be respectable. Good Carousing skill is mandatory. Most students have some Status, and either a little Wealth or a wealthy Patron (usually family), but poor, determined scholars also exist.

Witch/Cunning-Man

While most pragmatic rural magic-workers are too busy looking after their villages or their own interests, some go adventuring to fight evil, aid friends, or acquire magical secrets.

In addition to Ritual Aptitude and appropriate specializations of Alchemy and Ritual Magic, a witch will probably have medical knowledge. Good witches (with a Sense of Duty to their neighbors) usually have social skills, a little Psychology, and perhaps Meteorology or Naturalist; evil ones (typically with Bully, Lecherousness, or Megalomania) favor Intimidation, Poisons, and Stealth. Flight (Unwinged) is also popular; note that the flying witch will need to choose a "prop," such as a broomstick. "Cunning-men" traditionally have similar skills with less power and more subtlety, while minor warlocks usually share the same powers but with less subtlety.

WEAPONS AND EQUIPMENT

This setting is early TL5; available equipment is similar to that in our world around 1720. Base starting wealth is \$750 (possibly described in a bewildering variety of local currencies). Characters who are Very Wealthy or richer must put at least 80% of starting funds in a home, land, furniture, etc., but less rich adventurers may have entirely portable resources. (A settled peasant, renting his farmland, may have Average Wealth, but with most of it tied up in the form of a cottage and tools.)

Flintlock firearms are the standard military weapons. Use the statistics for the flintlock pistol (p. B208) and the Brown Bess musket (p. B209); blunderbusses (p. B209) are mostly limited to use in shipboard boarding actions, although some stagecoach guards also carry them, especially if escorting mail, and something similar may also be used for hunting.

A line infantryman's socket bayonet costs \$2, weighs 1 lb., and takes four seconds to fix or detach. When it is fixed, the combination can be used as a two-handed spear at -1 to skill. A detached bayonet can be used as a large knife, but at -1 to skill due to the clumsy grip, and it can only be used to thrust, not to cut. If a bayonet is fitted, loading the musket takes 10% longer, and shots are at -1 to hit due to poor balance.

Divide the cost of melee weapons from the **Basic Set** by 20, to reflect the economic balance of the setting and the relative ease of production of such things. Types widely available include hatchets and axes (essentially tools), broadswords (the standard cavalry arm), smallswords (a gentleman's weapon, mostly for lightness, convenience, and show), knives and daggers, lances (among a few cavalry), and shortswords (carried by artillerymen and grenadiers). Some infantry sergeants carry polearms as a badge of rank, but most lack the relevant skill. Woodcutters *always* wield two-handed axes.

The clothing, food, supplies, etc., in the **Basic Set** Fantasy/Medieval equipment tables are all generally available; again, divide costs by 20. However, luxury items, especially formal clothing, carriages, and banquets, have virtually no upper limit to cost; wealth should be dazzlingly visible!

Armor and shields are rare, being considered out of date; do *not* divide the **Basic Set** costs for such things, which must be made to order. Indeed, GMs might double or triple these prices, particularly for metal armor, or require characters to have an Unusual Background to have routine access to a supplier. However, a Status 3 or higher character might have some archaic items among his starting equipment, salvaged from the junk room or trophy gallery at home. (Some fairies also wear willfully archaic plate armor, made of strange metals.)

Scenario Seeds

Country House Mystery: PCs traveling in the Green Archipelago visit one of its great houses. However, shortly after they arrive, the Householder turns up dead in a ditch. Suspected of murder themselves, our heroes must disentangle a web of greed, jealousy, inheritance, old lawsuits, and secret correspondence.

The Haunting: Crossing a windswept moor, the PCs are confronted by a ghost, which is seeking to resolve unfinished business from its life. But what rewards (or threats) can a ghost offer? How long ago did it die? And can a ghost's word be trusted?

Hall of Mirrors: Fate takes the PCs to the Palace of the Sun. Once there, they must thread the maze of the Solar bureaucracy, acquire patrons and allies, identify duplicitous enemies, and perhaps gain the favor of the Emperor himself – or foil his grandiose schemes of conquest.

Playing Godmother: The PCs encounter a fairy who serves as guardian to an innocent young NPC in a nearby town. Unfortunately, enemies have cast spells of warding which prevent her from entering the place. In return for the promise of fairy favor, can the PCs provide mundane substitutes for magical aid?

Job Table

Job (Required Skills), Monthly Income

Poor Jobs

Casual Laborer (ST 9+), \$2	ST	LJ
<i>Struggling Jobs</i>		
Infantryman (Black Powder Weapons 12+), \$7 + rank plus room and board		
<i>Average Jobs</i>		
Craftsman (Craft skill 12+, Status 0+), \$2×skill	PR	-1i/-2i
Village Witch* (Alchemy 12+), \$25	IQ	-1i/-1i, 1d
<i>Comfortable Jobs</i>		
Consultant Philosopher* (Ritual Magic 15+), \$200	IQ-2	-2i/social disgrace
Merchant Captain* (Merchant 10+, Leadership 10+, Shiphandling 11+), \$150 plus room and board	Worst PR	-1i/-6i

*Freelance jobs.

GURPS High-Tech covers gunpowder-era technology, and especially firearms, in more detail. Anything described there as appearing by 1730, *except for TL5 rifles*, should be available in the Known Lands; TL4 weapons are likely to be rare and

rusty, although TL4-style rifles may be in use as hunters' weapons. **High-Tech** also has notes on early grenades and the elite troops who use them (pp. HT44-45); grenadiers make fine PCs, and grenades might be useful against some types of problem.

Status and Cost of Living

Status	Examples	Monthly Cost of Living
8	The Solar Emperor	\$20,000+
7	King	\$5,000+
6	Prince, duke	\$2,000
5	Earl, bishop	\$1,000
4	Baron, viscount	\$500
3	Knight	\$100
2	Village priest, lawyer	\$40
1	Rich farmer, master craftsman	\$20
0	Farmer, journeyman	\$10
-1	Lesser servant	\$5
-2	Known criminal	\$2
-3	Beggar, vagrant	\$2

STATUS AND EMPLOYMENT

The society of the Known Lands is structured and formalized, although the old systems are failing a little. There are impoverished knights and even aristocrats, and some peasants and merchants have wealth far above the norm for their class.

Jobs

While details of long-term employment don't really fit the tone of a fairytale game, GMs may define the pay and conditions of any jobs that PCs pursue as seems appropriate. The table shows some examples:

CAMPAIGNING

TYPES OF CAMPAIGNS

Seeking Destiny: Peasant youths and soldiers home from the wars go out on picaresque quests for fortune, often aided by witches and friendly fairies. Wandering the countryside or the cities, they encounter human villains, fairy ogres, or magical wonders.

Spy vs. Spy: With the threat of war hanging over the Known Lands, black-cloaked agents jostle and plot. Alchemical secrets, military plans, and the names of traitors and secret friends are the treasures in such games, sought by agents, warlock-intelligencers, and the smarter class of aristocrat.

College Life: In great universities, students and philosophers carouse, debate, and occasionally study. Alchemical powers or ancient lore attract the interest of some; prospects of noble patronage are the immediate concern for others.

Gone for a Soldier: When war does break out, life may be harsh for the common soldier, but a clever lad can prosper, if he's prepared to bend a few regulations.

Away With the Fairies: Dealings with supernatural creatures are rarely safe, but sometimes, the rewards almost justify the risk. Just be careful about visiting fairyland.

Age of Exploration: Take to the high seas! If the magic and mysteries of the Known Lands aren't enough, who knows what strangeness lies beyond the horizon?



CHAPTER THREE

MYTHIC

BABYSITTING

BY ELIZABETH MCCOY AND WALTER MILLIKEN



About the Authors

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(Special thanks to Genevieve Cogman, Prodigal, and R. Sean Borgstrom for suggestions, inspiration, and additional material. We want some of what's in *their* water, please.)

The soul is healed by being with children.
– Fyodor Dostoevsky

MYTHIC WHAT?

Babysitting.

(No, not the myth of babysitting – though many parents may complain about how hard it is to find. That's Mythic Babysitters. This is Mythic Babysitting.)

What, you thought that Zeus and Hera stayed home with little Hephaestus? That Shiva and Kali can't go out for drinks, war, and mayhem? That Beowulf's parents never needed to get some time to themselves? That superheroes can't have a quiet dinner and a break from the toddler? (And how *does* one toilet-train an infant whose body is made entirely of flame, anyway?) That the Archangel of Creation never wants to get out occasionally without 50 proto-angels trying to paint his wings sparkly blue? That the Bride of Frankenstein always has daycare? That the Patriarch of the

Cabal doesn't need someone to watch the cubs during the full moon? That . . . well, you get the idea.

Someone's got to do the job, and that's what the player characters are for . . .

Ordinary babysitting is dangerous enough, as the "Buttons and Mindy" segments of *Animaniacs* amply demonstrate. Mythic Babysitting is a setting where babysitters may have to arrive equipped with plate armor, tear gas, and cattle prods. Where babysitters may encounter perfectly normal toddlers from Arcturus, babies from Atlantis, pre-teen changelings from Underhill, and even a simple child with only a laboratory in her garage behind the secret wall. A setting where babysitters can return with rutabaga cake, fish cookies, faerie gold, anemia,

Trifibulan Death Acne – and their homework still unfinished . . .

Playing a Mythic Babysitting session requires at least one GM and one player (the babysitter), but some cases can require two babysitters, tag teams, or even groups. (For instance, if you're taking care of the Ancient Blue Wyrm's 50 new hatchlings, or even a single baby giant, you may need everyone you can get.) On the other hand, the other players may get into the fun as the *Adversaries* (the children) – see *Competitive Babysitting*, p. 42.

By default, Mythic Babysitting campaigns are set in the world of *GURPS IOU*, but that book only provides even more ways to torm- *entertain* the players; it's useful, but not required.

BABYSITTERS UNLIMITED

Babysitters Unlimited – BU for short – is a fully accredited and licensed, impeccably documented childcare company. It promises individual attention for your offspring, delivered to your door and guaranteed to provide complete satisfaction.

Considering the various calamities that occasionally strike an assignment, experienced babysitters view all that over-the-top ad-copy and airtight paperwork with cynical eyes. Yet, somehow, it stands up.

Employees visit the office once when they're first hired, and then monthly thereafter, for performance reviews (a perfunctory affair) and getting their schedules for the month. Naturally, sometimes a parent cancels, the employee gets asked to cover for another sitter who's suddenly become unavailable, or emergencies crop up (these allegedly are good for extra pay) – but for the most part, schedules are accurate.

New employees are required to take "babysitting classes," which are

basically CPR and diaper-changing reviews. Characters who wish to put a half-point into First Aid or Professional Skill (Babysitting; M/A) may use this as an excuse to do

so; those who don't may sleep through the classes. Review classes are offered for current employees to keep them up to date on the latest childcare theories.

Student Instructors

If a PC has been with the company for a while, he may be asked to instruct one of the babysitting classes. (This usually is only asked of anyone with Babysitting-13 or higher.) This should be only slightly less difficult than herding cats; other players, as well as the GM, may play new (or returning) students, and make life hard for the would-be instructor.

If the teacher is particularly (un)lucky, there may even be a child available as a "demo" – as usual, no one knows how Mother (see p. 33) arranged for that. The child, on the surface, is cooperative and helpful. The true chaos is sure to manifest midway through the class: the demo-baby begins dividing into slightly-smaller identical twins; the kid is revealed to be a shapeshifter; the sweet little girl is actually a werewolf (and it's a night class – during the full moon); that adorable boy turns out to be a hive-colony of five or six non-human larva; the twins are psionic megalomaniacs . . . The usual.

Dealing with the chaos during the class and not causing anyone to quit is likely to earn the instructor a small bonus in the next paycheck.

Interestingly, there are minor displays of not-so-normal technology here: the cutting-edge bioplas diaper, for instance, as well as the bearskin loincloth, the auto-warm bottle, and the robotic rocking crib. These are more often found on the sidelines of the classroom, but the sitting instructor – a long-term employee – can usually explain how to use them. The CPR classes are run by an apparently normal pediatric nurse from a local hospital, who never seems to notice that the handouts include nonhuman sections as well. (The one on centaur CPR is particularly detailed.)

THE OFFICE AND DENIZENS

Babysitters Unlimited's main office is nestled in a generic office building – the sort that has a dentist's office on one side, an insurance company on the other, and a real estate company headquarters upstairs.

The outer office looks approximately like a doctor's office: a waiting room equipped with couches, magazines, chairs, fake-looking potted plants, and a small laundry basket of assorted toys for kids of different ages. Some of the toys are, as is typical for such things, in less-than-perfect condition. There is a counter/desk for the secretaries, a bathroom door, and a door into the back. The carpet is a neutral brownish industrial weave, and the walls are a very pale ecru with forgettable landscapes on them.

Beyond the initial door, the BU headquarters appear to be nothing more than a few rooms off of a wide hallway (to accommodate wheelchairs; BU is handicapped-accessible). The prints on the walls now have little touches like a ringed Moon, strangely colored trees, still-lifes with alien fruit or Venus flytrap flower arrangements, and the like. (The oddest thing about them is that despite being obviously Not Of This World, they are still as forgettable as any other generic print on a boring office wall.)

The doors into the other rooms are always closed. Behind them are: a break room, with fridge, table, and couch; the room for babysitting and CPR classes; a generic office in pristine condition which never seems to

Mother

The apparent owner and obvious manager of Babysitters Unlimited is known only as "Mother." People asking for any other name are deflected, usually with the stock phrase: "I'm not one for formalities. Please call me Mother." This is usually delivered with gentle humor, but someone who asks too rudely gets a colder tone.

No one has ever quite seen her face – she uses veils, and the office illumination is positioned so that she's always backlit. Her outfits are conservative, but not harshly so, and drawn from many cultures, some of them unrecognizable. Her voice is low and rich, but not *quite* sexy, and always has a faint foreign accent . . . which is never quite the same two times in a row. She's always polite and proper, and insists on similar behavior from others. (She tends to get it, too; GMs may drop hints of mind control, vast charisma, or whatever else will get players to cooperate.)

Mother's natural state is sitting, either in her office, or in "Jeeves," her limousine. Under normal circumstances, she has never been observed standing, or moving anything but her arms and head, even to bend over. (She simply does *not* drop things, and never needs to do more than sway a tiny bit to access necessary drawers of her desk.)

Some employees whisper stories of vague memories when they've seen Mother *not* sitting. These have always been under conditions of great stress, such as invading aliens, attacking barbarian hordes, a dying babysitter, a damaged child, or other times when no one is remembering anything clearly. The accounts of *what* she looked like during these events . . . conflict. Some say that she has a straight posture and elegant carriage, though her skirt drops to the floor. Others claim they glimpsed cloven hooves or hairy legs and paws. Some whisper of scaled coils. A few swear that they saw robotic feet, crab-like, gleaming beneath her hem.

Even more speculation abounds as to Mother's true identity. Employees who are students at *Illuminati University* wonder if she's the ArchDean, or perhaps the Unseen Dean. Religiously-minded babysitters ponder Eve, Lilith, Lucifer, or the Metatron. Quite a few are dubious about Mother's basic humanity, and believe she's a robot, or an alien, or maybe a renegade elf. Some sillier suggestions are that she's a clone or AI based on Zsa Zsa Gabor or Marlene Dietrich; she'd certainly fit right into *The Maltese Falcon* and similar settings . . .

There are no stats or skills for Mother; in the setting of Mythic Babysitting, she has vast powers, but never uses them for the player characters in any obvious way, or where they can see. She defies all attempts to reveal her nature, apparently without even noticing half of them, and firmly correcting the "rude behavior" of the other half. She is an ultimate McGuffin for when things have gone *totally* wrong, if only to show up in the limo and collect the PCs before the nukes arrive, murmuring sadly that they've probably lost the Mmm contract entirely. The nature of Mother is a mystery, and should stay that way, unless the GM wants to drastically change the tone of the campaign.

have anyone *in* it, though sometimes it has a half-cup of coffee on the desk; a records room, full of filing cabinets; another bathroom; a broom closet; a fire-escape; a locked door that reputedly leads to the basement; and Mother's office.

The Secretaries

Babysitters Unlimited has at least a half-dozen employees who are *not* babysitters themselves. One or two of them are on duty at literally all hours;

BU is never closed, even though the door may be locked on weekends and after dark. The secretaries are apparently Unfazeable, or entirely Mundane and oblivious, treating everyone and every event with the same working stiff's vague boredom. They're pleasant enough when engaged in conversation, but their curiosity is either lacking, or else they already Know Too Much and couldn't care less about the rest.

From telepathic intrusion, mind-reading spells, and the like, it would seem that they're simply *Totally Uncurious*. Of course, that could be a symptom of *Knowing Too Much* – including *Knowing Too Much Sufficiently Advanced Mindshielding*...

Babysitters who ask how to get a secretarial job are given a form to fill out, and put on a waiting list for a job opening. There is never a job opening. Year in and year out, it's the same half-dozen faces (Cindy, Sheryl, Edna, Doris, Bob, and Edward, if anyone asks). The job must pay well.

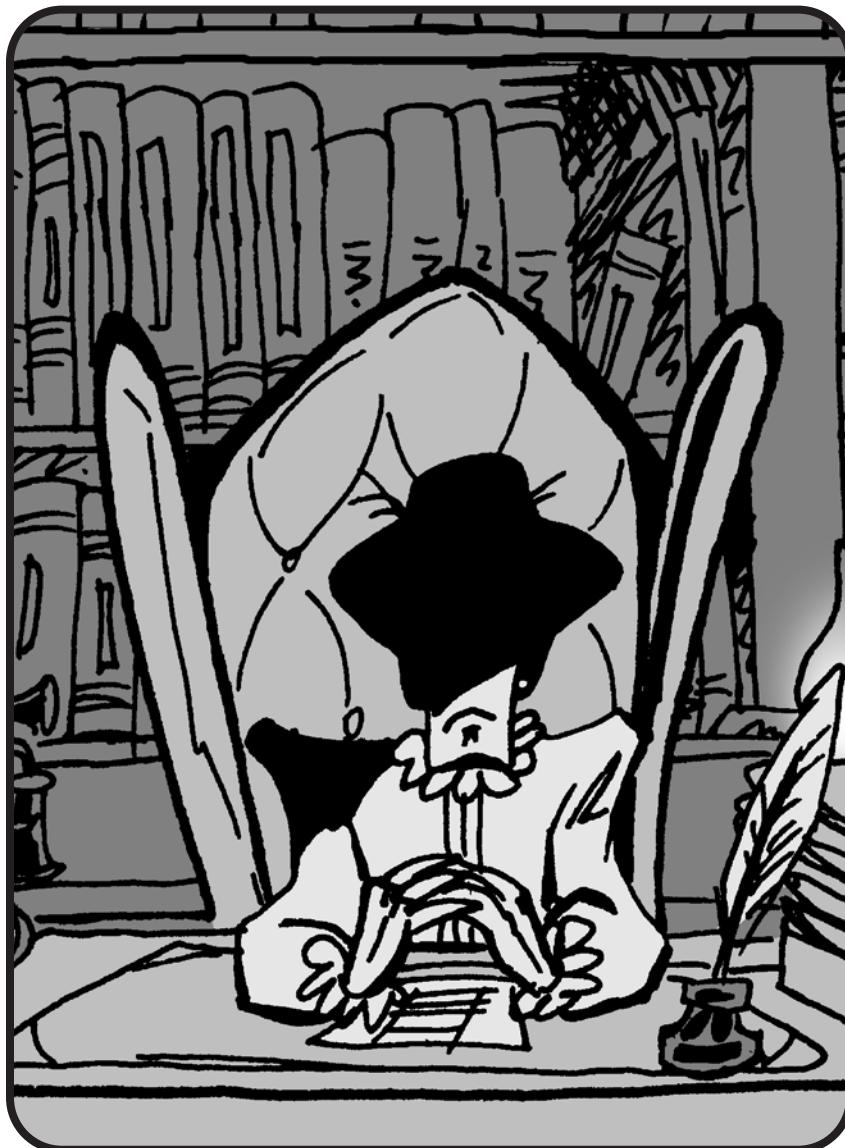
Mother's Office

Besides Mother (see p. 33), this office has several large, full bookshelves, and an impressive desk. The wall behind Mother's chair has an intricately carved wooden clock, with a 24-hour face instead of the usual 12-hour dial. Many books on the bookshelves have titles in languages the visitors have never seen before; the desk has an antique-looking telephone with no dial, whatever folders are needed for the PCs' schedules or contracts, and an old-looking, beautifully polished brass head. No one is quite sure how the telephone works; Mother never uses it in the presence of babysitters or prospective employees.

It should be noted that the head is one of the few things at BU that *does* radiate a magical aura to those with the senses to perceive such things. (Clever use of Psychometry or ultra-tech may detect it, as well as the old standby of *Magical Aptitude*.) The books, although not magical, are quite interesting.

Unfortunately, attempting to examine the books, or even to wander toward the bookshelf, causes Mother to issue a firm command to "pay attention." Likewise, Mother vastly disapproves of anyone casting spells or using psionic abilities in her presence, declaring that it's *Exceedingly Rude*, and bidding the offending person to *Refrain From Such Barbarism* in her presence. Pulling out ultra-tech sensors is equally offensive to her sensibilities. And, annoyingly, she somehow *always* interrupts the caster's (or psionicist's, or super's, or techie's) concentration just before he gets any real data.

Oddly, Mother's office contains *no* computer terminal, and the phone is the only obvious electronic device of any kind.



Other Individuals Of Note

Sometimes, especially if the babysitters arrive early to get their schedules, odd-looking people can be seen leaving the office. Likewise, if their appointment runs late, they may encounter a stranger arriving. If they happen to show up out of the blue, one of these folk might actually be in Mother's office.

For the most part, these visitors look totally human, with normal coloration, and a traditional sense of dress (business suits or bland gray dresses). Some of them – both male and female – go veiled, with clothing that seems foreign but conservative. When they speak, it is with odd accents, or even in unfamiliar (or entirely nonhuman!) languages.

Naturally, trying to follow them, mind-read them, scan them, or even

just get a good look at them, earns a stern glare from Mother, almost palpable despite her veil. For some reason, even the most arrogant and fearless characters become distracted by this, losing their chance to learn anything useful – even if they're not actually intimidated.

RECRUITMENT

Player characters may see an enigmatic advertisement in a campus newspaper, a favorite magazine, an online banner-ad, or any number of places. Writing off for more information – for most mere mortals – will garner a polite form-rejection. PCs (whether they wrote for more information or not) get something better. The invitation letter is hand-addressed in beautiful calligraphy, and both the envelope and letter itself

are high-quality paper, marked with a discreet "BU" logo. In the same elegant calligraphy, the letter gives vague promises of "a well-paying job with unusual benefits," and provides a street address for the BU office. It is signed, simply, *Mother*.

Upon arrival and admittance to the inner office, the job and its pay-rate are described in the manner best suited to convincing (some would say, "suckering") the prospective employee that BU is the best part-time job in existence. Hard sell, soft sell, orthogonal sell . . . Mother will apparently use whatever methods work. No one knows if there were prospective employees who *didn't* sign up for the job; maybe a few people never showed up, but no one's ever heard of somebody *walking away* afterward.

Point Levels and Spurious Advice

Babysitters Unlimited employees should be built on 150 points (the same number as a junior at IOU). As with that setting, GMs should be lenient and permissive in allowing their players to choose odd and perhaps even mutually exclusive advantages, skills, and backgrounds – though the odder the combination, the more the player should be urged to select such tidbits as Amnesia, Secret Advantages, Secret Disadvantages, and Split Personality. Remember, Weirdness Magnet isn't so much a disadvantage as a way of life.

Players are likely to take this advice and run with it, creating the uber-sitters they believe will be able to handle anything that the clients' children can throw at them. A nice thought, really. All the nifty skills and advantages that these points bought, though . . . well, they'll be useful enough. Sometimes. Somewhere. Eventually. Probably not when the sitter is trying to convince a recalcitrant Sleipnir to take a bath while Mommy Loki's out flirting with giants, though.

While making a purchased advantage, skill, or attribute *totally* useless is considered bad form, GMs should play to characters' weaknesses when crafting adventures and deciding on the tactics of the five-year-old evil geniuses bent on world domination. If necessary, a few hefty deductions from their paychecks, for "Improper Use of Mind Control" and the like,

may teach them to use their world-shaking abilities only as a last resort.

BU Benefits Package

One of the major incentives for employees of BU is that, despite being a part-time job, the life/medical insurance policy is extremely comprehensive. The payout in case of death would bankrupt small countries. This is solved in the most obvious fashion – by insuring that no one ever *dies* . . . permanently, that is.

(This is the Babysitters Unlimited version of *Illuminati University's* Student Life Insurance. Whatever method BU uses to retrieve memories – the translation-charms? – is at least as effective as the IOU ones, and often seem better. Unless, of course, they fail entirely and the employee has total amnesia of anything prior to their temporary demise.)

The primary effect of the Benefits Package is that the character will not remain dead. Those who die on assignment wake up the next morning, at their home, apparently whole and unharmed. Close examination reveals that they now have a small scar, mole, or tattoo somewhere inconspicuous – in the shape of a rather cute-looking, big-eyed skull. The more deaths, the more skulls; they may cluster, form lines, or be scattered randomly. Other side-effects are up to the GM.

Interestingly, for as long as someone works for BU, this applies to *any* death! Bystanders may report private

ambulances or mysterious doctors arriving at the character's side before the PC becomes alive again, but they're never sure exactly what happened. Obviously, whoever reported the sitter's death was mistaken. Right?

A secondary, but by no means insignificant, effect is to prevent BU from ever having to pay workman's compensation for on-the-job injuries. Any babysitters who get wounded, maimed, or otherwise suffer undue physical trauma are bundled into the car and fall asleep – or pass out – on the way home. When they wake up, a few hours have passed and they're on the couch in the BU office waiting room. They're also fully healed, and their clothes are cleaned (though not mended) or replaced. Sometimes they have faint scars, but otherwise, everything works normally, without ill effects.

As can be expected, "Mother" never talks about deaths, healing, or how the miraculous recoveries are achieved. Neither do the secretaries or other mysterious functionaries who sometimes pass through the office. There's no visible equipment pertaining to resurrections or fast healing, no psychic traces of psionic healing, and no aura of magic. It "Just Happens."

The BU Benefits Package is free to all characters in a Mythic Babysitting campaign; it's part of the background. *No Benefits Package* (like *No Student Health Insurance* at IOU) is a -100-point disadvantage, if the GM allows it at all.

Polly Voo Orcish?

Now, it's hard enough showing up and discovering that you're babysitting a litter of kitten-headed babies – but you have to speak ancient Egyptian, too? Fortunately, Mother apparently agrees that's more than a poor sitter should have to bear.

Each employee is loaned a clip-on earring, ring, necklace, or charm bracelet. (Male sitters also have the option of a camo-pattern watch or fancy belt buckle.) By magic, psi-tech, or sufficiently advanced translation gear, this item allows the sitter to converse in the dominant language of the client's species, culture, and time-period. Happily, it works over the telephone, holovid, and through communication-crystal balls. Unhappily, it sometimes does *not* work on text. It *definitely* doesn't work on baby babble. Likewise, even if individual words are translated, toddler logic is ineffable. (The GM should make a roll; on a critical failure, have *fun* with the "translation.")

No one's quite sure where Mother gets the items; they're suspected to be hideously expensive, as well as vital for coping with the local environment. Don't lose yours.

Affiliated NPCs

Player Characters tend to have associated NPCs – Allies, Dependents, Enemies, and occasionally a Patron or two. In these circumstances, the GM should always roll ahead of time to see if the NPC in question will appear during the game. (Though, of course, building an entire adventure around one is also appropriate.)

Allies: Allies may be fellow employees, or simply “come along for the ride” on an assignment. If the “baby” in question lives in a reasonable place for contacting an Ally, any reasonable means (telephones, holocommunicators, telepathy, magic, etc.) may draw in extra help when needed. (Or the Ally may have too much sen-, er, extra homework, and refuse to show up.) One typical Ally for a BU character is a boy/girl/thing-friend. Did we mention babysitting jobs can be hard on relationships?

Dependents: Sometimes, your kid sibling or (wimpy) significant other just *has* to be with you. What do you do when you’ve got to go babysit someone for BU? Bring them along, of course! Naturally, the Dependent will be in danger from the client, the local environment, pets, technology, the Wild Hunt, or alien invasion fleets that happen to be passing by. At the very least, the affiliated NPC is going to be a distraction while the child who is supposed to be kept track of is getting into mischief.

Another kind of Dependent is a fellow employee who is, for some reason, incompetent.

Enemies: Enemies can be rival employees who want to get tips (see p. 37), or at least pin the inevitable collateral damage on the PC. They can be employees of a rival babysitting service or childcare center! An Enemy can be a specific child, who asks for his “favorite sitter” again and again so they can have rematches! Or, of course, Enemies can be totally unrelated to BU, and simply show up to make the babysitter’s life even more miserable.

There’s One in Every Crowd

If the GM permits, the character may have “generic” affiliated NPCs – the *type* in question will show up anywhere (if the dice or GM so dictate).

Allies: For whatever reason, someone may show up to help.

Dependents: Sometimes family, sometimes a love interest, sometimes an otherwise useful partner who’s sick (hung over, drunk, possessed . . .), etc. When using stray pets or random strangers as “generic” Dependents, it is better for the babysitter characters to have an appropriate Sense of Duty or Quirk, rather than a specific Dependent.

Enemies: Wherever the poor sitter goes, someone (or an entire class of some sort) takes exception and seeks to thwart his goals and destroy his well-being. It’s suggested that the Game Master *not* allow “Babysat Children” as Enemies . . . or, if he does permit this, make sure the hi-jinks are played to the hilt! (If there’s more than one babysitter present, the child primarily targets the one with the disadvantage.)

Do I Get Paid For This?

Working for Babysitters Unlimited seems a wonderful idea when a prospective employee reads the ads or listens to Mother – or other sitters – recruiting. According to the spiels, skilled babysitters can command up to \$1,000 an hour!

Sitters are paid after each mission by Mother, not the parents. Mother is apparently paid in advance, judging from the enigmatic comments she

makes as she doles out the cash . . . with deductions for repairing collateral damage to houses, playgrounds, buildings, local flora and fauna, ecosystems, planets, and the timeline. (Fortunately, BU’s health insurance covers things like Trifibulan Death Acne and cases of undeadness.)

Even with all these deductions, player characters make decent profits from all this – just not indecent ones. It pays the bills, but it won’t make anyone rich.

Unless, of course, a sitter happens across the Holy Grail: an *easy* assignment without collateral damage. (And one where the parents don’t come back after 15 minutes.)

Babysitting for BU is a freelance Comfortable job, with a prerequisite of Babysitting-10 or First-Aid-12. However, it requires only 10 hours a week of work. If the GM wants to require job rolls for a BU babysitter in a larger campaign, a failed job roll results in a lost night’s sleep in addition to the normal effects, a roll of 17 means no income for that month, *plus* the loss of a month’s salary for damages, and an 18 inflicts a -5 point Secret Disadvantage! On a critical success, the sitter gets double normal income, plus a \$1,000 tip, or some minor non-mundane item of the GM’s choice.

ASSIGNMENTS

The beginning of a babysitting session is always the same. For a scheduled appointment, that day’s mail includes a hand-calligraphed reminder. (For all-day sittings, the note shows up the day before.) In emergencies, or if the employee hasn’t picked up his mail, Mother makes a phone call. She never leaves messages, but somehow always calls when the character can answer the phone.

If the employee has no phone available, the notification is via a note in calligraphy, with appropriate postmarks. Even the *emergency* changes of schedule.

About a half-hour to 45 minutes before the appointment, Mother arrives in “Jeeves” (see box) to pick up the babysitter.

On the way to the scheduled appointment, Mother will brief the sitter about the job. “Brief” is usually the precise word; Mother could give oracles lessons in being cryptic. A statement such as “Looks a bit stormy” is almost clear, but could refer to wind-elementals, telekinetics, poltergeists, baby storm giants, or simply that one should close the windows lest small black terriers land in one’s living room.

The end of a babysitting session is equally predictable. Precisely 23 minutes after the parents return, Mother arrives to pick up the sitter. No matter where he happens to be. (See *When Babysitters Run Away* for options; instead of being penalized, perhaps

sitters are merely warned to be available – or be *left*.) Naturally, Mother makes no comment about difficulties picking up employees.

On the way back, Mother tallies up the collateral damage that is going to be taken out of the babysitter's paycheck. Somehow, she always knows what went on during the mission. Some sitters, for their peace of mind, will ask questions about the circumstances. Amazingly, if those questions don't touch upon Mother or BU, she usually answers.

What Happens In The Middle

While the beginning and ending have a certain uniformity to them, the *middle* of a babysitting mission has only one loose theme: survive and don't let the kid destroy too much.

Every plot needs conflict. In the case of Mythic Babysitting, the major conflict is one between the player characters and non-player characters; see pp. 42-44 for NPC design suggestions. Aside from the natural conflict that arises when Wee Willamina wants to eat her strawberry bloodcake *now* and not after dinner, other things factor in. See *Additional Complications*, below, for the more character-driven problems that a sitter might have to cope with.

Setting-driven problems, touched upon later (*The House*, p. 39), are useful lead-ins for the rest of the mayhem. Remember, in Mythic Babysitting, the setting can be anywhere, anytime, and *anything*. You have to care for baby virii while Mr. and Mrs. Virus are out colonizing

Tipping

A satisfied parent or guardian may give a little "extra" to the babysitter who's been taking *such* good care of little snookums. Sometimes this is food (fish cakes, hawkpanda jerky, unidentifiable-chip cookies . . .), cash (paper, plastic, gold, gems, radioactive ores . . .), but most of the time it's some trinket or other. Some are pretty, such as a sun-catcher of an alien. Some are attractively mysterious, e.g., an abstract sculpture which glows when vowels are spoken. Some are downright odd, such as the *Necronomicon (Pop-Up Edition for Young Readers)*. Some are trite, yet possess power: say, a magic wand tipped with a glittering star which *will* cause things to levitate for 30 seconds if the right word is spoken (it may even come with an instruction manual!). Some are vastly powerful – flying carpets, personal starships, etc. – but possess odd quirks or require far too many batteries to make them practical for everyday use.

Most distressing are the benevolently applied, ambiguous curses (or blessings?). "You have babysat so well that henceforth you shall always find what you want and lose what you need." What is a babysitter supposed to say to that?

Mother *never* comments on tips, though she may hand a plastic bag to the sitter before they get into the car to protect the upholstery from tips that are overly slimy, or drippy, or strange. Occasionally she'll examine the item closely, or taste it with the very tip of her tongue (never the food items, though). If a gift seems too . . . distressing . . . for the PC, Mother will, naturally, accept it.

Even the ambiguous curse-blessings.

No, no one's quite sure how she does *that*, either.

Or what she does with them afterward.

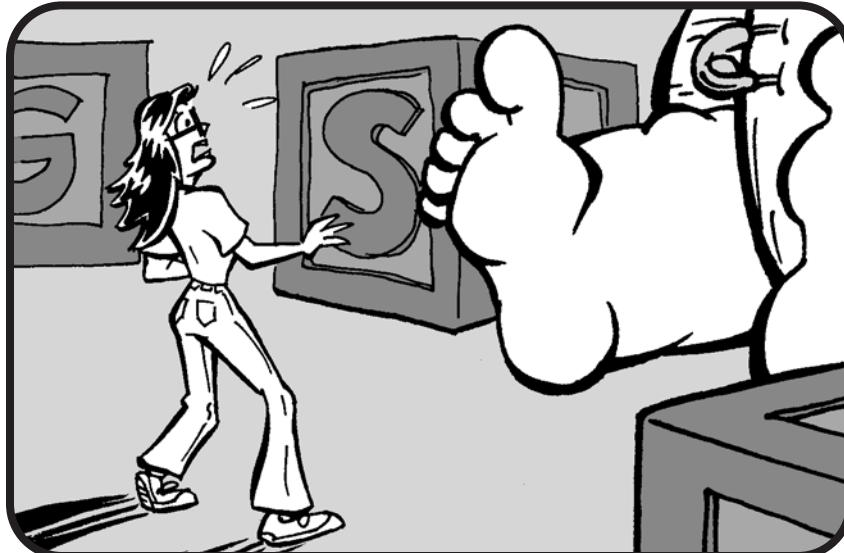
other parts of the dog? Your co-workers will tease you about it later, but it's probably not as weird as something *they've* done . . . or something *you'll* do next Tuesday. Historical Greece? Been there, babysat Heracles. Altair-4? Got the holographic snow-globe. Dream about visiting the North Pole? Santa's got to have some kind of elf-production, and the adults will be busy for the Christmas rush; hope there's no diaper shortages.

Happily for GMs, with such a loose setting to work from, any comic, television program, neural-stim game, or random hallucination can provide inspiration.

Additional Complications

Naturally, every cake needs frosting – just ask any kid. ("What frosting? Oh, I already ate *that*. Now I want more!") Complications for a babysitting assignment start with NPCs (see *Affiliated NPCs*, p. 36), but of course they don't end there. Besides the date *du jour*, and the necessities of divvying attention between one's significant other and the kids, there are also school problems (i.e., homework), pet problems, and entirely unrelated disasters.

Dates: Not every boy/girl/thingfriend is a Dependent or Ally. If Mythic Babysitting episodes run alongside a regular campaign (such as *IOU*, *Illuminati*, *Black Ops*, odder parts of Yrth, or *Munchkin*), then the employees of BU might have a social life they want to develop – or conceal.



Transportation

Employees of Babysitters Unlimited don't need their own vehicles. In fact, it's politely discouraged by Mother and other staff. Experienced employees assure newer recruits that they *don't* want to take their car anywhere *near* a mission location; it's just too dangerous.

Instead, Mother drives all sitters to their assignment's home, and picks them up. Personally. In "Jeeves."

The car starts out as a black limousine, with personalized plates: MOTHER. Mother herself refers to the limo as "Jeeves." Any special gear the sitter might need is within. If more than one sitter has a job that evening, they carpool, each dropped off at the appropriate place.

Appropriate, naturally, is a matter of opinion. This is especially true in the case of the "MomMobile," for during the journey, just as one blinks, the car will be . . . something else. Sometimes it's merely a taxi, or a hover-limo. The rickshaw is at least recognizably terrestrial – usually. The elephant-mounted palanquin is typically on an elephant. The flying carpet is getting outré, but it's not as bad as the flying cauldron, or the biologically-engineered starship whale. (At least, it looked like a whale. Sort of. If you squinted.) The cybernetic universe teleport beam is said to be pretty bad, though; don't look down if you get seasick easily.

Mother misinterprets or simply doesn't hear questions about Jeeves' form-changes, though most sitters don't get up the courage to ask. Some BU employees have said that the radio turns on, loudly, if they flat-out demand to know why "he" changes shape in the middle of a trip.

Since Babysitters Unlimited occupies a less mundane world than many, various employees, tagalongs, and hitchhikers have tried to avoid blinking and see just what is going on. It never works. One moment, they're riding in a mundane-seeming, if expensive, limousine. The next, it's something just as luxurious, but definitely *not* a limousine. (No one speculates where the hefty servants that carry the litter come from . . . or why they're in shiny black armor . . . or walk in perfect step with each other . . . or why Mother calls them Jeeves interchangeably.) There are no special effects for the transition, no odd sensations, no detectable magic or psionic activity – it Just Happens.

Some sitters find this mystery a challenge, and attempt elaborate ways of trying to capture the change on film, as data, or even just *see* it.

On the way back, the same thing happens in reverse. Mother picks up the sitter in the star-whale, litter, or mini-elephant-drawn-carriage, and somewhere along the way . . . Jeeves is a limousine again, just as if it had never been anything else.

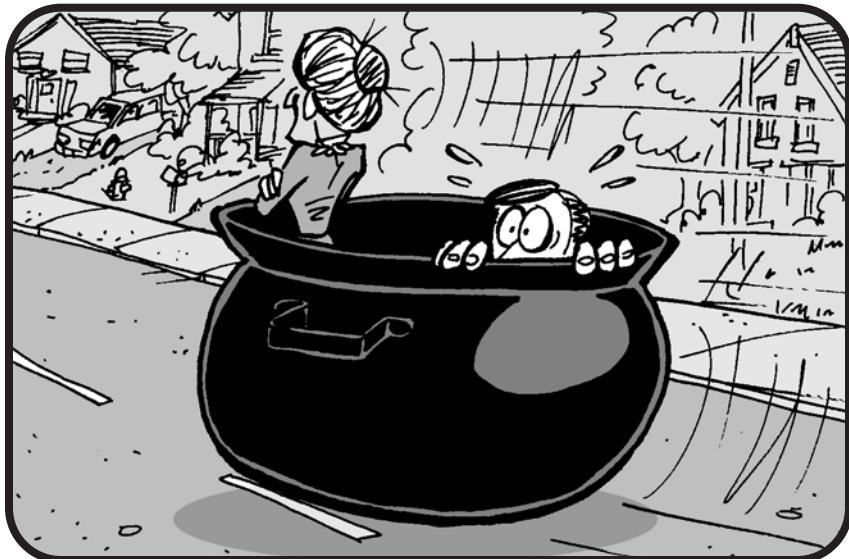
Schoolwork: Most babysitters are high school or college students, and therefore subject to the sadistic whims of their educators. Naturally, no teacher consults the Babysitters Unlimited schedule to see if a 50-page essay is due the day after a BU assignment. Naturally, no children ask if they can go to bed early so that their sitter can finish a 50-page essay – unless they're actually slipping out the window for their own nefarious schemes.

Friends and Family: Even if you don't take them as an official Disadvantage, friends and family may make inconvenient phone calls at inconvenient times. This may be anything from a desperate plea from a friend who's missed the last bus from the mall and needs to get back to her dorm, to an equally urgent request from an uncle of, "How d'ya fix this computer again?" Little siblings may be dumped on you just as a particularly lucrative emergency BU case comes up. Entirely inappropriate friends may seek babysitting employment and insist on coming along or showing up at the target's house to "learn the ropes." "How hard can it be?" they ask . . .

Pets: Not all characters have pets, familiars, or other animal sidekicks. Those who do, well – sometimes Lord of the Shadowed Hallways gets hairballs, or Swiftwing eats a mouse that disagrees with her, or Platinum throws a shoe. Will the babysitter manage to balance BU tasks with the duty to stay with their ill companion? Especially if the animal needs an antibiotic pill every few hours? (For added trauma, combine with little siblings, above. Perhaps both Brightfang and Sammy-chan must be fed medicine, on different schedules . . . Don't mix up the Ringworm Medicine with the Cure Disease potion.) Further, some familiars, such as raccoons, ferrets, or wolverines, have bad habits all their own, and few birds can be house-trained.

Minor Crime: So the babysitter's finally gotten sweet Sardonia and Tiny Tristan into bed. Time for homework, right? Well, breaking and entering could be considered homework . . . Can the babysitter foil a hapless cat burglar without waking the kids? And if not, will the kids help the sitter or the thief?

Major Crime: Whether it's an ever-popular alien invasion, giant monster, or simply an escaped crime leader – you know it's going to happen nearby,



and the sitter will have to keep the kids safe from it. Or keep the bad guys safe from the *kids*. This is a particular problem with children of superheroes, super-villains, or other paranormal types. However much Larkchild wants to apprehend Max Mungor, her bedtime is *still* 9pm. School tomorrow, after all.

Major Crime, Take Two: Due to a mix-up in addresses, a group of alien commandos, ninja masters, CIA agents, Things In Black, or Child Welfare Agents (or any and all of the above) arrive at the house in order to take custody of Princess Leeya'a'a'a, the Silver Child, a decoding prodigy, the Baby of Zion, or any and all of the above. Naturally, they think the babysitter's current victim is their target. What to do? And what if the would-be kidnappers are *right*, and the children they seek are the ones the sitter is watching?

Unexplained Disasters: There's a comet headed for the Earth, a volcano under the basement, tidal waves, and several bulldozers outside explaining that a new arcology is going to be built here. (You just *know* Mother will assess damages if the house gets leveled.) Victory conditions: keep the kids, the house, and the world safe. You have four hours, Sitter X-42.

OVERDRAMATIS PERSONAE

In a Babysitters Unlimited game, the plot is very simple: Babysitter goes to house. Babysitter meets child. Child and babysitter spend the rest of the session trying to impose their will upon the other, with whatever weapons come to hand. Complications may arise (earthquakes, house foreclosures, the Wild Hunt . . .) which either interfere with the efforts of the babysitter to prevent the babysittee from stealing the Holy Grail, or cause the PC and NPC(s) to band together against this outside threat before returning to their own battles. Eventually, the parents return, and the babysitter goes home with enough money to be willing to do this again sometime. There are also, frequently, fewer players than in many campaigns.

Therefore, the Game Master's primary job is not so much about plotting, pacing, and weaving a unified universe. Instead, it's setting the scene and

Some Survival Tips

"Okay, here's some stuff you need to know," the guy said. "Underhill. You know about Underhill, right?"

"Ummmm," I said.

"Where a single night can last years – decades! Centuries! People go down there with the Fair Folk, and return to a changed world. So when you get a fae-job, you make **sure** you're out of there before dawn. Don't hang around after the job. Get to the surface for Mother to pick you up."

I nodded, impressed.

"Mind you," the girl added, "it's worse if you let the Queen of Air and Darkness drop her kids off at your place. She wants to party for a night without the changelings, but she'll be by to pick them up 40 years later . . ."

I couldn't tell if she was joking or not.

ensuring that the Child Du Jour is a suitable opponent. Therefore, some tips.

The Parents

The first thing the GM should decide is what the parent, guardian, hive-worker, or plural thereof is like: species, age, clothing, and a quick physical description. A voice description is also useful – and if the translation device picked a good match of voice to physical appearance.

Parents *never* mention Babysitters Unlimited or Mother directly. In all cases, the greeting is a variant of, "Ah, you must be the babysitter [someone, probably a relative] sent for." They then deliver any unusual requests ("Can you please accept the orange package, when it comes, and tell the one with the purple envelope that they want tomorrow at seven-seventeen on the dot?") and instructions ("Don't let him

have any sugar after midnight, and make sure she eats all her vegetables at dinner. Use the green bath salts, and make sure the windows are locked in their room."), along with showing the sitter the most important parts of the house. Usually, the parents also mention how long they expect to be gone, and where they'll be – they may explain how to contact them, or say they'll call in to check on things. (They may even be telling the truth!)

The House

The GM should have at least a mental map of the house, since that's going to be the main battleground for the ensuing battle of wills, powers, and raw SCIENCE! that will begin once the parents are safely out of range. The players, not unreasonably, are likely to request at least a rough map so they can plan tactics.

When Babysitters Run Away

Sometimes, sitters aren't at home for Mother and Jeeves to pick them up. Either they're in a spot of trouble, or they're deliberately trying to avoid the appointment. The GM has two options for this.

Option 1: The penalties for missing a sitting appointment are *harsh*. Employees should be desperate to get *somewhere* in time to be picked up. And, as long as there's a road, Mother and Jeeves will arrive on time and pick up the sitter (and hangers-on he vouches for).

Option 2: If the GM must kick the weirdness up another notch due to PCs being in inaccessible places, then Jeeves *arrives* as a swamp-boat, elephant-borne palanquin, or hover-car. Naturally, Mother will neither comment on this nor respond to questions about Jeeves' nature or form. If the babysitter was deliberately trying to escape, the UFO-with-tractor-beam ploy may work wonders. One moment flashing lights, the next, the character wakes up in the back seat of Jeeves, halfway to the appointment . . .

Raiding the Refrigerator and Other Perks

Once Little Timmy (. . . Ginny, Rover, Quasimodo . . .) is in bed, it's time for a babysitter's perks: TV and exploring the fridge.

Happily, one of the parent-BU agreements seems to be that there's always *something* edible and non-poisonous for the sitter to munch on. Mind, sometimes this "something" is less than appetizing; monkey brains, cat-kebobs, fried chocolate-covered wormoids, and Sentient Snacks are not to everyone's taste, after all. Bring a lunch, just in case.

Still, this leaves the prospect of entertainment. Despite the dangers of telepathic boobytraps, poison darts, or late night religious infomercials, it's the rare babysitter who can resist trying to find the television (or local equivalent) and seeing what's on. If the sitter is unlucky, the era and technological level is only up to hand-calligraphed texts, dark tomes that glow unsettlingly, or wall-pictographs. If the sitter is very lucky, the entertainment center includes a multitude of easy-to-use video games (with or without neural interface fields). In the middle of the luck spectrum, the parental unit's satellite dish gets the PlayHiver channel, *Science! with Dr. V!*, music videos involving small furry alien bandmembers, and historical documentaries of the rise and fall of the Pictish Empire.

The music videos aren't bad, usually.

Well, except when the local rock-star garb involves plaids in neon colors *Man Was Not Meant to See*.

Maps can be acquired from many sources, both commercial and internet-based. (Searching for "floor plans" and variants is particularly rewarding.) Some players benefit from having the floorplan on a hex-map or grid, and the use of minis – or at least stray candies. Others merely require a rough sketch, including any unusual features, such as moats, pit-traps, high-voltage electric cables, alligator pens, unusually low ceiling fans, secret rooms, matter transporters, pentagrams, and the like. The GM should also note the overall Tech Level of the house and its surroundings.

It's probably fair play to have a pre-written list of the resources the combatants will have to hand, but the babysat will have a home field advantage over the babysitter, and will frequently get to the fire extinguishers, laser guns, or magic artifacts long before the PC can.

The Kids

Even more than the parents, even more than the house, what makes a Mythic Babysitting session something to talk (or swear) about is the kids. Therefore, the Game Master should lavish all possible care, detail, and

unashamed point-mongering on these little bundles of sadistic joy.

Of course, a good opponent, er, child requires motives. Choose the goals carefully, for they are likely to set the tone of the adventure. World Domination has a different victory condition than Staying Up Till Midnight, or Stealing All The Cookies (And Blaming The Sitter). Likewise, while Mad Scientists and Mad Wizards simply want to perform their experiments in peace, undistracted by the babysitter – who would make a good test subject, come to think of it – Mad Slasher kids are a bit more of a handful. (They're also very prone to target sitters who bring along their romantic interests for when the kids are asleep.)

Once the goals are decided, whether mundane or supernatural, huge or trivial, long-term or near-to-hand, next comes the means of acquiring the goals. Cookie-stealing via thought control of the babysitter, versus the dark pact of the finger-puppet gods; staying up late through guile and treachery, or bribery and intimidation; world domination that requires advanced technology like the sitter's cell-phone, or world domina-

tion that requires five cups of blood from a living being . . .

Whatever briefing the sitter got from the parents, odds are *very* good that it's nowhere near complete enough. And the child knows this from experience. So the GM should come prepared with useful phrases like, "Mommy always lets me use her cauldron," and "I know where Daddy keeps the key to the liquor cabinet." Not to mention, "I'll tell Mama-san you ate all the Salted Slimesnails."

Choose powers and skills to set the tone. Yes, it is possible to run Mythic Babysitting darkly; blood sacrifices of household pets, even goldfish, can be gruesome. On the other hand, sacrificing the ant farm on the teeny tiny altar is hard to make gothic. Unless, perhaps, the PCs are somehow trapped within the ant farm themselves.

For the primary NPCs (the kids), the GM may be well advised to prepare a full character sheet, with detailed stats, advantages, disadvantages, and skills. Mythic Babysitting is frequently less a shared story and more a battle royal, child versus sitter, where players might object to any perceived favoritism – in either direction. Throwing the fight is, after all, unsatisfying to the "victor."

Sitter players (and GMs) should take note that killing the sittee is neither worth experience points, nor likely to result in rewards from the parents or Mother. Usually.

(Unless you're playing *Munchkin*, that is.)

The Pets

Not every family has pets, but most will have fish, cats, dogs, pet rocks, pet ambulatory rocks, bats, rats, hamsters, robots that may or may not look like any of the above, zombie gerbils, vampire rabbits, miniature ponies . . . Occasionally it can be difficult to tell the children from the pets.

Pets may be allies to a beleaguered sitter (especially one with an Ally (Generic) advantage), enemies, enemies to both the sitter and the child, or simply a random complication or bit of stray weirdness. They may or may not be house-trained, can suffer mysterious maladies at the drop of a drop of blood, and often display a voracious appetite for furniture, the sitter, the sitter's boy/girl/thing-friend, the client, or everything in the fridge.

Or they may just be over-friendly. ("Down, Cerberus, down!")

Of course, sometimes both children and "pet" insist that the creature is a long-standing member of the family, when it's actually a stray, owned by the family next door, stolen from a pet shop, an intergalactic criminal in hiding, or summoned from an alternate dimension.

Jimmy's Little Friends

Sometimes the charge has friends visit during the mission – especially if they were told beforehand that the parental units would be gone. Or worse, the parents may have blown town deliberately, before the sleepover crowd arrives . . .



Roleplaying Kids

There must be 50 ways to craze your sitter . . . Most don't even need major collateral damage. Sorted by age, a few relatively mundane samples follow. (GMs can round this out to a full 50, or more, with research or by drawing on personal experience.) Other ideas can be found on p. 42, *Sample Victory Conditions for Sitters*.

It should be realized now that, aside from some odd notes about exorcisms, the BU insurance does *not* cover mental health benefits.

Infants

- Cry whenever put down.
- Cry whenever picked up.
- Never sleep more than 15 minutes at a time, and demand attention the rest of the time.
- Never sleep in your swing, or any other rhythmic-motion machine that is supposed to put you to sleep.
 - Be very affectionate and hugging. Constantly. Cry when not permitted to do this.
 - Spit up on the sitter's shoulder at every opportunity, then cry.

Toddlers and Preschoolers

- Take your diaper off constantly.
- Refuse to be potty trained after taking off your diaper.
- Insist on watching your video (flatscreen or holographic) about baby-talking beings in primary colors. (It's very disturbing to see a little snakeling singing along with the Magenta Human – who is very clearly a snake-person in a toothless plush suit.) Repeat viewing until the video wears out.
- Ask why. Repeat forever. Occasionally ask "what" or "how" instead.
- Ask what other beings are thinking, such as pets, computer game antagonists, or the plastic houseplants.
- Use "toddler logic" to explain why you did something; "because the cat was looking at me and it's *black*" is quite appropriate.
- Insist on making the sitter play your favorite edutainment games *for* you. When they involve first-person movements between "learning areas," keep asking, "Are we there yet? Now? Now? Now?"
- Hide from any :59 on the clock until it turns to :00 again. Scream about it.
- Ask the sitter if you're potty trained. Ask the sitter if he or she *thinks* you're potty trained. Ask if the sitter is potty trained. Insist you want to watch. Now.
- Ask for frozen popsicles to eat. Display that you are not coordinated enough to hold them yourself without great purple, red, and blue stains on the floor.
- Try to get the sitter to take a bath or shower with you.
- Hug and cuddle the sitter any time you think you might be about to be in trouble.

Gradeschoolers

- Get your sitter to "help" – i.e., do your homework for you.
- Explain you've done your homework, and of course you can stay up late to watch the horror program.
- Slip out your window at night to go meet up with some other friends and toilet-paper (or the moral equivalent) someone's yard. Or your own.
- For the 13-15 age range (or the local species equivalent), try to sneak your boy/girl/thing-friend into your house/room/dungeon.
- Spy on the sitter . . .

BU MISSION PROFILES

Herein lies a list of sample child types. Each has suggested advantages, disadvantages, and skills that fit the theme; use others as appropriate, but don't pick all of them. Well, not unless the players are getting too cocky.

Note that *all* children, by definition, are going to have Youth relative to their culture (thus, it is not included in the suggested disadvantages). This may cause cognitive dissonance, when the 20-year-old babysitter meets the 50-year-old elfin "child."

GODLINGS, HEROLETS, AND IMPS

Whether it's little Hermes or baby Achilles, Bast's kittens or Georgie the large lizard slayer, Samuel "Sammi" Lightbringer or Mephistica, this child has access to supernatural abilities. Hero children are more likely to have

Patron (Divine Spirit), while godlings and imps tend to use weaker versions of their parents' powers. Their goals are often bound up in world domination (benevolent or not), world salvation (physical and/or metaphysical), and homework avoidance.

Suggested Characteristics: ST 7-18, DX 8-18, IQ 6-18, HT 9-18.

Suggested Advantages: Acute Senses, Alertness, Appearance (above average), Charisma, Combat Reflexes, Damage Resistance, Danger Sense, Hyper-Reflexes, Hyper-Strength, Magical Aptitude, Magic Resistance, Patron (Supernatural Being), Psionics, Psionic Resistance, various Super powers.

Suggested Disadvantages: Appearance (below average), Impulsiveness, Odious Personal Habits, Overconfidence (or Megalomania), Self-Centered, Short Attention Span, Stubbornness, Trickster.

Suggested Skills: Acrobatics, Brawling, Escape, Running, Stealth, Tactics, Tracking, Traps, various Super skills.

Competitive Babysitting

Babysitting – mythic or not – can easily be seen as a war between sitter and sittee. So why not turn it into a wargame? In this variant, the GM referees between a PC sitter (or team) and one or more PC kids – the Adversaries. Sitter PCs are built as before; the adversaries can either be pre-generated PCs with some sketchy background and behavior notes, or the GM can give the Adversary players a setting and let them design characters (100 points recommended – they also get a "home field" advantage).

Once the pieces are on the board, all we need for a wargame is victory conditions. The GM should choose one or more victory conditions for each side.

Sample Victory Conditions for Sitters

- Finish homework.
- Keep the house – mostly – intact.
- Get kid fed. Score a special victory for good nutrition.
- Prevent the charge from eating the neighbors.
- Get kid into bed by bedtime. Special victory if kid actually goes to sleep.
 - Keep the sittee in the house.
 - Make out with boy/girl/thing-friend.
 - Get into liquor cabinet and get drunk.
 - Watch movie on TV, all the way to the end.

Sample Victory Conditions for Sittees

- Stay up too late.
- Eat some of the villagers. Special victory for *all* of the villagers. Ultimate victory for eating the sitter, too.
 - Get into liquor cabinet and get drunk.
 - Build a transdimensional warp gate and send the babysitter Somewhere Else.
 - Turn the sitter into a goldfish. Or a mindless zombie.
 - Watch sitter making out with boy/girl/thing-friend on living room couch. Special victory for videotaping the event for blackmail later.
 - Escape from the house and rampage through the neighborhood/city/galaxy.
 - Find out how much energy it takes to crack the planet in half.
 - Go back in time and kill your kindergarten teacher's parents.

GOTHIC VAMPIRES, SPECTRES, AND MINI- LICHES

Even the undead can have "offspring." Sometimes they've adopted a child to raise to adulthood before granting eternal unlife. Sometimes the child is from the dead parents' former living days. And sometimes the child is eternally a child – which is good for repeat business, from Babysitting Unlimited's point of view.

Little undeadlings have long-term objectives: language studies, occult matters, winning suitable minions and servants, and stocking their dungeons. (Which often have floorplans conveniently laid out in 10' by 10' squares because that's what fits on graph paper easiest.)

Suggested Characteristics: ST 9-14; DX 7-14; IQ 7-15; HT 12-18.

Suggested Advantages: Appropriate ones from *GURPS Undead* or *GURPS Spirits*, Absolute Timing, High Pain Threshold, Immunity to Disease, Magery, Night Vision, Unaging, Voice.

Suggested Disadvantages: Appropriate ones as above, Appearance (below average), Bad Temper, Enemy (Undead hunters), Megalomania, Paranoia, Stubbornness.

Suggested Skills: Intimidation, Leadership, Magic spells, Occultism, Stealth, Tactics.

MONSTER BABIES

These are, well, monsters. Yeti kittens, Bigfootlings, werewolf cubs, or anything else that's stronger, faster, and has bigger teeth than its sitter. Fortunately, these are *usually* not nearly full-grown teenagers, and therefore within human norms. Their victory conditions are typically Eating, Staying Up Late, and Running Off to Make Trouble. The sitter needs to keep them from eating what they shouldn't, get them to sleep on time, and prevent them from either

When Things Go Wrong

Sometimes the world is ending (or at least the younglings rampaging) and the sitter is at wit's end. Worse, the player is out of ideas, too.

That's when the doorbell rings.

At the door is a messenger – always nondescript but well groomed, and clearly some kind of setting-appropriate flunky. There is no visible means of transportation for this person, which may be odd if the house is on a genetically engineered giant lilypad. Said flunky gives the character a hand-calligraphed note from Mother, turns, and is usually gone by the time anyone looks up from the note's helpful suggestions.

For those times when the babysitter attempts to question or detain the messenger, or just watch where he, she, or it goes, some crisis will arise to distract him. This is easy to arrange; simply have the client's child ambush the sitter from behind, with "guess who!" or bazooka as desired.

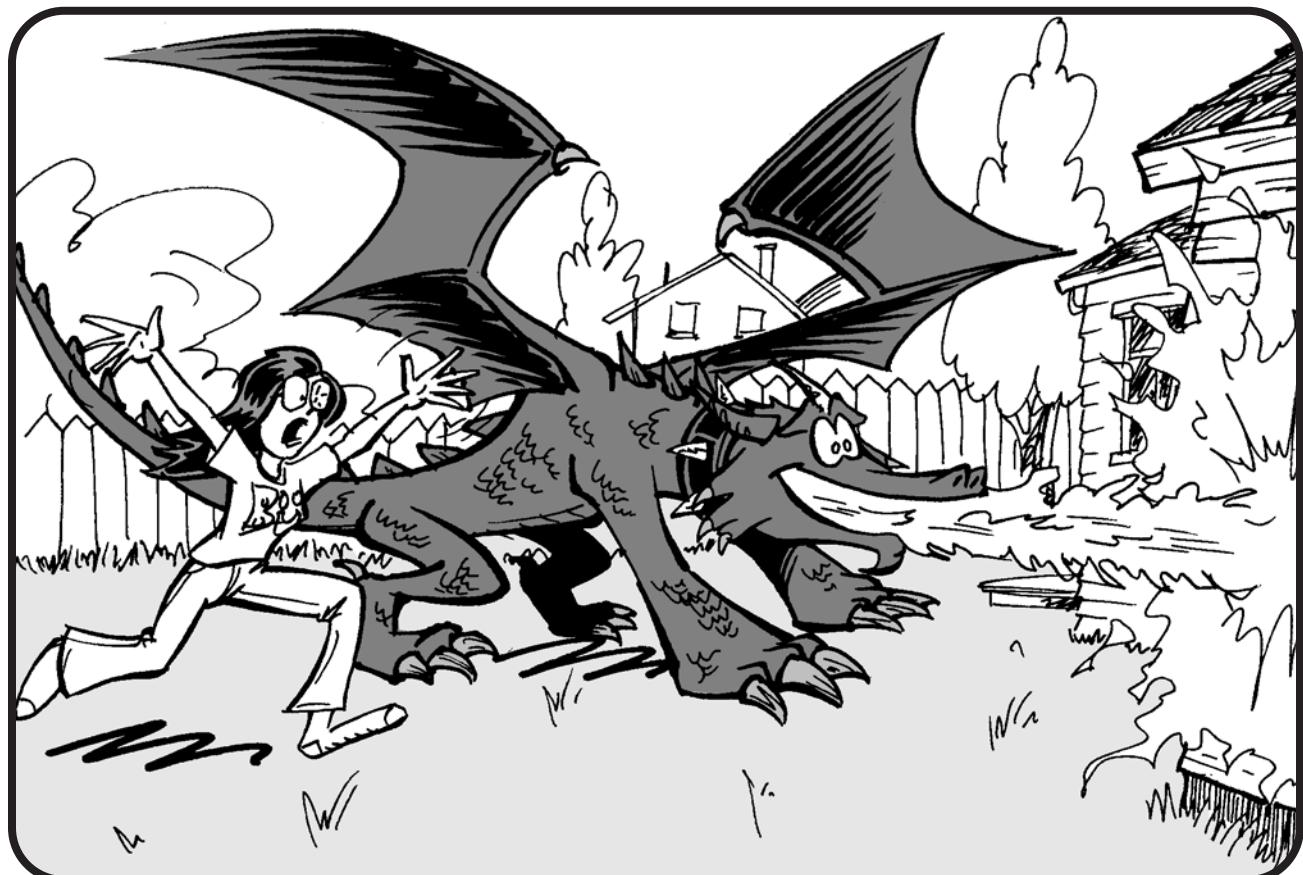
Sometimes a very good Sense roll (or cunning tactics) picks something up: a sound of large wings beating, before or after the messenger's appearance. A flash of light. A hint of brimstone in the air. Or any other odd bit of flavor the GM cares to use. Consistency between messenger appearances is entirely optional.

raising havoc or getting shot by overenthusiastic monster-hunters.

Suggested Characteristics: ST 7-13, DX 10-15, IQ 4-12, HT 9-16.

Suggested Advantages: Appropriate ones from *GURPS Shapeshifters*, Acute Senses, Alertness, Animal

Empathy, Cast Iron Stomach, Combat Reflexes, Damage Resistance, Danger Sense, Hyper-Reflexes, Hyper-Strength, Magic Resistance, Night Vision, Peripheral Vision, Psionic Resistance.



Suggested Disadvantages: Appearance (below average), Berserk, Bestial, Gigantism, Gluttony, Gullibility, Illiteracy, Impulsiveness, Mute, Odious Personal Habits, Overconfidence, Phobia (Fire, Loud Noises, Machinery, Magic, Sharp Things) Poverty, Primitive, Stubbornness.

Suggested Skills: Acrobatics, Brawling, Escape, Intimidation, Jumping, Running, Stealth, Survival (local environment), Swimming, Tactics, Tracking, Traps (discovering and disarming; monster babies rarely build traps).

MAGES, PSIONICS, AND GADGETEERS

The defining characteristic of these kids is their *intelligence*. Whether with the powers of the mind, magic, or Science!, these are the children most likely to beat the babysitter in any pure-IQ contests. Fortunately, they *tend* to be physically weak and prone to underestimating their opposition. Their goals (aside from ruling the universe from time to time) tend to focus on being left alone to research or practice their powers and build their golems or supercomputer robots. Naturally, these goals tend to be at odds with bedtime, eating all their dinner, or allowing the babysitter to have a peaceful evening without being eaten by mis-summoned demons.

Suggested Stats: ST 3-7; DX 3-7; IQ 12-18; HT 3-7.

Suggested Advantages: At least one of Gadgeteer, Magical Aptitude (limited or not), or Psionic powers; Strong Will.

Suggested Disadvantages: Absent-Mindedness, Skinny, Stubborn, and Stuttering.

Suggested Skills: An appropriate selection of Psionic skills for their

Setting the Tone

Like *GURPS Illuminati University*, the default mood of Mythic Babysitting and Babysitters Unlimited is Silly. No setting is too over the top, no dialog is too campy, and no cliché too old to be used, abused, and twisted to the needs of mayhem and amusement. The Worldwide Child Conspiracy *will* meet in the basement when the babysitter is there. The National League of Bad Guys *will* come recruiting. Aliens *will* drop by to ask if the cookies are made from real Girl Scouts. Of course, like *IOU*, one can use *Weird* and *Dark* instead.

A *Weird* campaign of Babysitters Unlimited is more mundane. There are no trips out of the timeline or off-planet, and “Jeeves” is only a car. (Really.) The Conspiracy of Teenage Geniuses is only going to meet online, requiring a stay of execution on bedtime. It won’t be *quite* the full moon when the triplets start howling suggestively, and they do stay humanoid. The escaped gerbils are only theoretically vampiric. Basically, the surface of the world is calm, orderly, and normal, and even at the worst, there’s usually a barely-plausible explanation for the madness.

Naturally, a *Dark* portrayal will be more mysterious. Employees of BU are given instructions to leave certain items at their charges’ homes, or be sure to take away specific things. The GM should make sure that every sitter has some disadvantage that gives BU a hold over them: Addiction, Secret, Secret Disadvantage, etc. It’s not just BU, either; when a babysitter discovers that tonight is when Little Jessie is slated to be initiated into the Cult of the Ancient Spirits, should he just take his money and leave when the parents come home? Is BU perhaps a branch of competing Illuminati, spying upon the other would-be Secret Masters and their children, assembling blackmail material to be sold to the highest bidder?

It’s also, of course, possible to have *Silly Dark* Mythic Babysitting. Five-year-olds in robes around a pentagram are cute, until you realize that their ritual knives are blood-stained and you’re the one tied to the altar. Werewolf puppies are adorable, until they get hungry. Even a baby vampire can be kitchie-cooed, but don’t run out of the O-negative in the fridge, and make sure that it doesn’t suck on your finger . . .

powers, Research, Science!, Spells, Thaumatology, Weird Magic, and Weird Science.

SUPERBABIES

There’s nothing to say that superheroes and superheroines can’t have romance, and the results . . . well, use the *heavy-duty* kite string on the Masked Levitator’s twins, right? And likewise, there’s nothing to say that superheroes and villainesses can’t have romance – or villains and heroines, or evil supers of appropriate gen-

ders, for that matter. It’s usually easier to babysit the heroic ones. Usually.

Superbabies have simple goals: avoid being toilet trained, avoid diapers, avoid going down for a nap, avoid eating what one should and not eating what one shouldn’t. Superkid goals divide into Saving The World or the ever-popular Ruling The World, primarily. They do have to start small, though – the back yard, the local park, the neighborhood . . .

Suggested Stats: ST 5-18; DX 5-18; IQ 7-18; HT 10-20.

Suggested Advantages: Anything in *GURPS Supers*.

Suggested Disadvantages: Anything in *GURPS Supers*, as well as Dependents (neighborhood non-super kids, pets, parents, etc.), Code of Honor, Duty, Honesty or Megalomania, and Sense of Duty.

Suggested Skills: Appropriate ones to use their superpowers.

Mother is the name of God in the lips and hearts of little children.
– William Thackeray

CHAPTER FOUR

MERIDIAN

BY DAVID PULVER



About the Author

David L. Pulver's first book was *GURPS Ultra-Tech*. Since then he has written or co-written over 50 game books including *Transhuman Space* and *BESM, Second Edition*. He presently lives in Victoria, British Columbia.

TIMELINE

This timeline summarizes the history of mankind from the 21st to the 30th centuries. All dates are A.D.

2015: Terrestrial Planet Finder space-based infrared interferometer scans nearby stars, discovering several potentially habitable planets within 50 light-years. Later follow-up projects like the lunar and solar foci telescopes will discover dozens of near-habitable or habitable worlds within several hundred light-years.

2059: Grand Unified Field Theory provides the basis for the production of exotic “negative matter” – the key to warp drive and faster-than-light travel.

2080: Various “posthuman” beings are created: transgenics with enhanced longevity, sapient artificial intelligences (AIs), and uploaded human minds (“braintapes” or “ghost-comps”). The legal status and human rights of these beings creates a great deal of controversy, as they are powerful tools, but many fear they could supplant humanity if allowed freedom to do as they wish.

2100: Research bases, mines, and small colonies are now established on Luna, Mercury, Mars, and Titan, and several asteroids and smaller gas giant moons. Joint Chinese-American Mars terraforming project is well underway.

2105: Completion of space elevator from Kenya on Earth into geosynchronous orbit – the Earth Beanstalk. It encourages a population exodus into space.

2120: Global Trade Conference collapses after Pacific bloc (Asia-America) and Eurasian Union cannot find common ground regarding the rights and legal status of sapient software. “Sapient rights” movement becomes increasingly radicalized.

2131: Zhang-Exo-Dynamics laboratory complex on Mercury uses ultra-high-power electrical fields to create a tiny quantity of exotic negative matter.

2150: First negative-matter drive (NMD) starship – the *Temerity* – is built by ZED and Hermetik Technologies. Operating on an evolved form of the Alcubierre warp drive principle, it can reach near-light-speed by simultaneously destroying and creating spacetime around itself. On its maiden voyage, it accelerates from Mercury to Pluto in just over five

hours . . . instead of the year that a conventional fusion drive ship requires.

2153: The re-engineered *Temerity* is lost when it vanishes without a trace while trying to travel faster than light.

2160: All major powers develop or retrofit sublight NMD drives into their vessels. The solar system shrinks . . . but interstellar space will take years.

2164: First starship to reach another star (Alpha Centauri) is Eurasia’s *Garuda*.

2170: “Tightening of the Belt” as Eurasian Union consolidates its control over various unaligned, anarchist, and corporate settlements in deep space, cleaning up a once-wild frontier.

2177: Chinese and American employees of Mercury-based Zhang-Exo-Dynamics learn their corporation’s Earthside office has been nationalized by the Eurasian Union. Many ZED personnel had parahuman children, most of which were Xian-series, a radical new design facing onerous restrictions under Eurasian Union law.

2178: The majority of ZED’s 1,300 employees cash in their (very lucrative) stock options, lease the starship *Chang Zhen*, and head out for one of the more distant star systems believed to hold life, 37 Geminum. They are the first of many space-based settlements to take the Outleap.

2201: Safe noninvasive braintaping technology becomes available. On Earth, half of the citizens in the Eurasian Union are sapient AIs.

2222: Starship *Chang Zhen* reaches 37 Geminum and founds the Tsikada colony in the asteroid belt.

2243: The Eurasian Union’s Interplanetary Conference on Artificial People (ICAP) demand that Pan-Pacific nations give their AIs the same rights as those enjoyed in Eurasian Union.

2250: Braintaping technology is pervasive on Earth, with perhaps 20% of the population keeping a digital “backup” stored in a secure vault.

2270: The Zarya colony spreads through its system’s asteroid belt, and constructs an orbital spaceport and beanstalk.

2280: Eurasian Parliament is deadlocked over the demand by AI citizens and their pan-sapient rights supporters of the “fundamental right” to replicate and upgrade themselves freely. “Pan-Sapient Charter of Rights” fails to pass by two votes; parallel legislation to require the same restrictions on humans (e.g., psychology tests before one is allowed to have children) is soundly defeated.

2300: Terraforming of planet Zarya (Epsilon Indi) completed. Its primitive bacterial life forms are now extinct in the wild, existing only in samples.

2305: The sudden emergence of an AI nation, the Eastern Singularity, leads to a “virtual coup” war on Earth with the Pan-Pacific Bloc.

2306: The conflict sucks in the Eurasian Union, Brazil, and other global powers, leading to “World War III.” Most offworld colonies strive for neutrality, but many strategic off-world targets are destroyed, including the huge antimatter and negative matter plants on Mercury and the system’s beanstalks.

2309: Eastern Singularity splinters into two factions, one of which allies with parts of the Eurasian Union military and various offworld colonies. The war goes bio-, nano-, and in places nuclear. Over 13 billion die. Most of Earth is devastated and collapses into disorder.

2313: Report of the Singularity War begins to reach the nearest extra-solar colonies, spreading fear and chaos.

2342: On and above Earth, an alliance of AI-dominated space colonies, city-states, and web life coalesce to form the State of Mind.

2360: The Church of the Infinite, who believe in the divinity of Gemini Jones, is founded on planet Zarya.

2375: State of Mind begins a lengthy effort to repair postwar Earth. “Human reboot”: millions of stored braintapes are recovered and played, and these “ghosts” join the State of Mind’s culture.

2419: Infinite Church begins spreading their gospel of human destiny via radio and laser beam to other Earth colonies.

2421: Galactic Railway Company is incorporated on planet Tsikada.

2438: Galactic Railway Company and ZED begin to build a negative matter factory.

2450: The Galactic Railway Company begins launching its first sublight “Spikes” to assemble the Railway.

2470: Formation of Worldscapers Inc., who begin terraforming a prebiotic “Embryonic Eden” world for the Infinite Church.

2501: Tsikada, Zarya, and five other systems linked by the Galactic Railway and (spiritually) by the Infinite Church unite to form a new power, Meridian.

2521: Meridian fights an Identity Shard culture called the Black Pelagics over the right to run a wormhole gate through their system.

2540: State of Mind begins to rebuild negative matter plant on Mercury, and begins work on wormhole technology.

2668: State of Mind colonizes Proxima Centauri asteroid belt, the first of several star systems it will gradually expand into.

2700: State of Mind installs multiple wormhole stargates that link various points in Sol and Alpha Centauri.

2710: Church of the Infinite forms a de-facto alliance with the Galactic Railway Company and Meridian.

2718: State of Mind forms the Preservers, a paramilitary organization dedicated to the eradication and preservation of biosapients for the cosmic good.

2745: In the first of several such incidents, Meridian seedships are driven from “Embryonic Eden” worlds guarded by Preserver robot sentinels.

2794: State of Mind begins constructing wormholes, but these are initially used to connect diverse parts of its own solar system.

2850: Preservers resort to terror tactics in their war against Meridian’s expansion. They attack a new terraforming colony on Tau Ceti and massacre 153,000 colonists.

2857: Meridian GALSEC forces launch a retaliatory strike against a

suspected Preserver base in the Alpha Centauri Oort cloud.

2891: Intense diplomatic action averts conflict with State of Mind.

State of Mind decide to ban the Preservers from launching attacks from SoM territory, but refuse to outlaw the organization. Preservers relocate to hidden (but less well-defended) systems within Meridian and the Identity Shards and continue their war.

2898: GALSEC agents infiltrate Preserver-sympathizing “Green Angel” cult and discover location of a major Preserver asteroid base hidden just beneath a gas giant atmosphere in Meridian space. GALSEC operatives attack, and are surprised to find a “virtual vault” with operating braintape recordings of the massacred prisoners of Tau Ceti.

2899: Carnification Crisis divides Meridian, as the fate of the Ghosts of Tau Ceti is determined.

2901: The present.

MERIDIAN

Meridian is the largest human interstellar nation. Its systems are connected by a network of “star stations” which contain wormhole stargates that allow instant jumps across light-years. Each star station is a colossal investment in resources (requiring, among other things, the creation of stable negative matter) but this is small price to pay for providing instant communication.

Meridian traces its ancestry to the Galactic Railway Company of Tsikada (a descendant of the Mercury branch of the Sino-American-Russian aerospace corporation Zhang-Exo-Dynamics) and the Church of the Infinite. “Meridian” can mean several things. The founders – more than half

of them Infinite Church members – had in mind the great circle they intended to construct via their star station network, and their hope of becoming the predominant interstellar power.

Meridian Worlds

A Meridian system is one that has a star station – a link in the chain of the Galactic Railway.

Junction Systems are worlds with three or more star stations, each connected by a wormhole to another star station.

Trunk Systems are those with a pair of star stations, each connected by a wormhole to another star station.

Branch Systems are those with a single star station.

Frontier Systems are those with no star station at all.

Main worlds are the worlds in branch, trunk, or junction systems that actually possess stargates. Minor worlds are worlds that do not. A minor world in a branch system is not really in Meridian and is known as an “outworld.”

Meridian Society

Meridian is a capitalistic, democratic society, at least in theory. All of Meridian’s inhabitants possess the usual civil rights, but power is heavily stratified depending on where you live and the types of genes you have.

Xian are the upper class of Meridian, descended from the children of the transhumanist corporate executives, engineers, and scientists that founded Tsikada and the Galactic Railway company. They’ve engineered their bodies for immortality, and live in the star stations above the planets.

Citizens are residents of the star cities with Web of Harmony links, and include both “old colonial” Xian families and *nouveau riche* former riders who have purchased links. The latter often create Xian children.

Quick Facts: Meridian

Tech Level: TL11 (trunk system telepolities); TL10 (branch system telepolities, trunk system jack cities); TL8-9 (most jack cities); TL6-8 (elsewhere).

Population: 40 billion sapients.

Gross Domestic Product: \$5,000 trillion.

Government Type: Athenian democracy/corporate plutocracy.

Typical Control Rating: CR 4 (CR 1-3 on planets).

Native Languages: English and Mandarin.

Riders are Meridians without the vote, but with passports that allow them to ride the galactic railway. Most live on planets that have joined Meridian within the last generation or so. Some may come up to work in the star cities, renting quarters or living in Xian residences as servants.

Indigs are the lowest class. They are often natives of newly absorbed branch worlds who do not yet have passports that permit them to leave their own planets. They can rise to Rider status by getting a job with a Citizen-owned (“Galactic”) company that will sponsor them. Their children may become Riders after their world is raised to trunk status.

Technology

Meridian is TL11 in most areas, and is especially advanced in high-energy and exotic-matter physics. It (and many Shard colonies as well) has distrusted sentient computers and self-replicating machines since the Singularity War. Most citizens have Intolerance or even a Phobia toward any sapient AIs; robots are made to be subservient.

Interstellar Relations

At present, Meridian is a force for stability. They are steadily expanding, at least in part due to their extensive use of self-replicating robot ships to seek out terrestrial worlds and seed Meridian colonies throughout much of the Orion arm of the galaxy. They can be somewhat hostile (verging on xenophobic) toward newly discovered alien races or other human cultures that may threaten their equilibrium, and have been involved in at least one genocidal war against “incomprehensible” gas-giant-dwelling aliens. When they encounter human cultures, Meridian generally seeks to assimilate them rather than destroy them.

Economy

Planets are economically interdependent. They often obtain raw materials from asteroids and gas giants (sometimes by using a wormhole-equipped station which hovers in the upper gas-giant atmosphere to scoop out helium-3 fusion fuel).

Extent

Currently, 158 “core” systems connect to the Galactic Railway. Of these, 90 are “main line” systems with two

wormholes and 68 are “spur” systems with one wormhole. Meridian adds up to three additional systems every year.

Sixty systems are classed as territories because they are located a light-day or more distant from a Galactic Railway Station. They enjoy Meridian protection and hope to be integrated – some day – into the Railway.

Internal Politics

Meridian is a single democratic government, rather than a federation or alliance of smaller powers. Each planet (and sometimes each region of a planet) may have its own distinct flavor and traditions, but they all share the same laws, values, and culture.

Legislative activity occurs in the lively interstellar net known as the Web of Harmony. Any full subscriber is free to debate, vote for, or propose legislation. In practice, most legislation comes out of popular SIGs (Social Interest Groups) (p. 80).

Demarchists: A philosophy rather than a party. There is a large democratic anarchist movement within Meridian that often votes together on certain issues relating to extension of individual freedom and property rights, reduced taxes, etc. but which is quite independent otherwise.

Colonial Party: The “Old Colonials” support continued expansion, terraforming of new worlds, and extension of the Galactic Railway. They support assimilation of willing, high-tech Shard systems, but fear this may damage the cohesion of Meridian if done too rapidly. The Colonial Party supports upgrading selected branch worlds with new wormholes to make them trunks. They oppose the “planet-saving adventurism” of the Infinite Justice Party. They have strong ties to the Galactic Railway, other businesses, and the Infinite Church.

Reflection: Advocates strong pansapient rights, closer ties with the League of Angels, and rapprochement with the State of Mind. This party supports the right of adult humans to alter their bodies and minds freely, but is split on issues of altering children. They are often stigmatized as atheists, heretics, or transhumanists, or soft on interstellar defense, but get along with some Demarchists.

The Galactic Railway

Meridian’s worlds are linked by a network of wormhole gates popularly called the Galactic Railway. The rail-

way is a colossal investment in resources and power, but this is considered a worthwhile price to pay for instant faster-than-light communication. It has fostered a high degree of specialization among individual Web worlds – there are many planets and star systems devoted entirely to single products or industries. In fact, some citizens even commute to work between star systems.

Meridian Society

Meridian is a capitalist, expansionist society whose leaders are consciously united and socially homogeneous, despite its size. Life, freedom of thought, and the pursuit of happiness are the primary virtues. To that end, the people sacrifice a degree of personal liberty.

Meridian encourages capitalism, but provides a generous basic living allowance to citizens. It maintains public baintape and clone banks (“deathcare” or the right to life).

STATE OF MIND

The major rival of Meridian, the State of Mind controls 200 star systems extending out from Sol, with a presence in another 140 systems. Total population is 8 billion sentient robots, 5 billion subjects on 37 low-tech “nursery” worlds, and 40 billion conquered subjects living in “Retirement Vaults” within their former systems. All citizens dwell in a bizarre abstract cyberspace ecology that is sustained within linked “ghost comp” megacomputers.

The State of Mind has a more measured approach to their manifest destiny. They are also expanding, but not as swiftly. Since the majority of their population perceive time more slowly than humans, the lengthy voyages necessary to establish stargate networks seem even longer to the State of Mind; this is one reason why they have not expanded as quickly as Meridian. Although individual digital intelligences can adjust their time rates, few wish to lose decades of real time to interstellar voyaging.

The State of Mind prefers to colonize asteroid belts and hot worlds close to suns such as Mercury. In a State of Mind system, the inner space around the star is often swarming

with thousands of solar-powered star stations and vast light-sail vessels; farther out, giant asteroid-mining ships swallow entire planetoids and slowly convert them into smart matter constructs.

The State of Mind felt severe remorse for the destruction of Earth's ecosystem during the Consolidation Wars. Having absorbed large numbers of human (and animal) minds, and failed to save others, they now desire to prevent further posthuman genocide – which they believe the Infinite Church and the Galactic Railway are

perpetrating in their rush to terraform other worlds.

THE IDENTITY SHARDS

This is a Meridian term for the estimated 400 human worlds that are not part of Meridian, i.e., which maintain their own cultures. Among them are several large interstellar societies controlling a dozen or more solar systems. A few of these have accepted

Galactic Railway line star-stations, but retain sovereignty over the Jack City up to the GR tower itself.

All Identity Shard colonies have had two to five centuries to develop on their own. At least 800 worlds have not yet been contacted . . . others may have retained warp drive and colonized more worlds. Just about any type of world or human society can be encountered among them – pastoral farming communities, ultra-tech asteroid mining complexes, and more. Most of the worlds have populations under a million.

HUMAN SPACE

The Galactic Railway winds its way across an arc over 200 light-years across, roughly centered on Sol. There are over 14,000 stars in that region, so it would be impractical to map even a fraction of them! Many Identity Shard colonies are scattered at even greater distances, across a volume of space roughly 400 light-years in radius – and still expanding.

The population of Human Space is highly mobile, thanks to the Galactic Railway. Although some people only ever live on one planet, it's just as common for people to trek across the stars looking for work or (if rich enough) for pleasure.

Earth Sol (G2 V)

The homeworld of mankind (third planet, 1 AU from the Sun). Earth was the cultural center of humanity, but is recovering from a recent war. It is controlled by the State of Mind. They have built a link to the Galactic Railway, but it does not connect to the surface – Earth is still off-limits (and dangerous) due to relics of the Singularity War (rogue AIs, killer nano, etc.) Most of the inhabitants are ghosts, AIs, and rhizogenic plague victims.

Galactic Railways: Alpha Centauri/Tsikada (4.4 LY); Sirius/Cynosure (8.6 LY).

Cynosure Station Sirius 2 (A0 V)

Cynosure, a Vesta-sized asteroid in a close, hot orbit around the star, is the location for a high-security negative matter plant and research station.

Wormholes: Sol/Mars (8.6 LY); Epsilon Eridani/Thorn (7.8 LY).

Tsikada

37 Geminorum (G0 V)

An old, warm, wet world with a standard atmosphere and abundant life, this was one of the first completely habitable planets to be settled by humans.

The largest Meridian station, Grand Central, orbits the planet; below it is Tsikada City, center of a spiderweb of railway lines that cross this world. Since the opening of the Galactic Railway it has experienced a flood of immigration and industrial develop-

ment. It now is home to 200 million people.

The (predominantly purple and blue-green) plants, and many insect-like species, are beautiful but quite poisonous. However, terrestrial life forms of all sorts are making inroads, and there are many areas where human crops are being cultivated (with judicious genetic tweaking). The largest animals, the Macro-Tsikadans, resemble Earth's dinosaurs in variety and size. They have six legs and natural chameleon skin. The smaller but fiercer species tend toward termite-like hive societies in underground burrows.

Frequency of Habitable Worlds

Habitable worlds are scarce – humans have reached only two worlds in the last millennium that can support human life unaided. (There are a thousand-odd other candidate worlds discovered by telescope that are possibly habitable, but well outside human space. Long range probes will take many centuries to reach them.) However, TL9+ technology can easily terraform less habitable ones. In particular:

Primeval Earth-type ("Neo-Eden") worlds are not uncommon, especially around stars younger than the Sun. These are greenhouse worlds the right distance from their sun for human habitation, but which have a too-thick carbon-dioxide atmosphere like the Earth of a billion or so years ago. Given about 300-600 million years, they may evolve life on their own. However, since conditions are almost right, terraformers can push ahead by adding carefully bioengineered algae and other photosynthetic organisms. With a premium prebiotic environment, life will spread across the planet at an accelerated rate.

TL10+ cultures can terraform more difficult worlds (like Mars, or, with a great deal of effort, Titan or Venus) but there is no need to try with plenty of Primeval planets to use. However, the terraforming of these Neo-Edens is detested by the Preservers, who see it as erasing the chance of a new type of life to evolve – a form of celestial abortion.

INSTITUTIONS AND ORGANIZATIONS

The following groups are unique to Meridian.

WEB OF HARMONY

Meridian's government is a virtual parliament in which every subscribed citizen has an equal voice through the Web of Harmony, at least in theory. All citizens can propose, debate, and vote on legislation any time they wish . . . but access is only open to subscribers to the Web, and the service fee for Web of Harmony access is a steep \$144,000 per year – more than most people can afford.

The Web is divided into millions of Social Interest Groups (SIGs), in which concerned citizens discuss, draft, and attempt to drum up support for public policy. The amount of funding within the annual budget that any actual bill can get depends not only on whether it gets more Yes than No votes, but also on the total number of citizens who chose to vote in favor of it.

Meridian is funded by a flat annual corporate tax (currently 5%) and the subscriber fees for the Web of Harmony.

“Essential services” (military, police, and so on) are contracted to private companies, e.g. GALSEC. It is sometimes enough to vote funds to a contractor and let them get on with the job. In other instances the same vote that hires a contractor also creates an elective committee (Citizen Oversight Group or COG) to tell it what to do.

Strategic Cog

This is Meridian's space exploration and naval arm. Its primary role is to defend planets (and Galactic Railway Stations) from space attack, preferably on someone else's territory.

Ships operate alone or in small groups. An exception is home defense squadrons for major worlds like Earth, which can be hundreds of ships.

Galactic Railway Company

This 600-year-old corporation is the largest trans-stellar in the Web of Harmony . . . the greatest company there ever was, or so say its publicists. The Galactic Railway company owns much of Meridian and vice versa.

The Galactic Railway Company directly employs 2 billion people, and almost all of the Xian own shares and stocks in the Galactic Railway.

GALSEC

The Galactic Railway Company's elite security and intelligence arm is, in all but name, an arm of the Meridian state. It protects stargates and exotic matter factories owned by the corporation, gathers intelligence on the competition and on threats to the Web of Harmony and Meridian. Its various divisions encompass space, rail, and intelligence operations, and include elite GALSEC commando forces composed of long-lived Xian (and skilled non-Xian) trained in special operations activities.

Ring Dynamics

This company is a major manufacturer of wormhole gates and exotic matter, and also manufacturers superconductors, energy banks, and fusion power systems. Its headquarters is the Sirius system.

Metapang Composites

This company is a major manufacturer of beanstalk stations.

INFINITE CHURCH

The Infinite Church is the unofficial state religion of the Web of Harmony, with eight billion followers. It preaches the gospel of Reiko Gemini, the legendary first woman to give birth in another star system. Man was granted a unique place in the galaxy by God, and has the duty to spread Earth's bounty through the

universe by terraforming worlds that lack life as we know it.

Infinite Church beliefs have roots in the (mostly extinct) Abrahamic religions (Judaism, Christianity, and Islam) and share the same basic moral precepts. The Church celebrates the perfection of humanity but opposes “pantropic” changes that adapt humans to other ecosystems. Church members are expected to be fruitful and multiply, spreading life through the universe. The church refuses to recognize AIs as “real” beings.

The Church was not part of the original Meridian, but was absorbed after the Zodiac Worlds were assimilated. Its doctrines proved compatible with the goals and ideals of Meridian, however, so the Xian – especially the executives of the Galactic Railway Company – supported it with donations and grants of Web of Harmony access (and thus citizenship) to its hierarchy. The Infinite Church preached in support of the Galactic Railway's construction, and some members consider the Stargates themselves to be sacred.

The Church membership is primarily a Rider faith, but members gain access to various unwritten social advantages, including preferential acceptance for jobs in high-paying Galactic companies. The Church is registered as a trans-stellar corporation and its bishops automatically become citizens. The symbol of the Infinite Church is the age-old symbol of the serpent-and-the-cross.

CRIMINALS AND REBELS

Several groups oppose the interests of the Web of Harmony.

Indig Guerrillas

Meridian has absorbed several worlds whose natives were less than keen to become part of its star culture. Anti-Meridian rebel movements are active on several worlds that were absorbed in the last century or so. These range from urban or rural ter-

rorist groups to bandits who sabotage the railway, rob trains, etc. Since the Xian are up in orbit, all but the best-organized guerrillas are limited in their targets. The victims of guerrilla groups are generally those Indigs who cooperate with the Meridian regime, and Rider settlers or migrant workers who are building the world's new railway and infrastructure.

THE PRESERVERS

Only a small fraction of the State of Mind actually feel this activity is especially worthwhile. This group, the Preservers, are fairly small (only equivalent in number to 2% of the military forces of the Meridian) but are nevertheless well-funded and equipped with TL12-13 technology, which gives them an occasional edge over their adversaries.

The Preservers are able to use State of Mind systems as a sanctuary if necessary, although (in the interest of avoiding all-out war) the State of Mind refuses to allow them to launch attacks directly from their territory.

Defensive Tactics: The Preservers smuggle military support – often just a small group of advisors or a few high-technology items – to various idealistically sound forces resisting Meridian. If a world has yet to be assailed directly, they may actually dispatch warships to help protect it.

Offensive Tactics: The Preservers also engage in hit-and-run tactics aimed at slowing the pace and increasing the cost of Meridian expansion. This involves raids on small, lightly populated colony worlds. The idea is to get Meridian colonies (or the corporations that fund them) to demand (expensive) protection. Hopefully Meridian will find the cost of garrisoning multiple small colonies too expensive, which will force it either to slow down and consolidate its expansion or terminate it all together.

The Preservers are, however, fastidious terrorists. Preservers avoid use of self-replicating molecular nanomachine weapons, out of fear that these could evolve uncontrollably and damage the very environments they are seeking to protect. Their own compassion often leads to overextension – if they discover a virgin world

about to be despoiled or colonized, they may send an expeditionary force to delay the process, even it's a forlorn hope.

Secret Bases

The Preservers have several hidden industrial facilities located inside Meridian territory. These are staffed with digital ghosts and a few sympathetic AIs. These robot factories are hidden in asteroid belts, on dead, airless worlds, beneath gas giant atmospheres, or in a system's (rarely visited) Kuiper Belt or Oort cloud.

Their arms factories are dedicated to turning out more Monitors and Harriers. It is also here they keep their notorious "Virtuality Vaults."

Preservers have a desire to be understood, and hope some of their victims will eventually accept what happened to them and why.

The Vaults

The preservers hold Mind in almost as much reverence as they do Nature. They don't like to kill. Even while launching a terror raid on a small Meridian colony, they may attempt a nonviolent solution if it presents itself; e.g., if destroying a particular bit of terraforming machinery would wreck the whole project, they will try and do that. This approach does require intelligence, and the Preservers will often have to infiltrate spies (human or otherwise). The Preservers have a sinister reputation among some humans, so sometimes the Preservers visit Identity Shard worlds to recruit human agents, telling them they work for rival Meridian corporations and seeking economic intelligence.

On the other hand, subtlety does not always work, and it is rarely very

intimidating. If necessary, and their resources allow, the Preservers will directly attack a colony to eradicate it. They avoid killing civilians if possible and prefer to fight with ecologically sound weapons (e.g., "clean" lasers, rather than gauss weapons that spit out high-density metals or blasters that emit radiation). They also avoid using weapons of mass destruction, chemical weaponry, etc., out of fear that it might further damage the biospheres they wish to save.

If possible, they use stunners and nerve blasters to take prisoners. Since shipping and taking care of hundreds or thousands of colonists is impossible for a hit-and-run guerrilla force, captives are usually either stored in suspended animation or – a new, ruthless policy – braintaped and then disposed of. Being digital entities themselves, they see this as assault, but better than death.

The Preservers have a desire to be understood, and hope some of their victims will eventually accept what happened to them and why. To this end, they have created several virtuality vaults – computers housing lifelike virtual reality simulations of planetary or other environments. They use these as interrogation rooms and prisons. They have even created illusionary Earth-cities (from the late, ecologically unsound, polluted era of man) which they place their prisoners into. Some of their victims may not even be aware they are captives in virtuality, believing instead they were shanghaied to a strange planet.

The illusion of reality is fairly exact to the microscopic level. At the molecular level and below, there are a great many simplifications, although these will not be apparent in most cases. The Preservers run most of these worlds at a reduced clock-rate to save on computing time. Even so, it is actually possible for people to live natural lives in them, and even die (and be rebooted automatically a few virtual days later) – some prisoners have been here for 30 years or more, and the simulation is complete enough that they can even have "virtual children." One virtuality vault was successfully liberated by a GALSEC raid on a Preserver base. However, since no clones of the original bodies were available, it is proving difficult to restore the braintapes to a biological form.

CHARACTERS

Characters can be built on any total from 150 to 400 points, depending on whether the emphasis is on playing relatively normal humans or long-lived and enhanced parahumans or ex-humans. About 300 points is suitable for most games.

CHARACTER TYPES

What do the average or elite do? Here's a list of adventurous jobs for humans living in one of the star cities during this period. See *GURPS Space* for suggested advantages, disadvantages, and skills for each character type.

Starship Crews attract attention in this age of slow starflight and fast stargates. Insystem crews have a reputation as clannish eccentrics, while the interstellar crews are seen as strange and romantic figures.

Dilettantes are Xian immortals and others who live on their stock dividends and options in the Galactic Railway or other major corporations.

Colonist can be a dangerous job. Most colonists are Rider settlers. Meridian provides land grants and corporate jobs to colonists who want to settle a newly opened world. This can be dangerous, because of both unexpected biological or natural hazards and attacks by rebel Indigs or Preservers.

Missionaries might be members of the Infinite Church. And there are some cults among Indig populations in Meridian that worship the Preservers as the Green Angels and pray for liberation from the stars.

Terrorists/Rebels usually oppose Meridian. There are Indig rebellions every few years, put down by GALSEC and local militia. However, some worlds in the Identity Shards have minorities that are themselves oppressed and see Meridian as a savior. These might be in contact with Meridian Outriders or GALSEC agents to assist any invasion. The Web of Harmony is also more likely to vote to forcibly assimilate a system if there is a noisy indigenous group that wants it there.

Tourists often travel on the Galactic Railway to see interesting astronomical

sights "in person." A few eccentric Xian enjoy traveling, sometimes disguised as ordinary Riders.

Artist/Entertainer: Citizens create or perfect forms of art, including fantasy roleplaying dreamgames, dance, fine art, fashion, and even sports. Economically speaking, entertainment (dream game disks, literature, new fashions) is a major export to other Metros cities.

Politician/Diplomats: Characters may be temporarily elected or appointed to a COG, or try to sway a SIG by words or deeds. Many star cities are participatory democracies. However,

professional politicos and diplomats are useful for dealing with planet-bound cultures, other star cities, and so on. This is a good profession for a character.

Engineers: Meridian is known for expertise in ultra-tech engineering projects. Advanced State of Mind cities often contract their services to lower-tech civilizations in return for gas giant or asteroid mining rights.

Pathfinders: Seeking out new worlds and contacting lost colonies or undiscovered alien races can be lucrative and dangerous. Long-distance telescopes can detect habitable worlds

Railway Workers

These workers operate and maintain Galactic Railway cars and their supporting infrastructure. Workers make their way up a hierarchy as they move through the Galactic Railway Company.

Lineworkers maintain the magnetic rail guide and handle cargo loading at yards. This is a lot of hard, nasty fieldwork. They may travel by train, ground vehicle, or aircraft to repair damaged sections of track in all manner of environments. They need Freight Handling and Mechanic (Mag-Lev) skills.

Linemasters work in vacuum on the beanstalk cables and systems. They often supervise Indig labor gangs or robots. In addition to lineworker skills, they need Free Fall and Vacc Suit skills.

Inductors ride in the mag-lev cars and maintain onboard systems, from life support to magnetic lifters. On passenger or freight runs they also help passengers with luggage and other duties. They have higher levels of the above skills and pick up Driving (Locomotive)/TL10.

Conductors oversee crew members (except engineers) to make sure the train operates according to the schedule and regulations. On passenger trains they collect fares, announce approaching train stops, and answer inquiries. On freight trains they manage the cargo and ensure that it is properly and safely loaded or unloaded. They have Rank 1 and Administration or Leadership skill.

Engineers are the "pilots" and "chief engineers" of each train. They train and supervise the inductors in maintenance tasks, monitor sensors that indicate guideway conditions, and keep alert for damage or sabotage. They also perform routine maintenance or emergency repairs to onboard systems and are qualified to work with fusion reactors. They have Rank 2 and add Mechanic (Fusion Reactor) to their skills.

Line, Cable, and Warp Engineers supervise sections of the magnetic guideway tracks, beanstalk, and wormhole, respectively (in that order of seniority); oversee AI systems; and schedule trains. They also shuttle train cars within the railway yards and maintain control equipment. They usually have Electronics Operation (Matter Transmitter) and Mechanic (Wormhole), which requires Physics as a prerequisite. They have Rank 3.

Ringmasters are the senior managers of a particular stargate. They have Administrative Rank 4+ and Status 3+.

Porters see to the needs of the passengers on starliner and sleeper trains. They need various social skills, but are not counted as part of the above hierarchy.

across dozens of light-years. Meridian launches large Seedship expeditions (carrying thousands of people and a wormhole gateway). A Seedship will use its fleet of warp-capable scout and exploration vessels to scout ahead to probe dangerous systems, make first contact, and prepare the way for the mothership's arrival. Once a planet is occupied, hands-on, boots-in-the-mud exploration is needed: biological and geological research, surveying a site for the Jack City and a path for the Galactic Railway, contacting and/or recruiting any Indigs, etc.

RACIAL TEMPLATES

The humans of the 31st century are the end result of centuries of careful modification. Even Shard humans are unlikely to descend from baseline stock. Genetic historians and Preserver researchers devote their careers to searching the Identity Shards for rare baseline genotypes of both humans and other Earth life forms.

Six non-starfaring alien species (TL1-5) have been encountered by humanity and absorbed into Meridian. GMs may wish to use the Sparrials, Pachekki, Gormelites, and Treefolk (pp. S56-58) as typical "Indig" races, or as species yet to be encountered in the unexplored reaches of space.

An alien subject on a conquered world is usually regarded as inferior by the Xian and Legacy populations. Indigs have Social Stigma (Minority Group) within Meridian and may have a few levels of Primitive if they have yet to adjust to their new culture. Aliens require visas to travel on the Galactic Railways. It is in fashion in some Xian circles to have a few alien clients or menials, however, or to have an alien porter on a railcar starliner.

In addition to biological life forms, robots are quite common. However, true sapient AI is rarely produced outside the State of Mind. A robot or known AI has the Barbarian, Outsider, or Valuable Property Social Stigmas.

Variant Humans see p. S54

The Light Worler and Spacer templates are common. High-G worlds and heavy worlders are very rare. Genetically enhanced humans are now a default.

Tokamura

Age 90, 5'7", 125 lbs. Wild mane of black hair, large dark eyes, oriental features and skin tone, slim and light of build.

Tokamura Tanith Hecate (last name/first name/residence name) is a Xian citizen born and raised on the *Hecate*. Tanith is a member of a small exploration team (Team Eon, which is a privately operated and funded by a National Geographic-style documentary company). Team Eon surveys newly discovered terrestrial worlds, looks into possibilities for economic or cultural exchanges or exploitation, and whenever possible, makes dramatic documentaries which are sold throughout the League and sometimes beyond.

Tanith is the team's new xenozoologist. Like most 31st-century Xian, she has many hobbies – she's an accomplished painter and dilettante genetic engineer. She has an ambition to breed flying riding animals, and always takes samples from any interesting winged creatures she encounters, hoping eventually to find a gene sequence that will let her build a workable one.

She spends only a few months out of every year at *Hecate*, but absence makes her fierce love for it stronger. Like most Xian, she has a number of android lovers.

Tokamura Tanith Hecate 270 points

ST 9 [-10]; **DX** 13 [30]; **IQ** 14 [30], **HT** 11 [0].

Speed 6.00; Move 6.

Dodge 6.

Advantages: Animal Empathy [5]; Interface Jack [10]; Status 3 [15]; Wealthy [20]; Xian [215].

Disadvantages: Dependent (Nosferatu, her pet bat brainboosted to IQ 8, on 9 or less) [-5]; Fanaticism (Loyalty to *Hecate*) [-15]; Intolerance (Free-willed AIs) [-5]; Pacifism (Cannot Kill) [-15]; Stubbornness [-5].

Quirks: Believes all AIs should be enslaved; Enjoys stopping to paint things, especially abstracts of animals; Keeps trying to gengineer flying riding animals; Overacts shamelessly for Team Eon documentaries; Pet of the week. [-5]

Skills: Acting-14 [1]; Animal Handling-17 [1]*; Artist-17 [5]; Beam Weapons (Neural)-15 [1]; Disguise-14 [2]; Electronics Operation (Sensors)-14 [1]; First Aid-15 [1]; Freefall-14 [1]**; Genetics (Genetic Engineering)-14 [2]; Judo-12 [2]; Lasso-11 [1]; Piloting (High Performance Spacecraft)-13 [1]**; Planetology (Earthlike)-15 [2]; Riding-16 [1]*; Stealth-12 [1]; Survival (Forest)-14 [1]; Tracking-14 [1]; Vacc Suit-14 [1]; Xenobiology (Terrestrial)-17 [4]; Xenology-13 [1].

* Modified by Animal Empathy.

** Modified by 3D Spatial Sense.

Languages: English (native)-14 [0]; Mandarin-14 [1].

Note: All mental skills include Eidetic Memory bonus.

Angel Parahuman 25 points

Attributes: ST -2 [-15]; HT+1 [10].

Advantages: 3D Spatial Sense [10]; Attractive [5]; Longevity [5]; Panimmunity 1 [2]; Rapid Healing [5].

A common species from the early era of Sol asteroid belt settlement. They often live in deep space ports.

Meridian Mongrels 27 points

Attributes: HT+1 [10].

Advantages: Attractive [5]; Longevity [5]; Panimmunity 1 [2]; Rapid Healing [5].

Taboo Traits: Any hereditary problem (GM's option), e.g., Albinism or Hemophilia.

The majority of "Riders" in Meridian are a mix of several infertile colonial gene lines. Some dominant genes continue to provide enhancement.

Xian 215 points

Attributes: IQ+1 [10]; HT+1 [10].

Advantages: Beautiful/Handsome [15]; Cast Iron Stomach [15]; Compartmentalized Mind 1 (Telereceive unnecessary; +10%) [55]; Cool [1]; Deep Sleeper [5]; Eidetic Memory 1 [30]; Filter Lungs [5]; Improved G-Tolerance (0-0.2 G) [10]; Less Sleep 3 [9]; Metabolism Control 1 [5]; Panimmunity 2 [5]; Regeneration (Slow) [10]; Reproductive Control [2]; Resistant to Poison [5]; Unaging [15]; Very Fit [15].

Disadvantages: Cyber-Rejection (Biological and nanotechnological implants only, -50%) [-5]; Social Disease (Other races only, -60%) [-2].

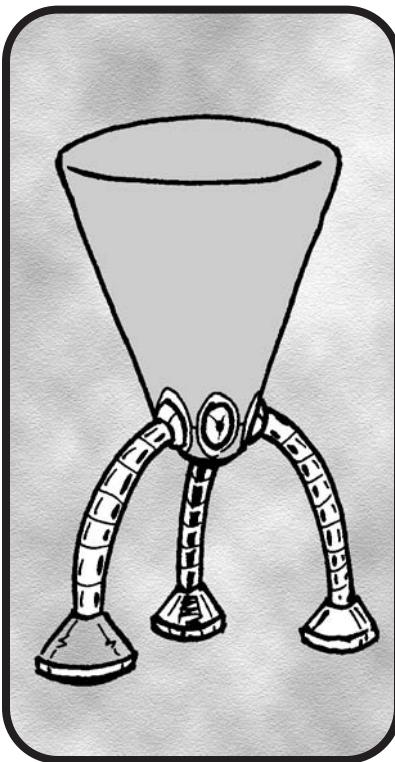
Features: No appendix; DNA codes with personal identity tag; Delayed puberty.

Taboo Traits: Any hereditary problem (GM's option), e.g., Albinism or Hemophilia; any Appearance less than Average.

Xian look human – but in addition to extensive genetic engineering (including insertion of artificial chromosomes), nanobots have replaced or assimilated their natural bacteria and thoroughly colonized their genome. The nano network is a sentient biocomputer that grows up and evolves along with the host.

Xian housekeeping nano polices the body, assisting in functions ranging from digestion to accelerated transmission of nerve impulses. It can also make repairs and eliminate hostile cells or invading nano. The artificial macrophages of their upgraded immune defense system are so aggressive that a non-Xian must make a HT roll after any intimate contact (sex, exposure to their blood, etc.) or, 1d hours later, suffer a mild fever and rash (-1 DX and IQ; -1 HP for HT/2 hours).

Xian have an extended childhood, with puberty delayed until age 16. They can voluntarily control their own fertility with a small effort, using biofeedback procedures to move between fertile and nonfertile phases. This takes a day for the transition to



take effect. They are infertile with other human species (unless genetic engineering is used).

Xian are effectively immortal; the oldest are about 300 years old.

Flexbot 297 points

Attributes: ST 11 [10]; HT+2 [20].

Advantages: 360-Degree Vision [25];

Absolute Timing [5]; Chameleon 1 [7]; Doesn't Breathe [20]; Doesn't Eat or Drink [10]; Doesn't Sleep [20]; DR 10 [30]; Eidetic Memory 1 [30]; Enhanced Time Sense [45]; Extra Arms 3 [30]; Extra Flexibility [10]; Extra Life (Digital backup, -50%) [13]; Flexibility [15]; High Pain Threshold [10]; Injury Tolerance (No Blood, No Brain, No Neck) [15]; Lightning Calculator [5]; Polarized Eyes [5]; Radio Speech [25]; Spectrum Vision [40]; Stretching 1 [30]; Unaging [15].

Disadvantages: Honesty [-10];

Impulsiveness [-10]; Low Empathy [-15]; Reprogrammable Duty [-25]; Slave Mentality [-40]; Sterile [-3]; Unhealing [-30].

Features: Can double as furniture; Complexity 8 computer installed.

A typical modern robot, with an inverted cone for a body. It can retract up to five limbs, walking on three like a starfish and using two for manipulation. Its body is covered with a soft, yielding chameleon material; the flexbot is designed to double as a chair, cushion, or table, and can even flatten itself to act as a bed. No devices or sensors protrude from it – it is smooth, functional, and elegant. It can wear armor and vacc suits modified for it (+50% cost).

State of Mind Citizen: State of Mind AIs and ghost-comp citizens (including Preservers) often occupy Flexbot-type bodies. As above, but delete Honesty, Impulsiveness, Low Empathy, Reprogrammable Duty, Slave Mentality. 397 points.

STATUS AND COST OF LIVING

Status (p. B18) reflects one's position in society. Examples are listed below.

Senior positions (e.g., a corporate executive or ministry bureaucrat) are reflected by Administrative Rank, not status. Celebrity is reflected by Reputation.

Non-Xian who are Status 3+ should take a Reputation -1 ("new money," among Xian, a large class), or a Secret (resulting in disgrace) if they hide it.

Meridian Status Table

Status	Position	Cost of Living
4	Citizen resident in a central station or GR tower	\$120,000
3	Citizen resident elsewhere (including a Seedship)	\$24,000
2	Rider living in central station or GR Tower	\$6,000
1	Rider living in Jack City or deep space port	\$2,400
0	Rider living elsewhere on a planet, etc.	\$1,200
-1	Indig	\$600
-2	Homeless Indig	\$300
-3	Nonsapient AI	None

TECHNOLOGY AND EQUIPMENT

Two “superscience” technologies are in use: warp drive and wormholes, and the exotic matter factories used to build them. Technology is otherwise “hard science” (see p. S27 and p. UTT6). Force field and gravity manipulation technology is unavailable, energy storage use the advanced battery rules (p. S26), and braintapes only permit digital braintapes to be made, at 100,000 gigs.

GALACTIC RAILWAY STATIONS

The Galactic Railway is a multi-track magnetic-levitation railway line that (by last reckoning) covered over 100 million miles of track on 300 worlds. The Railway also partners or operates planetary mag-lev (and other) transport links.

This means that a passenger with the right ticket on a Meridian world can board a luxurious Galactic Railway starliner car in a station in a major downside city – say, Hecate on Hell’s Snowball in Epsilon Eridani – then ride that same car at 340 mph across the continent to the local Jack City. The car then climbs up (still mag-levitating) the beanstalk cable, accelerating in the vacuum to several thousand mph. Once in geosynchronous orbit, the passenger’s galactic railway car can pass through the station’s wormhole gate and leap instantaneously across the stars. His car will emerge from a wormhole star station at Epsilon Indi, Tau Ceti, or elsewhere. He can then ride the same car down the space

elevator to the surface, or switch tracks and trains and continue on to the next star station.

The result: Interstellar travel is now a fast and luxurious rail journey rather than a space flight. Every Galactic Railway station is different, but since many were built by the same company, they often share certain characteristics.

Central Station

The most impressive part of the star station, each “Central Station” is an city-sized space station placed in a geostationary orbit (23,000 miles up for a typical Earth-sized planet), unless it’s in an asteroid belt or some other unusual location. The station is usually a box or cylinder, but there is often a rotating habitat ring designed to provide a normal-gravity section. Central Stations are towns or cities in their own right. Transient populations can vary from 1,000 (typical for branch world star stations) to a few million (for star stations on trunk or junction worlds); permanent populations are smaller, but many of the Xian prefer luxurious residences in them, as do nouveau riche non-Xian. The largest central station is the Grand Central.

The center of the habitat is a cylindrical “terminal” that contains docking and switching facilities for the mag-lev cars, warehouse and industrial space, and the machinery for stabilizing a 5-yard-wide wormhole: a stargate.

The central habitat also anchors a beanstalk cable that leads down to the planet below.

The Beanstalk

A space station at an equatorial geosynchronous orbit seems to hang in place over a particular point on the

ground. This allows a superstrong carbon nanotube cable to be connected from orbit to the surface: a beanstalk. The cable hangs vertically over the equator.

Beanstalk cables are several yards thick at the Central Station but narrow to only a few yards thick at the GR tower several thousand miles below (23,000 on an Earth-sized world). In addition to supporting elevators, the cables can tap the rotation of the planet’s magnetic field (if it has one) to generate power for elevators and other station needs; otherwise, a fusion reactor in the station (the same one that helps stabilize the wormhole) also provides the necessary power. The cable system also includes a fat bundle of optical cables, which carry the Web of Harmony communication network between the stars.

Each beanstalk has two to 12 magnetic-levitation elevator tracks that run down from the cable (actually a bundle of cables) to the Jack City on the surface. Power required is relatively low: when each elevator is descending, the elevator car freefalls toward the surface, returning energy to the system.

Elevator cars ride the beanstalk at about 6,000 mph and can climb an average beanstalk in four hours. The view out is spectacular.

Balance, Countermass, and Deep Space Port

To prevent the thousands of miles of cable from tumbling back to the planet, the beanstalk requires an equal balancing weight that extends out into space.

This is in the form of a not-quite-so-long cable with an attached countermass. That might be an asteroid if there is nothing else of interest in the system, but most star stations install a spaceport (Class II to IV) as well or instead. The mag-lev track links the higher-up deep space port with the Central Station. It usually takes about half as long to go from Central Station to the deep space port (or back) as it does to reach the surface – usually a two-hour journey.

Ticket Prices

Galactic: \$500 to go up to or down from a central station, or to reach the deep space port, or per wormhole jump.

Planetary Mag-Lev Ticket: \$10/100 miles.

Double cost for sleeper car, $\times 5$ cost for a luxury starliner car.

Retired or vacationing Galactic Railway employees of Rank 1+ can travel for free if there is a spare cabin; this is a Claim to Hospitality [5].

Passengers get a good view of the spaceport activities as their car closes on the port. Depending on the system's offworld industrial base, it may range from a few Galactic Railway maintenance teams in workpods to multitudes of vessels bringing in ores and volatiles from in-system asteroids and gas giants. There might even be a giant Seedship docked, or preparing to depart on a long interstellar mission. A few super-industrial deep space ports even have a second wormhole, one that opens directly onto a major space mining facility.

Since most citizens of Meridian never travel in spacecraft, the Deep Space Port is an exotic environment. It is often in zero-G, and many of the population are specially space-adapted animals or humans. There is usually a small "star town" (population 100-10,000) that exists to serve their needs and desires; this often houses stranded aliens, slumming AIs, criminals of all stripes, and other exotics. There may also be micro-gravity factories, labs, or other zero-G industrial facilities.

Passengers bound for the planet's surface who arrive through the Deep Space Port often remain in their railcars as it travels down the counter-mass cable to the Central Station. Spacecraft can also use the rotation of the entire space elevator to slingshot payloads into deep space, adding several miles per second of additional velocity.

Jack Cities

It might be named Footfall, Babel, Monolith, or even Lowell City, but whatever the name, it's the downport at the base of the beanstalk: a sprawling "star town" that surrounds the base of the GR Tower. There is a web of mag-lev railway, road, and airport facilities radiating out from the Jack City – in a newly settled world, these are still under construction, often with equipment coming down the beanstalk from a Seedship (p. 58) in orbit. Planetary authorities and corporations are encouraged with tax incentives to build their own mag-lev lines to connect Jack City with other centers.

Life in a Jack City is usually seen as much more glamorous than living anywhere else on the planet, especially if one can get a job with a transstellar like the Railway. Cost of living is correspondingly higher, but it's also

a place where higher-TL goods, Xian aristocrats, and even alien visitors are found. There is usually a thriving underworld as well, not to mention plenty of homeless and runaways drawn by the lure of a "star city."

Each Jack City has its own Galactic Railway (GR) tower, a huge, mostly hollow tower that stretches several miles into the heavens, anchoring the bottom end of the beanstalk. GR towers are built atop mountains if possible, but it's not essential. The GR logo is prominent and can be seen for miles. A railway line runs into and up the tower. It may also house a few thousand offices, shops, and even

apartments; in the Meridian view, if you have live on a planet, this is the best place to live.

GALACTIC RAILCARS

The standard Galactic railcar is a streamlined magnetic-levitation (mag-lev) vehicle used for operation both on the beanstalk and off it. Freight, liner, and other specialized cars exist – even armored cars used by GALSEC and local militias. Cars are always pressurized and designed to be rugged, with

Wormholes

Wormholes are delicate and expensive systems. The hole itself – both ends – is an exotic matter construct that can only be manufactured in a few specialized wormhole factories, each of which costs many trillions. The holes are enlarged, stabilized, and supported by tremendously powerful electromagnetic fields; the hole itself is rarely more than five yards across, but the machinery for stabilizing it masses many thousands of tons and requires vast amounts of energy. Some of that energy comes up the beanstalk cable, but it will also have an integral reactor.

Use the rules for artificial wormholes (p. VX16). A pair of wormholes are manufactured at the same time, which, when separated, remain connected, even at interstellar distances. Each of the two sides of a 5-yard hole is 500,000 tons, 1,000 spaces, and \$50 billion, excluding shipping and handling, plus the equivalent of a jump drive capable of shunting the desired mass (used to stabilize the hole; without it, it collapses when used). Wormholes are installed at the ends of evacuated tunnels a few hundred yards long. A complex system of magnetic tracks routes masses in and out of wormholes automatically. The wormhole traffic is controlled by AI and human station managers on either side. Communication beams are constantly carrying data through the wormhole, and allowing synchronization. It is possible to walk through a tunnel if it's not in use.

Wormhole transit is instantaneous, but trains often halt before entering, as it is important that the amount of mass/energy passing through a wormhole on both sides is equalized.

Branch Systems have only one wormhole. Upon arrival, a train may stop at the station to pick up or deposit any cargo and passengers, switch tracks and head back, or continue down the beanstalk to the planet.

Trunk Systems have multiple wormholes. Access requires taking a spacecraft to fly around the planet (takes about an hour, mostly for docking) or riding the railway down to the surface.

Depending on their car's schedule, passengers may transfer to a different car at the terminal they arrive in, or continue on in the same car up or down the countermass cable and out through the next wormhole, an extra 3 hours' travel.

Spur Stations have a single wormhole. They are the "end of the line" – cargo and passengers must proceed further by starship or spaceship, if any are available.

Unlimited FTL Radio: Wormholes allow unlimited FTL radio but only through the wormhole network. In practice, this means that worlds connected to the Galactic Railway benefit from it (with a very small delay as the wormholes are usually on the other side of the planet).

auxiliary power systems and safety features. Diamond windows provide an excellent view of the scenery. Cars may be singletons or linked together in multi-car trains. They're usually unarmed, but a locker holds sidearms (typically a tightbeam blaster with electrolaser setting) and other emergency supplies.

"Orion Express" Star Freighter (TL10)

These railcars have been in service for over 200 years. Some of them are getting due for replacement, but they remain reliable and efficient.

The car's forward section houses the control room (seating two) next to an airlock and car's locker, followed by a cabin for the engineer (who may share it with a friend, if desired). Behind the cabin is an automated sickbay, the engineering spaces, a bunk room for five crew, and the aft airlock. Filling the rear of the car is a big cargo hold. The turret is above the aft airlock, and is usually empty, serving as an observation dome except on the rare military train.

Usual crew is an engineer, a conductor, three inductors, and two porters. On hazardous routes, a GALSEC officer may ride shotgun, sharing the cabin. The cargo hold carries 2,500 cf of cargo (typically 50 tons).

Hull: 10,000 cf SL hull. 16 spaces. Small turret. cDR 1. Intruder chameleon. 6 tons.

Modules (Spaces): Small Bridge (1); Mag-Lev Lifter (1.5); 10-MW Fusion/10 (0.5); Fusion Core/10 (0.5); 1 Bunk Room (1); 1 Cabin (1); Full Life Support (0.5); 1 Small Entry Module (0.5); 1 Autodoc (0.5); Cargo (10).

Statistics: EMass 38.3 tons. LMass 89 tons. Total Cost M\$7.2555. cHP 45. Hull Size Modifier +6.

Performance: Accel 1.4 mph/s. Decel 10 mph/s. Speed 340 mph (in atmosphere).

Express Variations

The star freighter car is not the only one in use. Other cars commonly operational include:

Sleeper: The basic longliner carries 30 passengers in curtained sleeping alcoves, plus a dining room section. Add 2 Diners and an extra 6 Bunk Rooms in place of 8 Cargo. Only the most eccentric Xian would travel this way.

Mag-Lev Lifters Table

System	Lift	Mass	Cost	Power
Mag-Lev Lifters	80	4	0.32	1.6
Track-Powered Lifter	40	4	0.32	-

Commuter: Used for short-haul runs, carrying 120 seated passengers and 10 tons baggage. Add 8 Passenger Seats in place of 8 Cargo.

Repair: Dispatched to repair damaged guideway lines/cars. Carries eight extra inductors (but no conductor or porters) and 5 tons of spares. Add a Bunkroom, 3 Complete Workshops (7.5), and an Autodoc (0.5) in place of 9 Cargo.

Star Liner: Carries up to 12 passengers in comfort, with 5 tons of baggage. Add 2 Luxury Cabins (4), 4 extra Cabins, and 1 Diner in place of 9 Cargo.

Ballroom or Casino: Usually only part of a train with multiple starliner or sleeper cars. Add 1 Hall in place of 10 Cargo.

Ferry: Add Vehicle Bay (10 space) in place of 10 Cargo.

Dining Rooms

Dining rooms are bought as Passenger Seating.

Mag-Lev Lifters

Galactic Rail cars must operate in just about any environment. Thus, they're best built as spacecraft. This module generates lift and thrust through magnetic interactions with a mag-lev rail. Skill required is Driving (Locomotive)/TL.

Lift, Mass, Cost, and Power are per space; half- or quarter-space lifters are possible. If the vessel's mass exceeds the Lift value, it cannot move.

Performance: Maximum speed is calculated as for Top Air Speed (p. S130) except that mag-levs operating in thin or trace atmosphere do not have to calculate Drag. Thrust is equal to $0.2 \times (\text{rated Lift of the lifters} - \text{LMass})$; plus the thrust of any added reaction engines used for propulsion. Deceleration is 10 mph per second. Acceleration is $(\text{Thrust}/\text{LMass}) \times 20$ mph per second.

Mag-Lev Rail Line: A guideway for mag-lev lifters to operate on. The rails are M\$1 per mile and must be kept relatively flat with gentle curves; cost assumes the track is elevated to clear ground contours. Power requirement equals the total mag-lev power

requirements of all vehicles currently using the track.

Contact Power: Mag-lev lifters that are powered by the rail line itself are double the mass but reduce the Power requirement to 0.

STARSHIPS

Ships tend to be TL11-12 designs. Starships are used for exploration, diplomatic missions between far cultures, and fast interplanetary trade.

There is very little interstellar trade by starship – if two systems have a trade relationship, that justifies the establishment of a stargate link.

Maneuver Drive: Ships use grav drives ("NMD drives" in this setting) for sublight maneuvering. These are pseudo-velocity drives: the fabric of space itself is moved (created and destroyed) as the ship travels, so there are not any relativistic or increased momentum effects. A ship under grav drive takes 8,300 hours divided by sAccel to reach 99.99% of light-speed; higher velocities are not possible. For fast interplanetary travel at near-light-speed, just multiply the distance in AU by 500 to get seconds of time. TL12 grav drives are not usable inside an atmosphere; TL13+ are, but will be limited to a top speed of less than orbital velocity, e.g., 15,000 mph.

Negative Matter: A grav drive ship requires a small negative mass of exotic matter to create the sublight warp-drive field around the ship. Treat this as a Warp Core (p. S116) except that the cost is M\$10.

Unavailable Components: FTL sensors; superscience drives other than the grav drive; FTL drives; tractor and pressor beams; artificial gravity; contragravity; superscience power cells; anything TL14+.

Weapons: Beam weapons such as X-ray lasers and particle beams are standard. Missiles are rarely carried unless the ship is planning planetary bombardment. Grav drives are too expensive for normal use (M\$50 for light or M\$100 for heavy). Reactionless drive missiles are unavailable. Reaction drive missiles can be used, but are normally unable to catch grav drive ships.



FTL Radio: There is no FTL radio as such, but any ship in communication range of a system can send or receive messages transmitted through the gate.

A few sample starships are provided here. GMs can create more using the rules in *GURPS Space* and the guidelines in this chapter.

Seedship

A gigantic vessel for lengthy interstellar voyages at sublight, Seedships explore new systems and transport wormhole spikes from star to star. They are named after divine creative forces, e.g., *Isis*, *Shiva*, or *Prometheus*.

Seedships are TL11 vessels with TL12 grav drives. A semi-transparent nanoplastic egg houses drive generators, tanks, an internal rotating habitat ring, and many large habitat chambers. The rotation of the ring makes the ship vaguely resemble a cutaway diagram of a complex mechanical clock. The interior contains luxurious surroundings amid parks (with ponds and trees), plazas, even farms and orchards.

A Seedship can produce a thrust of a few miles/second via reaction drive – enough to match velocities with a high-orbit station. Grav drive is sluggish compared to a small vessel, but can reach 99% of light-speed in 227 days.

Although a Seedship may take several years even at light-speed to reach its destination, if it's carrying a wormhole, contact can be maintained and the crew can even travel back and forth . . . but only when the NMD is turned off!

Hull: 500 million cf USL. 1 million spaces. 50 large turrets. cDR 70.

Systems (Spaces): 10 Large Bridge/11, sentient (40); 10 Advanced

Sensors/11, astronomical and planetary survey (40); Grav Drive and Core/12 (125K); Spin Gravity (1 G) (5); Fast Fusion Drive/10 (3.75K); Tanks (water, 11.25K); Fusion Reactor and Core/11 (25.5K); Backup Fusion Reactor and Core/11 (25K); 10 Factory (100K); 20 Farm (200K); 5 Park (50K); 5 Plaza (50K), 20 Housing (200K); 50 Hv. X-ray Lasers (in turrets) (5K); 4 Extra-Hv. X-ray Lasers (4K); Labs (500); Large Entry Modules (10); 10 million cf Spacedock (40K); 10 250K cf Spacedocks (10K); Energy Bank (1.2K); Cargo (150K); Empty space (5.2K).

Statistics: EMass 3,767,945.85 tons. LMass 4,722,145.85 tons. Total Cost M\$136,902.665. Scan 43/40/39. Hull Size Modifier +16. cSM +6. ASig +6. PSig +6. Hull cHP 57,000.

Performance: sAccel: 0.1 (grav drive); 0.1 G (reaction drive). Burn Endurance 2 hours (reaction drive).

Outrider (*Meridian*)

Outriders are scout ships carried by Seedships for exploration, trade, and courier missions; a Seedship usually carries several of them. They are also popular in the Web with corporate troubleshooters (and GALSEC operatives), and as yachts for those Xian eccentric enough to want to travel in normal space.

Hull: 200,000 cf SL. 1,000 spaces. 1 medium double turret; 2 quad small turrets. cDR 12. Basic Stealth and Emissions Cloaking.

Systems (Spaces): Medium Bridge/11 (2); Enhanced Sensors/11 (1) with planetary survey and astronomy upgrades; Fast Antimatter Thermal Drive (12.5); Grav Drive and

Core/12 (100.25); Fuel Tanks (Water) (71) 20 Luxury Cabins (40); Total Life Support/11 (1); 2 Medium Particle Beams/11 (20); 8 Lt. X-ray Laser/11 (in turrets) (40); 4 Energy Banks/11; 2 Automed Bays (1); Complete Workshop (2.5); 1 Freeze Tubes (1); Lab (2); 2 Small Entry Modules (2); Surgery (0.5); Antimatter Reactor and Core/11 (21.5); Antimatter Bay (0.5); Cargo (58).

Statistics: EMass 1,706.875 tons. LMass 2,468.375 tons. Total Cost M\$184.882. Scan 39/38/35. Hull Size Modifier +9. cSM -1. ASig -8. PSig -8. Hull cHP 375.

Performance: sAccel: 162 G (grav drive). sAccel 2 G (antimatter drive). Burn Endurance 1/2 hour (antimatter drive only). Top Air Speed: 2460 mph (antimatter drive only).

Harrier

A small Preserver vessel used for raiding and terror operations or (in numbers) as part of an assault group. The spacedock is normally used to carry combat robots or fighting vehicles rather than spacecraft. It has no cabins, as the crew are usually robots, but it can carry 400 humans in suspended animation.

Hull: 500,000 cf SL. 1,000 spaces. 2 triple medium turrets. cDR 20. Radical Stealth and Emissions Cloaking; Intruder chameleon.

Systems (Spaces): Medium Bridge/12 (2) (sentient); Enhanced Sensors/11 (1) with planetary survey and astronomy upgrades; Grav Drive and Core/13 (270.25); 6 Medium Antiparticle Beams (in turrets)/12 (60); 1 Heavy X-ray Laser/12 (100); 10 Energy Banks/12; 8 Automed Bays (4); Complete Workshop (2.5); 20 Freeze Tubes (20); Lab (2); 2 Large Entry Modules (2); 20 Hall (10); Surgery (0.5); Antimatter Reactor/12; 50,000 cf Spacedock (200); Cargo (100).

Statistics: EMass 4,371 tons. LMass 5,375 tons. Total Cost M\$682.315. Scan 39/38/35. Hull Size Modifier +10. cSM 0. ASig -16. PSig -16. Hull cHP 600.

Performance: sAccel: 400 (grav drive). Top Air Speed 58,000 mph.

CHAPTER FIVE

THE LAST SPARTAN

BY GENE SEABOLT



About the Author

GURPS WWII line editor Gene Seabolt lives in San Antonio. He seems to be drawn to the sites of epic lost battles.

This campaign setting thrusts the players into the roles of elite Spartan warriors who have just lost their independence – and reason for existence – at the battle of Sellasia in 222 B.C. The defeat leaves them as finely honed weapons without anyone wielding them, like ancient Greek ronin. They might pursue their own ends, or simply wander about in this colorful period of classical history, one that is often overshadowed by

Alexander on the one end and Rome's rise on the other. Alternately, they might set out to join or avenge themselves upon their king – Cleomenes III – whose hubris has made him, in effect, the last Spartan.

Whatever these Spartiates decide, and wherever they go, they will command respect, fear, even awe – with all that entails in subsequent flattery, deceit, even treachery. These men are walking legends; eager nobles and

kings will invite them to join their retinues. Although this campaign is presented in realistic terms, it does not dwell on the strains and toils of ordinary folks in a hard age. It's about real men thrust into the roles of abandoned heroes, capable of making kings or breaking empires, but free to choose a simpler life as corsair or sell-sword.

CLASSICAL TIMES, TO DATE

Alexander and his tutor Aristotle died a century earlier, but the brilliance of both men still reverberates throughout Western civilization. After the Macedonian warlord's death, his generals split his empire between themselves and fought one another until they reached a balance of power. By 222 B.C., these Greeks still ruled the eastern Mediterranean and continued to impart their social structures on to what we now call the Middle East. Sometimes hostile but as often not, this cultural colonialism gave the period its name: the Hellenistic Age.

While Alexandrian generals were bringing western ideas to the east, Greek philosophers were creating completely new ways of thinking. In spite of the many ideas he got completely wrong, Aristotle all but invented the concept of scientific reasoning. His successors are beginning to explore – and challenge – the limits of their knowledge of the world, and how that knowledge might be converted into power. Learning is becoming a highly prized commodity. Leading minds are realizing that it might prove a weapon worth more than the largest horde of elephants.

In the meantime, other powerful forces also occupy places at the gaming table. Mysterious Carthage, still smarting from its first clash with the grimly earnest Romans, maintains its stranglehold on the far-eastern Mediterranean and the all-but-unknown lands at and beyond the Strait of Gibraltar.

The Romans are the up-and-coming power in the region. They have no qualms about fighting their neighbors and their legions are steadily improving. As conquerors, their diplomats are feared almost as much as their legionaries.

Useful Things

Though it mostly deals with later years, *GURPS Imperial Rome* will provide useful background on the Roman republic. Likewise, *GURPS Greece* focuses on an earlier time but much of its content will come in handy, while *GURPS Egypt* adds color and briefly describes this period. *GURPS Low-Tech* describes more of the technology and advances of the age.

General histories on the Hellenistic Age (when they can be found) will add to the setting, as can any treatment of later Greek or early Roman topics.

Despite an unprecedented prosperity and thriving trade, the Hellenistic is no idyllic age for anyone.

SPARTA

Six centuries earlier, the Spartans under the revered Lycurgus had reshaped their society along unique and severe lines. The Spartan state held all property, and provided for the small nucleus of full Spartan citizens, who dedicated their lives to becoming the most elite of elite warriors. (Spartan women basically dedicated themselves to providing the next generation of warriors.)

In those militant times, about nine people had to work the soil to provide enough excess food to support one non-farmer, much less one who needed expensive arms and armor, so the Spartans required a large subject population. They kept these hard-worked helots in vassalage by means of cold-hearted laws and systematic terror.

It was not a pretty system – a case could be made that the closest 20th-century analog was not Communism, but Nazism – nor was it particularly efficient. The Spartans had to remain

wary of vengeful uprisings at home, so they rarely felt safe campaigning abroad. Spartan expansion was also limited to an area their small army could directly supervise.

Still, it was a satisfying system, in that the well-trained Spartan male enjoyed a manly cachet rivaled by no other. Athenians and other Greeks made jokes at Spartan expense . . . but generally behind their backs. Persians and many others learned to dread the upside-down V that graced a Spartan shield, if they survived their first encounter.

All this came to an end in 369 B.C., when the Thebans wrested away Messenia, the subject lands that had fed Sparta. Forced to fend for themselves, the Spartans abandoned their communal barracks and slid toward obscurity. The city simply became another small city-state, and not even a very powerful one.

Some remembered their past glory, however. In 244 B.C., Agis IV became one of the city's two traditional kings. He soon called for a return to the old ways of communal property and martial devotion. Most of the remaining Spartans were drowning in debt and glad to endorse a system that would

cancel these free-market obligations. The few Spartans who held the wealth, in turn, had Agis IV killed in 241 B.C.

In 235 B.C., Cleomenes III became a king after an arranged marriage to Agis IV's splendid widow, Agiatis. He also ordered a return to the old ways, or *kosmos*, and he succeeded. No one can say how thoroughly this reversion permeated Spartan society, but this setting assumes that for several years prior to 222 B.C. Spartan youths were raised classically: in barracks under the harshest discipline from age seven, with all of their time and effort devoted to perfecting their bodies, wills, and military skills.

Cleomenes III set out to restore the city's holdings. In several battles he defeated the Achaean League of Greek cities. The powerful ruler of Egypt, Ptolemy III Euergetes (p. 68), had been supporting the Achaeans to keep Macedon occupied. When the Spartan victories gave the Achaeans reason to find common cause with Macedon's

ruler, Antigonus III Doson (p. 62), Ptolemy shifted his support to Cleomenes. Still, the Spartans were outnumbered and threatened from several directions. Cleomenes maneuvered and avoided a decisive battle for years, until he received word that Ptolemy was withdrawing his support. That news made it imperative that he attack while still strong, and before the many Greeks allied against him could become stronger. In 222 B.C., he finally arrayed his Spartans, allies, and mercenaries to face the army of Antigonus, who held no small reputation as a general himself.

Sellasia

Sparta's two kings came from distinct families, the Agiad and Eurypontid lines, but Cleomenes III had toppled his Eurypontid rival and installed his brother Eucleidas in his place. This sibling he entrusted with the *perioikoi* (allied troops) atop one hill on the battlefield, while he led the

Spartan phalanx and mercenaries atop another. The cavalry stood between.

Antigonus lined up his core troops, the Macedonian phalanx, facing Cleomenes, but dispatched smaller units to climb the steep approach to Eucleidas. Inexplicably, Eucleidas waited while his approaching foes became scattered and vulnerable. They regrouped and attacked, forcing the pseudoking's men down the hill's far side and into a rout.

Seeing this, Cleomenes hurled his men at the Macedonians, who far outnumbered them and could afford to form a denser wall of pikes. After some early success and a long fight, the Spartiates broke. The last classically trained Spartans lost their last battle, 258 years after their defining moment defending the pass at Thermopylae. Of the 6,000 Spartans who fought at Sellasia, only some 200 survived.

THE HELLENISTIC GAZETTEER

The Spartans almost certainly will start out by traveling. They may head toward Alexandria, either in loyalty to Cleomenes III or to assassinate him for his shameful flight (p. 68). They might find themselves in the baggage of Antigonus, which means they'll very likely be headed for Macedon (p. 62). Or they might decide to take up their own cause and strike out for other locales. In any case, the GM should keep in mind that travel is an adventure in its own right. Travelers might be delayed days, months, even years while fighting pirates, getting swept up in the traffic created by great festivals, being summoned to noble courts, and so on. If they start with few or no funds – as Spartans usually will – they also might need to stop and earn their passage.

Money and Its Coming and Going

The Greeks base most coinage on the Attic talent, a unit of weight equal to about 57 lbs. The silver drachma, at 6,000 to the talent, and the obol, at six to the drachma, form the basic

currency. The drachma is worth \$6 and the obol \$1 in ***GURPS*** terms. This values silver at about \$630 per pound.

Rome will introduce the denarius in 11 years. At this time, Romans abroad generally use the \$10 silver quadrigatus.

Carthage trades based on its silver \$10 Punic shekel. The Barcids in

Spain mint their own special \$20 double shekel.

Smaller coins in bronze and silver are very common; the Greeks mint tiny silver coins. Bronze coins tend to be worth a little less than \$4.50 per pound; Romans will use this bulky currency for most domestic transactions. Gold coins also turn up at times.

Starting the Show

For dramatic effect, the GM should consider beginning his campaign just as the Spartan phalanx breaks at Sellasia. The PCs would be younger warriors at its rear. They see Cleomenes III turn and race back toward Sparta, but enemy troops are advancing between them.

Basically, they have two options. Spartan honor suggests that they continue the hopeless fight. Many Spartans did not take their honor to suicidal excess, however. Even if the PCs do, they might be rendered senseless in the combat and taken as slaves or left for dead. Or they can flee. Trying to follow Cleomenes amounts to fighting; the enemy is between them. Fleeing safely, then circling back to Sparta, takes long enough to guarantee that Cleomenes already has left for Alexandria (p. 68).

The stranded warriors are left leaderless and free to form whatever plans they may.

Gold is worth about \$6,300 per pound, usually minted as the \$120 stater in the successor states. Though coins from major powers travel well, merchants won't accept currency from minor or distant lands. Moneychangers charge about 5% as their fee.

Skilled labor and unskilled troops such as galley rowers earn about 1 drachma per day. Unskilled labor may earn only 2 obols, more usually 3-4. Professionals such as architects and skilled soldiers such as hoplites can earn 2 drachmas daily. Status of 2 or more opens up far richer jobs, but itself requires a net worth of about \$10,000; this doesn't apply to Spartans.

Basic Set prices apply in this setting. In this sort of campaign, with very scarce money, it might be best to tally meals, lodging, and clothes as the travelers purchase them, rather than apply a blanket monthly cost of living. If the GM prefers the convenience of a monthly figure, use 80% of (Status+5) cubed.

Travelers carry their own foodstuffs at about \$2 and 3 lbs. per day. Respectable sorts bring along at least one servant, preferably several, to act as cooks, porters, and bodyguards. These earn about \$2 per day plus upkeep or cost about \$3,000 as a healthy but unlearned slave. Literate slaves cost far more.

Overland travel often is by foot. A staff and Climbing skill come in handy even on the best Greek roads. Many roads and temples offer inns, where a windowless, bedbug-infested room costs about \$3, plus \$6 to stable a horse. Most towns have a public bath, costing about \$1 including cleansers and somebody to guard clothing, which will be stolen otherwise.

Ship passage costs about \$4 per day the voyage should take. Passengers sleep on deck and provide their own victuals.

Languages

The Spartans' native Greek dominates the Hellenistic Age. In eastern lands, almost everyone of Status 1 or higher will speak it, whether Greek colonist or native-born. Carthaginians speak Punic and Romans speak Latin, but Greek is found in those lands, too. In Egypt and the Seleucid Kingdom, the commoners often speak Aramaic. Of course, scores of other languages will be encountered, but the above tongues travel well.

THE GREEK MAINLAND

Greece generally did not enjoy the boom times seen elsewhere in this period. The frequent fighting between powerful Macedon and smaller factions led a large portion of the population into slavery as prisoners of war. This cheap labor in turn depressed employment, leading the remaining free men to the mercenary trade, which led to more war . . .

In general, Greece has a "Wild West" feel. A prudent man keeps his sword handy and takes matters in his own hands.

The Antigonus Dynasty

Destiny has a bitter twist in store for both of Sellasia's leading men. Just a bit more delay by Sparta's Cleomenes III would have reversed his fortunes. Two days after Sellasia, the ailing Antigonus III will receive news that the Illyrians (p. 69) are invading Macedon. He will hurry home to repel them; this would have compelled the Achaeans to agree to Spartan terms.

In the summer of 221, while roaring to spur or cheer his victorious troops, Antigonus will bring up a great gout of blood. He will fall into a fever and die shortly thereafter.

His half-cousin, Philip V of Cynoscephalae, will succeed him. Though only 17 years old, Philip V is savvy and ambitious. He will soon undermine the regents that Antigonus III put in place to nurse him along. He will consolidate power as king where Antigonus had carefully distributed it. This will put him at odds with many democratically minded Greeks, which the Spartans are in their own strange way.

His Macedon is a powerful but unruly place, with little centralized administration. Most cities issue their own coins, industries have been wiped out by war and not re-established, and finances generally remain in tatters. Still, the Macedonian phalanx that served Alexander so well remains the most feared unit on the field of battle. It will be quite some time before the Roman legions perfect their craft enough to take that honor.

Most Greek cities resent Macedonian rule, but can do little

about it as long as Philip V holds "the three fetters": Corinth, Demetrias in Thessaly, and Chalcis on the island of Euboea. These strongholds allow Macedon to threaten invasion wherever needed, and remain heavily garrisoned.

In 215, Philip V will begin a lengthy series of conflict with Rome. The Romans will turn him into a vassal in 197 B.C.

The Non-Macedonian Factions

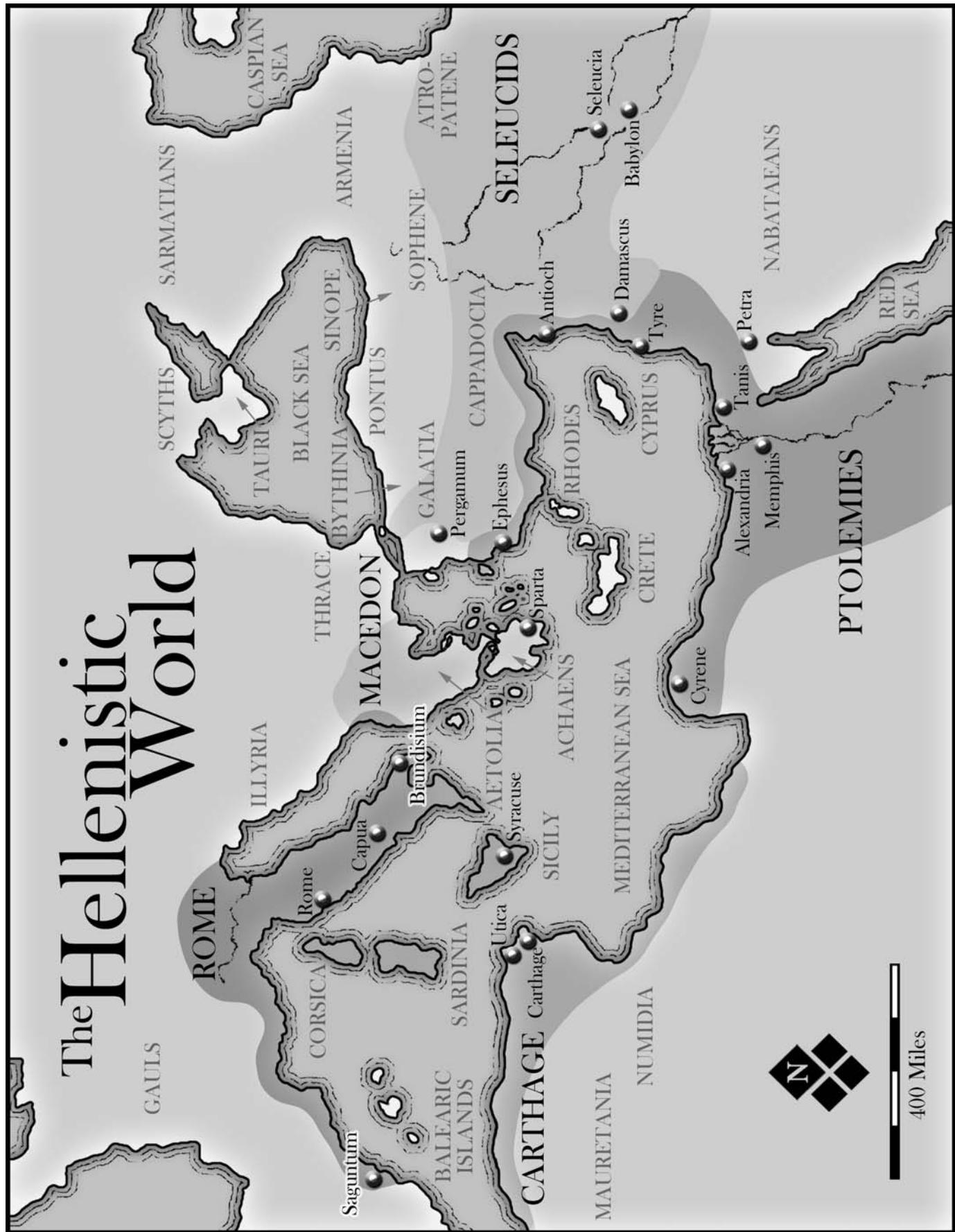
The Achaean (or Hellenic) League controlled most of the northern Peloponnese before Cleomenes III challenged its rule. The Achaeans fought constantly with the Aetolian League, based roughly on the northern shore of the Gulf of Corinth. The Aetolians also fought with the Macedonians, though they did put aside their differences long enough to join the campaign against Cleomenes. Within a short time the Aetolians will be recruiting and supporting Sparta, so some delegation of Spartiates might already be in place there (if the PCs themselves don't end up being said emissaries).

A small council holds most of the power in both leagues. Their armies are led by a strategos who serves a year, then has to wait a year before becoming eligible for another term.

For the Achaeans, a brash master of guerrilla tactics, Aratus of Sicyon, holds the post every other year until his 213 B.C. death. He and Cleomenes raced to provoke the other to war; then Aratus had to grudgingly accept Macedon's interference when the fight went against him. The Achaeans will never really regain independence after this, but Aratus certainly will be trying. A sign of the respect that Aratus fosters is his foes' habit of optimistically announcing his death. An envoy once handed him some demands based on his own demise, unaware that he was dealing with the famed warlord himself.

Sparta itself will be forced to join the Achaean League, under its pre-Cleomenes government. A "real" Spartan might decide that this is the corpse of his city, not the living thing, and abandon it until the barracks open again. They never will, though in 22 years one last tyrant will somewhat cynically go through the motions of reviving the Spartan ideal.

The Hellenistic World



Like Sparta, Athens confuses past glory with political reality, but it does retain most of its independence despite being surrounded by Macedonian interests. The young Phylarchus lives there. His later pro-Spartan account of Cleomenes' war will provide the basis for what history we know, but only fragments survive. An adventure could center on the PCs influencing his commentary. Also, Aristotle's version of the Peripatetic school is still active. Though not as renowned as in the days of its founder and Straton, it is a center of learning.

Special Sites and Sights

Considered by the Greeks to be the navel of the world, Delphi is the most important oracle site in this period. It stands high in the mountains, and possibly has a mildly toxic atmosphere from the discharge of subterranean ethylene gases. Visitors often became awed by the scenery, the harsh sunlight, and a sense of leaden dizziness. Spartans – who very much try to live their lives by the prophecies – would be very susceptible to the mystique of this ancient place.

Delphi has been a major religious center for many years, although its patron god has changed many times. Past gods include the earth-mother Sibyl and Poseidon. The current patron is Apollo. The oracle is called Pythia after the giant snake Apollo slew here. She chews laurel leaves while sitting on a tripod over a rocky fissure; the gases rising from the fissure induce visions, which the oracle describes in mumbles. A high priest clarifies Apollo's advice (see p. 70). He charges a great deal to a question; it costs (Status+5) × \$50. Almost every answer is cryptic, and many can be interpreted to mean one thing or its opposite. Supplicants accept that this is part of the game.

Other oracles give prophecies across Greece and Asia Minor. Many of these sites have an *omphalos*, or egg-shaped rock, believed to allow direct communication with the gods. The one at Delphi is the most revered.

A priestess of Sibyl is an interesting alternate PC (p. 70). One is always around Delphi, which is something of a training center. Some of these women would possess great expertise in astronomy and astrology, cyphering, literature, and other learned arts.

ROME

The Romans have been enjoying a winning streak. Two decades ago, the cunning leadership of Hamilcar Barca (p. 66) foiled their land-based attacks. So they built yet one more navy – storms had turned previous efforts into costly follies – and this time they got it right. Since then, the Romans have used their new galleys to good effect in the Adriatic and established themselves as the leading naval power in the central Mediterranean. Rome's rivals keep building bigger and clumsier warships to advertise their might, but Rome generally sticks with the tried-and-true quinquereme.

In the meantime, on Rome's narrow Alpine land bridge with Europe, the Gauls of the Boii and Insubres tribes coordinated yet another invasion three years ago. This gave Rome the excuse it needed to first smash the invading armies, then sweep the Gauls from the fertile Po Valley permanently. The last fighting is just now wrapping up, and has left the consul Marcus Claudius Marcellus as a conquering hero. In a recent battle at Clastidium, he killed the Gallic king personally, earning the *spolia opima*, or spoils of honor, for the third and last time in Roman history. This gives him a Reputation +4. Marcellus will serve as consul four more times in the Second Punic War, and die leading his men in 208 B.C.

The other consul, Gnaeus Cornelius Scipio Calvus, has not fared quite so well in the fighting, though he certainly is not the worst commander that the legions have seen; reliance on politician-generals of very mixed quality will haunt the republic for decades to come. Nor have the legions reached full potential. On even terms they can dominate the Gauls – who simply swarm forward in ferocious waves that melt quickly if their foe fails to break at first contact – but a well-led phalanx will still consistently beat them. Romans are feared not for their skill at arms, but because if beaten they will send another legion, then another, then another. Perhaps not even the renaissance Spartans can match the Romans' dogged determination.

The end of the Gallic fighting will usher in a brief peace for Rome. Though Spartans cannot take part, Roman PCs of Status 4 or more (making them either *patricians* or wealthy *plebeians*) seeking to advance to the

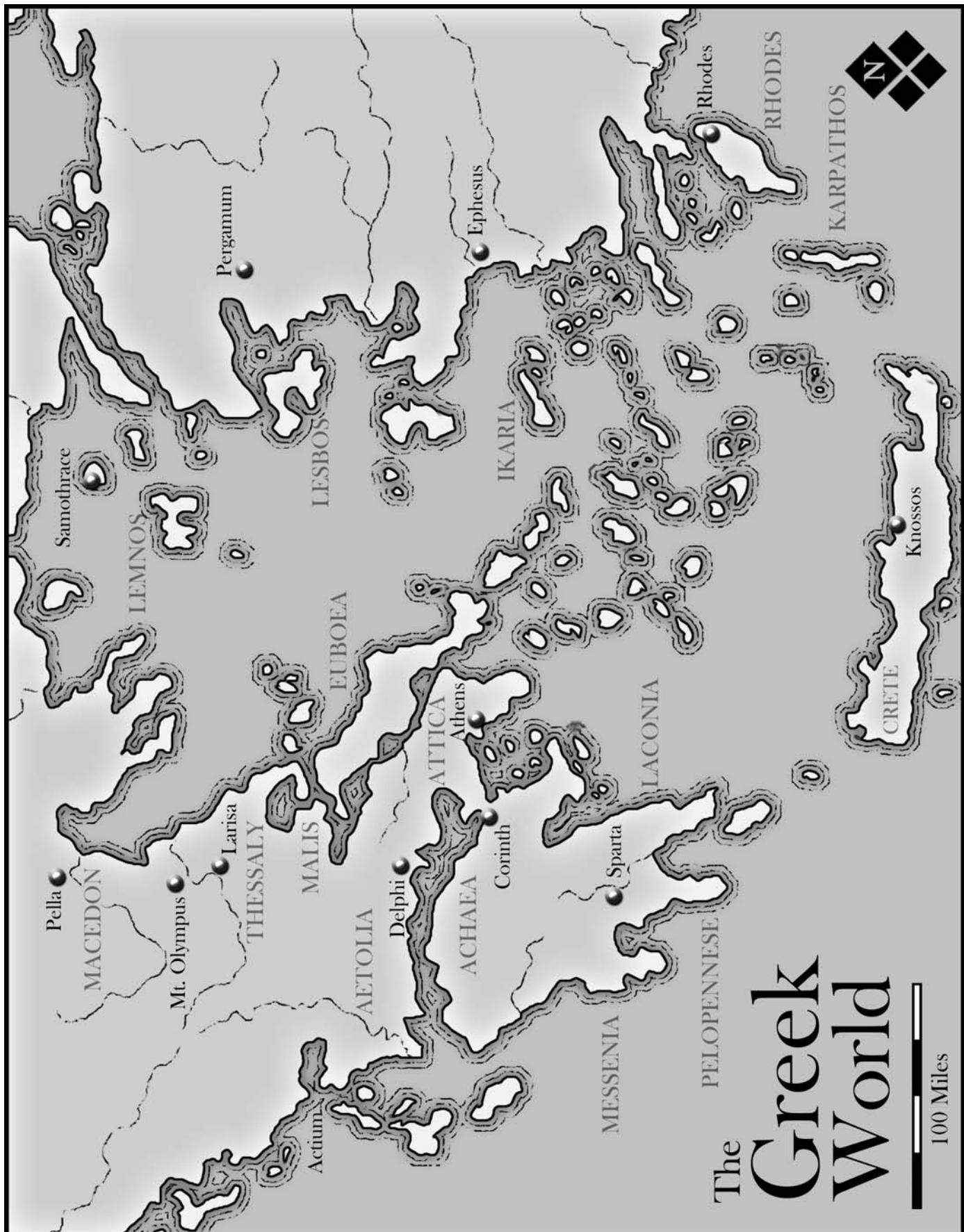
upper class) would be expected to turn their energies to political careers during this lull. Roman government at this time has an almost formalized career ladder, the *cursus honorum*. Public life begins with election by the *Comitia Tributa*, or assembly of all 35 Roman tribes, to serve a year as one of the city's eight *quaestors*. Then one could run for election by the *Comitia Centuriata*, a military assembly in which the patricians held great influence, as one of four *praetors*, who also held office for a year. These men then became viable candidates to become one of the two consuls, also elected by the *Comitia Centuriata* for a year. Former consuls then gained lifetime senatorial status, if they did not already possess it. These elections could prove difficult affairs for "ordinary" patricians, such as any PC would be, because a new class of superwealthy patrician is just beginning to flex its political muscles at this time. These men will come to be called *optimates* within the century.

Praetors and *consuls* enjoyed the protection of bodyguards called *lictors*, who carried a bundle of rods tied around an axe and escorted the official on his daily rounds. Without too much eyebrow-raising, exile Spartans might land this job. The position provides Legal Enforcement Powers at the 10-point level; the rods would be used with Shortsword skill to make arrests, while the axe normally is reserved for executions. Unfortunately, *lictors* are provided neither shield nor armor for this work. Each *praetor* had six *lictors*, each *consul* 12.

In three years, Rome will tire of Demetrius of Pharos breaking their treaty by sacking allied cities, and dispatch legions to break him in a brief and clever campaign. The next year, Hannibal will begin the republic's greatest trial to date.

Special Sites and Sights

Though Rome is a great city, it has yet to reach anything like the grandeur that it will achieve in the imperial centuries to come. Most of its landmarks have yet to be envisioned, much less built. Its older homes are built on a plan borrowed from the Etruscans, who once dominated their southern neighbors. The houses are square and single-story, with a roofless inner courtyard containing a cistern to collect rainwater.



The tallest Roman buildings of this day probably are but three stories, with shops and good flats on the ground floor and the others filled with small, dark single rooms for commoners.

Improving on the Etruscan state of the art, the Romans have been building all-weather military roads for the last 90 years. These projects began with the Via Appia to Capua and the naval port Brundisium. In two years, work will begin on the Via Flaminia, cleverly twisting through the Apennines from Rome, then up the Adriatic coast.

These roads require grueling labor by the legion's engineers and soldiers. Given TL3 instruments, the most skilled surveyors will be challenged to lay them out in the arrow-straight fashion that is preferred. Work crews with picks sometimes must cut their way through a hill that can't be avoided. Many stretches are elevated to keep the roadbed above snow or floodwaters. For the best stretches, great sheets of igneous rock are broken into smaller pieces (probably at the quarry), then each piece marked so that they can be reassembled into a seamless surface on the road. Manpower remains in constant shortage for these labors – the republic does not yet enjoy the surplus of slave labor that imperial Rome will know in later centuries – but anyone taking a job in Roman construction will earn his pay.

CARTHAGE

Carthage is an empire based on trade. Although it lost an extended and costly war with Rome, waged from 264-241 B.C., Carthage may have rebounded more vigorously than the victors. With the Roman navy now dominating the central Mediterranean that Carthage previously ruled, it has solidified its grip on the North African coast and greatly expanded its holdings in the wilds of Spain, where new mines provide an outpouring of wealth.

For the past 15 years, the centuries-old Barca family has dominated Punic politics, despite relocating to Spain. Beginning with the immensely popular general who led Carthage's troops in the Roman war, Hamilcar; this clan has not deigned to return to Carthage in quite some time. Though Hamilcar died in battle some eight years ago, his son-in-law Hasdrubal still leads the troops, with Hamilcar's sons – 25-year-old Hannibal and 23-year-old

Hasdrubal – taking on more responsibility as they come of age. The Barcas use the wealth of Spain to ensure that important posts back home are filled by relatives (some of whom may also have the traditional Barcan names Hamilcar, Hasdrubal, and Hannibal).

The Barcas represent the leading family among many great seafaring mercantile clans in Carthaginian society. These sailors often come into conflict with Carthage's great landowning families, which tend to eschew commerce in the noble style and have long advocated a friendlier relationship with Rome. Hamilcar's contemporary, Hanno the Great, leads these landowners in an outgunned but vigorous opposition to Barcan domination. Though nowhere near the general that Hamilcar was – or his elder son will prove to be – Hanno wields a keen sense of politics and in years to come will prove instrumental in withholding the military support that Hannibal needs. This victory over the Barcas will come at a price that possibly even Hanno would not willingly pay.

A small senate technically rules Carthage, with a citizen-assembly possessing some power as well. These bodies elect Punic generals, though not to fixed terms as in other empires.

In a year, the elder Hasdrubal will be murdered and Hannibal will become the most powerful Carthaginian. Then he and Rome will quarrel over the Spanish city of Saguntum, and the renowned Second Punic War will spell the downfall of Carthage. Punic armies almost always are entirely mercenary – as will be the force that Hannibal leads over the Alps in 218 B.C. – so hired lances will find a ready market for their skills.

The Carthaginians Alone

Carthage is very much the odd man out in Mediterranean politics. Through centuries of dealing with Greek colonies in Italy, the Romans have picked up a good deal of Greek culture. The Ptolomies and Seleucids have become more slippery and evasive than their cousins at home would prefer, but the leading lights of these empires understand each other. They worship and speak much the same, and hold similar values.

To these others, the Carthaginians seem very strange and their gods very dark. Where the Greco-Roman pan-

theon portrays a turbulent but thriving reality, the sun and earth god Baal Hammon and moon god Tanit seem to reflect a cosmos that seeks to drown anyone who quits thrashing even for a moment. They're hard Eastern deities suited for a people who brave open ocean in leaking boats held together by twine. Though doubt persists, the Romans claim that Carthaginians engage in child sacrifice, and some evidence supports the charge. The Punic gods may demand this awful price to win their favor. Wealthy Carthaginians can purchase the baby of an impoverished mother for this purpose, but the mother has to attend the sacrifice and refund the price if she sheds any tears. (As awful as this sounds, the Greeks have little room to condemn the practice. The "values" that they spread across the West include the practice of abandoning unwanted babies to die of exposure. This may be so widespread that it causes a population decline during this period.) At any rate, the Carthaginians have begun sacrificing animals in the place of infants by this time, though in times of crisis they quickly revert to terrible and blood-thirsty practices.

No matter the real reasons – which could simply stem from mercantile competition when it gets right down to it – Greeks generally treat Carthage with suspicion and the Romans maintain a special hostility for their African neighbors.

Special Sites and Sights

The Carthaginians show more interest in building fortunes than monuments. Still, Carthage itself is a great city, perhaps home to as many as 400,000, built on a Tunisian peninsula and with impressive 42-foot walls that heavily fortify it. At the city's center stands a steep rocky hill topped by a temple of healing that also serves as a citadel. The houses tend to be two or three stories – rare for the time – with their own wells or at least cisterns. The city boasts a magnificent harbor, the Kothon, divided into commercial and military anchorages, with the latter surrounded by a wall. An immense chain allows the city leaders to seal off the harbor's narrow entryway during a siege.

Kon'n the Cimmerian

Some players might not want to portray a Spartan. That's fine. Mercenaries of all sorts served at Sellasia, and though Spartans never carried non-combatants in their train, the sellwords would bring along camp followers: courtesans and diviners, scholars and actors, etc. In the chaos of a rout, it should not take much effort to attach exotic personnel to a body of Spartan PCs.

The GM may decide to allow fewer than 200 points on which to build these non-Spartans, but to be fairly equitable these players should get at least 150 points, with the understanding that their characters are truly exceptional examples of their general type.

A really interesting PC of this sort could be built as a Cimmerian barbarian. Although barbarians are far more famous for their favorite son in Robert E. Howard's fantasy fiction, the Cimmerians were a real people who did their share of toppling kingdoms in Anatolia about 700 B.C. In Asia Minor itself, the Cimmerians rapidly intermingled with other cultures and lost their distinct identity, but a single tribe – the Tauri – held out intact in the Crimea.

There the Tauri remained in 222 B.C., though within a few decades they would face annihilation at the hands of the Scyths, themselves fleeing in front of the Sarmatians. In these times, a last handful of Cimmerian warriors might feel compelled to make their way into the larger world. They easily could favor the broadsword, given that their neighbors employ cavalry so much, and those from the southern Crimea almost certainly would have high Climbing skill. Their pastoral lifestyle could allow them to get more protein in their diets – thus growing big as an ox – while their truly remote homeland would make them a barbarian's barbarian. (Even a Gaul would scratch his head on hearing a Tauri's accent.)

Whether Kon'n or something similar would pass as an authentic Tauri name is anyone's guess, but too minor a point to skip a little fun . . .

THE SELEUCID KINGDOM

The Seleucid state covers most of the old Mesopotamia, Syria, and Iran – rich lands that had come under the Persian Empire before Alexander took them for his own. The vastness of this state leaves plenty of room for the Greeks and locals running its countless semi-independent satrapies to squabble among themselves. This infighting leaves the central government relatively weak, but it still possesses a formidable backstock of Persian wealth and its sheer size lets it pose a significant military threat.

At least, on land. By this time, the Ptolemies in Egypt dominate the naval arms race in the eastern Mediterranean, and their galleys effectively control all of the Seleucid western seaboard. This coastline aside, the

two mighty empires butt up against one another only in the thin strip of hospitable land in Syria. This has been turned into a militarized zone where the opposing armies growl at one another.

The youthful Antiochus III, who would become known as the Great considerably later in life, took the throne the previous year after the murder of his brother, Seleucus III. He has been focusing his military might on Syria, but many of his governors are contemplating a revolt. One named Molon will soon begin one in the northern empire, or Media. Molon's forces will then sweep through the west, Persia, and south, Babylonia, before Antiochus leads his army on a long trek to cut off the rebels' supply line back to Media. In 220 B.C., Antiochus will bring Molon to battle, but half the rebels go over to the king before the fight. The surrounded Molon will kill himself. Both sides in this war will provide a thriving market for mercenaries.

Turning back to Syria, Antiochus III will finally clash with Ptolemy IV Philopator (p. 69) in 217 B.C. at the battle of Raphia. After several days of skirmishes, the Seleucid king will pit 62,000 infantry, 6,000 cavalry, and 102 elephants against Ptolemy's 70,000 infantry, 5,000 cavalry, and 73 elephants. Both sides will employ Greek mercenaries along with Cretan archers, Gauls, and other exotic troops (p. 69).

Antiochus' large Indian elephants will intimidate Ptolemy's smaller African specimens, so the Seleucids will enjoy the initial momentum on the Seleucid right or Egyptian left, where the kings station themselves. Both wings will separate from the main phalanxes at the center of each line, but while Antiochus will let himself be caught up in pursuing the forces in front of him, Ptolemy will slip away to lead his central phalanx to victory. With that, Ptolemy will win the battle, at a cost of some 2,200 dead to the 10,000 casualties and 4,000 prisoners taken among the Seleucids. Antiochus III will have to seek peace terms and will obtain a one-year truce.

Special Sites and Sights

The empire's founder, the former Alexandrian general Seleucus I Nicator, established both Antioch, which has come to serve as the capital, and Seleucia, which has become the capital of its eastern provinces. Antioch will grow to become a major commercial center; goods and explorers from the Indian east reach the West through its gates, and vice versa. Seleucia, on the banks of the Tigris, enjoys relative independence under its senatorial rule, and has replaced ancient Babylon as the administrative center of the region. The countless gardens and ziggurats of exotic Babylon continue to dazzle the Westerners who visit, though the storied Hanging Gardens no longer exist (if they ever did).

Though Ptolemy's galleys control the maritime traffic, the Seleucids can actually seize control of any town on the Asia Minor coast by sending troops there to prevent the galleys from beaching. One such town, the Greek colony of Ephesus, hosts a temple to Artemis that is one of the most sacred places in the graeco-oriental world. The original temple's sheer

beauty had earned it a place as one of the natural wonders of the world until the night of July 21, 356 B.C. – the very night that Alexander was born – when one Herostratus set it to the torch in a successful effort to burn his name into history. The rebuilt temple endures as a center of religion – where travelers and merchants tithe their homage to the nature and fertility goddess – and perhaps not coincidentally as an important marketplace. All manners of goods can be found there.

EGYPT

The thriving Ptolemaic Kingdom centers on Egypt. It harbors a large population of desert nomads, Greeks, and Jews in addition to the native Egyptians. The Greek rulers hold a great deal of power and keep all important industries as government monopolies. Furthering their wealth, they impose very high taxes on the populace. This leads to frequent revolts, but none organized enough to become effective.

As elsewhere, Egypt will soon endure succession. The mathematician-soldier Ptolemy III Euergetes will die at year's end. His libertine but shrewd son, Ptolemy IV Philopator, is only in his early 20s. Pretenders will eye his new throne.

The End of Cleomenes III

Sparta's fate is entwined in this drama of succession, swinging up or down depending on how each Ptolemy reacts to Cleomenes.

Cleomenes III always has been the kind of man that one has to love or hate, especially if one is a Spartan. Sensitive and discerning yet full of passion, he possesses the dry wit that Spartans treasure, but can act in a most humorless fashion when others get in his way. He claims to revere the long-lost Spartan ways, but killed and exiled traditional officeholders to make himself tyrant and force his revisionism on the city-state. His leadership and finely honed Spartiates led to early glory, but ultimately to despair at Sellasia. Worst of all, he fled that defeat, putting the lie to all the Spartans hold ideal.

Or did he? After Sellasia, Cleomenes and the men around him will stop briefly at Sparta to gather their families – though Cleomenes himself already has

Painting the Picture

GMs should bear in mind that this is the Greek *fin de siècle*. The mundane will not do; those in power revel in the baroque and grandiose. Ornamentation is *important*, palaces are bigger than ever, the pikes of a ruler's army must be longer than those of his rivals. Everything that can be flashy should be, because most of this world is not about inventing new things, but rather perfecting the existing. Nowhere is this more evident than in the surreal naval arms race. The galleys of this age are *huge*, and not always seaworthy. Some probably are catamarans, formed of twin hulls with a large deck between used as a fighting platform. A modest galley costs about \$44,000 to build and another \$450,000 annually for the crew. The fashionable monstrosities were *immense* investments.

Most rulers seem at least fairly capable, because it's difficult to surprise anyone in these times. It's all been said and done before. Some power-brokers go through the motions with a cynical awareness of what their rivals will do and how they will react in turn and so on . . .

Soon enough Rome will usher in a new epic and new ideas, but for now the graeco-oriental world is playing out an intriguing twilight much like Europe in 1914.

lost his wife, whom he had adored, and Egyptians hold his son and mother as hostages – then set sail for Alexandria and the court of their former sponsor, Ptolemy III. On the journey, the Spartan Therycion rebukes his king, pointing out death in battle is the Spartan way. Cleomenes argues that death is the easy way out, that living to fight another day requires real courage. Therycion takes his leave and kills himself; the Spartan exiles sail on.

Cleomenes' Fate

Historically, Ptolemy III initially kept Cleomenes at arm's length, but soon found him to be a most noble and useful vassal. He awarded the Spartan an annual \$864,000, which Cleomenes distributed to house his retinue and other Spartans who followed their king into exile. Cleomenes' hope was that Ptolemy III would give him enough money to fund an army.

After his father's death, Ptolemy IV Philopator at first placed Cleomenes on his inner council, an excellent weapon to have against Philopator's many rivals. Eventually, though, the Spartan's Laconic forthrightness served him ill with Philopator as it had served him well with his father. Cleomenes refused to approve a scheme to kill the king's brother. This sowed the seeds of distrust in Philopator's mind. Courtiers then whispered that the Spartan was acting like a lion surveying a flock of sheep, and Philopator imagined himself as a juicy lambchop. Cleomenes knew his posi-

tion was eroding, and so asked for no support, but only permission to leave on receiving news of Antigonus' death (see p. 62).

Philopator's chief minister, Sosibius, refused permission; Cleomenes knew too much of the regime's weakness to be allowed out of their control. Nor could he be trusted once he had been spurned. Sosibius thus leaked word of a wicked jest that Cleomenes had made at the king's expense, and received permission to trick the Spartans into house arrest.

Trapped, Cleomenes asked an old friend from court to call on him. The visitor reassured him, but on taking his leave this "friend" failed to notice that Cleomenes followed him to the door. The visitor rebuked the guards for their carelessness in watching "a great and furious wild beast." The Spartan finally realized how treacherous court life was, and resolved to break out with his men and attack Philopator.

When the king left the city, the Spartans arranged for their guards to be sent false orders for their release, feasted with them, then strode out as the turnkeys slept off their wine. Cleomenes set out with his last 12 Spartiates, including an older man named Hippitas, who had a lame leg, and the heroic Fanteus, who had served well in long-ago battles. They roamed the streets, challenging disgruntled Alexandrians to join them, but none dared. The old Spartans fought a few skirmishes and killed the deceitful "friend" whose loose lips set

them off, but were unable to force their way into the palace to increase their numbers with political prisoners. The Spartans finally realized the futility of their mission – no bystanders had the courage to aid them or even oppose them, at least until Philopator returned with enough troops to do the job. They threw themselves on their swords to end the sorry affair like Spartans.

When Philopator returned, he ordered death for Cleomenes' followers remaining in his realm. The Spartan's son had already tried to emulate his father and had jumped off a roof, and Cleomenes' mother went with her own Spartan stoicism.

Special Sites and Sights

Alexandria near Egypt – the great conqueror established *many* Alexandrias, and *the* Alexandria does not quite sit in classical Egypt – has risen to become the age's greatest city, though only 110 years old. Its immense manmade harbor displays some of the king's powerful fleet of galleys. At the harbor's extreme stands the famous Lighthouse, towering about 410 feet tall. Its keepers tend a signal fire at its summit. The smoke guides ships in by day, the light by night.

Two colonnaded boulevards, 46 feet wide, divide the city into quarters. Greeks live near the harbor, Egyptians in the west, Jews in the east. The Greek area includes the Sema (Alexander's massive tomb), the Museum, and the Library.

The latter institutions make Alexandria the new center of learning. The Library holds perhaps 750,000 scrolls. Much of the collection will be multiple copies, because that many books have yet to be written. The works include originals of Sophocles, Euripides, and Aeschylus; Ptolemy III "borrowed" them for copying, then sent the copies back to Athens and let that city keep his \$540,000 deposit for the originals' return. The Museum, or shrine of the Muses, includes lectures, experimental theaters, and exhibits. Its government-paid scholars enjoy a relatively free hand, but a priest runs the place. A great many scientific advances are under way at any time. These include the engineering arts – the Ptolemies *love* gadgets based on pneumatics, hydraulics, springs, water clocks, toothless gears, etc. Toothed gears would be state of the art.

OTHER PEOPLE & PLACES

Gauls: Also called Celts, these tribes roam most of Europe proper. The Romans, whom they dislike even more than the Greeks, have been inflicting grave defeats on them (p. 64). Gauls also inhabit an Anatolian kingdom, Galatia, ruled by tribes that stayed behind after an earlier invasion was cut off. The Galatians once preyed on their neighbors, but now the reverse is true and their outlook is bleak. The one bright spot is that they have begun colonizing Britain.

Illyria: The Illyrians inhabit a forested Adriatic coast offering hidden coves and tricky anchorages. They preyed on shipping until six years ago, when a Roman fleet deposed the fiery Queen Teuta while establishing a Balkan foothold under Demetrius of Pharos. It will take centuries to make the Adriatic truly safe, but this would be small consolation to a pirate crew pursued by a greyhound-swift galley full of hard-bitten legionaries led by a hanging-judge patrician. Teuta disappears from history and could turn up as a pirate queen. Outcasts of all sorts might be found on this semi-wild shore.

Mauretania and Numidia: The Berbers of North Africa provide most of Carthage's mercenaries, and gave their paymasters all sorts of trouble when funds ran dry late in the Roman war. Mauretania remains a scattering of tribes, but Carthage has subdued the Numidians into an uneasy vassalage. The Massyli under Massinissa rule eastern Numidia while the Massaesyli under Syphax dominate the west. Massinissa will ally with Rome in the Second Punic War, for a little while . . .

Pergamum: This prosperous city-state won its independence from the Seleucids 40 years ago. Sited 1,000 feet above the surrounding plain, the city lays legitimate claim to being the most wondrous in the Greek world, with a library second only to that of Alexandria. State-owned, slave-driven industries fuel its economy. Eight years ago, king Attalus I Sater defeated a Galatian attack and annexed Seleucid lands, but his colossal neighbor has since taken most of them back. He will ally himself with Rome in its coming quarrels with Macedon.

Nabataeans: These Bedouins drive great caravans through the Arabian wastes, linking West and East in trade. The graffiti they leave behind suggests a high literacy rate, but they consider their ways to be a trade secret and write down little of worth. Skirmishing with Seleucids has given them an appreciation of Hellenistic culture, but they don't invite guests to their hidden city of Petra. To conceal their homes, trade routes, and canny water-conservation projects, they fill outsiders' ears with tall tales, some of which will enter Western mythology. The lands that they control include a few trade routes easy and obvious enough for others to use; they don't bar this practice, but do tax these travelers to guarantee safe passage.

Rhodes: The island remains a leading and wealthy commercial center. An earthquake toppled the Colossus of Rhodes two years ago. This wondrous statue of Apollo had stood about 105 feet high – on a comparable scale with the Statue of Liberty – and cost a jaw-dropping \$10.8 million to build in 280 B.C. The prone figure remains recognizable in its wreckage. It probably consists of about 200 tons of bronze – \$1.75 million worth – and 9 tons of iron – worth some \$700,000 in its own right. Historically, it will not be salvaged until 635 A.D.

The Seleucid Breakaway States: Several small kingdoms cluster along northern Anatolia to the Caucasus mountains – Armenia, Atropatene, Bithynia, Cappadocia, Pontus, Sinope, and Sophene. Most of them are Armenian or Persian holdouts from Greek rule who fight carefully among themselves and try not to draw too much attention from the Seleucids. Farther afield, the Parthians and Bactrians – both Persian but with a Greek dynasty ruling the latter – enjoy somewhat more confidence in their independence. The Parthian state will form the basis for a Persian revival in decades to come. Far beyond Bactria lies a very strange land whose newly unified people will begin to build a Great Wall in the next year . . .

Syracuse: The tyrant Hieron II holds this powerful city-state and its galleys firmly allied to Rome. He keeps his relative, Archimedes, in modest comfort and free to theorize and experiment. After years of study in Alexandria (see above), Archimedes probably rates as the leading scientist of this day.

THE HELLENISTIC SUPERNATURAL

Magic is real and potent in this superstitious age.

Ancients quite simply believe in magic, so they tend to subconsciously reinforce that belief. This means that beneficial “magic” can give a +1 to all IQ-based rolls (Will, skills, Perception, etc.) while harmful magic can impose a penalty. This effect endures until the subject has scored either a notable success or equivalent failure *while pursuing the actions to which the magic applies*. Until that point, he has effectively psyched himself to be “on a roll” or “in a slump.”

Religious magic mostly consists of prophecy and omens. Prophetesses tend to handle the former, priests the latter. Prophecies are seen as the god’s words, hazily channeled, while many omens involve the sacrifice of animals.

A prophetess rolls vs. Fortune-Telling skill (apply a +4 for Empathy) while a priest uses the Augury skill. A success represents a prophecy of properly cryptic but optimistic wording or a sacrificial animal with good entrails, and it provides a +1 to the supplicant’s IQ rolls, though only while pursuing the course of action on which he inquired. A critical failure represents a prophecy that troubles the supplicant and/or warns him away from the enterprise, or a malformed specimen on the sacrificial altar doing the same; it imposes a -2 to IQ rolls in pursuit of the specified agenda. Failure to solicit a prophecy or omen for a major undertaking is itself worth a -1 to IQ rolls.

Many Greeks use Dreaming skill, though often at default. Dreams are the most popular media, but the skill can be used on the flight of birds, a cat walking under a ladder . . . anything. The skill roll takes a -4 unless a truly remarkable dream or event provides

the pretext for the omen. Sleeping in a temple (called incubation) provides a +2 to apply the skill to dreams only. The subject of a Dreaming skill roll intended to benefit him receives a +1 on a success or -2 on a critical failure. A Dreaming attempt intended to harm reverses the effects.

Subjects of harmful Fortune-Telling, Augury, or Dreaming effects may attempt a Will roll to “shake it off,” but most people lack real skepticism about the supernatural – even those who scoff at it. A successful Will-5 roll will offset -1 point of a harmful spell (or the effect of not having a prophecy or omen cast), a critical success cancels the entire thing. Apply a further Will modifier of subject’s native TL-5 (i.e., -2 at TL3).

Another form of incubation involves sleeping in a temple of Aesculapius, the god of medicine, in pursuit of faith healing. The patient makes a sacrifice, receives a bath, then beds himself in the temple’s colonnade, where trained snakes lick his eyes and any wounds. In this case, a +1 is applied to HT for any healing-related rolls after incubation, until a notable success or failure as normal. Some far-thinking priests of Aesculapius run their temples much like a modern-day spa, with nutritious meals, exercise programs, and good hygiene. The rate of “faith” healing at these sites is exceptional.

Commoners often cast curses. The practice involves lead tablets called *defixiones* inscribed with the subject’s maternal (rather than the usual paternal) name and details of the curse. The caster must invest \$1 in the tablet, inscribe it, and place it in one of the approved locales (a grave, a sanctuary, water, or a place relevant to subject or curse). Then, nothing happens, unless

the caster *subtly* and *aesthetically* lets the subject know he’s been cursed. This involves acting like a mysterious practitioner of arcane arts, leaving weird totems for the subject to find, letting the subject catch just a glimpse of the caster watching him at a charged moment, etc. Once the GM rules that the subject has gotten the message – or a player says something to the effect of, “What’s with the weird old woman following my guy around?” when a PC is the subject – roll a contest of the caster’s Thaumatology skill (possibly with a bonus for artful hint-dropping) vs. the subject’s Will. If the subject loses, apply a -1 to IQ-based rolls or a -2 if the subject loses by 5 or more.

A curse’s penalty applies to all activities, unless the caster somehow lets the subject know the spell’s intent, which is difficult to do without being so overt as to ruin the atmosphere. Secular magic thus proves far more capricious than the divine sort. A caster might exceed himself on a curse to make the subject’s genitals fall off, only to watch the rattled subject make some terrible investments and lose his fortune, instead.

Spells to make the subject fall in love with the caster, or simply do his bidding, are nearly as common. They work the same way, but are *much* harder to pull off. It’s difficult to jinx someone into loving you. Apply a -10 to Thaumatology skill.

No magic user can apply his skills to *himself*. Someone else must be the subject. It’s useless to apply magic to an animal or object – the gods don’t trifle with such lesser beings . . .

The Romans inherited similar magical practices.

HELLENISTIC ARMS & EQUIPMENT

The **Basic Set** describes essentials for equipping Hellenistic peoples, while **Low-Tech** can add a great deal

of variety and color to the offerings. The following briefly describes the

things people will be carrying, to simplify creation of NPCs.

Soldiers

Africans: The Numidian mercenaries of Carthage are highly regarded as unarmored light cavalry, throwing javelins with a small shield and knife or axe as backup. Mauretanians, or Moors, generally fight on foot with the same weapons. Tribes from closer to Carthage, the Libyans, fight as Moors but might have a leather jerkin, or their Punic employers might outfit them as heavy infantry with large shields and spears.

Arabs: These Seleucid subjects have not yet bred many horses, and usually fight as low-quality infantry, but can present real problems when mounted on camels. Horses shy away from the strange beasts, while the unarmored camel-riders attack with a bow or a thin two-handed sword as appropriate.

Carthaginians: Though they usually rely on mercenaries, in a crisis Carthaginians fight as hoplites with helms, greaves, and large shields. They carry spears and shortswords. Nobles fight as cavalry, adding a breastplate, switching to medium shields, and replacing greaves with open-toed boots; they wear the purple clothing and trim favored by nobles everywhere.

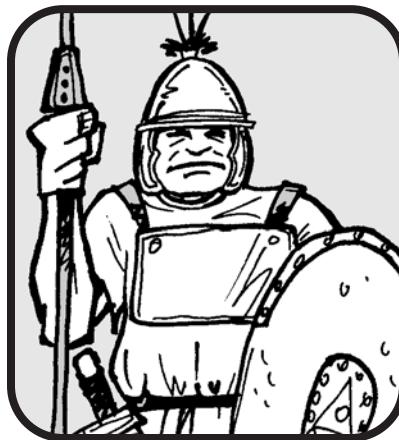
Cretans: Many of this island's males leave home to work as mercenary archers; they're found *everywhere*. Though less common, Armenians share their reputation as skilled and loyal bowmen. Syrians are regarded as cheap but unreliable, while Jews are seen as tough but touchy. All of these archers wield a composite bow with no armor and only a knife for backup.

Elephant Riders: Regardless of nationality, these men generally wear no or little armor and throw javelins, though they sometimes use bows. They usually fight from a howdah holding three fighters, a beast driver, and a supply of javelins.

Gauls: These men generally wield javelins and blunt broadswords of poor quality, with large shields but no armor. The Gasatae tribe even fights in the buff. Nobles fight as cavalry, replacing the javelin with a spear.

Macedonians: See *Spartans*, below, for well-equipped foot troops, except they wear open-toed boots rather than sandals. The cavalry, a Macedonian speciality, has begun carrying medium shields and employs the blunt broadsword generally used by horsemen of this age. Commoners often

wear cuirasses of cloth armor. Their Greek subjects often fight as unarmored light infantry with small shields and javelins, as do the Aetolians they often face. Macedonian shields usually feature the device of a central star surrounded by crescents.



Romans: The legions look little like their Imperial descendants. Their large shields are oval rather than cylindrical. Their helms are of simpler design, and topped with three long purple or black feathers. They wear Roman sandals, actually boots with the chafing bits cut away. The front ranks and wealthy wear greaves. The wealthiest wear a shirt of recent Gallic invention: chain-mail. Others wear bronze or iron breastplates in several styles: plain, the Greek "muscled" fashion, or an olden style with hemispherical protrusions over pectorals and abdomen. Many make do with a 9-inch square of bronze strapped over their sternum. This acts as a bronze breastplate, but roll 1d: On a 1-3, an attack bypasses the armor. Alternately, an attacker can target the unarmored portion of the chest at -3 to hit. This chest protector costs and weighs 1/3 as much as a breastplate. The recently introduced *gladius* has spread through the ranks, though some may still carry a Greek-style thrusting-only shortsword. The front lines carry *pilums* (javelins), the back rank spears.

Rhodians: These islanders enjoy high demand for their skill as slingers. Agrianians, from Thrace, also hold some renown, and some may use the staff sling. (Legend credits Alexander's father, Philip, with its invention.) Carthage relies on famed slingers from the Balearic islands off Spain's coast. Slingers usually wear no armor and carry a small shield. Greeks

fashion bullets of lead, the Spaniards of dried clay.

Spartans: These warriors wear helms and breastplates (probably of bronze, but either item could be fashioned of iron by this time), greaves, sandals, red tunics and cloaks, and large shields. They wield an 18-foot pike, fitted with the buttspike that is found on most Greek spears, and suspend their shields from hands-free straps, though a classical Spartan used a spear one-handed and employed the more typical hand grip on his shield. A Greek thrusting shortsword serves as a backup weapon.

Successors: The Ptolemies and Seleucids richly equip their core troops. Their arms match those of the Spartans, above, except in styling. The head of a lion, in red, on their shields often identifies Ptolemy's troops, much like the upside-down V serves Spartans. The Seleucids favor an elephant device.

Civilians

Courtesans: This trade thrives in these days. Some female courtesans will be carrying ingredients for poisons; they use these as crude contraceptives. They also will have from \$7 to much, much more for each previous transaction of the evening.

Merchants: When traveling, they often carry surprising values in gold and silver – \$50,000 would not be out of the ordinary – but when possible they exchange letters of credit with trading partners along their usual route. These letters would be worthless to anyone else, of course.

Physicians: As today, these professionals generally make a very good living from their fees. They often carry a wooden case that unfolds to reveal a surprising array of finely crafted iron medical instruments. They might also be carrying herbs and drugs, though the latter would be of dubious quality.

Scholars: These learned men often receive generous pay from their patrons. They wear good but not ostentatious clothes and perhaps have an expensive gadget on their person. They might also be carrying expensive scrolls; these usually are about 6 inches wide and 12 inches long, and hold the equivalent of about 15,000 words in English text. Some larger works are up to eight times as long – unrolling to about 150 feet – but these are very hard to handle. All scrolls are very fragile.

Spartan

200 points

This template illustrates a young Spartan who has spent some years in the barracks, restored by Cleomenes III around 227 B.C. It presumes that the rest of the world fits a fairly standard **GURPS** 100-point scheme, with ordinary people or raw soldiers at up to 50 points; veteran troops about 75 points; and minor nobles, top scholars, or elite troops 100-150 points. The Spartiates stand this far above the usual ilk by virtue of their intensive martial training.

Little room is left here for customization of these men, as befits the cookie-cutter indoctrination that they received. An older Spartan who grew up in the “degenerate” days before the king’s reforms might use this template but trade out points for a wider variety of advantages and skills. To be fair, though, an older Spartan won’t have benefited as much from the pressures of the barracks: The GM might rule that for every year older than 20, the character must trim 5 points completely, but then may trade another 5 points from the template toward new attributes, advantages, or skills.

Attributes: ST 13 [30]; DX 13 [30]; IQ 12 [20]; HT 12 [20].

Advantages: Combat Reflexes [15]; Cool [1]; Fit [5]; High Pain Threshold [10]; Reputation +3 (Spartan) [15]; Semi-Literacy [5]; Status 2 [10]; Strong Will +1 [4]; and 25 points in increased attributes; Absolute Direction [5]; Acute Hearing or Vision [2/level]; Alertness [5/level]; Appearance [5 or 15]; Charisma [5/level]; Collected or Composed [5]; Common Sense [10]; Danger Sense [15]; Disease-Resistant [5]; Fearlessness [2/level]; Less Sleep [3/level]; Literacy [a net 5 points]; Rapid Healing [5]; additional Strong Will [4/level]; Temperature Tolerance [1 or 2]; Toughness [10 or 25]; Very Fit [a net 10 points]; and Voice [10].

Disadvantages: Fanaticism (Spartan) [-15]; Reputation -3 (Spartan) [-5]; and -20 points in Appearance [-5 or -10]; Bad Back [-15]; Bad Temper [-10]; Bloodlust [-10]; Bully [-10]; Callous [-6]; Careful [-1]; Edgy [-5], or Paranoia [-10]; Chauvinistic [-1] or Intolerance [-5 or -10]; Code of Honor (Mercenary’s) [-5]; Compulsive Lying [-5];

Delusions [-5]; Hidebound [-5]; Innumerate [-1]; Kleptomania [-15]; Light Sleeper [-5]; Low Empathy [-15]; Obdurate [-10]; Overconfidence [-10]; Proud [-1]; Sadism [-15]; Sense of Duty (to Sparta) [-10] or (to Cleomenes) [-5]; Shyness [-5 or -10]; Stubbornness [-5]; Vow [-5 or -10]; and Workaholic [-5].

Primary Skills: Area Knowledge (Peloponnesus) (M/E) IQ [1]-12; First-Aid/TL3 (M/E) IQ [1]-12; Hiking (P/A; HT) HT [2]-12; Intimidation (M/A) IQ [2]-12; Knife (P/E) DX+1 [2]-14; Savoir-Faire (M/E) IQ [0]-12*; Savoir-Faire (Military) (M/E) IQ [1]-12; Shield (P/E) DX+1 [2]-14; Soldier (M/A) IQ+2 [6]-14; Spear (P/A) DX+2 [8]-15; Shortsword (P/A) DX+1 [4]-14; Tactics (M/H) IQ [4]-12.

* Defaults from Status.

Secondary Skills: Agronomy/TL3 (M/A) IQ-1 [1]-11; Climbing (P/A) DX-1 [1]-12; Dancing (P/A) DX-2 [1/2]-11; Leadership (M/A) IQ-1 [1]-11; Spear Throwing (P/E) DX+1 [2]-14; Singing (P/E; HT) IQ-1 [1/2]-11; Stealth (P/A) DX [2]-13; Survival (Mountains or Plains) (M/A) IQ [2]-12; Wrestling (P/A) DX [2]-13.

Background Skills: Spend 5 points on any of Jumping and Swimming (both P/E); Boating and Riding (Horse) (both P/A); Pickpocket and Sleight of Hand (both P/H); Running (P/H; HT); Cooking, Cyphering, Fishing, Gesture, and Seamanship/TL3 (all M/E); Administration, Armoury/TL3, Blacksmith/TL3, Cartography/TL3, Distilling, Fast-Talk, Gambling, Heraldry, Holdout, Interrogation, Language (Aramaic or Latin), Lockpicking / TL3, Meteorology/TL3, Orienteering, Packing, Performance/Ritual, Politics, Sailor/TL3, Shadowing, Teaching, Teamster, Tracking, and Writing (all M/A); Accounting, Animal Handling, Detect Lies, Diplomacy, History, Law, Navigation/TL3, Philosophy (Stoicism), Sacrifice, Shiphandling/TL3, Strategy, and Theology (all M/H); and Augury and Dreaming (M/VH).

Customization Notes

A Spartan character may take up to another -20 points in personal disadvantages and -5 points in Quirks to further customize this template. (Disadvantages that cost -1 point may be listed as Quirks, instead.) Usually, a severe physical disadvantage would not allow one to remain in the Spartan ranks, but with GM approval these Spartiates should be allowed to take one or two – these could represent crippling wounds suffered at Sellasia, for instance.

Few Spartans have average Appearance; they cultivate an attractive or fierce persona depending on the resources that nature provided. They wear their hair in long dreadlocks to make a good face more comely or an ugly face uglier.

Spartans have good and bad Reputations. The constant +3 represents the healthy respect people pay to them, as some of the finest warriors in the known world. The -3 applies, and effectively cancels out the +3, when Spartans attempt to exert control over others. They are known as harsh masters. (And they are. Spartans worship Fear as one divine force that keeps Sparta running.) In this vein, most Spartans will have at least the Chauvinistic disadvantage. Many have full Intolerance at -10 points.

Spartan fanaticism consists of forthright behavior toward other Spartans, willingness to sacrifice for Sparta, and a “with my shield or on it” machismo. A good Spartan doesn’t ask how many he’ll face, but where he can find them. When dealing with non-Spartans, anything goes, as long as the Spartan doesn’t get caught. If discovered, he’ll generally be treated as if he’d behaved that way toward a Spartan. Given this self-serving divide, this does not count as a Code of Honor. Spartans may take the Mercenary’s code (essentially: once bought, stay bought) and many will, given that Spartans often serve as freelances abroad. It’s one of the few paying jobs for which they’re qualified.

Spartans begin play with the gear they carry and nothing more. They had no personal property before Sellasia.

CHAPTER SIX

UNDERGROUND

BY WILLIAM H. STODDARD

About the Author

William H. Stoddard is a copy editor specializing in scientific material. He lives in San Diego, California, in an apartment overfilled with books. He has written or co-written six previous *GURPS* books, the most recent of which is *GURPS Covert Ops* with Hans-Christian Vortisch.

From Paleolithic caves to Parisian sewers, from asteroid mines to the hollow earth, underground locations make perfect settings for adventures. Real-world explorers can only go a few

miles down into natural caves or artificial tunnels. Short of superscience or superpowers, no human being can reach the earth's interior. In a fantasy or weird-science setting, though, sur-

vivable conditions may extend far deeper, into vast caverns or a hollow world, perhaps inhabited by exotic creatures or civilizations – and intrepid adventurers may explore those realms.

CHTHONIAN TALES

One of the best sources for fantastic underground settings is past ages' beliefs. Storytellers based their tales on what their ages knew, speculated, or imagined. These ideas can create a setting utterly unlike the real world, but detailed and logical.

THE FLAT EARTH

The earth looks flat and many early civilizations thought it was. So what happens if someone keeps traveling in a straight line? Here are three possibilities:

- He reaches the edge and falls off. The earth is a huge flat shape – a circle, square, triangle . . .
- He keeps going forever. The earth is an infinite plane.
- He bumps into walls and has to stop. The world is a house built by the gods; the sky is its roof and walls.

In most theories, up and down are the same everywhere. An infinite-

plane world or a houselike world might have an infinitely thick floor, growing denser with depth. Flat worlds are usually relatively thin; ambitious miners might tunnel through! Who knows what holds up such a flat world? An outrageous example is the world being held up by elephants and turtles (see *GURPS Discworld*). The first Greek philosopher, Thales, proposed that the earth floated on water; this might require it to be hollow for buoyancy – and hollow continents might be sinkable.

Another Greek philosopher, Anaximander, envisioned a drum-shaped earth with two habitable surfaces. Each side's "down" was the other's "up."

Hades

If the earth is a house, then the underground is its basement. Underworld gods often reflect this. Basements are storehouses, especially for valuables; Pluto was the Roman god of wealth. Basements may hold dungeons; Pluto was king of the trapped dead of his realm.

Other cultures have similar myths. In Norse tales, the god Loki was imprisoned and tortured under the earth; the world quaked when he writhed in pain.

Faerie Mounds

Folk legend often includes smaller underground realms. In Irish myth, for example, many mounds are inhabited by faeries or are gateways to their realms (see pp. FAE45-46). Chinese Buddhism offers a different view, teaching that vast caverns conceal paradise realms where any inhabitant can become enlightened.

THE GEOCENTRIC COSMOS

With the development of mathematical thought, the ancient Greeks worked out the spherical earth. At the Library of Alexandria, Eratosthenes calculated Earth's circumference, based on the sun's angular height above the horizon at two cities.

Philosophers also had to reevaluate their concepts about the universe. They came up with *geocentric astronomy*. In this system, celestial bodies follow circular orbits around the earth. Earth is heavy and impure, but celestial bodies are light and pure. Therefore, on a spherical Earth, "down" is toward the center of the sphere, and "up" is toward the sky and Heaven.

The Inferno

The greatest work of fiction based on geocentric astronomy is probably Dante's *Divine Comedy*. In the *Inferno*, Dante and Virgil explore Hell, located within the earth. Dante took many details of Hell from Roman myths. But he also took physics into account, as in the scene where Dante and Virgil descend to the lowest circle of Hell, where Satan himself is imprisoned.

The Hollow Earth

In 1692, the astronomer Edmund Halley proposed that Earth was not a solid sphere, but five concentric shells. In 1818, a retired American army officer, John Cleves Symmes, added a new feature: large holes at the North and South Poles through which explorers might enter the interior. This inspired a privately funded Antarctic expedition in 1824, and may have inspired Edgar Allan Poe's *The Narrative of Arthur Gordon Pym*. In 1920, Marshall Gardner published a new version, adding an internal sun. Edgar Rice Burroughs presented a similar image in *At the Earth's Core* and its sequels.

A different "hollow earth" theory has vast caverns running through the earth's crust or deeper. Jules Verne used this in *A Journey to the Center of the Earth*, with a vast cavern extending from Iceland to Sicily. L. Frank Baum adopted it for *Dorothy and the Wizard in Oz*.

Realistically, a hollow earth wouldn't last long: the spheres would collide or the outer shell would collapse under its own weight. By the end of the 19th century geologists had abandoned the theory. But pseudoscientific and occultist groups often found it appealing. Both versions found supporters in Nazi Germany (see pp. W:WW125-126).

Murdered Giants

One of the oldest ideas about the earth is the myth of a slain giant whose corpse was shaped into the world. The oldest recorded version of this tale comes from Babylonian tablets. The *Enuma Elish* describes how the god Marduk killed the monstrous Tiamat and made the heavens and the earth from her remains. Adam Kadmon in Jewish legend, Purusha in Hinduism, and the giant Ymir in Norse myth all suffered similar fates.

The Norse version offers a twist: maggots within the corpse became the races of elves. Some, the alfar, came out into the light; others, the svartalfar, remained an underground race.

Once they move past Satan's midsection they are climbing *up* Mount Purgatory. At the sphere's center, up and down interchange.

CONTESTED GROUND

After the Middle Ages, explorers and natural philosophers began pursuing what eventually turned into modern geology.

The Origin of Landmasses

Early geologists developed conflicting theories on the origins of rock. One group, called "neptunists," thought rock originally crystallized out of seawater, supplemented later by sedimentary rock strata. They believed that volcanoes were heated by burning veins of coal and regarded the earth's interior as mostly cold – a theory Jules Verne used in *A Journey to the Center of the Earth*.

On the other hand, "vulcanists" argued that basalt formed from cooled lava ejected from a *hot* interior; the later "plutonists" applied the same idea to granite and emphasized the volcanic origins of mountain ranges.

The Origin of Fossils

Many early naturalists found buried objects that looked like creatures' remains, but were made entirely out of stone. The ancient Greeks and Romans explained these as monsters killed by gods or heroes.

In one theory, these remains were originally organisms buried in sediments. As the sediments turned to rock, minerals replaced the tissues. This theory of "solids naturally contained within solids" became the basis

of modern paleontology. A rival theory proposed that minerals could spontaneously take on the shapes of living creatures. The theory was discarded in the 19th century.

Noah's Flood

Another anomaly was finding fossilized seashells in strata far above sea level. In Christian Europe, people thought these were from the Noachian flood. The 18th-century catastrophists believed that the flood was only the latest in a series of global disasters, each of which wiped out most of the species of its time. Frozen mammoths were viewed as evidence for one catastrophe. The uniformitarians rejected catastrophism, claiming that geological structures were formed by the same slow forces that operate in the present landscape – a view that later inspired Darwin's theory of evolution.

GEOLOGICAL TIME

In the 19th century, uniformitarian geologists realized that Earth had to be hundreds of millions years old for natural processes to have created the visible landscape. Exposed areas such as the Grand Canyon showed layer on layer of rock strata formed from marine sediments. Strata from across the world contained fossils of similar species, always in the same sequence (see *Geological Ages*, p. 76). Museums began competing to produce dramatic exhibits of extinct lifeforms, especially the big ones.

This new geological history became the basis for fantastic fiction about prehistoric tribes or entire lost civilizations. In the early 20th century, H. P. Lovecraft developed a new kind

of cosmic horror, filling the geological record with forgotten inhuman civilizations, making human history a mere episode, likely to be swept aside if the ancient races ever revived. Occultist groups such as the Theosophical Society claimed to have actual records of these antiquated times.

Land Bridges and Lost Continents

Similarities between the fossil records of different locations puzzled many paleontologists. Related species were found on widely separated continents. The distribution of living species was also odd; why could marsupials be found in Australia and the Americas, but not on Asia or the Pacific islands? The common answer was land bridges. The seas had risen and fallen in the past, and low levels might turn shallow seas into land.



Most 19th-century geologists believed that the earth was cooling fairly rapidly and shrinking as a result. In the process, its crust cracked and wrinkled, and parts sank into the interior, turning continents into oceans. Oceans could also turn into continents, as regions of seafloor failed to sink or were pushed upward. With serious geologists proposing such ideas, speculations about lost continents such as Atlantis and Lemuria seemed plausible.

PLANETARY INTERIORS

At the start of the 21st century, geologists have a fairly detailed picture of Earth's interior, and some ideas about other planets' and satellites' interiors. If adventurers in a realistic setting go underground, this is what they'll find. And present-day campaigns in more fantastic settings probably need to come up with alternate explanations for what geologists have observed.

The key to modern geology is *plate tectonics*. This started out with *continental drift theory*, first proposed in 1915. Back then, geologists rejected it because they couldn't see how the continents could move – plate tectonics is the explanation.

BELOW THE SURFACE

The earth's chemical elements fall into three main groups. *Lithophiles*, such as aluminum, potassium, and silicon, combine with oxygen, forming rocky materials. *Chalcophiles*, such as lead and mercury, react with sulfur, forming ores that can be broken down by heat. Iron reacts with both oxygen and sulfur, but there's lots of excess iron; unreactive *siderophiles*, like gold and platinum, go into solution with the iron.

Within the earth's hot interior, these materials sort themselves into different layers. The *core* is mostly iron and nickel, with about 20% non-metallic material, likely sulfur. The outer core is liquid; the inner core is solid. As the core slowly cools, crystals grow on the outside of the inner core, releasing heat as they freeze – about 40% of the heat budget for the earth's interior. Above the core is the mantle, made mostly of rocky materials. The main radioactive elements in the earth's interior are all mantle lithophiles: potassium-40, thorium-

Geological Age	MYA (millions of years ago)
Priscoan Eon	4,600
Archean Eon	4,000
Proterozoic Eon	2,500
Phanerozoic Eon	590
Paleozoic Era	590
Cambrian Period	590
Ordovician Period	505
Silurian Period	438
Devonian Period	408
Mississippian (Lower Carboniferous) Period	360
Pennsylvanian (Upper Carboniferous) Period	320
Permian Period	286
Mesozoic Era	248
Triassic Period	248
Jurassic Period	213
Cretaceous Period	145
Cenozoic Era	65
Tertiary Period	65
Paleocene Epoch	65
Eocene Epoch	55
Oligocene Epoch	38
Miocene Epoch	25
Pliocene Epoch	5
Quaternary Period	2
Pleistocene Epoch	2
Holocene (Recent) Epoch	0.01

232, uranium-235, and uranium-238. Their decay provides about 60% of the earth's internal heat. The mantle has several layers with different properties, including the upper, fairly rigid *lithosphere*, and the more yielding *asthenosphere* just beneath it.

All the heat release within the earth gives rise to heat flow called *convection*. Hot material rises, moves away from the hot spot, cools, and eventually sinks somewhere else. Convection within the earth provides the tectonic energy for nearly all geological processes.

THE CRUST

On top of the mantle is the *crust*. Its thickness ranges from 4.5 to 27 miles – a short distance, but no human could survive the descent.

The oceanic crust is made up of basalt, with a skin of sedimentary rocks such as sandstone and limestone. The continents have a lower layer of basalt, a thick middle layer of granite, and an upper sedimentary layer.

Lines of convective heat produce divergent plate boundaries. These

Physics of Earth's Interior

Here are the numerical details for the physical state of Earth at the boundaries of its major interior zones:

Boundary between:	Radius (miles)	Gravity	Pressure (atmospheres)	Temperature (°F)
Outer/inner core	750	0.45	3,300,000	13,500
Lower mantle/outer core	2,150	1.09	1,400,000	8,100
Upper/lower mantle	3,550	1.02	240,000	2,000
Crust/upper mantle	3,945	1.00	6,000	1,700

form as continental-rift valleys in East Africa, narrow seas like the Red Sea, or oceanic ridges such as the Mid-Atlantic Ridge. New crust forms in the latter and pushes plates apart. Elsewhere, plates come together; oceanic crust is pushed down into the mantle and melted, rising to form volcanic mountain chains. Continental crust stays on top; a single continent develops volcanic mountain ranges along its margin, such as the Andes, while two continents collide and produce compressional mountain ranges,



such as the Himalayas. Volcanoes and earthquakes occur mostly along plate boundaries, such as the Pacific "ring of fire," but hot spots develop in the

middle of plates – worldwide, there are about 100, including Yellowstone and the Hawaiian Islands.

The crust recycling in the upper mantle produces concentrated deposits of metals and their ores. Water heated by geothermal energy can also concentrate ores. Geothermal energy can be economically valuable in its own right; geologists estimate that the energy contained in heated rock exceeds the available energy in fossil fuels.

EARTH SCIENCE

SEISMIC INSTRUMENTS

Legend says that the Greek philosopher Empedocles hurled himself into Mount Etna, in Sicily, as a martyr to scientific curiosity. Many geologists still physically go to sites – but indirect learning methods about the interior are available.

Using the gear below requires a roll vs. Electronics Operation (Sensors), unless otherwise stated. Interpreting unfamiliar readings or telling how an underground structure was formed requires a roll vs. Geology, Hydrology, or Prospecting.

Many geological events – including earthquakes, landslides, and eruptions – produce seismic activity, or ground vibrations. No roll is needed to notice large events; a seismograph and a roll against Mechanic at TL6 or Electronics Operation (Sensors) at TL7+ allow detection of smaller events and how far away they are.

Three readings from different locations are enough to locate an event with a roll vs. Cartography. Tremors and landslides can be detected within several miles; major earthquakes can be detected anywhere on Earth. Seismic-wave analysis also provides information about the mantle and core (see p. 76).

During World War I, seismographs were used to locate enemy artillery. In the 1920s, oil companies started using seismic waves created with buried explosives to map subsurface oil deposits – in effect, this is very-low-frequency sonar. (For more on geophones and detecting oil, see p. 85.)

The Gaia Hypothesis

Modern geology still has room for speculation. In the 1960s, a Jet Propulsion Laboratory consultant, James Lovelock, formulated the Gaia Hypothesis, which says Earth is habitable because life itself keeps it so. For example, its surface temperature has been stable for several billion years; despite changes in solar radiation, the seas have neither frozen nor boiled. Recent studies suggest that water acts as a lubricant for plate tectonics; without life, the crust might fuse into a solid shell. The Gaia Hypothesis found supporters among environmentalists, but was heatedly debated by scientists and by religious thinkers reacting to its allusion to a mythical goddess.

Extraterrestrial Geology

When a star system comes into being, gravity forms its original gas and dust into *planetesimals*, small celestial bodies like present-day asteroids. These collide, releasing heat and fusing into larger bodies. After reaching a diameter between 280 and 440 miles, some bodies weigh enough to exceed the structural strength of their materials. These collapse into roughly spherical shapes. Smaller bodies, by contrast, retain irregular shapes.

Radioactive materials inside a planet add to its internal heat. If this is great enough to melt the planet's material, it forms into layers, like Earth.

DRILLS AND SAMPLES

A drill rig able to bore through solid rock can collect material from deep within the earth's crust. (These are called "core samples" – but they do not come from the earth's core!) Geologists and paleontologists can analyze their composition, estimate their age from the radioactive elements they contain, and find fossils or even living microorganisms in them (see *Life Under Pressure*, p. 81). Roll vs. Driving (Construction Equipment) to collect a usable sample.

EXTERIOR FIELDS

An object's gravitational field is proportional to its density. Since rock is denser than water, measuring gravitational strength reveals submerged mountains. Gravimeters in ships or

submarines can identify these. More sensitive gravimeters can detect differences in subsurface rocks; this is another method for finding petroleum deposits.

Magnetism can be used for similar purposes, since rocks respond to Earth's magnetic field. Skill rolls to detect iron ores are unmodified; subtler differences between rock strata are at -4 to skill.

Inserting a thermal probe into a borehole measures how fast temperature increases below the ground. The probe can also determine thermal

conductivity using a heating element on its tip. Roll vs. Geology or Physics to compute heat flow from these measurements. This can identify geothermal-energy sources.

DEEP IMAGING

Radar waves can penetrate a short distance into the ground; their reflections can be used for subsurface imaging. Low frequencies penetrate 30 to

100 feet and produce an image with a resolution of one yard. High frequencies penetrate 0 to 30 feet and produce an image with a resolution of one foot. Vehicular versions can be bought as low-res imaging radar with ranges of one mile (pp. VE51-52); effective underground range is still based on frequency, as above.

Subsurface electrical properties can also be measured with electrical resistivity arrays. These mainly detect ground water in porous rock; roll vs. Hydrology to interpret.

INTO THE DEPTHS

Entering natural caves or creating mines and tunnels allows actual exploration of the interior. Fiction offers a third option: vehicles that travel through the earth as a submarine travels through the ocean. The next step after traveling underground is building and occupying permanent structures.

CAVES

Caves typically form in porous rock such as limestone. Water flow creates underground channels and sometimes weakens the ground so that it collapses, producing sinkholes and terrain known as *karst*. Minerals coming back out of solution form stalactites, stalagmites, and other structures. Other cave types exist: lava tubes near volcanoes, and geothermal or glacial caves.

Caves present explorers with a variety of obstacles. In the first place, they're often totally dark. Their passages aren't always level and may even be vertical, requiring climbing; they may also be narrow (see *Escape*, p. 83). Cave floors may have gaps or breaks.

Most caves have even temperatures, equal to the average surface temperature – cool in summer and warm in winter. (Geothermal sources may raise a cave's temperature.) The air in many caves is completely still and can feel warmer than it is; roll vs. IQ (at +1 per 10°F below zero) to perceive freezing cold (see p. B130).

Explorers may have to wade, crawl, or swim in underground pools or streams; some even need scuba gear. Cave water is often dangerously

cold, but water in *geothermal* caves may be incredibly hot. Water conducts heat much better than air; the human comfort zone in water is only 75-85°F. Higher or lower temperatures cause problems:

136-212°F: Roll vs. HT each minute; lose 1 fatigue on a failure. Burn damage 1d-4 per second.

126-135°F: Roll vs. HT each minute; lose 1 fatigue on a failure. Burn damage 1d-4 per minute.

86-125°F: Roll vs. HT each minute; lose 1 fatigue on a failure.

75-85°F: Normal comfort zone.

55-74°F: Roll vs. HT each minute; lose 1 fatigue on a failure.

35-55°F: Roll vs. HT each minute; lose 1 fatigue on a success; on a failure, lost fatigue equals points of failure. When unconscious from fatigue, lose hit points instead.

32-35°F: As above, and cold damage 1d-3 per minute. On immersion, roll vs. HT; -3 to DX on a failure; cardiac arrest on a critical failure. Cardiac arrest reduces hit points to 0 and kills in HT/3 minutes; CPR (roll vs. Physician or First Aid-4) prevents death.

GURPS calculates digging in cubic yards (cy) per hour. In tunneling, the critical question is often length. To convert cy/hour to yards/hour for a crawl space, multiply by 1.00; for a man-high tunnel, multiply by 0.50; for a circular bore, multiply by 1.25 and divide by the square of the diameter in yards. All work done in a crawl space is at half speed.

In addition to the tasks covered on p. B90, tunneling requires hauling out broken rock or loose soil. An average wheelbarrow load is 0.1 cy; the round trip to the dumping site takes 2 minutes per 100 yards.

Various technologies can speed up tunneling, including explosives, jack-hammers, and mining machinery (see *Equipment*, pp. 84-86).

Cave-ins are a chronic risk in mines and tunnels; roll vs. Engineer when creating a new tunnel. On a failure, the tunnel shows strain; the miners can try to brace it (roll vs. any suitable Craft or Professional skill). On a critical failure, a collapse occurs with no warning!

MINES AND TUNNELS

Where no caves exist, human beings can create their own. Tunneling under fortifications has been part of siege-craft since the Bronze Age. The **GURPS Basic Set** offers rules for digging by manual labor; the following guidelines extend those rules and apply them to tunneling.

UNDERGROUND STRUCTURES

Civilized societies (TL1 and higher) may build underground structures, offering protection from the elements, intruders, or military attack – as well as secrecy, though modern sensor technologies reduce this (see *Earth Science*, pp. 77-78). Surface structures may also end up underground in long-occupied sites, as the ground level rises; an abandoned city is often completely buried.

Dowsing

Another method for underground sensing is dowsing. This is not an authenticated scientific technique, but some engineers and prospectors have sworn by it. In a hard-science campaign this is a Delusion – though it could turn out to be true, and involve some undiscovered force. In a campaign with psionics it can be a form of ESP.

Caves and Magic

Caves have been favored for magical and religious ceremonies since the Paleolithic Age. They conceal secret activities, and their darkness and silence invite perceptual illusions and may help induce trances. In a setting with mana-based magic, caves may have higher mana than the surrounding environment. Spirits may also be found in caves.

The Underground Future

Science-fiction writers have offered many images of underground societies. The details depend on the reasons for going underground:

Military Defense: After the invention of nuclear weapons, radioactive fallout became a major fear. During the 1950s and 1960s, many people built shelters. In grimmer visions, nuclear-war survivors might have to stay underground indefinitely.

Progress of Civilization: In *The Time Machine*, H.G. Wells showed a future society moving its industry underground, after which evolution reshaped the working class into natural cave dwellers. Similar dystopian visions appear in later science fiction. A planetwide ecological catastrophe could be the basis for a contemporary treatment.

Planetary Senescence: H.G. Wells was a pioneer here, too; *The First Men in the Moon* showed an underground lunar civilization. Many writers envisioned Martians going underground as their planet lost its air. For a version based on up-to-date planetary science, Earth's might still have internal radioactivity when the sun's expansion makes the surface uninhabitable. If the Earth could be propelled into a wider orbit, or out of the Solar System, its inhabitants might tunnel to get closer to their remaining heat source.

Building underground is expensive. It requires excavation of an area at least as big as the final structure. And for safety, the construction needs walls thick enough to resist the weight of the earth above it. An underground base costs two to five times as much as it a similar one on the surface.

SUBTERRENE VEHICLES

Stories about underground travel often feature tunneling vehicles, but realistic digging machines are huge power tools – they move a few yards per hour. A bore weighs 2,700 lbs., takes up 108 cf, costs \$2,160, and requires power of 5.4 kW for each

cy/hour it can dig in hard rock ($\times 2$ in clay, $\times 3$ in soil, $\times 4$ in sand). To convert to tunnel length per hour, see p. 78.

Since Edgar Rice Burroughs, writers have fantasized about true underground vehicles. *GURPS Vehicles* offers an option for creating subterranean craft: the super-bore (pp. VE67-68), which tunnels in cy per minute rather than per hour. It can be based on plasma beams, monomolecular drills, vibrational-resonance effects, or even (in a fantasy campaign) the “universal solvent,” of alchemical speculation. (For vehicles with super-bores, see p. STM75 and p. W:WW87.)

Another option for superscience campaigns is the flexibody, which imitates the movement of worms through the soil (see *Burrowers*, p. 81) on a

much larger scale. This requires the following changes to the vehicle's systems:

Segmentary body: A body whose sections can change from wide and short to narrow and long. Multiply volume $\times 2$ before determining surface area. Buy vehicle frame as a flexibody with an additional $\times 2$ cost. Must be sealed.

Earthworm flexibody drivetrain: A drivetrain in which each segment first shortens and widens, then narrows and projects forward. Cost $\times 2$.

Nonrigid armor: An earthworm flexibody vehicle must have synthetic nonrigid armor or reflex armor.

Compute performance as for a ground vehicle; underground performance is designated as “t” for “tunneling.” For surface movement, divide drivetrain power by 2 before computing speed; for movement through the earth, compute speed as usual, but then divide by 100. Underground acceleration is the same as aboveground. With a flotation hull, the vehicle can operate as a watercraft; divide normal flexibody thrust by 2, and treat the segmentary body as having mediocre hydrodynamic lines when computing drag.

Here is a sample futuristic vehicle. Its ability to operate underground, aboveground, or on water makes it a favorite for scouting and colonial-exploration parties.

Amaterasu Industries Mosura 3 (TL10)

Subassemblies: Body +5.

Powertrain: 1,000-kW fuel cell with 1,000-kW earthworm flexibody drivetrain; 1,000-kWh advanced battery.

Fuel: 1,380 gallons liquid hydrogen and 690 gallons liquid oxygen in self-sealing tanks.

Occupancy: 2 CCS **Cargo:** 20 cf

Armor

All: 2/8 NR

Equipment

Body: Complexity 5 minicomputer with neural-net and robot-brain options and two terminals; computerized controls; geophone, 50 mile radius; ground penetrating radar, 100-foot range; limited life system, 2 men, 5 man-days.

Statistics

Size: 6'x6'x30'/4'x4'x60'

Payload: 7,400 lbs. Lwt.: 24,200 lbs.

Volume: 1,000 cf Maint.: 12 hrs.

Price: \$2,980,000

HT: 12 HP: 2,550

gSpeed: 32 gAccel: 5 gDecel: 20

gMR: 1.5 gSR: 5

tSpeed: 0.5 tAccel: 5 tDecel: 20

tMR: 1.5 tST: 5

wSpeed: 11 wAccel: 2 wDecel: 38

wMR: 0.75 wSR: 7

Ground Pressure Very Low. 1/2 Off-Road Speed.

Flotation 53,125 lbs. Draft 2.1'.

Design Notes

Body is heavy, expensive, segmentary, with mediocre hydrodynamic lines and total compartmentalization. Area is 850 sf. Armor is reflex (hardens to 4/16). Vehicle is sealed and has improved suspension. The onboard tanks provide fuel for 12 hours.

DWELLERS IN THE DARKNESS

Real underground creatures aren't threats to human explorers; they're small, slow, and blind. But human imagination populates the subterranean realm with creatures as varied and dangerous as those on the surface. Such threats work especially well in horror campaigns, but any cinematic campaign may have hostile creatures beneath the earth.

People who encounter such creatures don't necessarily know what they are. Scientists may regard them as a new ecosystem, while superstitious people may call them monsters – and either could be right!

UNDERWORLD SPIRITS

Spirits appear in environments where perception is difficult – the underground is naturally dark and often has twisting passages and hidden chambers. The very act of entering a tunnel conveys a sense of transition. The dead are often found underground, especially in cultures that practice burial. And dead people who aren't properly laid to rest may come back out of the ground, as ghosts or corporeal monsters (see pp. UN34-37).

LIVING FOSSILS

With the emergence of evolutionary theory, biologists identified some species, such as the platypus or the coelacanth, as "living fossils." Present-day cryptozoologists hope to find even more impressive survivors, such as the hypothetical *Plesiosaurus* of Loch Ness or the central African *mokolembembe*, which might be a dwarf *Apatosaurus* (see p. BE60). Fiction often envisions entire surviving

ecosystems, as in Arthur Conan Doyle's *The Lost World* or Jules Verne's *A Journey to the Center of the Earth*.

Some fictional treatments have a single ancient organism in suspended animation, entombed in rock or ice, waiting to be restored to life, as in the Japanese film *Rodan*. For more exotic variants, a supernatural-horror campaign could have undead fossil dinosaurs, or a weird-science campaign could have fossils spontaneously generated within the earth "ripen" into true and dangerous life.

Griffins 80 points

Classical writers referred to griffins (also spelled "gryphon") not as fantastic beasts, but as a natural species found in Asia: quadrupeds with beaks similar to those of eagles and lionlike bodies. Such creatures are often represented in Scythian art and may have been inspired by the ceratopsian fossils common in central Asia (see *Protoceratops*, p. D50). In an alternate history, they might have survived into the present as living fossils. (See also p. FB28.)

Attributes: ST+10 (No fine manipulators, -40%) [66]; DX+3 [30]; IQ-7 [-60]; HT+5 [60].

Advantages: Alertness +8 [40]; DR 2 [6]; Early Maturation 1 [5]; Enhanced Move (Running) 0.3 [3]; Extra Hit Points +10 [50]; Extra Legs (Four legs) [5]; PD 1 [25]; Peripheral Vision [15]; Sharp Teeth (Beak) [5].

Disadvantages: Bestial [-10]; Color Blindness [-10]; Dead Broke [-25]; Hidebound [-5]; Incurious [-5]; Inconvenient Size [-10]; Innumerate [-5]; Mute [-25]; No Depth Perception [-10]; No Fine Manipulators [-30]; Presentient [-20]; Social Stigma (Barbarian) [-15].

CAVE CREATURES

Some animals use caves as places to sleep or hibernate. These creatures are sometimes very large – the prehistoric cave bear weighed between 1,200 and 1,600 pounds. Full-time cave dwellers are usually small. Fantastic underground races often fit the same pattern: the gigantic cyclopes go out of their caves to herd flocks of sheep, but smaller races such as goblins are often full-time cave dwellers. The *Troglodyte* template (p. 82) is for such creatures.



Cave animals may have enlarged light-sensitive eyes for good night vision. Others have bad sight or are blind; they may rely on sonar or be sensitive to air currents. Many lack pigmentation, since they don't need protection from sunlight. Flying and adhering to walls are useful for getting around caves without level floors. In water-formed caves, creatures may be amphibious or aquatic.

BURROWERS

Other underground creatures actually burrow. A segmented body, like an earthworm's, is mechanically efficient for burrowing. Vertebrate burrowers may have large, blunt claws that scoop the earth backward as they crawl forward. Fantasy races (notably halflings, pp. FF95-98) and some alien races may be burrowers.

Realistic burrowing is slow (see *Tunnel*, p. 83). Fictional burrowers, however, may be fast enough to overtake a running man – examples include *Dune*'s sandworms or the monsters of *Tremors*. Burrowers are often blind, but may sense vibrations. The temperature underground tends to be even – avoiding temperature extremes is one reason for burrowing! – but burrowers often have to be tolerant of low-oxygen environments.

LIFE UNDER PRESSURE

Finally, there is the option of life deep below the ground, within solid or liquid rock. Cores drilled deep into the crust during petroleum exploration have contained microorganisms living within microscopic pores

in rock. These *extremophiles* can survive temperatures as high as 230°F, at which water remains liquid only because of the very high pressure also present. Many of these cannot survive exposure to oxygen. They appear related to other organisms, classified as Archaeabacteria or Archaea, that live in extreme environments on the earth's surface, such as "black smoker" hydrothermal vents deep in the ocean. Some estimate that their total weight may exceed that of all life elsewhere on Earth.

Organic life at greater depths, inorganic life, or multicellular organisms tough enough to drill rock, are highly speculative fiction. If they existed, they would have to tolerate extreme pressures and temperatures, and be anaerobic. Conditions on the surface would kill them. The Chthonians of the Cthulhu Mythos are a classic example.

Crystalloids

385 points

What if the vast heat flux at the boundary of the inner and outer cores gave rise to life and even intelligence? Here is a sample race of that environment, made of crystallized impure iron, storing memories in magnetic domains, sensing by sonar, and aspiring to venture into the bitterly cold

mantle and crust, if they can build suitable craft. An average crystalloid weighs 800 lbs but is only 1 cubic foot in volume.

Attributes: ST+15 [150]; IQ+2 [20]; HT+2 [20].

Advantages: Armor Plates (PD 2, DR 3) [59]; Body of Metal 18 (Cannot switch out of form, -20%) [130]; Extended Lifespan 3 [15]; Extra Arms (10 short arms) [50]; Extra Hit Points +13 [65]; Magnetic Sense [5]; Manual Dexterity +2 [6]; Secret Communication (Magnetic patterns) [20]; Single-Minded [5]; Spines (Short) [5]; Tunnel (Realistic, -50%, see p. 83) [25].

Disadvantages: Altered Time Rate [-100]; Anaerobic [-30]; Increased Life Support 2 [-20]; Reduced Move 5 [-25]; Selfish [-5]; Short Arms [-10].

Quirks, Features, and Taboo Traits: Native gravity 0.45 G [0]; Sonar vision replaces sight [0].

Customization Notes: A Crystalloid able to survive on the surface would have Pressure Support [15] and Body of Fire 520 (Always on, -40%) [1,560]. It would not require Increased Life Support. Its cost would be 1,980 points.

EXPLORERS

Many people go underground for various reasons. The following templates and rules can be used to create underground adventurers in *GURPS*.

TEMPLATES

These templates are designed for underground adventuring, but leave plenty of points for customization. If the heroes may be leaving the caves and dark places, they should also have abilities useful above ground.

Construction Engineer *80 points*

Someone builds tunnels, mines, and underground bases. The construction engineer is in charge of the work and the people who carry it out.



Attributes: ST 11 [10]; DX 10 [0]; IQ 12 [20]; HT 11 [10].

Advantages: 3D Spatial Sense [10]; Mathematical Ability [10]; either Administrative Rank 4 [20] or Wealthy [20]; Status 1 [0];* and a total of 10 points from Alcohol Tolerance [5], Composed [5], Fit [5], Lightning Calculator [5], Manual Dexterity [3/level], Night Vision [10], Single-Minded [5], Strong Will [4/level], Temperature Tolerance [1/level], or Versatile [5].

* Free from Administrative Rank 4 or Wealthy.

Disadvantages: Duty (Current project; 15 or less) [-15]; and a total of -15 points from Code of Honor (Professional) [-5], Hard of Hearing [-10], No Sense of Humor [-10], Oblivious [-3], Overconfidence [-10], Sense of Duty (Workers) [-5], Stubbornness [-5], or Workaholic [-5].

Primary Skills: Administration (M/A) IQ+1 [4]-13; Engineer (Mining or Combat)/TL (M/H) IQ+2 [4]-14.*

*Includes +2 from Mathematical Ability.

Secondary Skills: Geology/TL (M/H) IQ [4]-12; Leadership (M/A) IQ [2]-12; one of Architecture/TL, Prospecting/TL (M/A) IQ [2]-12, or Tactics (M/H) IQ-1 [2]-11.

Background Skills: A total of 4 points in Brawling or Masonry (P/E); Climbing or Driving (Construction equipment)/TL (P/A); Carpentry, Computer Operation/TL, or Scrounging (M/E); Cartography/TL, Electronics Operation (Sensors)/TL, Hydrology/TL, Mechanic/TL, Surveying/TL, or Writing (M/A).

Geologist 60 points

People studying the earth often have to go out into the field. The geologist has adequate survival and technical skills and mastery of the scientific knowledge of his age.

Attributes: ST 10 [0]; DX 10 [0]; IQ 13 [30]; HT 11 [10].

Advantages: Status 1 [5]; and a total of 15 points from Administrative Rank [5/level], Comfortable [10], Fit [5], Manual Dexterity [3/level], Single-Minded [5], and Tenure [5].

Disadvantages: Code of Honor (Scientist) [-5]; and -15 points from Absent-Mindedness [-15], Bad Sight [-10], Bad Temper [-10],

Shyness [-5/-10/-15], or Workaholic [-5].

Primary Skills: One of Electronics Operation (Sensors)/TL, Mechanic (Clockwork and small gadgets)/TL, or Photography/TL (M/A) IQ+1 [4]-14; one of Geology/TL, Naturalist, or Paleontology (M/H) IQ+3 [10]-16.

Secondary Skills: Cartography/TL (M/A) IQ-1 [1]-12; Research (M/A) IQ-1 [1]-12; one of Planetology/TL (M/A) IQ-1 [1]-12 or Chemistry/TL, Ecology/TL, Natural Philosophy, or Physics/TL (M/H) IQ-2 [1]-11; and one of Bard, Teaching, or Writing (M/A) IQ-1 [1]-12.

Background Skills: One of Survival (Arctic, Desert, Mountains, Plains, or Caves) or Vacc Suit (M/A) IQ-1 [1]-12. One of Hydrology/TL, Meteorology/TL, Planetology/TL, or Prospecting/TL (M/A) IQ-1 [1]-12; or Archaeology, Astronomy/TL, Geology/TL, Metallurgy/TL, or Paleontology (M/H) IQ-2 [1]-11.

Customization Notes: For an archaeologist, substitute Archaeology for Geology as a primary skill and Anthropology or History as a secondary skill; add Anthropology, History, and Linguistics to the background skills.

Spelunker 75 points

Some people go underground for fun. Traditionally they're called spelunkers; many now prefer the name "cavers." Serious enthusiasts have long believed in preserving the underground environment; standards are now more rigorous.

Attributes: ST 10 [0]; DX 12 [20]; IQ 11 [10]; HT 12 [20].

Advantages: Composed [5]; Fit [5]; and a total of 10 points from 3D Spatial Sense [10] or Absolute Direction [5], Breath-Holding 1 or 2 [2 or 4], Double-Jointed [5], Night Vision [10], Single-Minded [5], Temperature Tolerance [1/level], or improving Fit to Very Fit [10].

Disadvantages: A total of -10 points from Code of Honor (Spelunker's, see p. 83) [-5], Curious [-5], Overconfidence [-10], Sense of Duty (Fellow explorers) [-5], or Sense of Duty (Anyone in danger underground) [-10].

Primary Skills: Climbing (P/A) DX+1 [4]-13; Orienteering/TL (M/A) IQ+1 [4]-12.

Secondary Skills: One of Escape (P/H)

DX-1 [2]-11, Hiking (P/A; HT) HT [2]-12, or Swimming (P/E) DX+1 [2]-13; two of Area Knowledge (Cave complex), Cooking, First Aid/TL, or Scrounging (M/E) IQ+1 [2]-12 or Leadership, Survival (Caves), or Teaching (M/A) IQ [2]-11.

Background Skills: One of Hidden Lore (Underground realm), Photography/TL, or Tracking (M/A) IQ-1 [1]-10; Naturalist (M/H) IQ-2 [1]-9; or Appreciate Beauty (Nature) (M/VH) IQ-4/IQ+2 [1]-7/13.

Troglodyte 70 points

Cave dwellers may be individual outcasts or members of secretive tribal cultures. Many will be NPCs, but this template is also good for an unusual PC.

Attributes: ST 12 [20]; DX 10 [0]; IQ 10 [0]; HT 12 [20].

Advantages: Absolute Direction [5]; Acute Hearing +2 [4]; Temperature Tolerance 1 (Colder temperatures) [1]; Unusual Background (Subterranean) [10]; and a total of 20 points from Double-Jointed [5], Extra Hit Points [5/level], Fit [5] or Very Fit [15], Manual Dexterity [3/level], Medium [10], Night Vision [10], Single-Minded [5], enhanced Acute Hearing [2/level], or improving Absolute Direction to 3D Spatial Sense [5].

Disadvantages: Social Stigma (Outsider) [-15]; one of Disciplines of Faith (Monasticism or Mysticism), Delusion (Major), Phobia (Open spaces, mild), Primitive [-2], or Reclusive [-10]; and a total of -25 points from Albinism [-10], Bad Sight [-25], Bad Temper [-10] or Berserk [-15], Dwarfism [-15], Mute [-25], Odious Personal Habits [Varies], Poverty [Varies], Primitive [-5/level], Skinny [-5], and Unattractive [-5], Ugly [-10], or Hideous [-20].

Primary Skills: Climbing (P/A) DX+2 [8]-12; Survival (Caves) (M/A) IQ+2 [6]-12.

Secondary Skills: Blind Fighting (M/VH) IQ [8]-10; Escape (P/H) DX [4]-10; Stealth (P/A) DX+1 [4]-11; and Swimming (P/E) DX [1]-10. Also pick one of Knife (P/E) DX+2 [4]-12; Axe/Mace, Broadsword, Spear, Two-Handed Axe/Mace, or Wrestling (P/A) DX+1 [4]-11; or Staff (P/H) DX [4]-10.

Subterranean Supers

The ability to travel through the earth can be a superhuman power. In *GURPS* terms, this involves several advantages. The ability to dig through rock or stone at Move 1 is Tunnel 2 (p. CI69). Surviving with no oxygen source is Vacuum Support (p. CI70), which includes the ability to survive any pressure. Removing the ability to survive *low* pressure is appropriate, and a -10% limitation, reducing the cost to 36 points. Vacuum Support also protects against high temperatures. Penetrating Vision, Radar Sense, or Sonar Vision can also “see” through earth or rock (see pp. CI63, 66).

Background Skills: Naturalist (M/H) IQ-2 [1]-8; and one of Masonry (P/E) DX+2 [4]-12 or Animal Guise, Stone Knapping, or Traps/TL (M/A) IQ+1 [4]-11.

ADVANTAGES

The following advantages have special applications in an underground campaign.

3D Spatial Sense see p. CI31

A character with this advantage can mentally map not just where he is in a system of tunnels, but where each tunnel is in relation to the others. If two tunnels pass close by each other, he can roll vs. IQ, Engineer (Mining), or Prospecting to determine the direction and distance of the shortest new tunnel that would join them.

Absolute Direction see p. B19

Absolute Direction works underground, but only in relation to movement in passages or tunnels. It doesn't give a three-dimensional picture of an underground complex.

Dark Vision see p. CI52

Supernatural races or creatures that live underground may have this ability. Natural races or animals generally should not.

Doesn't Sleep see p. CI52

Underground races may have no natural daily cycles.

Phobia

see pp. B35-36

Underground adventurers should not fear darkness or enclosed spaces. Actual cave dwellers often fear *open* spaces; in a campaign set entirely underground, reduce this phobia's value to -5/-10 points.

SKILLS

The following skills work a bit differently in an underground campaign:

Climbing see p. B57

Natural-cave explorers often have to climb. Treat a sloping passage as an ordinary mountain; a vertical passage is equivalent to a vertical stone wall. Cavers often rely on ropes; treat this as rope-up or rope-down. (See p. B89 for all these options.)

The high-speed form of roping down is *rappelling*. The -1 modifier in the *Basic Set* assumes you have a *Harness* (p. 84) to keep the rope properly positioned; the modifier is -2 without one, or -5 if you also have no gloves. A *Descender* (p. 84) grants +3 to skill.

Caves may present an additional option: *chimneying*, or climbing a vertical passage by bracing against its opposite walls, either with an arm and leg on each side (for narrow passages) or with back and feet against opposite sides (for wider passages). See the table.

Engineer see p. B60

Two different specializations apply to excavation and underground construction: Combat engineering and Mining. At TL4+, either can substitute for Demolition.

Escape see p. B65

Caves often contain very narrow passages. This skill can be used to squeeze through a passage only slightly wider than one's body.

One technique used by spelunkers is total exhalation, to narrow the chest before attempting a tight passage. This is risky; on a critical failure the spelunker gets stuck and cannot breathe! The person is treated as out of breath *immediately*. Companions

Immunity to Poison see p. CI58

This advantage includes the ability to resist poisonous gases from caves or volcanoes. It *doesn't* protect against burning damage from superheated gases.

Tunnel see p. CI69

The speeds attained with this advantage are much higher than real organisms can manage. To create a biologically plausible burrower, buy only one level of Tunnel for 50 points and apply the following limitation:

Realistic: Your tunneling speed is 1/4 hex per turn in earth and 1/16 hex per turn in rock. To increase speed, you can buy one level (only) of Enhanced Movement (Tunneling); this doubles both these speeds. -50% (-75% if not usable in rock).

DISADVANTAGES

The following disadvantages have special applications in an underground campaign.

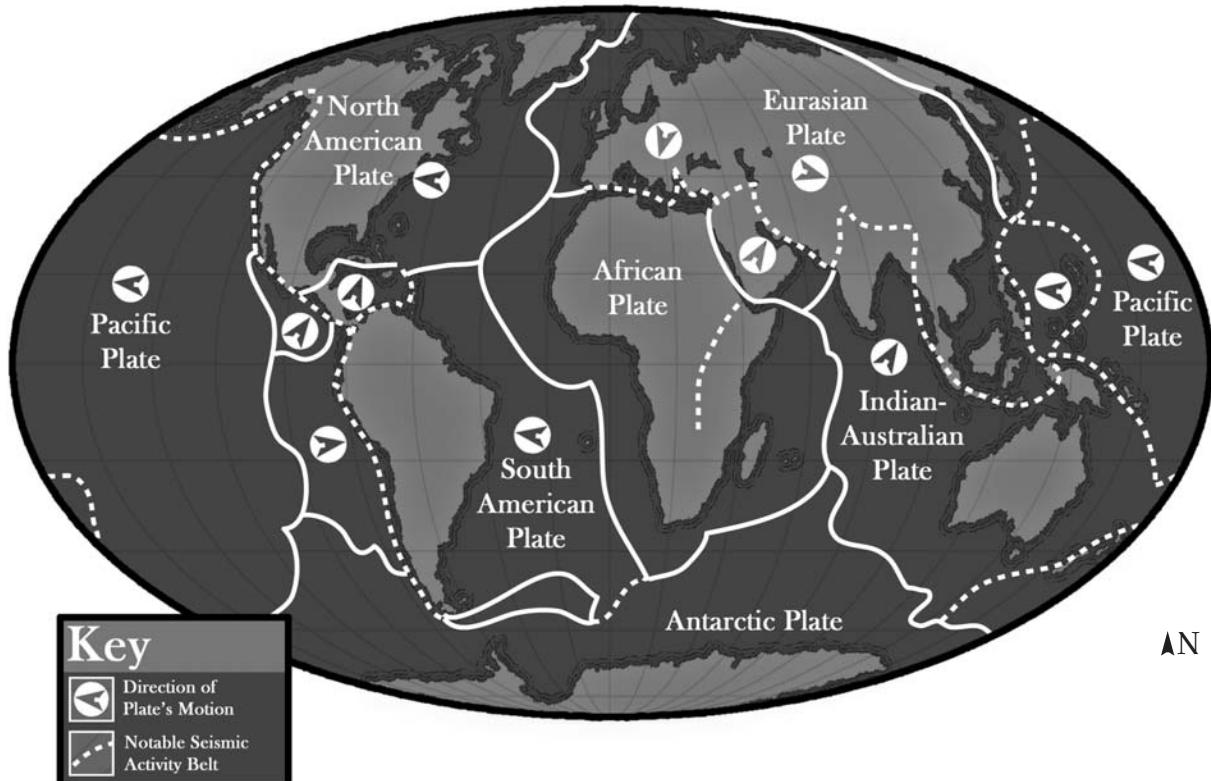
Albinism see p. B27

In a campaign set entirely underground, albinism is a 0-point feature; the environment nullifies almost all its inconveniences.

Code of Honor see p. B31

Spelunker's Code of Honor: Take nothing except pictures; leave nothing except footprints; protect the caves you explore from damage. -5 points.

Type of Climb	Modifier	Short Climb	Long Climb
Narrow chimney (1-2 feet)	-1	0.5 ft./sec	10 ft./min
Wide chimney (2-3 feet)	-2	0.25 ft./sec	5 ft./min



can yank a trapped spelunker out with a ST roll, inflicting 1d-2 damage; getting out unaided requires a ST-6 roll.

Geology *see p. B61*

Geology includes knowledge of all cave types.

Hidden Lore

see p. CI147

Parallel to Sewer Lore, versions of this skill can provide knowledge of the secret inhabitants of any local underground realm, in natural caves or artificial tunnels.

Hydrology

see p. CI157

Hydrology includes knowledge of caves formed by the action of water, but not of lava tubes or other exotic cave types.

Naturalist *see p. B57*

Traditional naturalism included minerals as well as plants and animals. A naturalist can recognize common minerals and predict where to look for them above or below ground. Locating subsurface mineral deposits requires Prospecting (p. B62).

Survival (Caves)

see p. B57

Underground explorers have their own specialized Survival skill. You

can't necessarily find food (if the cave doesn't contain any) but you can find water and identify natural hazards. This defaults to other Survival skills at -6 rather than -3, and vice versa.

NEW SKILL

This skill may be useful in historical campaigns.

Natural Philosophy (Mental/Hard)

No default

This general skill replaces specific scientific skills for scholars of TL1-4. When answering questions about how the universe is *believed* to work, roll against Natural Philosophy instead of a particular scientific skill such as Geology. Unlike modern scientific skills, Natural Philosophy does not extend to practical tasks such as analyses, lab work, or inventing; instead, natural philosophers use simple observation and speculation.

EQUIPMENT

Climbing Gear

Descender: A small metal device used when rappelling. This gives a +3 skill modifier for rappelling down a vertical wall. 1 lb., \$40.

Harness: When used with a rope, this gives +1 to all Climbing rolls and keeps the user from falling. It also leaves his hands free for manual tasks. 2 lbs., \$300.

Piton: A sturdy metal spike driven into a rock face to provide a hand- or foothold. Using pitons is much slower than climbing without them, but also more secure: +2 to Climbing and divide speed by 5. 10 pitons, 5 lbs., \$10. Hammer, 4 lbs., \$12.

Rope: A standard rope 1" thick can support 3,600 lbs. safely; a 10-yard length of such rope weighs 9 lbs. and costs \$225. For thinner or thicker rope, multiply strength, cost, and weight by the square of the diameter in inches. The thickest rope an average man can grasp is 2.5". Nylon rope, available at TL7, can support twice the weight; a 10-yard length costs \$90 and weighs 2.25 lbs. Cavers need extremely low-stretch ropes with special "kernmantel" construction for safe descent; standard nylon rope costs half as much as above but Climbing is at an extra -2 when descending.

Rope must be checked every day for damage; roll vs. Climbing or Engineer to detect faults. Rope with undetected faults gives -1 to Climbing skill, and on a roll of 16 or above, the rope breaks.

Explosives

Explosives are useful in breaking up rock. Breaking up 1 cubic yard of rock requires 5.7 lbs. of black powder or ammonium-nitrate-fuel-oil (ANFO) mixture (\$2 per pound), 3.6 lbs. of 80% dynamite (\$2 per pound), or 2.9 lbs. of TNT (\$3 per pound). This is placed in a hole drilled in the rock and tamped, or surrounded by clay or dirt, and packed in (roll vs. Demolition or Engineer). On a failed roll, or if the explosives are simply placed on the rock surface, divide the effective weight by 10.

Lighting

Carbide Lamp: Produces light by burning acetylene produced by dripping water onto calcium carbide; not having a liquid fuel reservoir makes it safer. Projects a 50' beam with a bright flame. Invented in 1897, it remained in use through most of the 20th century. 0.5 lb., \$120; \$3.00 for 0.25 lb of calcium carbide, sufficient for 6 hours.

Electric Lamp: A high-intensity electric lamp that projects a 120' beam. Power comes from a belt-mounted 216-kWs lead-acid battery good for 12 hours per recharge. 6 lbs., \$225.

Protective Clothing

Helmet: A helmet designed for underground wear, with a built-in lamp mount. Protects areas 3, 4: PD 3, DR 3. 1 lb., \$70.

Heavy Clothing: Clothing made of thick fabric with limited water retention (wool or synthetics), plus a durable belt. Protects areas 6, 8-14, 17, 18: PD 0, DR 1. 5 lbs., \$110. Worn with gloves and boots that protect areas 7, 15-16: PD 2, DR 2. 3 lbs., \$50.

Scientific Apparatus

Earth Vibration Unit: Designed as a seismic-vibration source for local seismic probing. The earliest units weigh over a ton and are carried on specially built trucks; modern units are much smaller and can be mounted on a small cart or any vehicle with a hitch. 250 lbs., 5 cf. Power supply: 5,400-kWs lead-acid battery (108 lbs., \$135) provides power for 1,500 uses.

Electrical Resistivity Array: An electrical source and a set of detectors, used in an array spaced about 20 feet apart. Source unit: 20 lbs., 0.4 cf,

\$750; requires a 0.5-kW power source. Detector: 7 lbs., 0.1 cf, \$250.

Geiger Counter: Detects ionizing radiation and gives its strength in millirads; available after 1928. 0.5 lbs., 0.01 cf, \$400.

Gravimeter: Measures variations in gravitational field strength. Pendulum gravimeters, available after 1924, are 50 lbs., 1 cf, \$10,000. Compact modern models are 10 lbs., 0.2 cf, \$2,500.

Ground Penetrating Radar: A small radar unit designed to map subsurface features, mounted on a tricycle base. Available in low-frequency (25-200 MHz) and high-frequency (300-1,000 MHz) versions. 12 lbs., 1 cf, \$6,700; includes batteries for 6 hours of use.

Magnetometer: Measures local magnetic fields; acts as a metal detector within 1 yard. 5 lbs., 0.1 cf, \$5,000.

Seismograph: Detects vibrations from earthquakes, other geological disturbances, and explosions. Must be stationary and in good contact with the ground. Mechanical seismograph (available 1880): 250 lbs., 5 cf, \$10,000. Electromechanical seismograph (available 1910): 50 lbs., 1 cf, \$20,000.

Smaller units, called *geophones*, are used in strings, and each unit has a spike that can be driven into the ground for proper sensitivity. To detect oil using geophones, set up a string of them spaced about 20 feet

apart. Drill a hole down to bedrock (at least 30 feet) and set off a buried charge of explosive (from 2 oz. to 200 lbs., but 2 lbs. is typical). This requires a roll against Demolition. If drilling is inconvenient, alternatives are 10 dynamite charges of 5 lbs. each on 10-foot poles, a two-ton weight dropped from 10 feet up, or an earth vibration unit (see above). For depths of less than 30 feet, blows from a sledgehammer are sufficient.

Geophones are also good improvised intruder-detection systems; roll vs. Camouflage to conceal them. Wire, per 20': 2 lbs., \$5. Geophone unit: 8 lbs., 0.2 cf, \$300.

Thermal Probe: Inserted into a drilled hole in rock, a probe measures the temperature difference at the surface and 2 to 20 yards beneath it; includes a heat source for thermal-conductivity measurements. Per yard of depth: 2.5 lbs., 0.05 cf, \$100.

Ultrasonic Mapper: A handheld ultrasonic device that instantly measures an enclosed space's dimensions, accurate to within 1%; maximum range is 50 feet. 0.1 lb., \$35.

Tools

Hand Drill: A metal shaft with a pointed end, held by one person while another hammers it into soil or rock. Drills 0.1 x ST yards/hour in hard rock. Hammer: 8 lbs., \$25. 4-foot drill: 20 lbs., \$50.

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The following books are useful sources of factual and historical information. See the text of the chapter for some sources of fictional inspiration.

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Mayor, Adrienne, *The First Fossil Hunters* (Princeton University Press, 2000).

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Skinner, Brian J., Porter, Stephen C., and Botkin, Daniel, *The Blue Planet*, 2nd Edition (Wiley, 1999).

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Jackhammer: A pneumatic drill operated by one man (Min ST 12). Drills 2 yards/hour in hard rock; breaks up 1.5 cy/hour of hard rock. 40

lbs. (drill), 275 lbs. (compressor); \$9,000 (combined price); burns 1.5 gallons fuel oil per hour.

For both these tools, multiply work rate $\times 2$ in clay and $\times 4$ in ordinary soil. Fatigue is the same as for using a pick or shovel (p. B90).

ADVENTURES UNDERGROUND

Underground places and activities can be the focus of an entire campaign. They are also suitable for shorter episodes.

Digs

Some underground places are not found, but constructed (see *Mines and Tunnels*, p. 78). The construction can be the goal of a group – they may want to build a private sanctuary. They may be digging for treasure, such as archaeological relics or fossils. Or they may want to invade a fortress, and have to get past enemy miners. Regardless, the focus is on dealing with obstacles and hazards and getting the job done.

Hidden Places

Explorers may discover a preexisting underground site – a natural cave or an abandoned catacomb. Do they want to explore it, hide in it, travel through it, or rescue someone from it? Any venture into an unknown place tests the adventurers' skills, endurance, and resolve. When they go underground they pass into a different world; the GM can make this more vivid by emphasizing the sense of transition and the limits of the perception and mobility.

Certain underground experiences warrant fright checks (pp. B93-94): having the lights go out suddenly or getting stuck. And hostile creatures are more fearful than above the ground, because it's harder to see them.

Subterranean Worlds

Finally, a subterranean place can be an entire realm, with its own civilizations. Hollow-earth realms are expansive and often have their own light sources; effectively, they're an exotic variant of the surface. Cave complexes are dark and cramped, though they may run on for hundreds of miles. Their inhabitants will be adapted to such conditions, perceiving by infravision, sonar, other exotic senses, and feel at home there. Outsiders, however, may find such a

setting alien, and the adventure should emphasize this.

A twist is to have subterranean beings venture to the dangerous and exotic surface (see *Crystaloids*, p. 81).

followed, explorers, hunters, miners, and colonists ventured into the subterranean realms.

Adventurers of this alternate age can be sent to map the underworld's farther reaches, perhaps even finding a gateway to the other side of the world – or to a different world altogether. Or they can hunt its great beasts for natural philosophers, gladiatorial impresarios, or generals experimenting with armored cavalry.

Catacombs

Rome is famous for its catacombs, but even its rulers don't realize how deep they go or what inhabits them. As the first millennium approaches, demons, survivors of pagan cults, and the unsanctified dead gain power and threaten the living. The Church has gathered a small band of knights, outlaws, and scholars of forbidden lore to take the fight into the catacombs and the realm of the dead.



CAMPAIGN SEEDS

Dragons in the Earth

In 430 B.C., the philosopher Empedocles led an exploration party into the crater of Mount Etna and discovered a gateway to a vast underground realm. This massive kingdom was lit by phosphorescence and inhabited by gigantic beasts unknown to the surface. In the centuries that

The Great Tunnel

In 1880, British and French engineers set to work on a new wonder of the world: a tunnel under the English Channel. As it nears completion, unexpected obstacles appear: labor agitators trying to start a strike, jingoists who think the tunnel will open England to invasion and want to sabotage it, and mysterious foreign spies scouting out the tunnel to plan that future invasion! A team of British and French police officers is assigned to make sure that nothing goes wrong.

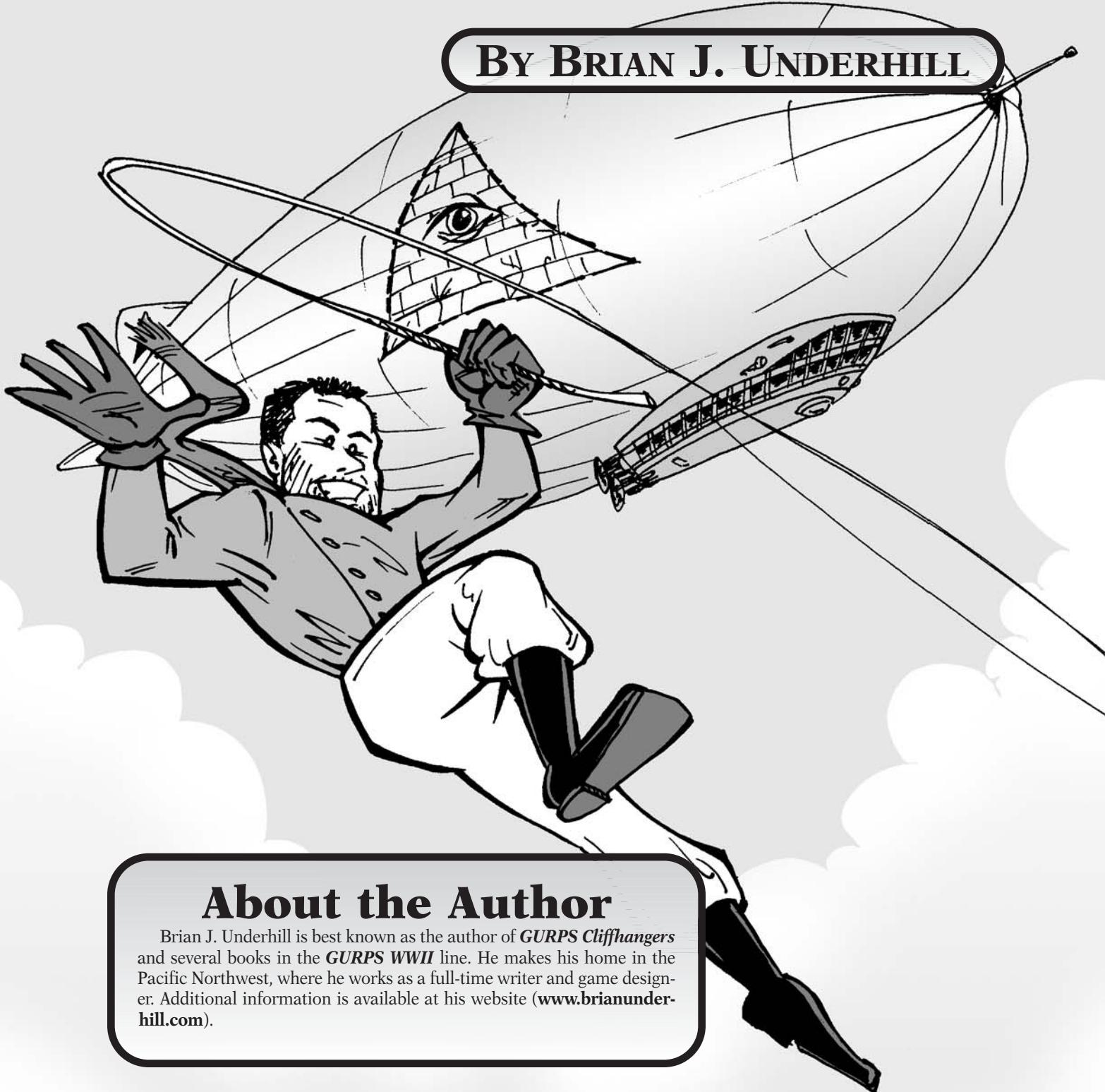
Safety Valve

The hot spot under Yellowstone has a cycle of major eruptions every 650,000 years – and is past due. In the near future, the U.S. government, fearing a geological catastrophe, tries to relieve the heat and pressure – and tap into a new energy source – by drilling into the upper mantle. How will the pilot project's crew solve the problems of working through remote-control robots in a lethally unfamiliar environment?

CHAPTER SEVEN

AIRSHIPS

BY BRIAN J. UNDERHILL



About the Author

Brian J. Underhill is best known as the author of *GURPS Cliffhangers* and several books in the *GURPS WWII* line. He makes his home in the Pacific Northwest, where he works as a full-time writer and game designer. Additional information is available at his website (www.brianunderhill.com).

Seventy years have passed since the mighty lighter-than-air craft filled the skies, but the romance and adventure surrounding them has never faded. From Jules Verne's *Master of the World* to *Chitty Chitty Bang Bang*'s evil Baron Bomburst, from the zeppelin raids of World War I to the *Hindenburg* conflagration, mankind is still enamored by these fascinating lighter-than-air craft. From the late 19th century to the beginning of World War II the airship reigned supreme in the skies. Nothing matched the grandeur of these queens of the sky, and no roleplaying campaign in that era would be complete without them!

FROM PAPER BAGS TO BALLOONS

In 1783, Joseph Montgolfier, a middle-aged paper manufacturer, sat in front of his fireplace watching bits of partially burned paper waft up the chimney. He and his brother soon built a massive balloon made of linen and paper, and on June 5, 1783, filled their 100-foot diameter balloon with 20,000 cubic feet of smoke and hot air. The balloon shot skyward, rising more than 3,000 feet. It remained aloft for 10 minutes and came to rest two miles away. Soon hydrogen replaced hot air, and on November 21, scientists Pilatre de Rozier and the Marquis d'Arlandes climbed aboard a wicker basket, rose into the air, and glided five miles on the gentle currents of the wind. Man had finally flown.

In My Beautiful Balloon

Within two years, balloons had crossed the English Channel, women had been carried aloft, and the first aviation deaths had occurred. Bigger and higher were the goals, with flights to over 22,000 feet by 1804. In 1824, three men flew nonstop for nearly 500 miles.

In 1863, the "Giant" was mounted with a large gondola (13x25 feet), complete with seats, captain's room, stateroom, bathroom, and pantry. An observation deck on top and windows all around allowed passengers a terrific view; wheels on the bottom allowed it to be towed home after a flight.

By the 1900s, balloon races and pleasure trips became commonplace, but only those that could afford the \$1,200 for a typical private balloon enjoyed the hobby. These balloons held about 80,000 cubic feet of gas (hydrogen), and were equipped with a barometer (altimeter), a compass, and a statoscope – the barometer was a finely tuned version that could detect small changes in altitude. Sandbags were dropped to increase lift; gas was vented to descend.

THE SEARCH FOR A DIRIGIBLE

On September 24, 1852 – more than 70 years after Montgolfier's first balloon flight – French inventor Henri Giffard filled an unwieldy 143-foot bag with coal gas and slung a heavy gondola some 40 feet below it. He mounted a 350-pound, 3-horsepower steam engine and a three-bladed propeller, lifted off from the Paris Hippodrome, and flew around the city at five miles per hour. The first "dirigible" airship – a powered, steerable lighter-than-air craft – was born.

Also in France, Alberto Santos-Dumont, a displaced Brazilian, launched *Number 1* – with its 82-foot long gasbag and 3.5-horsepower engine – on September 18, 1898. As his construction and flying skills improved, Santos could be seen flying above Paris almost daily. He would hover near his favorite café, lower a rope ladder, climb down for a bite to eat, then fly away once again, much to the delight of Parisian onlookers.

In 1901, he won a 25,000-franc prize by flying *Number 6* from St. Cloud, around the Eiffel Tower, and back in under 30 minutes. Santos became a French national hero, building a total of 13 airships during his stay.

COUNT ZEPPELIN'S RIGID AIRSHIPS

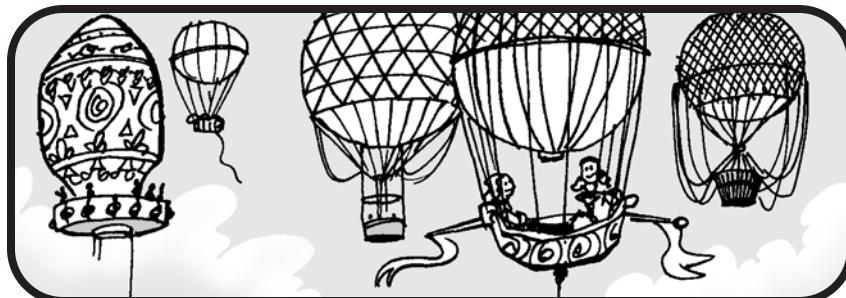
Count Ferdinand von Zeppelin – a veteran soldier – considered the military applications of balloons and dirigibles for years. When he was forced to retire from the army at age 52, he began to pursue his ambitions.

His first attempt – *Luftschiff Zeppelin 1* – was 420 feet long, 40 feet in diameter, and held 400,000 cubic feet of hydrogen. It used a sturdy internal framework to keep the airship rigid, even during turbulence or gas leaks. *LZ1* had 17 individual gasbags – or cells – held together by a framework of transverse rings, longitudinal girders, and diagonal braces. The entire structure was covered with fabric and a pair of gondolas was slung beneath it – one fore, one aft. A cable that ran between the gondolas held a sliding weight that would lift or lower the airship's nose, improving its climbing and diving capability.

The *LZ1* was launched from a floating hangar on Lake Constance on July 2, 1900, and despite its difficulties, proved that the rigid airship idea was sound. The *LZ1* flew only three times and was broken up in 1901, while Zeppelin returned to scheming and planning.

Construction on the *LZ2* did not begin until 1905. By 1910 Zeppelin had ironed out the wrinkles in his designs and his name soon became synonymous with safe, effective airship travel.

Beginning with Zeppelin's successes at Lake Constance, the airship industry began to flourish. Zeppelin's partner and successor, Hugo Eckener (p. 91), revolutionized the industry by pushing the German zeppelins further than ever before. He helped establish



AIRSHIPS

DELAG (p. 91), a commercial air service, and piloted the *Graf Zeppelin* around the world in 1929 (p. 93).

Despite tragic accidents that took many lives, the airship had established its place in military, civilians, and commercial circles. From the early 1900s through the end of the 1930s, hundreds of airships delivered thousands of passengers across

millions of miles. But the halcyon days would not last.

Some point to the destruction of the *Hindenburg* as marking the end of an era. While it is true that few airships sailed after that fateful day in 1936, it was not a single cutting stroke that severed the head of the airship industry.

Aviation was changing. Planes were going farther and faster, and

speed appealed to the world's population more than slow, steady sumptuousness. German zeppelin flights continued until World War II, and the U.S. continued to operate military balloons through the 1950s. But the heyday was over for the mighty dirigibles. The romance, intrigue, glory, and tragedy of the golden age of airships remains, but only in memory.

ANATOMY OF AN AIRSHIP

Dirigible design underwent many changes from 1852 to the 1930s, but the basic principle remained the same. A lighter-than-air gas, enclosed in one or more leak-proof gasbags, provided sufficient lift to hoist the airship into the air, while powered engines provided propulsion.

Finding the right balance of lift versus weight was difficult – too much lift and the airship would become airborne too early. Not enough lift and it would remain grounded. Maintaining this balance was not easy. As the gasbag changed temperature – due to cold altitudes or hours in the midday sun – so did the lifting gas inside. Warmer gases would expand, threatening to explode the gasbag; cold gases compressed and lost lift.

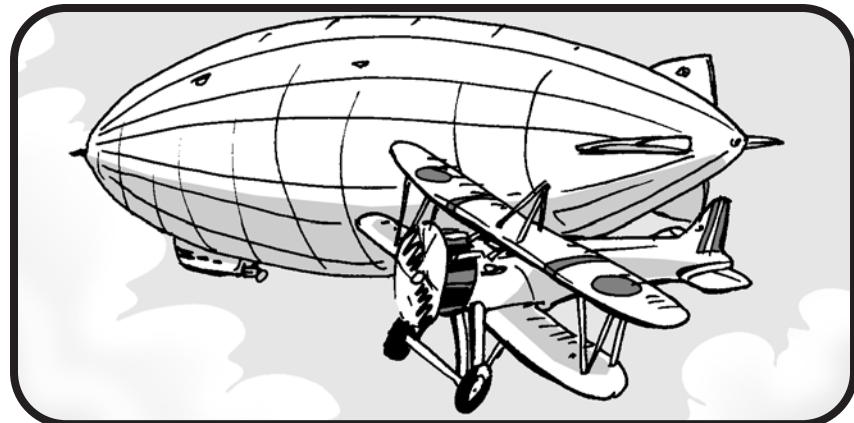
Airship pilots continually monitored a plethora of details, expanding gas or dropping water ballast as needed.

Ballonets

A subsection of an airship's gasbags was sometimes dedicated to balloonets – balloons embedded inside the hull of the airship. These balloonets could be pumped full of air or deflated as necessary, to maintain equal pressure inside the gasbag. As the airship rose or warmed, and the lifting gas expanded, the balloonets were deflated, keeping the gasbag at an even pressure. Conversely, they could be filled with air to prevent the gasbag from collapsing when the lifting gas returned to normal pressure.

Weapons

Rigid airships were sometimes built with one or more machine-gun emplacements in various locations outside the hull – at the nose, on top, or on the sides. They were accessible



via catwalks and ladders inside the ship, some of which also allowed access to the engines.

Some airships – such as the British R series used during World War I – carried a biplane, such as the Sopwith Camel, slung underneath. The plane could be released, but not recaptured. With the advent of the internal hangar in the *Akron* and *Macon* U.S. Navy airships, several scout planes could be launched and recaptured from the air (see p. 97).

DIRIGIBLE TYPES

Three primary styles of dirigible construction have been used over the years:

Nonrigid

Balloons and early dirigibles were essentially flexible envelopes of cloth and paper. Although sufficient to lift a basket of passengers on an unpowered flight, early nonrigid ships were prone to sagging or collapsing in bad weather, especially if improperly loaded.

Despite these issues, nonrigid dirigibles have remained in use for more

than a century. Nonrigid airships include the *Nulli Secundus* (p. 95) and today's line of Goodyear blimps.

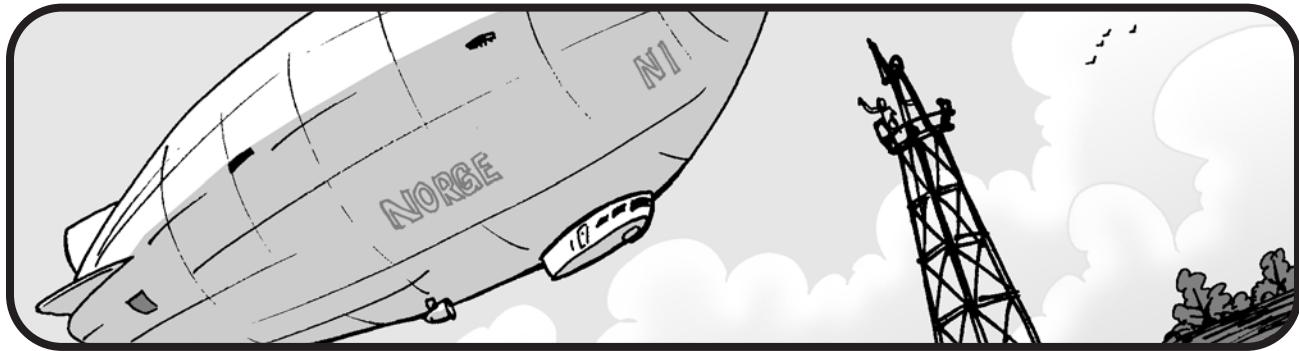
Semirigid

To prevent the gasbag from buckling, some kind of rigid structure – usually of aluminum – was introduced. A keel running along the bottom lent form and stability to the structure, increasing its durability and usefulness. The gasbag, atop the solid keel, was not reinforced.

Semirigid airships include the *Nulli Secundus II* (p. 95).

Rigid

Count Ferdinand von Zeppelin's rigid-airship design revolutionized the industry. A skeletal framework of aluminum beams supported the gasbag, giving the airship a vastly improved endurance and lifting capability. Several gas cells – small gasbags – were mounted throughout the dirigible, allowing crew and passengers access to the interior of the airship. (The *Hindenburg* and other rigid airships housed staterooms, crew quarters, and other rooms inside the ship itself.)



Nearly all rigid airships carried their framework inside the hull, but one was successfully flown for more than a decade with an *exterior* aluminum covering (see ZMC-2, p. 97).

Famous rigid airships include the *Graf Zeppelin*, *Hindenburg*, *R101*, and more.

LIFTING GASES

A variety of lighter-than-air gases have been used over the years, some with more success than others.

Hot Air

Heated air can be used to lift man into the skies. It is woefully ineffective, however, since its lifting capacity is only about 10% that of hydrogen or helium – a capacity that steadily dwindles as the air cools.

Modern hot-air balloons carry a small propane burner to keep the air heated, but no airship of any real commercial value could be constructed using hot air for lift. An airship the size of the *Hindenburg*, carrying 7 million cubic feet of hot air, would only be able to lift about 50,000 pounds – insufficient to lift even the framework.

Hydrogen

In 1766, Henry Cavendish discovered what he called “flammable air.” It didn’t take long for its lighter-than-air nature to be discovered, but it was not put to good use until more than 20 years later. Despite its flammability, it remained in use for years; almost all airships received their lift from hydrogen until 1923. Approximately 1,000 cubic feet of hydrogen provides 74 pounds of lift.

Helium

Helium was first isolated in 1895, and despite being one of the most

plentiful elements in the universe, was relatively uncommon during most of the era. It was a byproduct of methane production in Texas and parts of Kansas, giving the United States an almost exclusive supply of the stable gas. A thousand cubic feet of helium produced 69 pounds of lift, but was very expensive – about \$120 in 1920, some 50 times more than hydrogen.

Only U.S. airships used helium through most of the era, beginning with *ZR1* (the *Shenandoah*) in 1923.

Blaugas

Blaugas is a light, gaseous fuel comprised of acethane, acetylene, butylene, methane, propylene, and hydrogen. *Blaugas* is not a lifting gas, but it is nearly weightless. Unlike liquid fuels, which lightened the airship when consumed, *Blaugas* could be carried in an airship and burned as needed without changing the weight of the ship. The *Graf Zeppelin* carried nearly a million cubic feet of it inside specially designed gasbags in its hull – enough to fuel the engines for 100 hours at cruising speed.

PILOTING AN AIRSHIP

Flying an airship required more than just a pilot. Crewmen were needed to monitor instrumentation, vent hydrogen, drop ballast, operate machinery, and inspect the gasbag for leaks. Military operations required bomb crews, observation crews, or airplane pilots and passenger flights necessitated stewards, cabin boys, cooks, and other staff.

Though an airship might have only a single captain, several men usually rotated through piloting shifts at the helm. They had to be quick thinkers and know the airship inside and out.

Mooring and Boarding

Airships were large vessels and susceptible to changes in wind direction and velocity. A mooring mast was provided – a tall tower with a special attachment at the top – and the nose of the airship was mounted with a device that could mate up to the mooring mast.

Boarding was often done via a short flight of steps of a ladder leading directly into the gondola mounted on the belly of the ship.

Some airships (such as Britain’s giant *R100* and *R101*) were entered via a hatch in the nose of the ship. Passengers and crew rode an elevator to the top of the mooring mast – some 200 feet off the ground – where they crossed a gangway to the hatch, entered the interior, and walked a catwalk to the livable areas of the ship.

“Up Ship!”

Launching an airship consisted of taking on or dropping ballast until the vessel was only slightly heavy. Ground crews pulled the ship away from the mast using long mooring lines, and the engines began to provide gentle forward motion. The ship’s elevators – moveable surfaces like those found on airplane wings – aimed the nose skyward and the engines drove the massive vessel into the air.

The transition was smooth and steady; passengers aboard often had no idea they were airborne unless they were looking out a window as the ship took flight.

In *GURPS* terms, a single Piloting (Airship) roll is required to launch the ship. Penalties of -1 to -5 may be applied to fight crosswinds or an unusually heavy vessel, such as one that has run low on hydrogen due to venting during a previous flight.

Docking and Landing

Bringing an airship in to land was one of the most difficult and *dangerous* parts of the journey. The pilot would need to approach the ground, slow the ship's forward speed and drop enough ballast to prevent the giant vessel from crashing as it descended. Once the vessel was in position, ground crews would muscle the giant ship into position with the mooring mast, towing it using long mooring cables dropped by the airship's crew.

A single Piloting (Airship) roll is required to land an airship, assuming the vessel has crewmen on the ground to nose the ship up to the its mast. Manually piloting an airship to a mooring mast is nearly impossible, and the GM should allow such an

action only in the most cinematic of campaigns, and even than at a substantial (-10!) penalty.

Weather

Airship pilots learned to recognize weather patterns, and chose to go around heavy weather whenever possible. Heavy winds could send an airship rocketing skyward, allowing the gas cells to expand rapidly and forcing the crew to vent them to keep them from rupturing. When the wind shifted suddenly, the airship would plummet like a stone. Water ballast was dumped to keep the airship aloft.

Rainstorms brought their own kind of difficulty as rainwater gathered across the massive surface area of the shell, adding tons of extra weight. Even light rain could spell

disaster for an already-heavy airship or force the crew to drop precious ballast to counteract the weight.

Hot days heated the envelope and the gas inside, causing it to expand; cold days and high altitude created the opposite effect.

Piloting an airship was a neverending battle to conserve lifting gas and ballast, for both were steadily lost in order to maintain altitude. GMs may call for several Piloting (Airship) rolls at various penalties, depending on weather conditions, temperature, altitude, and amount of lifting gas and ballast remaining. During a routine flight through decent weather, Piloting rolls might be required only once every few hours; during bad weather, these can be as frequent as once per minute.

GERMANY

DELAG

The *Deutsche Luftschiffahrts Aktien Gesellschaft* (German Airship Transport Company), or DELAG, was established in 1909, to promote air travel throughout Germany. Cities across Germany provided hangars and passenger waiting areas, and a local steamship company subcontracted as a ticket agency.

DELAG's first passenger airship, the *LZ7*, was christened *Deutschland* and began operations in the summer of 1910. The routes were sporadic and irregular, nonexistent during the winter months, and several airships crashed after only a few flights – but the German populace was nevertheless supportive and enthralled by the new company.

When young journalist Hugo Eckener published critical technical reviews of Zeppelin's airships, Count Zeppelin hired him to suggest improvements. Eckener became one of the most skilled and popular zeppelin captains, and inherited the Count's legacy in years to come (see p. 92).

With Eckener's assistance, the Zeppelin Company began producing better ships and DELAG flourished. Soon the airline was running an entire fleet of dirigibles, including the *Deutschland*, *Deutschland II*, *Schwaben*, *Viktoria Luise*, *Hansa*, and *Sachsen*. During its four-year operation (1910-1914), DELAG ships

carried more than 10,000 paying customers on 1,500 flights – all without a single injury.

ZEPPELINS IN WORLD WAR I

As the Great War began in 1914, DELAG came to an end and Count Zeppelin again turned his attention to creating war machines.

Germany began the war with seven airships (six army, one navy), but the Zeppelin Company was soon hard at work. A million-cubic-foot model appeared in the middle of 1915, capable of reaching 11,000 feet and carrying a bomb payload of two tons.

The first of the "super zeppelins" – *L30*, *L31*, and *L32* – came into service in May 1916. They were twice the size of the earlier models, and could go faster and higher than ever before.

The Height Climbers

The massive German "height climbers," beginning with *L42*, could reach 20,000 feet, making them difficult to shoot down with antiaircraft fire or fighters – neither of which were designed to reach those massive heights.

“Prepare to Board Our Prize!”

On April 23, 1917, the commander of the *L23*, Captain Ludwig Bockolt (who piloted the *L59* to Africa; see below) ordered his crew to approach a Norwegian schooner near Denmark. As the giant dirigible loomed overhead, the crew panicked and abandoned ship. Bockolt ordered his men to prepare a boarding party.

Men armed with a heavy machine gun descended in a lifeboat, but without their weight, the *L23* shot skyward, taking the machine gun with it. The German boarding party continued to the schooner, the *Royal*, undeterred. Armed only with a flare gun, they forced the remaining crew to surrender and sailed their newly acquired prize – loaded with mining timbers – back to Germany.

While the zeppelins were safe from enemy fire at 20,000 feet, they suffered from mechanical difficulties brought on by the cold and lack of oxygen – ambient temperature at that altitude is about 20°F below zero, even in the middle of summer. Oil congealed, bogging down the engines; oil lines froze and snapped; radiators froze; windows broke; and cables froze up, limiting control of the airship's control surfaces. The liquid inside magnetic compasses even froze!

The Raids

In addition to altitude woes, many zeppelins suffered from difficulties in reaching the English countryside. Many turned back with mechanical difficulties, others were forced back by inclement weather. It was not usual for a group of half a dozen zeppelins to leave Germany together, only to have half of them turn back before reaching England.

Timing was also an issue. Raids were scheduled to coincide with the darkest nights when the airships were the least visible to ground crews and aircraft, which mean the airships would leave Germany around noon and arrive at the English coast by dusk. A few hours later, in the darkest night, they would drop their bombs – usually aiming for the docks and industrial areas of London – then return to Germany before daybreak. Raids were rarely undertaken during the peak of summer, for the nights were not long enough to provide the cover of darkness.

Despite their infamy, zeppelin raids did little actual damage during

the war. In 51 airship sorties to England, only 550 Britons were killed and 1,300 injured. Property damage amounted to only a few million dollars.

The raids' greatest impact was in other ways. The drone of the engines high above the clouds struck fear into stalwart hearts; men and machines that could have been used at the front were kept at home to fend off the attacks; and the German population was rallied by the idea that they were taking the war to the British people.

The War Ends

With the end of the war, the zeppelin crews destroyed many of their own ships. Count von Zeppelin had died during the war, and his protégé and successor Hugo Eckener had taken over the reigns of the Zeppelin Company. Though he was determined to turn the venture to civilian pursuits again, his two remaining passenger airships – *Bodensee* and *Nordstern* – were taken from him and turned over to the Allies as war reparations.

Germany was restricted from building airships that exceeded 1.1 million cubic feet – a restriction the essentially prohibited zeppelins large enough to cross the Atlantic. Eckener and the Zeppelin Company were broke, and the German airship movement seemed near its end.

In 1922, Eckener's salvation came when the United States Navy commissioned him to build a 2.5 million cubic foot airship (see the *Los Angeles*, p. 97). Because it was to be sent to the U.S., the size prohibitions did not apply.

In 1925, the Treaty of Locarno rescinded the airship size restriction, and Eckener went back to work with renewed vigor. He envisioned bigger and better airships, and a new *transatlantic* passenger air service. Under Eckner's guiding hand, the Zeppelin Company began turning out some of the largest and most famous airships ever built. The *Graf Zeppelin* (p. 93) was launched in 1928 and began the truly golden age of German airships, one that has never been matched.

FAMOUS GERMAN AIRSHIPS

Germans flew countless military and civilian airships from 1900 to 1940. They were more numerous, more famous, and better built than any other airships in the world.

L59

On November 21, 1917, the 2.5-million cubic foot navy zeppelin *L59* left Yamboli, Bulgaria on a 4,300-mile one-way journey to German East Africa. She was loaded with supplies intended to reinforce German forces under General Paul von Lettow-Vorbeck fighting a rear-guard action against the British in the Makonde Highlands.

The airship was loaded with 13 tons of medical and military supplies, and was itself specially redesigned to be cannibalized upon arrival: the engines would be turned into dynamos to create power, the cotton envelope would be stripped and turned into clothing, the aluminum framework would be turned into radio towers. The entire ship would be dismantled and used to reinforce the desperate German forces.

The *L59* sailed south across the Mediterranean and crossed into Africa near what is now the Egypt-Libya border. The hot desert air made sailing difficult, and the crew was overcome by airsickness on a scale not seen before in zeppelin flights. Despite the difficulties, the resolute crew, under Lieutenant Commander Ludwig Buckholt, continued their flight.

Two days into the journey, the *L59* received a radio message from Germany: their forces in Africa had

been overrun and the *L59* was to turn back immediately. Disappointed, the crew brought the zeppelin about and sailed back to Yamboli, arriving in the early hours of November 25. The 95-hour flight had taken them across 4,200 miles of the worst climates ever experienced by a zeppelin crew, and yet the *L59* had enough fuel remaining to remain aloft for another 64 hours.

Although the trip was considered unsuccessful by many, it showed what a zeppelin was capable of. It was later revealed that the report about the German losses in Africa had been falsified by the British, and that Lettow-Vorbeck and his men were still waiting for the *L59* in German East Africa.

Graf Zeppelin

The *LZ127* – christened the *Graf Zeppelin* after Ferdinand himself – was launched in 1928 and became one of the most famous airships of its day. It set records almost from its launch, and continued to do so for many years. It made the first trans-Siberian flight, the first commercial passenger flights to South America, and set the standard for airship travel that would later be surpassed only by the *Hindenburg*, launched eight years later.

A detailed description and a set of floor plans of the *Graf* appears on p. 98.

Graf Zeppelin II

The *Graf Zeppelin II*, the last of the mighty German airships, flew her final voyage on September 14, 1938. Originally called *LZ130*, the *Graf II* was 830 feet long and powered by four 900kw Mercedes-Benz engines.

The ship's biggest claim to fame may be her trip along the British coastline in 1938 to investigate the Chain Home radar towers. Because German radar wavelengths were much higher than those used by the British, the crew of the *Graf II* was unable to pick up any radio signals. They returned to Germany, bewildered by the towers' purpose.

Hindenburg

No other airship is as well known as the mighty, ill-fated *Hindenburg*. Launched in 1936, she was 808 feet long, 135 feet in diameter, and weighed 485,000 pounds loaded. Originally designed to carry 50 passengers, she was later upgraded to carry 72, all of them journeying aloft in comfort and opulence.

The *Hindenburg* joined the *Graf Zeppelin* in providing commercial air service for the newly reformed DELAG (p. 91), flying from Friedrichshafen, Germany, to Lakehurst, New Jersey, on a weekly basis. The westbound trip took about 63 hours; the return to Germany required only 51. As winter approached, it turned south, flying from Germany to Rio de Janeiro four times, before retiring for the winter season.

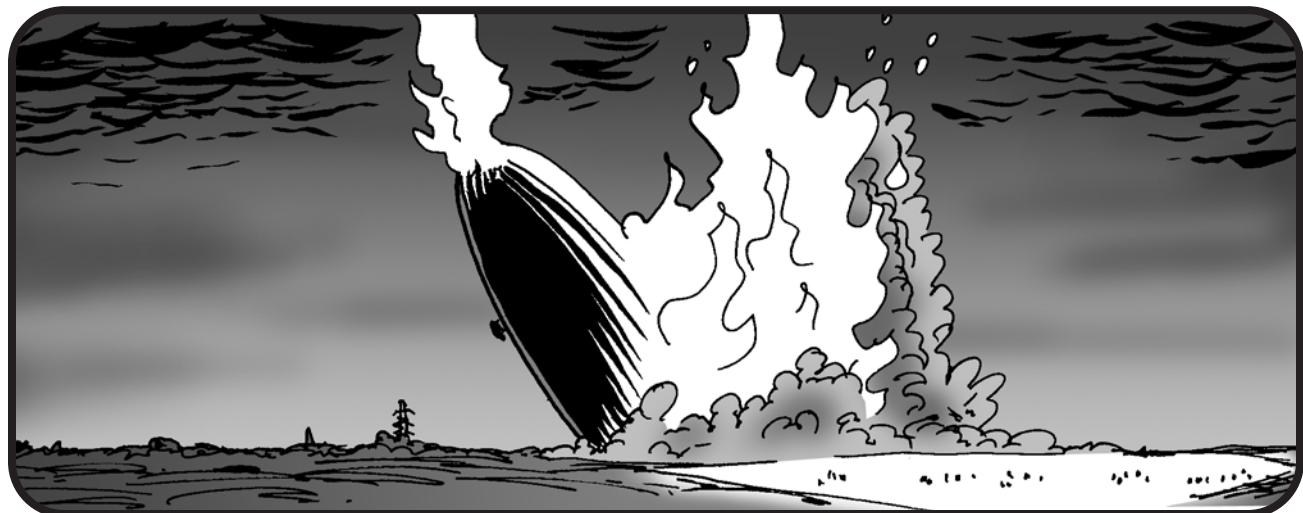
Unlike the *Graf Zeppelin*, the *Hindenburg* had no gondola for her passengers. Rather, they were carried within the ship itself. Two decks provided accommodations for passengers in staterooms decked out like a contemporary ocean liner, and included six toilets and a shower. Other areas included a lounge (complete with 112-pound aluminum-framed piano), a large dining room (some 16 by 46

feet), a bar, a galley, and even a smoking room (the room was kept pressurized to keep hydrogen out, and the cigarette lighters were chained down and carefully monitored). Two promenades ran along either side of the ship, and allowed the passengers a view outside the mighty airship through windows cut in the ship's outer hull. The ship's crew served meals three times a day.

The trips were quiet and calm; it was said you could stand a coin on edge on your stateroom table, go to dinner, and find it still standing there when you returned. The *Hindenburg* was the epitome of luxurious air travel during the late 1930s. One-way fare aboard the *Hindenburg* started at about \$2,000 early in her career, but was reduced to less than half that by 1937.

Despite her luxury and stateliness, the *Hindenburg* is probably most known for her fiery end. On May 7, 1937, while moving toward the mooring mast at Lakehurst, the mighty zeppelin exploded in a ball of fire and crashed to the ground, killing 35 passengers and crew, and one ground crewman. Some say an electrical discharge started the fire, other point to anti-Nazi saboteurs even to this day. For years the accepted theory was that the hydrogen gas was the source of her explosive demise, but many today point to the highly flammable doping solution on her hull as the primary culprit in her sudden destruction.

Whatever the cause, the loss of the *Hindenburg* grounded all German zeppelins almost immediately, effectively marking the end of the German airship programs forever.



GREAT BRITAIN

In 1907, the British War Office launched the nonrigid airship *Nulli Secundus* – the “second to none.” After a single maiden flight, fraught with difficulties, the *Nulli Secundus* was dismantled and her parts were used to build the *Nulli Secundus II*.

The *Nulli Secundus II* was a semi-rigid airship with an aluminum keel, designed to overcome the difficulties of her predecessor. Although construction was completed, the airship never left the ground and was subsequently cannibalized to build the *Beta* and *Gamma* versions. Apparently the *Nulli Secundus* was not, after all, “second to none.”

The Royal Navy set about building a rigid airship soon thereafter. The *Rigid Naval Airship Number 1* – christened the *Mayfly* – was completed in May 1911, but the airship was not ready for use until September.

On September 24, the *Mayfly* was approved for her maiden voyage and the ship was slowly removed from the protection of her hangar. A crosswind caught the *Mayfly* before it even cleared the hangar, and hurled it against the entrance, crushing the framework and effectively destroying it. The damage was so complete that no repairs were even attempted; it was scrapped on the spot.

As a result, Britain flew almost no dirigibles during the Great War, relying mostly on nonrigid balloons for artillery spotting and observation roles. While Germany was fielding scores of new military zeppelins, Britain flew only eight rigid airships during the entire war, all of which were extremely primitive compare to the zeppelins, and none of which had any significant impact on the war effort.

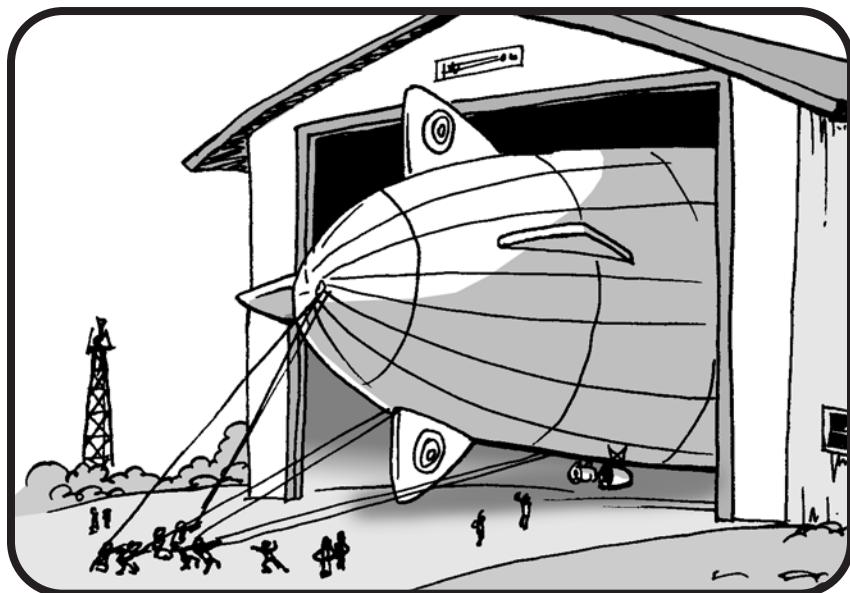
After the War

Although British airships failed as war machines, one has the notable distinction of performing the first east-west transatlantic crossing by air, and of being the first rigid airship ever seen in America. The *R34* left Scotland at 1:42 a.m. on July 2, 1919, loaded with 30 passengers and crew. Despite discovery of a stowaway aboard, the airship continued toward the New World unhindered. By July 4, the *R34* had reached Nova Scotia, but

fuel was running low. The ship continued to run headlong into the wind, running as low as 800 feet to avoid the worst of the headwinds, and burned precious fuel. The crew scavenged drops of fuel from various tanks, using jars and cooking pans, and consolidated it into the gravity-feed tanks directly above the engines, and at 9:54 a.m. on July 6, the *R34* touched down at Mineola, New York.

R100

Both the *R100* and *R101* ran into design and construction difficulties and took much longer than anticipated. The *R100* was built at an old WWI airship station at Howden. Wildlife roamed the area and a damp mist permeated the site, causing no end of difficulty when it froze on the *R100*’s girders during the winter months.



Despite the triumph of the *R34*, the airship program was soon all but forgotten. It had failed to give a good showing during the war, and the British economy was struggling to recover. So on August 1, 1921, the government officially shut down the airship service.

ONE LAST TRY

Former Navy commander and parliament member Sir Dennistoun Burney lobbied to reactivate the program, envisioning a fleet of six ships linking British possessions around the globe. When the newly installed Labor Party accepted his proposal at the end of 1924, they approved only two airships. One, the *R100*, was to be built by private industry; the other, *R101*, was to be sponsored by the government.

A lack of skilled workers made it difficult to build the ship properly; the aluminum skeleton was assembled using local farm workers. In December 1929, despite many technical issues, the *R100* was launched and flew from Howden to the site of Burney’s proposed “Imperial Airship Base” at Cardington (near Bedford) where it went through a number of test flights and engineering refinements.

On July 29, 1930 it lifted off from Cardington and headed to Canada. Loaded with 44 passengers and crew, the multimillion-dollar airship performed flawlessly, exceeding its predicted performance numbers and hitting a top speed of 81 mph. The passenger accommodations were nearly comparable to those on the German airships.

The *R100* reached Montreal in 79 hours, stayed for two weeks as something of a tourist attraction, then sailed home, a success. Less than six months later, following the fiery crash

of her sister ship (see below), an anti-airship campaign swept through England. The *R100* was soon scrapped for \$2,500, essentially marking the end of British airship ventures.

R101

The state-sponsored *R101* was built at Cardington proper, inside the largest building in all of England. The *R101*, like its sister ship, was huge. The 732-foot airship had taken two linear miles of girder, six miles of booms, eight miles of struts, and over 450,000 rivets. A single one of the *R101*'s gas cells (she had 16) provided more lift than the entire airship *Norge* (see below).

As production continued, the Secretary of State for Air, Lord Thomson of Cardington, pushed for an early launch. The airship had many problems, including leaky gasbags and stability problems, and the inexperienced design committee continually added unnecessary and heavy luxuries like full carpeting.

Thomson made a show of concern about the ship's safety, but insisted that it be ready for flight by September of 1930. He hoped to

become the next Viceroy of India, and so insisted that the airship deliver him to India and back before the Imperial Conference in London in the middle of October. The builders rushed to finish construction, even cutting the ship in half and inserting an additional gasbag to improve lift.

September came and went, and Thomson fumed. On October 1, the ship finally emerged from its hangar. Despite warnings from the builders and inspectors, Thomson insisted there was only "the millionth chance" of disaster.

On the evening of October 4, 1930, the *R101* slipped her moorings. Instead of lifting to the sky, she began to sink to the ground, and four tons of water ballast was immediately dumped. Soon the ungainly *R101* was airborne, sailing over England at top speed, but only managing 25 mph due to headwinds. Over the English coast she was hit by strong crosswinds and heavy rain. The ship struggled to maintain lift, traveling only 400 to 500 feet above the Channel. She crossed the French coast near the mouth of the Somme at about 11:30 p.m.

At about 2:00 a.m., while sailing near Beauvais, France, the ship entered a steep dive, losing 1,000 feet of altitude in less than two minutes. It struck the ground, bounced once, then skidded into the Bois des Coutumes forest before collapsing. A massive explosion filled the gasbag; the fireball rattled windows of nearby Beauvais. Only eight men escaped the wreckage, and only six of these survived. The remaining 48 – including Lord Thomson – perished in the fire.

The incident shook Britain to the core. Half a million Londoners lined the streets of the capital during the funeral procession, which was two miles long and took over an hour to pass by. The dead were buried near Cardington, within sight of the hangars that had housed the *R100* and *R101*.

A court of inquiry later ruled that the *R101* had been unfit to fly to India, but no charges were ever levied against those responsible. They had died in the tragic disaster.

The *R101* was Britain's last attempt at large airships. Her sister ship, the *R100*, was scrapped and the airship program closed for good.

ITALY

Italy received a pair of zeppelins from Germany for war reparations, but the country's most notable airships were its own.

Norge

The *Norge* was a 600,000 cubic foot semirigid dirigible purchased by Norwegian explorer Roald Amundsen, the first man to reach the South Pole. At age 53, Amundsen placed the *Norge* under command of its Italian designer, Umberto Nobile, and began planning a trip to the North Pole.

On April 10, 1926, the *Norge* left Rome for King's Bay, on the Arctic island of Spitzbergen. On arrival, the two men found that American Navy Lieutenant Richard E. Byrd had arrived first. Only two days later, Byrd roared off toward the North Pole in his ski-equipped Fokker. He returned 15 hours later, claiming to have reached the Pole.

Nobile and Amundsen decided that to truly be successful, they would now need to sail over the North Pole,

across the entire Arctic region, and land in North America.

On May 11, 1926, *Norge* left King's Bay. The *Norge* was heavy, laden with supplies, and the weather was treacherous, but by 1:30 a.m., on May 12, the airship passed over the North Pole.

By May 13, the *Norge* reached Alaska, and touched down near a small village at 7:30 a.m. on May 14. The airship had crossed fully one third of the globe, flying 7,800 miles in 171 hours. The Arctic crossing – 3,180 miles – had taken a little over 70 hours and averaged 45 mph.

Nobile and Amundsen both claimed credit for the feat, but Nobile received the lion's share of the recognition, much to Amundsen's chagrin.

Italia

Nobile, riding on the crest of the *Norge*'s success, was soon put in command of the *Italia*, a slightly smaller airship than the *Norge*. On May 23, 1928, the *Italia* left King's Bay,

Spitzbergen on an exploratory journey across the Arctic. After reaching the North Pole, Nobile decided to return to King's Bay because of encroaching bad weather. For a full day, the *Italia* fought against fog and snow, making only 25 mph against icy headwinds. On the morning of May 25, the ship's elevator wheel jammed, leaving the ship pitched nose-down toward the ice. Nobile killed the engines, and the ship slowed to a stop about 250 feet from the icepack. It drifted upward to nearly 3,000 feet, forcing the crew to vent precious hydrogen. When the ice was removed and the elevator functional again, the *Italia* was underway once again. But the loss of hydrogen proved fatal to the airship, and soon it began to drop toward the ice. Despite Nobile's best efforts, the *Italia* slammed into the ice pack, tearing off the gondola and dumping ten crewmen – Nobile included – onto the icepack. Suddenly lightened, the *Italia* launched upward, taking six other crewmen back into the sky. They were never seen again.

Nine men survived the fall to the ice, and five of them were injured. They scrounged through the wreckage and found a tent, a pistol, a radio, and provisions for a month and a half.

Two weeks passed before anyone found them. Airdropped supplies sustained them, and Nobile himself was rescued by a Swedish pilot who risked landing on the ice pack. On July 12,

the Russian icebreaker *Krassin* finally reached the remaining survivors.

Nobile was held responsible for the loss of the *Italia* and criminal charges were levied against him. He moved to Russia where he worked on several semirigid airships, and later emigrated to the United States. After the American submarine *Nautilus* crossed under the ice pack in 1958, its

captain sent Nobile a letter that read, in part: "From your courageous flight over the polar ice pack in 1926 it was established that there was no land between Alaska and Spitzbergen. Without this knowledge . . . we would not have known enough to undertake our voyage."

Nobile died in 1978.

THE UNITED STATES

The United States Navy was the driving force behind the American airship programs. Planners envisioned a fleet of observation balloons, especially for use in the Pacific where distances were vast and American possessions scattered. The United States also possessed a unique tool in the airship arsenal: the sole source of helium in the world.

In 1919, Congress approved funds for a U.S. Navy airbase and the purchase of two rigid airships. The first, *ZR1*, was to be built by the United States; the other was the British *R38*.

On August 24, 1921, during a final test flight, the *R38* crumpled and exploded over the Humber River, shattering windows for miles around. The ship broke in two. The front half plunged into the river, burning furiously. The back half drifted lazily toward a sandbar and deposited five men intact. Forty-six crewmen died in the crash.

Despite the disaster, the American desire for a rigid-airship fleet was undiminished. The Naval Aircraft Factory in Philadelphia, Pennsylvania began work on the *ZR1*, and in June 1922, the Navy contracted Hugo Eckener and the German Zeppelin Company to build a replacement for the *R38*.

Shenandoah

In September 1923, the *ZR1*, the first airship ever inflated with helium, made its maiden flight near Lakehurst, New Jersey. The 680-foot rigid airship was christened *Shenandoah* – an Indian name that means "Daughter of the Stars."

The Navy planned on sending the *Shenandoah* on a flight over the North Pole, but the ship was damaged in 1924, and her exploratory adventure was postponed. When the ship was repaired, a cross-country

demonstration flight was scheduled, both to show off the Navy's massive airship to the American populace, and to work out any bugs from her repairs.

The *Shenandoah* left Lakehurst, New Jersey on October 7, 1924, sailed to California, Washington State, and then home, arriving on October 25 – a round trip of 235 hours. When she

returned, she moored next to the *ZR3*, newly arrived from Germany and piloted to Lakehurst by none other than Hugo Eckener himself.

Because there was only enough helium in the United States for a single airship of any size, and Eckener's *ZR3* – now christened *Los Angeles* – was deemed the future of air travel,

Campaigns and Adventures

Airships can be used in any number of adventures set during their era. *GURPS Cliffhangers* campaigns are ripe for airships ranging from the *Graf Zeppelin* to a fictional monstrosity flown by a megalomaniacal villain.

GURPS Steampunk and *Castle Falkenstein* can both benefit from the inclusion of a dirigible, perhaps one powered by steam and built with cutting-edge technology for the time.

GMs favoring a military bent might run a WWI campaign, with the PCs taking on the role of German zeppelin crewmen or valiant British pilots flying balloon-busting sorties in the dead of night.

Airships make an excellent addition to alternate-reality campaigns, such as the wonderfully atmospheric world found in *Crimson Skies*. Even the "normal" campaigns mentioned above can be tweaked to include bigger, better, faster, more powerful, and more numerous airships than historically existed.

Running an Airship Adventure

GMs running any adventure that includes an airship should not miss out on the many opportunities such a setting provides.

Murder mysteries become even more mysterious aboard an airborne zeppelin; fight scenes suddenly morph from running gunfights to hand-to-hand melees when they take place near hydrogen-filled gas cells; and Arctic or Tibetan searches for Things Man Was Not Meant To Know become more treacherous when the journey is undertaken by dirigible. No *Cliffhangers* dirigible flight would be complete without at least one fist-fight atop the airship's envelope!

Masterminds can turn airships into mobile hideouts and keep them hidden in the mountainous regions of the world, inside an inactive volcano, or even concealed in deep underground caverns. Even the heroes themselves may find their globe-hopping, crimefighting adventures more interesting if they can lay their hands on an old airship and remodel it into a base of their own!

the helium was pumped from the *Shenandoah* into the *Los Angeles*. Later, when sufficient helium was available, the *Shenandoah* was reinflated, but was relegated to touring the countryside on demonstration flights across the American Midwest.

On September 3, 1925, the *Shenandoah* sailed into a storm over Marietta, Ohio and was tossed about by heavy winds. Despite the crew's best attempts to control the airship, the *Shenandoah* broke in half. The bow section, still mostly intact, floated upward to some 10,000 feet and was brought safely to the ground by crewmembers who valved off helium to bring it slowly back to the ground some 12 miles away. The stern section itself broke in two, with half falling into a stand of trees and half falling hard onto bare ground. Because the ship's gasbags had been filled with helium, they did not explode; 29 of the ship's 43 crewmen survived.

Los Angeles

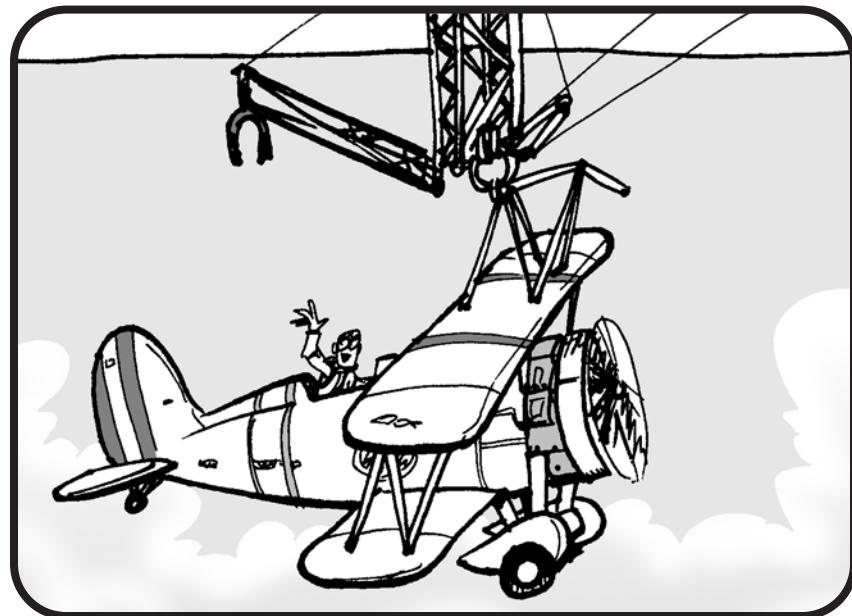
Hugo Eckener delivered the German-built rigid airship LZ126 to Lakehurst, New Jersey on October 16, 1924. The Navy designated the airship ZR3; President Coolidge's wife later christened her the *Los Angeles*. The *Los Angeles* was 658 feet long and held 2.5 million cubic feet of gas. (Eckener had filled it with hydrogen, but it was filled with helium from the *Shenandoah* upon arrival in the United States.)

The *Los Angeles* performed admirably, and was often seen traveling the United States, much as Zeppelin's original airships had journeyed across Germany a decade before. She flew throughout the late 1920s and into the 30s, and was dismantled in 1932.

ZMC-2

On August 19, 1929, the U.S. Navy purchased a one-of-a-kind rigid airship from the civilian Aircraft Development Corporation. The ZMC-2, nicknamed the "tin balloon," consisted of a single helium-filled chamber (with ballonets to keep pressure) surrounded by a thin layer of riveted sheets of duralumin, a light aluminum alloy, giving it PD 2, DR 5 all around.

The ZMC-2 – Zeppelin, Metal Clad 2 – made over 750 flights before being dismantled in 1931 due to old age. Although the experimental dirigible was a success, the Navy continued to



focus its attention and money on more conventional airship designs.

Akron

America entered the 1930s with only the *Los Angeles* still flying, but the Goodyear Tire and Rubber Company had formed a partnership with the Zeppelin Company, creating the new Goodyear-Zeppelin Company. The first airship created by the joint company was the *Akron* (ZRS4), a 785-foot monster that carried 6,850,000 cubic feet of helium.

The *Akron* was launched on September 23, 1931, under the command of Lieutenant Commander Charles Rosendahl – a survivor of the *Shenandoah* disaster – and made extensive flights around the U.S., and trips to Cuba and Panama.

A unique feature of the *Akron* was a large aircraft hangar built right into the hull that could house up to five light aircraft, although the airship traditionally only carried three on her flights. The aircraft – Curtiss F9C Sparrowhawk biplanes – were specially fitted to be picked up by a crane, lowered through an opening in the *Akron*'s belly, and released. They were recovered in a similar manner, with the pilot approaching the airship from behind, flying up toward the "trapeze," and hooking onto it while in mid-flight. The *Akron*'s biplane pilots were soon called "trapeze artists."

The Sparrowhawks' landing gear was eventually removed to lighten the load, since the planes never actually landed.

On the night of April 4-5, 1933, the *Akron* plunged into the Atlantic during a severe storm, killing 73 men – the largest number of fatalities in an airship disaster.

Macon

The *Akron*'s sister ship, *Macon*, was originally designated ZRS5. She had been launched only a few weeks before the *Akron* was destroyed, and spent the next two years undergoing training flights and spending time with the Pacific Fleet, testing the viability of using rigid airships in the Pacific theater. Although the official report made disparaging comments about the *Macon*'s performance with the Navy, in reality it provided an excellent platform for observation – using her planes as scouts she could search 129,000 square miles a day. There was even some talk of stationing the *Macon* near Pearl Harbor; GMs may wish to consider the ramifications of such an act in an alternate-history campaign.

In the end, however, the *Macon* was relegated to training flights until February 12, 1935, when her upper fin was torn off by a sudden gust of wind. Less than half an hour later, she ditched off Point Sur, California, dropping into the ocean and sinking. Only two men were killed in the crash – 83 others survived.

The U.S. Navy continued to use nonrigid balloons for observation for decades, but never again did they attempt to use rigid airships in any capacity. In 1962, the Navy shut down its balloon operations for good.

THE *GRAF ZEPPELIN*

Although often overshadowed by the size, glamour, and tragic end of the *Hindenburg*, the *Graf Zeppelin* was the undisputed queen of the skies for many years. Her endurance, safety record, and range of travel were unmatched, and the zeppelin makes an excellent addition to any *Cliffhangers* campaign.

The *Graf* was 776 feet long, 100 feet in diameter, and carried 3.7 million cubic feet of hydrogen. She was launched on September 18, 1928 and flew until June 1937. In those eight-and-a-half years, she had traveled over a million miles, delivered 13,000 passengers and thousands of tons of mail and cargo, and crossed the Atlantic 144 times – all without incident.

The mighty airship was retired after the *Hindenburg* disaster. Although she was still in good shape and capable of continuing her flights, she didn't have enough lift to cross the Atlantic if filled with nonexplosive helium, and so was deflated and put

on display at Friedrichshafen, Germany in June 1937.

Early Flights

The *Graf* ran passengers all over the western hemisphere, making regularly scheduled trips from Germany to both North and South America. During good weather, she traversed the shorter route that took her to Scotland, Canada, and then Lakehurst, New Jersey, the terminus for transatlantic passenger routes. When bad weather threatened, a longer but safer route was available from Germany, to Madeira, Spain, then straight across to Bermuda. From there, a trip up the east coast of the United States put her in Lakehurst.

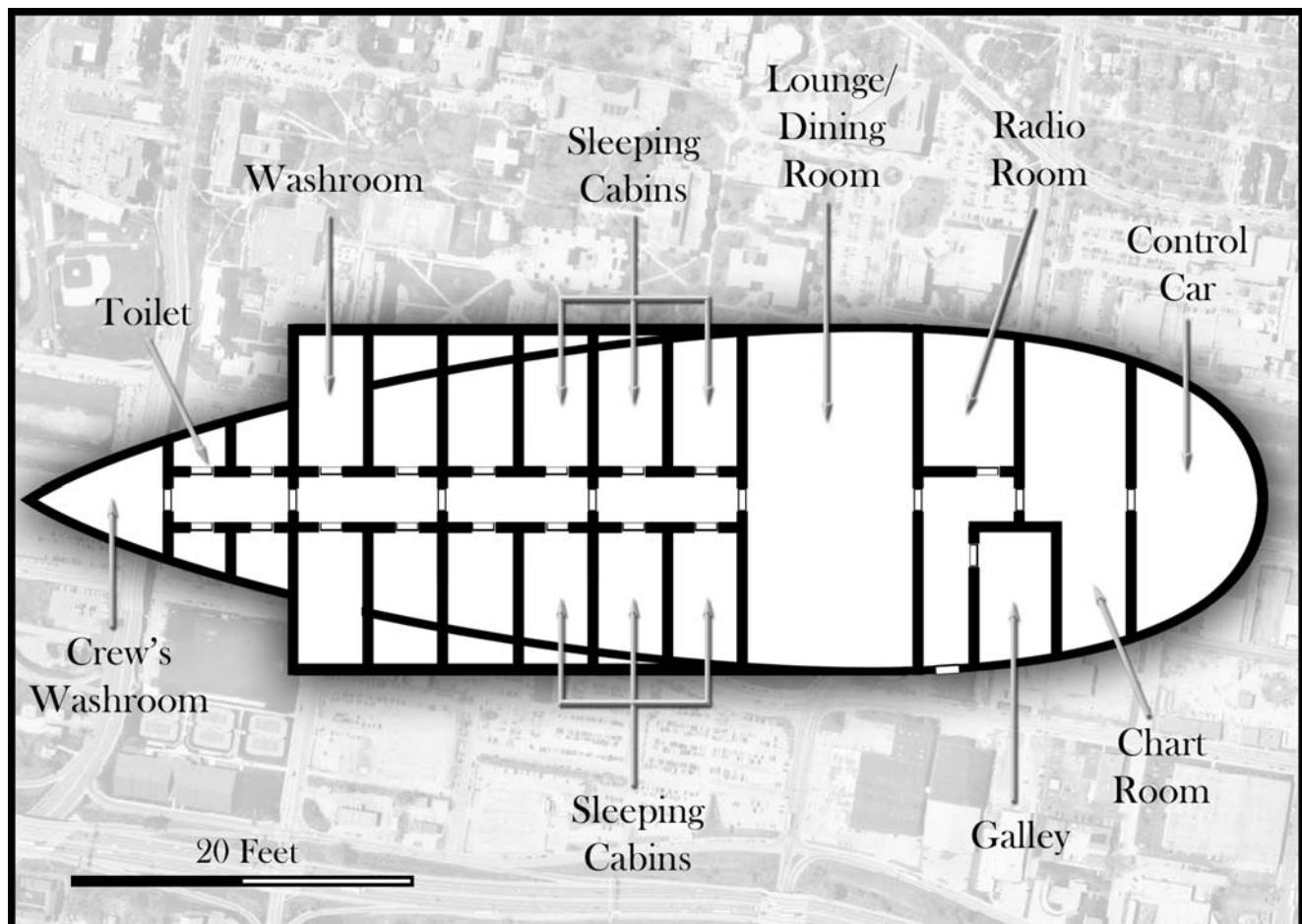
It was this latter route – with its stunning views of the Black Forest, snow-capped Alps, and sparkling Mediterranean – that marked the *Graf*'s maiden voyage in the fall of 1928.

In March 1929, a luxury cruise (invitation only) took government and

business leaders from the French Riviera to Corsica, on to Rome, the south of Italy, Crete, and Cyprus, and then to Jerusalem, Egypt, Athens, and over the Alps to Vienna on the way back to Germany. The 81-hour cruise was simply amazing, and every passenger walked away a zeppelin supporter.

Around the World in 21 Days

Dr. Hugo Eckener, the force behind the *Graf*, then began laying plans for his most ambitious project to date – a trip around the world. Backed by funds from American newspaper mogul Randolph Hearst – funds bolstered by \$2,500 ticket prices – the *Graf* left Lakehurst on August 8, 1929 and headed east. After a stop at Friedrichshafen, she moved northeast toward the Russian border. The trans-Siberian crossing – the first in history – was uneventful, but the empty isolation and vast stretches of wilderness set both passengers and crew on edge.



All were thrilled to see civilization once again, even if it was little more than the scattered huts of native villages in eastern Siberia, whose residents were frightened into a panic at the sight of the silver-skinned monster that bore down on them from the sky.

Midway through the flight, a stowaway was discovered hiding amongst the gas cells inside the hull – a small, half-starved black kitten. The crew gave the frightened animal to Lady Grace Hay-Drummond-Hay, the only woman aboard.

By August 18th, Tokyo was near. Some 100 hours and 7,000 miles from Friedrichshafen, the *Graf* touched down for the first time. Four days later, she left for Los Angeles, arriving on the 26th. Though Eckener had some difficulty getting the *Graf* airborne – they had vented a lot of hydrogen during the journey – the airship eventually worked her way skyward and arrived in Lakehurst on the 29th – a journey of 20,373 miles in only 21 days, counting layovers.

Later Flights

The *Graf Zeppelin* went on to provide passenger service between Germany and Lakehurst for many years, and flew the southern route to Rio de Janeiro regularly as well. She reached the North Pole in July 1931, spent two weeks in Chicago during the Chicago Exposition (October 14 to November 2, 1933), reached Argentina in 1934, and the Gambia in 1935 and 1936.

LIFE ABOARD THE GRAF

The *Graf Zeppelin* had 10 staterooms on either side of a central corridor, each with two sofas that turned down into beds. Safety netting could be raised along the open side of each bed in case the airship encountered turbulence. A small closet and end table were in each stateroom. The rooms were carpeted and decorated with flowered wallpaper.

A pair of washrooms, with sinks and mirrors, was located at the aft end of the gondola, and four toilet stalls just beyond that. A crew washroom took up the very tip of the gondola's aft section.

Dominating the middle of the gondola was a spacious 16.5×16.5 foot

Technical Specifications

Designation: LZ127 (Graf Zeppelin).

Launched: Sept 18, 1928. Built by the Zeppelin Company, Friedrichshafen, Germany.

Dimensions: 775 feet long; 100 feet in diameter.

Lifting Gas: 3,700,000 cu. feet of hydrogen.

Engines: Five 550 hp (410 kw) Maybach engines.

Speed: 73 mph cruising; 80 mph maximum.

Operating Range: About 200 hours without refueling, for a total maximum range of 14,000 miles or more. Longest recorded flight was about half that (p. 93).

Passengers: Accommodations for 20 passengers in the gondola attached underneath the hull.

Crew: 43; accommodations comprised hammocks slung on either side of the main walkway in the lower portion of the hull. Typical crew shifts were four hours on, four hours off; later changed to four on, eight off.

Weight: 258,000 pounds, loaded.

Gondola: Included bridge, radio room, chart room, galley, dining room, ten staterooms, three washrooms, and four toilets. The gondola was 98.5 × 20 feet.

Hull: Lower portion of the hull contained storage for 2,000 gallons of gasoline, three crew galleys, work room, spare parts storage, and cargo hold. Access was granted to the engine pods and to the top exterior of the zeppelin via catwalks, ladders, and hatches. Safety lines were used any time crewmen left the interior.

dining room with four tables, each set with fresh flowers during dinner. Meals were served on china edged in cobalt blue and gold, and silverware, crystal goblets, and linen tablecloths rounded out the settings. A typical dinner consisted of *pate de foie gras*, fillet of anchovies, steamed asparagus tips, and roast goose, with steamed apples and custard pudding for dessert.

Forward of the main room was a short hallway that led to the gondola's entrance, and on the port side a small radio room allowed the zeppelin to stay in contact with the ground, which was especially important during docking. The galley, chart room, and bridge made up the remainder of the forward part of the gondola.

Passage aboard the *Graf* varied from about \$2,000 on her early voyages, to as little as \$400 for a short sightseeing tour in the United States during her goodwill visits there.

Hugo Eckener was often aboard, much to the delight of the passengers, and spent plenty of time visiting with them. They were often allowed to see the inner workings of the ship and were given tours of both the bridge

and the cavernous interior. Hatches atop the dirigible allowed access to the exterior, where crewmen would often be found sunbathing during long, uneventful flights. Passengers were not allowed outside the dirigible, for safety reasons.

Several of the crewmen were competent entertainers and would give impromptu shows on the accordion or other instruments if asked.

A deck plan of the *Graf Zeppelin* appears on p. 98.

The Airship With a Soul

The *Graf Zeppelin* was revered by many, respected by all, and was the finest airship of the era.

Lady Grace Hay-Drummond-Hay, a Hearst reporter and regular zeppelin passenger, summed up the prevailing attitude of the day: "The *Graf Zeppelin* is more than just machinery, canvas, and aluminum. It has a soul. I love the airship as if it were something alive, a being animated by life, responsive, grateful, capricious, and loveable."

Few disagreed.

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GLOSSARY

airship: A lighter-than-air, self-propelled vehicle.

ballonet: An inflatable subsection of an airship's gasbags (p. 89).

Blaugas: A near-weightless, propane-like fuel sometimes carried in special gasbags and burned as engine fuel (p. 90).

blimp: A nonrigid airship.

DELAG: *Deutsche Luftschiffahrts Aktien Gesellschaft* (German Airship Transport Company). The first passenger airline service (p. 91).

dirigible: A powered and steerable airship. From the Latin word *dirigere*: "to direct."

gasbag: A flexible container, usually rubberized cloth, used to contain an airship's lifting gases.

gondola: A cabin-like structure attached or slung beneath an airship.

helium: An inert gas used to fill airships beginning in 1923 (p. 90).

hydrogen: A flammable gas used to fill early airships (p. 90).

nonrigid airship: An airship with no framework in or around the gasbag (p. 89).

rigid airship: An airship with a built-in rigid frame, usually made of aluminum girders. Zeppelin-manufactured airships were rigid airships.

semirigid airship: An airship with a partial framework (such as a half-keel) designed to improve durability (see p. 89).

trapeze: A crane-like mechanism used to deploy and recapture biplanes from the belly of the *Akron*, *Macon*, or other similarly designed airships. Pilots flying such biplanes were called "trapeze artists."

zeppelin: A rigid airship, especially those built by the Zeppelin Company (p. 91).

Zeppelin: Count Ferdinand von Zeppelin, the originator of rigid dirigibles (p. 88).

CHAPTER EIGHT

PRECURSORS

BY JONATHAN WOODWARD



About the Author

Jonathan Woodward is a freelance writer and occasional computer professional. He is the author or co-author of the *Hellboy Sourcebook and Roleplaying Game*, *GURPS Ogre*, *Transhuman Space: In The Well*, and *GURPS Magic Items 3*, all for Steve Jackson Games. He is also co-author of several books for White Wolf's *Trinity*. He lives in Massachusetts.

What are Precursors? For the purposes of this chapter, they are a race – or races – usually alien, believed extinct, which possessed advanced technology, and left behind traces of their presence. These traces typically include mysterious artifacts and ancient ruins. They are alternately known as Progenitors, Ancients, Builders, the Old Empire, or the Creators.

CREATING PRECURSORS

"You realize what you're implying? That we owe our human condition here to the intervention of insects?"

– *Edwin Richfield as the Minister of Defense, Quatermass and the Pit*

Inventing a Precursor race for a campaign involves answering key questions.

WHO WERE THEY?

One alien race. The simplest choice is that they were a single alien race. The GM may want to work out important details of their physiology, psychology, and culture. This isn't absolutely necessary – if they left no photographs or statues behind, exactly what they looked like can be left a mystery – but it's easier to be consistent if these details are known. Working up a full **GURPS** racial template is optional, but recommended (see *Precursor Racial Generation*, p. 105).

Many alien races. The "many races" choice requires less work to begin with, since it allows for inconsistency. One set of ruins doesn't have to resemble the next. In the long term, the GM can work out each race in detail, and describe how they related to each other. (If they were extremely *hostile* to each other, this may explain where they all went . . .)

A not-so-alien race. This connects to the "What's The Twist?" question on p. 104. What if the Precursors were humans? Or Neanderthals? Or dinosaurs? (In Dan Simmons' *Hyperion* novels, some Precursor relics were made by human-created time-traveling artificial intelligences.) If the

In science fiction, Precursors are almost as common as the ray gun or spaceship. Extinct advanced alien species are a simple notion with obvious story potential, which also avoids the problems of having a superior race that's still around. It allows for effectively magical technology in hard-science-fiction settings, and provides a built-in mystery ("Where did they go?") for the protagonists. It also

makes for fascinating archaeological expeditions instead of boring astronomical surveys.

How prevalent are Precursors in science fiction? Out of the first 50 novels to win the Hugo Award, nearly a third make reference to Precursors or something similar. And in half of those the Precursors or their artifacts are important to the plot.

Precursors reached their peak on Earth, the question of why their relics aren't everywhere must be answered. Pulp fiction usually puts the ruins in deepest Africa or the Antarctic; another possibility is that they took their

cities with them. If the Precursors are still around as a lesser species – snakes, tigers, etc. – what happened to reduce them to their current state? Vicious genetic warfare? With who?

Set Dressing

There were things in there, and they weren't natural. I couldn't have told you what sort of things because they were like nothing I had ever seen before in my life, or seen pictures of – or heard of. How can you describe what you've never seen before and have no words for?

But I could see this: they weren't rocks, they weren't plants, they weren't animals. They were made thing, man made – well, maybe not "man" made, but not things that just happen, either.

– Bill Lerner, from Robert A. Heinlein's *Farmer in the Sky*

There are a few standard types of artifacts left behind by Precursors. GMs should come up with at least one type for each category.

Useful and Interesting

These artifacts are major campaign plot points. Examples include faster-than-light drives – *vastly better* FTL, if the campaign already has them – longevity techniques, and super weapons.

Useful But Boring

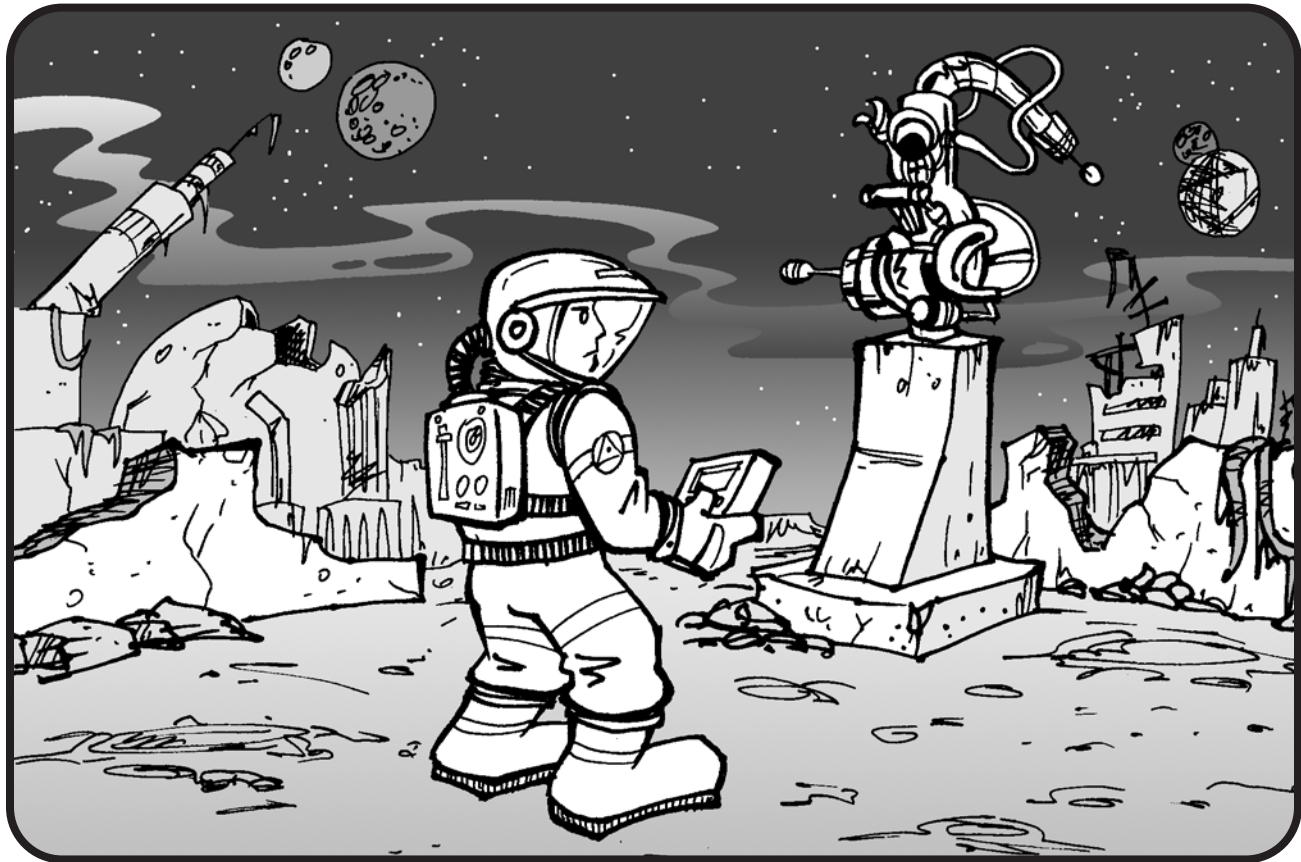
Dull devices can still be important, even if they are just background detail. Some useful-but-boring technologies are broad-spectrum antibiotics, highly efficient heating systems, and super-compact computer memory.

Pretty But Inexplicable

Artifacts like these probably served some important purpose, but contemporary scientists can't figure out what it was. They're interesting to look at, obviously complex, and very common, but they don't seem to do anything.

Weird Architecture

The simplest way to make a ruined city alien is to add a truly odd architectural detail. Examples are balconies with no railings, ramps instead of stairs, no rooms (only corridors), 20-foot ceilings everywhere, or no ceilings whatsoever. Many suggestions appear under *Precursor Racial Generation*, p. 105.



WHERE DID THEY GO?

They physically left. The Precursors simply got in their spacecraft or hopped through intergalactic portals and left. Why? Maybe they felt obligated to give the real estate to the next generation or learned that Andromeda is far more interesting.

They transcended. In this scenario, the Precursors transformed into another kind of being, typically incomprehensible to less-developed species. (This is the believed fate of elder races in David Brin's Uplift novels.) This option is explored in more depth under *Galactic Cycles* on p. 109.

They died. This grim ending could be the result of suicide, genocide, accident, or war. If suicide, what was so awful that death was preferable? Was it guilt over a terrible crime? Or did they mistakenly *think* they were transcending? If they died in war, who was their enemy? Where is that enemy now? How was the extinction performed? If it was an accident, could it happen again? One odd possibility is a destructive meme, a dangerous concept that can only affect civilizations beyond a certain level of

advancement. The classic film *Forbidden Planet* explores this notion ... the destructive "monsters from the id" can only be unleashed by advanced Krell technology.

They ran. Another common concept is that the Precursors *ran away* from something horrible. This involves deciding what the terrible Enemy *is* and why the next galactic civilization isn't bothered by it. The Enemy might be the equivalent of a dark god who only visits this galaxy occasionally, or a recurring stage in the life cycle of a galaxy which kills anything sapient.

WHAT DID THEY LEAVE BEHIND?

Advanced technology. Precursors are by definition more advanced than contemporary civilization, so advanced technology is standard. Typically, the technology is either impossible to replicate, tightly controlled by a government or similar organization, or relatively innocuous. If none of this is true, it will quickly become widespread, and the

Precursors lose some of their mystery. *"What'd you find?" "Oh, just another salt shaker that'll blow holes in walls. Hard to get excited now that you can buy them over the counter."*

Incomprehensible technology. It beeps, glows, or makes a steady whirring noise, but it doesn't seem to do much of anything. It's clearly consuming a lot of power, though . . .

Ruins. Precursor cites rarely survive intact. This is partly for balance – an intact Precursor city would be immensely valuable. It's also for atmosphere. Precursors typically vanished hundreds to millions of years ago, and their ruins *feel* old. What's left will obviously be durable. Stone, metal, and ceramic are common choices, but self-repairing living structures (now mutated and dying) are also possible.

What clues did they leave? Precursors can be awe-inspiring even if there are no mysteries associated with them, but it's normal to have at least one puzzle. The mystery is usually related to *Who Were They?* and *Where Did They Go?*, above. The GM should establish which clues the populace at large knows, which are being kept secret, and which are waiting to be discovered.

WHAT'S THE TWIST?

In many stories *about* Precursors, as opposed to stories in which they are merely background, there's a surprise at the end. Some possibilities follow.

The Precursors are still around and powerful. While they appear to have vanished millennia ago, they are in fact merely unseen by contemporary species. Usually this is because they are intentionally concealing themselves. They may be observing without interfering, or they may be interfering willfully but don't want to be caught doing so. Precursors may also be hiding (from who?), or simply oblivious to current events.

The Precursors are still around but are no longer powerful. In this scenario, the Precursor race still exists, but no longer wields the power it once did. They may have lost their technology or actually devolved. The change may have been voluntary, imposed from outside, or accidental. It's also possible that the Precursors were not representative of their entire race, and the extant members are descended from the less-advanced societies, which survived when the Precursors proper vanished. (Something similar is true in the *Traveller* universe, for example.)

The Precursors were time travelers from the future. This possibility neatly explains why the Precursors had advanced technology, and it also allows for a cyclical story structure, in which the past actions of the Precursors may be the result of the current actions of the PCs. When explorers find million-year-old ruins containing messages to themselves, the eerie weight of destiny descends on them.

The Precursors came from the previous universe. One cosmological theory holds that the universe will one day stop expanding, and collapse in on itself in a "Big Crunch" . . . and then explode again into a new universe. If so, there was logically a universe before our own. A species which survived until the end of its home universe might have the power to survive the End of Everything and make its way into this creation.

They're coming back. Wherever they went to, they're going to return,



and soon enough to worry about. Will they be pleased with the young races overrunning their old homes?

Whatever happened to them is still around. Anything dangerous enough to wipe out an advanced civilization presents an apocalyptic challenge for the next one.

The Precursors created the universe/humanity/other. Since they had godlike powers, it seems sensible that they did godlike things. They may actually be the creators of the monobloc that came before the Big Bang, and their relics are merely an artist's signature – or an intelligence test for their creation. On a smaller scale, they may have started life on Earth, or prodded humanity's predecessors into sapience – indeed, they may have done this on *many* worlds. For example, the insectoid aliens of *Quatermass and the Pit* are responsible for humanity acquiring intelligence, though for all the wrong reasons.

The Precursors are hostile. If they're extinct, this option lacks punch, but the Precursors could be waiting in hiding for the right moment or have left booby traps among their relics. Regardless, with their advantages they stand a good chance of wiping out the current societies unless those societies get very lucky. This option works well with the "time travelers" choice, as the Precursors could hold a grudge for things their victims haven't done yet!

The Precursors were human. If the campaign world has humans in it, this possibility should be considered. Earth as of this writing contains no evidence of advanced extinct societies, so their relics must lie elsewhere. (The Moon is a common choice.) Since no fossilized rocket launching sites have been found, they either destroyed all the evidence, others destroyed it, they were assisted off Earth by another species, or they somehow developed a spacefaring civilization without durable artifacts.

PRECURSOR RACIAL GENERATION

Building a Precursor racial template is no more complicated than for any other race, and follows the rules in Chapter 7 of *GURPS Compendium I*. This section discusses each step and what the choices might imply. If the Precursors are still around, making a template is strongly recommended. If they're extinct, it's optional, but can help in designing their artifacts and architecture. It also works the other way around: researchers will use the characteristics of Precursor artifacts to determine what they were like. GMs can skim this chapter to design challenging relics, then work backwards to create a matching racial template.

Racial Attribute Modifiers

A highly advanced civilization might use machines to do all the hard work, leading to physical atrophy and a lower ST and DX. On the other hand, the artifacts left behind by a high-ST race might be too heavy for other races to easily move, and the control panels of a high-DX race could update too fast to follow.

In fiction, Precursors are usually highly intelligent or at least merely average. A low-IQ race with advanced technology isn't impossible, but it

would be quirky, and its artifacts should be very easy to figure out.

A good HT is a sign of a race that conquered most diseases, and is nearly required for species that achieved longevity. In contrast, low HT might be the reason they're now extinct . . .

Racial Advantages

This section covers four broad categories of advantages and many specific ones.

Enhanced Senses

Some racial advantages improve a race's senses or provide additional ones that humans don't have. Examples include Acute Senses (p. B19), Discriminatory Smell (p. CI52), Independently Focusable Eyes (p. CI58), Infravision (p. CI58), Magnetic Sense (p. CI60), Microscopic Vision (p. CI60), Night Vision (p. B22), Parabolic Hearing (p. CI62), Penetrating Vision (p. CI63), Radar Sense (p. CI63), Radio Hearing (p. CI64), Sensitive Touch (p. CI65), Spectrum Vision (p. CI66), Subsonic Hearing (p. CI67), and Telescopic Vision (p. CI68). It's also possible for a race to simply have *different* senses – they could, for example, see an equally large range of frequencies compared to humans, but all in the ultraviolet, effectively a 0-point feature.

Artifacts abandoned by a Precursor race with additional or different senses may have readouts imperceptible to a race without those senses. Homes may not include lamps, they may not have needed windows to see out, and their recordings may be too high-pitched to hear. If their senses were

only more acute than the norm, output devices may still be hard to read – black text on a dark gray background, for instance – and street signs are probably illegible. Learning what senses the Precursors had is a major component of Precursor archaeology.

Exotic Powers

In addition to powerful artifacts, the Precursors may have given themselves innate powers through cybernetics, biotech, nanotech, applied probability physics, or other strange sciences. Many abilities from the *Occult and Paranormal Advantages* section of *GURPS Compendium I*, and almost everything from the *Racial and Super Advantages* and *Natural Attacks* sections, can be explained this way. A race with innate powers may leave fewer artifacts behind, to the despair of researchers, but there may instead be devices that *grant* those powers . . .

Long Life

One of the prime causes of technological advance in humanity is the desire to stave off death; the Precursors are likely similar. Many will possess Extended Lifespan (p. CI54), Immortality (p. CI58), Longevity (p. B21), Unaging (p. CI69), and assorted health-related advantages such as Disease-Resistant (p. CI24), Hard to Kill (p. CI25), Immunity to Disease (p. B20), Immunity to Poison (p. CI58), Injury Tolerance (p. CI58), Metabolism Control (p. CI60), Panimmunity (p. CI28), Rapid Healing (p. B23), Regeneration (p. CI64), Regrowth (p. CI64), Resurrection (p. CI64), Sanitized Metabolism (p. CI65), and Very Rapid Healing (p. CI31).

A long-lived race will build to last. This is the typical explanation for why their ruins are still around millennia after the Precursors themselves are extinct. Immortality is also likely to breed either a balanced life of contemplation or plain boredom. The latter can be an explanation for eclecticism in Precursor architecture and artifacts, and for any meddling they may have done.

One caveat, of course, is that a race that doesn't die easily should still be around. A slow decline into apathetic senility is one possibility, leaving the race unable to support itself or an easy target for its enemies. The options of transcendence and Precursors-in-hiding also work.



Physical Durability

The Precursor race may have been hardier than contemporary races, or able to survive in a wider range of environments. Advantages that represent this include Amphibious (p. CI49), Damage Resistance (p. CI52), Decreased Life Support (p. CI52), Doesn't Breathe (p. CI53), Filter Lungs (p. CI56), Fur (p. CI56), Gills (p. CI56), Improved G-Tolerance (p. CI26), High Pain Threshold (p. B20), Invulnerability (p. CI59), Passive Defense (p. CI63), Pressure Support (p. CI63), Temperature Tolerance (p. B30), Toughness (p. B23), Vacuum Adaptation (p. CI69), and Vacuum Support (p. CI70). (Some of these are examined in more detail on below.)

In particular, the artifacts and architecture of a race less sensitive to pain could be very uncomfortable for everyone else. Their beds may be slabs of stone, their portable sensors may have razor sharp edges, and they may have built their cities in fields of volcanic glass. If the Precursors could survive in exotic environments or even *preferred* them, explorers will find their ruins there. Having to use vacuum suits or scuba gear will make archaeology that much harder.

Absolute Timing

see p. B19

Races with this advantage won't leave clocks behind, which may make it hard to date their ruins. Even *broken* clocks can be useful. The length of day for a given planet tends to change over millions of years, so if a clock was used to measure a 14-hour day and the day is currently 17 hours, archaeologists can estimate when the clock was built.

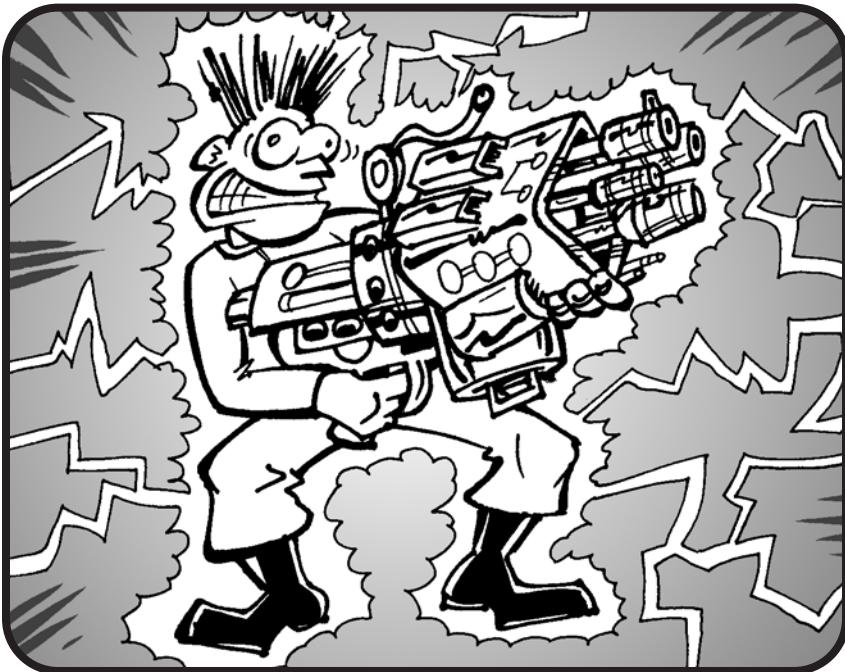
Acceleration Tolerance

see p. CI19

Discovering a Precursor spaceship can be the find of a lifetime. It can also be lethal if the builders could survive higher acceleration than the discoverers.

Amphibious **see p. CI49**

A race equally at home in water and air would have radically different architecture. (Structures could be even less comprehensible if the water has since *evaporated*.) Quite likely certain activities would have been assigned to each environment: water for sleeping and air for



manufacturing, for instance. Most artifacts will be waterproof.

Animal Empathy, Beast-Kin

see pp. B19, CI21

A race which kept lots of animals around all the time would have very different architecture. (Think of dog flaps in all the doors, birdcages built into the walls, grazing grass indoors, and very large beds.) They may have also pursued a biotech-focused technology path.

Appearance **see p. B15**

In many settings, what the Precursors looked like is completely unknown. The author usually did this to preserve mystery, and it is often explained by odd Precursor psychology or religious taboos. (Aliens landing in a ruined New York would figure out what we looked like in short order.) If their appearance is known, it will probably shape contemporary reaction. Attractive Precursors inspire more religious cults, while Hideous ones cause more worry and heavier security at their sites.

Brachiator **see p. CI51**

A Precursor race with this advantage may have spent more time dangling from the ceiling than standing on the floor. Artifacts will be designed to leave hands or equivalent appendages free for grabbing ropes. Rooms may be taller than they are wide, particularly in urbanized areas,

with shelves and appliances at all heights.

Cast Iron Stomach, Universal Digestion

see pp. CI51, CI69

If the Precursors had either of these advantages, it will be harder for investigating biologists to determine their biochemistry from what they ate.

Clinging **see p. CI51**

This is another advantage that can lead to bizarre architecture. Such a race may not have stairs or ladders, and doors would be placed wherever convenient – even on the ceiling.

Eidetic Memory

see p. B20

Perfect memories means fewer written records or recordings of any kind, possibly none at all! This will make archaeology *much* harder. The Racial Memory advantage (p. CI42) may have a similar effect.

Extra Arms **see p. CI54**

Any artifact that requires more than two hands to operate will befuddle humans. It's also possible to build architectural elements, such as doors, that require more than two hands – but this is likely rare, except as cheap security or logic puzzles.

Flight **see p. CI56**

Like Clinging, but more so! Buildings may be completely separate from the ground – held aloft by helium, antigravity, or other technologies.

High Technology

see p. CI26

This advantage is defined relative to the campaign norm; if the Precursors are extinct, it's irrelevant for balance purposes, but will tell exactly what TL their artifacts are. For Precursors who are still around, the presence or absence of this advantage will be important in defining their relationship to contemporary galactic society.

Lightning Calculator, Intuitive Mathematician

see pp. B21, CI26

The input systems of artifacts created by Precursors with these advantages may expect the users to be able to do complicated math in their heads.

Mindshare see p. CI60

One of the classic forms of Precursor transcendence in fiction is for the entire race to become one mind. This advantage may apply to those Precursors (or *the* Precursor) still around, or some negative side effect of a massive Mindshare could have led to the race's extinction.

Morph see p. CI61

A morphing race may create artifacts in whatever shape is easiest, and then adapt *themselves* to their devices. Investigators will at first think the Precursors were *many* species, rather than one race.

Musical Ability

see p. B22

A race of musicians will leave behind fascinating instruments. Once they're discovered, there will probably be a fad for performing Precursor music.

Plant Empathy, Tree-Kin

see pp. CI29, CI31

A strong relationship with plants implies that the Precursors' homes were gardens in their own right, though after years of neglect they may be more like jungles. The buildings themselves were likely once alive; their artifacts will probably have a heavy emphasis on biotech.

Reputation see p. B17

Reputation is irrelevant for extinct Precursors. But if any are still around, when they go public they will certainly have a strong Reputation, one way or the other.

Transference see p. CI68

If the Precursors had this parasitic advantage, they could easily still be around – it was only their old *hosts* who went extinct. The Precursors may have transferred into a new race and gone elsewhere, or they may still be lurking around their ancient ruins in a microscopic dormant form, waiting for new hosts.

Unusual Background

see p. B23

Being a member of a Precursor race is certainly an Unusual Background in most campaigns.

Vacuum Adaptation,

Vacuum Support

see pp. CI69-CI70

Given the prevalence of vacuum in the universe, a race which *can* grant itself either of these advantages probably *will*. Their relics and ruins can thus be nearly anywhere and open to space.

Voice

see p. B23

If Precursors with beautiful voices left audio recordings behind, people will happily listen to them even if they don't understand the language. "Lecture Notes #31" could become a Top-10 hit . . .

Racial Disadvantages

Precursor disadvantages reflect the intrinsic problems of a given race, possibly explaining why they are extinct or missing (see p. 103).

Antisocial Mental

Disadvantages

Many antisocial mental disadvantages can explain why the Precursors eventually went extinct. These include Bad Temper (p. B31), Berserk (p. B31), Bloodlust (p. B31), Bully (p. B31), Fanaticism (p. B33), Intolerance (p. B34), Jealousy (p. B34), Megalomania (p. B34), Paranoia (p. B35), and Sadism (p. B36). A single genius with Bloodlust and access to TL15 items can kill a *lot* of people. Now consider an entire race like that . . .

The question then arises of how the race survived as long as it did. One possibility is that the hostile disadvantages came into being as the race advanced – possibly due to the killer meme suggested on p. 103. Another is that the disadvantages were always there, but the technology for galactic-level genocide wasn't.

Reduced Senses

In contrast to *Enhanced Senses* (p. 105), the Precursors may have lacked certain senses entirely or had them only in a reduced form. Suitable disadvantages include Bad Sight (p. B27), Blindness (p. B27), Color Blindness (p. B28), Deafness (p. B28), Hard of Hearing (p. B28), and No Sense of Smell/Taste (p. B29). A deaf race doesn't care how loud their machinery is, while a blind race interacts with their environment in very different ways from sighted ones. (Examples include tactile labels on everything, no lamps, no windows, and really ugly color schemes.)

Absent-Mindedness

see p. B30

In a slightly silly campaign, this advantage can explain why the Precursors went extinct. They forgot to feed themselves, they left the lid off the quantum reactor, or they didn't notice the invasion fleet . . .

Aquatic see p. CI101

As for Amphibious (p. 106), but even more inconvenient.

Astral Entity see p. CI96

This disadvantage is normally not appropriate for advanced races which have transcended to another plane. It's inconvenient, and most Precursors should have been smarter than that. However, it could be valid if the Precursors made a miscalculation about the nature of the dimension they were moving into, it was a trap, or if they decided the benefits far outweighed the drawbacks.

Code of Honor

see p. B31

These disadvantages can explain why Precursors still around don't interfere – or, at least, not openly. Here are two examples:

Code of Noninterference: Never knowingly interfere with any member of a more primitive race. If you interfere by accident, do not attempt to "fix" things, simply leave. *-5 points*.

Code of Ethical Guidance: Always work toward the social, mental, and technological advancement of more primitive species. Never reveal your existence to any members of those species, except in disguise as one of them. *-15 points*.

Combat Paralysis, Cowardice, Pacifism

see pp. B32, B35

A race with this disadvantage was probably an easy victim for a race without it. One possible mitigator would be for the Precursors to create robots or warrior species to fight for them. If the servants turned on their creators and then collapsed into savagery . . . are we those servants?

Compulsive Behavior, Gluttony, Lecherousness

see pp. B32-B34

If a given activity was compulsive for the whole race, it probably influenced their architecture and artifacts. Compulsive fighters will have dueling arenas on every corner, and breakables won't be stored out in the open. Gluttonous races will have kept vast kitchens and stores of food in every room.

Delicate Metabolism

see p. CI81

This disadvantage will make it much easier for biologists to understand Precursor biochemistry from the remains of their kitchens and crops.

Delusions

see p. B32

An advanced society doesn't mean the Precursors were free of delusions. Contemporary researchers may be amused by the Precursors' misconceptions . . . or wonder if they aren't the ones who have it wrong.

Dying Race

see p. CI102

While appropriate for many Precursors in their final days, the *reasons* they had this disadvantage are actually what's important.

Dyslexia, Illiteracy

see p. B33

It's difficult to imagine an advanced Precursor race that couldn't write, but combined with Eidetic Memory it's possible. Their transmission of knowledge will probably be strictly through verbal instruction – or something genuinely alien, such as pheromones or the physical transfer of encoded memories. Artifacts may talk in lieu of labels and readouts.

Enemies

see p. B39

This disadvantage is another simple explanation for why the Precursors are extinct. Any survivors may be aggressively hunted.

Hive Mentality

see p. CI102

The cities left by a race with this disadvantage will likely be monotonous and devoid of luxuries. Simple human concepts like privacy and public safety will be reduced or absent entirely.

Honesty

see p. B33

Honest races wouldn't have had locks on their doors, and their political structure may seem overly simple to archaeologists – since the laws didn't need to be enforced, they had no police, and other organizations that monitor behavior were much smaller or nonexistent.

Inconvenient Size

see p. CI102

Human researchers will be intensely frustrated if all Precursor ceilings are 2' off the ground, or if they stored their artifacts 15' up. (Note that it is technically the investigators who are inconvenienced. The Precursors likely had no problems with their size, and would not have actually possessed this disadvantage.)

Laziness

see p. B34

An advanced lazy race would likely have used mechanical devices for everything possible. Expect lots of robots.

Miserliness

see p. B34

A race that collected wealth and then vanished probably left behind vast treasure houses. This assumes that "wealth" meant the same thing to the Precursors that it does to those who discover their ruins. Electronic bank accounts, coins made from non-precious metals, and odder forms of currency may be worthless.

Non-Iconographic

see p. CI92

Interfaces designed by Precursors with this disadvantage will either be trivially simple or strictly textual. Understanding their language will thus be necessary to comprehend all but their simplest devices.

Odious Racial Habits

see p. B26

If the Precursors were cannibals, sadists, or slavers, this will color people's reaction to their relics, and to those who study them. An exaggeratedly "politically correct" society could outlaw the study of particularly odious Precursors.

Overconfidence

see p. B34

This disadvantage is a very likely explanation for Precursor extinction. Vast planetary engineering efforts going wrong, starting a war inadequately prepared, or attempting to transcend to a misunderstood level of existence could all be caused by racial Overconfidence.

Parasite

see p. CI103

This represents an odd possibility for why the Precursors went extinct: They may have been dependent on another race for their survival and that other race may no longer be around. (This opens the story possibility that a contemporary race is suitable . . .)

Phobias

see pp. B35, CI93

Highly advanced technology means never having to face your fears. A race afraid of the dark may give their world three suns. One afraid of crowds could have a single luxurious estate per continent. If they were afraid of insects, the Precursors may have wiped them out, and filled their ecological niches with tiny genetically engineered mammals.

Planetbound, Space Sickness

see pp. CI103, CI84

A Precursor race with either of these disadvantages would have mostly explored the universe by proxy, sending out robot probes to do the work for them. Some of those probes are probably still going.

Pyromania

see p. B36

"Why are there so many stars in the sky, mommy?"

"Because the Precursors liked fire, dear."

Reclusive, Shyness

see pp. CI93, B37

While trite, these disadvantages are simple explanations for why any Precursors still around might keep their existence a secret.

Secret

see p. CI78

Precursors surreptitiously still alive and active in society today would likely have this disadvantage at the -20-point level.

Sense of Duty

see p. B39

Many Progenitor-style Precursors could feel a responsibility to the

species that came after them. Sometimes this Sense of Duty extended to *all* life.

Sterile *see p. CI84*

While this is normally unsuitable as a racial disadvantage, a Precursor race may have gradually lost the ability to reproduce as part of its decline.

Subjugation

see p. CI105

This disadvantage is one possible fate for a formerly advanced race. After a few millennia of servitude, no one will remember that they were the Precursors.

VR Addiction

see p. CI95

A Precursor race which has abandoned reality for VR (see *Where Did They Go?*, p. 103) obviously qualifies for this disadvantage.

Racial Skills

If a Precursor race possessed innate skill bonuses or learned skills, they probably used them a lot. A Combat/Weapon skill suggests that they fought a lot and left behind weapons and battlefields. Climbing might mean a preference for ladders over stairs. Thousands of beautiful murals may indicate an innate Artistic skill.



SAMPLE PRECURSORS

This section presents a few different Precursors which can be added to existing settings or used as the basis of their own campaigns.

GALACTIC CYCLES

"It's as far beyond Life as Life is from inert matter. I've seen it happen, many times before. I can feel it moving here, I can smell it in the wind. People . . . creatures, beings, they're all people to me . . . they ask the Final Questions. And then they get the Final Answers, and then it's goodbye. It's the Godhead, or as close as makes no difference to the likes of you and me."

— *The Presence*, from Bruce Sterling's *Schismatrix*

Big Dumb Objects

"It could hold a crew of tens of thousands."

"Or a crew of a thousand, ten miles tall."

— Lt. Cmdr. Uhura and Dr. McCoy,
Star Trek: The Motion Picture

A “BDO” is a mysterious artifact, usually astronomical in scale, whose story purpose is to generate wonder simply by existing and being large. (They’re called “dumb” in a deliberate attempt to point out that this is a little lazy.) Larry Niven’s Ringworld, Arthur C. Clarke’s Rama, the bigger-on-the-inside asteroid from Greg Bear’s *Eon*, any Dyson sphere, and innumerable vast abandoned spaceships are BDOs.

For a roleplaying game, BDOs serve as very large “dungeons.” A BDO is a place to explore, probably contains treasure (artifacts), enemies (automated defense systems, large vermin), and mysteries (How did they build something so big?). The GM doesn’t need to map out the whole thing, fortunately . . . just those points the PCs will most likely seek out. Examples of such places (not necessarily in all BDOs) are the bridge, the armory, the repair facilities, the hanger bays, the power source, and the way *out*.

This setting is the background assumption for several of the “generic” *GURPS* science-fiction books, including *GURPS Aliens* and the *GURPS Space Atlas* series. In this universe, the Milky Way has seen many cycles of galactic civilization, each rising to great heights, then mysteriously transcending the physical universe.

Each cycle begins when one race (the “Pioneers”) develops practical interstellar flight, and moves out into their region of the galaxy. They discover no other civilization as advanced as they are, though some are close. They make contact with these other species, and the less-advanced worlds gain the science and technology of the Pioneers. (This happens even when the Pioneer government has a noninterference directive. Inevitably, over the time scale of galactic civilization, rogue elements of Pioneer society find reasons to meddle.)

Somewhere from a few centuries to a few millennia after the first race expanded outward, all known intelligent species will be at roughly the same level of development, thanks to the leveling effect of interspecies trade, conquest, theft, etc. From this point forward, the entire galaxy advances as one.

A few millennia later, however, something transcendent is discovered. Exactly what this discovery entails is normally a mystery to the next cycle. GMs can choose from the possibilities listed below or invent their own. Regardless, this discovery spreads across the galaxy, and within no more than a few decades, every known civilization has vanished and “transcended.” They leave nothing but relics, and a galaxy bare of intelligent life, ready for a new Pioneer species to evolve, and begin things again.

What's the Discovery?

Heaven exists, and it's easy to get in. In this option, advanced researchers discover a literal paradise in a parallel universe, open to anyone who chooses to make the journey. The existence and perfection of this paradise is easy to prove once you know it exists. A small device, easily produced given high enough technology, is all that is required. These “ascenders” are partly psionic, and can only be activated by someone who knows their purpose, but they can affect many people at once, so long as the user can perceive them all. Anyone who ascends can



return at will, but few do. Many ascenders are still around, but no one from an insufficiently advanced society can determine their purpose.

Beings of pure thought. Another choice is that scientists discover a way to turn entire sapient species into “pure thought,” a level of existence as much above organic life as it is above rocks and dust. Once changed, thought-beings don't find the physical world very interesting anymore, and pursue agendas inconceivable to matter-beings. They occasionally manifest to people in the “old country,” but only for reasons of galactic importance. (This is one explanation for the Auroras from *GURPS Aliens*.)

Perfect virtual reality. By the time a species is ready to transcend, their computers are no longer recognizable as such by less-advanced species, and are unspeakably powerful and accessible from anywhere. The Precursors uploaded their minds into virtual realities, and let their old bodies rot. They're still there today, experiencing reality a thousand times faster and better than the real world.

The trap. A darker variant of the above options is that wherever the

Precursors went, it was a *trap*, and they now serve as slaves, fuel, food, or worse to some species or thing even more powerful. This Enemy patiently waits until each galactic cycle reaches a high enough level of development, and then drops hints about a better world . . .

Using This Setting

These are very generic Precursors, and can be dropped into most existing settings with little difficulty. Precursor artifacts and ruins can be diverse and eclectic, and Precursors did not necessarily interfere in the development of contemporary races, although that's an option. Once the cycles of transcendence are understood, there is the promise that the history of the *current* civilizations can have a happy ending. Further, Precursors can occasionally return in times of great galactic need, providing weight and wonder to the story.

Since the Precursors were many races, from many different cycles of history, there is no one racial template. Their original forms varied widely, and as transcended beings,

their abilities are vast and deliberately opaque to PCs. If they appear in person, the rule is that they should do as little as possible . . . but what they *do* accomplish should be awesome.

THE DYSONIANS

"It looks like a star with a ring around it. What is it?"

"It is a star with a ring around it. A ring of solid matter. An artifact."

— Louis Wu and Chiron,
from Larry Niven's
Ringworld

The race today known as the Dysonians flourished approximately 1,220,000 years ago throughout the local spiral arm. They possessed slow FTL, advanced matter-conversion technologies, artificial gravity, and a deep desire for *room*. They were descended from large plains-dwelling omnivores, who each required an exclusive territory to sustain itself. This genetic territoriality was blunted during their rise to intelligence and a space-faring civilization, but still existed when they acquired the technology sufficient to build environments bigger than planets.

Humans named the race for their largest artifacts, three Dyson spheres. One (designated Bet) is located in the race's home system; the others (Alef and Gimel) surround two nearby stars, seven and 10 light-years away, respectively. (They were given Hebraic-alphabetical names in the order discovered.)

Sphere Bet

The Dysonians built their first sphere by converting most of the planets in their home system to building materials, resulting in a sphere 80 million miles in radius and an average of 50 feet thick. The equator of the sphere – the part that lies in the orbital plane of the system – is thicker, due to the increased risk of debris. Most of the sphere's shell is solid, and consists of eight layers. Several of the layers are active, in the sense that they can change composition or shape when necessary. These changes are controlled by one of the middle layers, the *computation* layer, a massively distributed computer. Typically, no section of the computation layer is above

Complexity 5 (pp. S64-65), but if the entire layer needed to concentrate on a problem, it would be more powerful than every computer built by humans combined. It decides what changes are necessary to maintain the stability of the sphere and its ecosystem.

Working inward from the computation layer, next is the *matter conversion* layer, which corrects damage to the sphere, and helps maintain the ecology on the inside. Within its range (about 10 miles up and down), the conversion layer can turn one form of matter into another, and move matter from place to place.

Next is the *gravity* layer, which maintains the artificial gravity that holds the ecology to the inner surface. The gravity field is 0.79 G over almost the entire inner surface, and extends inward for five miles before quickly tapering off to nothing. It does not extend outward.

The layers described so far are protected from inner threats (e.g., burrowing animals) by a thin *inner armor* layer, which sits just beneath the *ecology* layer. The latter, of course, consists of dirt, rock, water, plants, animals, etc.

There are three layers outside the computation layer. Going out, first is the *shape control* layer. This part of the sphere is made of dynamic long-chain molecules, and can create indentations or bumps in the sphere itself. On the inside, these irregularities form the hills and valleys of the landscape. Making changes in the structure of the sphere is apparently very resource-intensive; human researchers have seen only a few such changes since they arrived.

Beyond that are the *outer armor* layer, and the *temperature control* layer. The armor is too thin to protect against a serious threat, but it can withstand routine damage, and is easily repaired by the matter converter. The temperature control layer is essentially a coat of paint; different colors radiate heat more or less efficiently, and enable interior climate control.

The sphere and the ecology layer are too thin to support a traditional planetary ecosystem. (For example, given no plate tectonics, eventually all the soil would wash into the lowest parts of the terrain.) The computation layer uses the matter converter to dynamically "fake" the portions of the ecosystem that are missing. For

example, it has been observed creating lava at the tops of mountains (forming it out of converted air), turning earth at the bottom of ocean rifts into water, and changing excess water into air.

Contemporary researchers have found the layers difficult to investigate. Penetrating the armor isn't difficult, but the computation layer does not recognize their authority to do so, and sees no need for their interference. It thus replicates new armor, sometimes making it out of the scientists' own tools! Parts of the sphere where the inner layers have suffered damage are easier to investigate but are much less representative, like examining a crashed car instead of an intact one. In addition, eventually the intact areas at the edges of the damage regenerate their way inward. What the researchers *have* discovered is that the layers are mostly nanotechnological in nature, and paradoxically the technology involved works best only on a large scale. For example, when separated from the sphere and jury-rigged, sections of the matter conversion layer function at only a fraction of the efficiency they possess when integrated with the sphere. Some breakthroughs have been made, but to date few have broad commercial applicability.

The one planet the Dysonians did not convert was their homeworld, called Dysonia by human researchers. It orbits just inside the sphere, clearing the atmosphere by one million miles. Today, it is a hot, dry, and dead world. Because the sphere reflects light, Dysonia receives much more heat than it did before Bet was constructed. The planet's climate used to be kept in balance through shades and mirrors, but those systems broke down thousands of years ago. Despite its being inhospitable, many contemporary researchers are concentrating their research on Dysonia, as the surface of the sphere itself lacks fossils and other clues to the Dysonians' biology and society.

The inner surface of the sphere is inhabitable and supports a flourishing ecology, which is similar to Earth's in broad ways. The environment in most parts of the sphere is acceptable for humans. The gravity is just under 4/5ths Earth's, the atmosphere is breathable (though very high in argon and low in nitrogen), and the temperature averages 50°F.

Though the sphere's systems are amazingly durable by contemporary standards, there have been breakdowns. The precise result depends on what went wrong. There are areas where temperature control has been damaged, and the climate is either far too hot or cold to sustain life. Hot areas burn themselves out, generating plumes of heated air which are dispersed by the matter converters. Cold areas generate glaciers, which spread outward until they reach warmer climes. At sites where gravity control has failed, the atmosphere (and everything else) slowly drifts upward toward the sun. Again, the matter converters attempt to disperse all mass sideways so that it isn't lost. If the converters themselves break down, the ecology can usually survive for a long time, but the area eventually becomes barren, sometimes down to the bare inner armor.

Oddities in the computation layer – believed caused by the equivalent of self-evolving viruses – can cause thousands of errors. Some include bizarrely tall mountains, places lethal to plant life but not animals, very steep temperature gradients across short distances, and unusual matter conversions, such as massive boulders made of diamond.

The most dangerous problems are holes in the sphere, caused by stray asteroids or similar threats. The neighboring areas deal with this by walling the hole off, which requires vast upward shifts in the shape control layer, topped with walls condensed out of the atmosphere. The missing areas are then regenerated from scratch.

The sphere includes several thousand *intentional* holes, which act as spaceports. They are 18 miles across each, and surrounded by walls seven miles high, to hold in the atmosphere. There are docking facilities on the outside of the sphere and along the inside of the walls. Both areas are in microgravity. Vessels can also fly inside, and then take up orbit inside the sphere, travel to Dysonia, or simply land on the inner surface, if they're equipped to do so. Explorers have found thousands of abandoned Dysonian spacecraft at the ports, and an even larger number of vessels for travel inside the sphere. Most are less sophisticated than the sphere itself, and they are very cumbersome for humans to operate. Their FTL drives are actually *less* advanced than contemporary drives.

Sphere Alef

The second one constructed, Alef uses the same technology, but is slightly smaller, as it surrounds a dimmer star. The Dysonian ecology had difficulty adapting to a different sun, a problem not helped by several unexpected flare-ups. The radiation from these solar flares caused mutations. Alef's technology continues to work perfectly and is attempting to compensate for the radical changes. Currently, Alef is a violent mix of pure Dysonian species and strange mutants.

Sphere Gimel

This sphere was the last constructed. It is considerably more massive; it appears the sun it surrounds was originally part of a double-star system, and the Dysonians converted the entire smaller *star* to make building materials. The shell is much thicker and honeycombed with interior spaces. Contemporary researchers have not determined the purpose of these spaces yet. In fact, they serve as a gateway into a pocket dimension created by the Dysonians! Whether this dimension is accessible and who lives there today is up to the GM. Gimel has *no* interior ecology. The atmosphere and sterile dirt are there, but apparently the Dysonians had not yet imported any lifeforms or programmed the computation layer. (The other possibility, not yet explored by humans, is that a vast burst of dimensional flux killed the lifeforms and wiped the computer.)

Other Artifacts

The Dysonians also created many other megascale artifacts, including huge spacecraft, hollowed asteroids, and a few small ringworlds. On a smaller scale, spheres they left behind have isolated homes but few cities. They had highly automated factories, but no general-purpose robots. Very few weapons have been found – apparently the Dysonians were civilized enough that violence was rare, but when it did happen they preferred hand-to-hand combat.

The Dysonians Themselves

Dysonians **120 points**

Dysonians are large, four-limbed, and approximately mammalian. They normally walk and run on four feet, but

can walk on two. Their front limbs have hands with four mutually opposable digits. They have no neck as such. Their fur is normally white or gray. The typical Dysonian is nearly 8' long when horizontal and weighs 525 lbs.

Attributes: ST +5 [60]; IQ +2 [20]; HT +2 [20].

Advantages: Animal Empathy [5]; Claws [15]; Extended Lifespan 2 [10]; Fur [4]; Immunity to Disease [10]; Sharp Teeth [5].

Disadvantages: Berserk [-15]; Gluttony [-5]; Reclusive [-10].

Quirks: Dislike enclosed spaces [-1].

Skills: Tracking +2 [2].

The above template represents a Dysonian at their height. Once they had their first two spheres set up and had begun their third, they discovered how to create pocket dimensions. They explored the possibility of engineering a perfect universe for themselves. Gimel's design was modified to include the machinery for creating a test dimension. Whether the experiment succeeded and most of the Dysonians are living there now, or failed catastrophically and killed those Dysonians near Gimel, is up to the GM.

At Alef and Bet, the Dysonians had already created the next best thing to paradise. Over the intervening years, the inhabitants of those spheres reverted to a wild existence, hunting and grazing for their food. The new template is as follows:

Feral Dysonians

56 points

Feral Dysonians are physically nearly the same as their ancestors, though somewhat larger. Humans think they resemble large white tigers.

Attributes: ST +5 [60]; IQ -2 [-15]; HT +3 [30].

Advantages: Claws [15]; Extended Lifespan 2 [10]; Fur [4]; Immunity to Disease [10]; Sharp Teeth [5].

Disadvantages: Berserk [-15]; Bestial [-10]; Phobia (Enclosed spaces) [-15]; Reclusive [-10]; Social Stigma (Barbarian) [-15].

Skills: Tracking +2 [2].

Contemporary scientists exploring the spheres regard feral Dysonians and the occasional mutant Dysonians in sphere Alef as dangerous animals – they haven't realized that these "beasts" are the sphere-builders! The

Dysonians didn't leave behind many visual records, and several of their land species look more-or-less identical to Dysonians to alien eyes, including domesticated food species and wild predators. The Dysonians themselves have lost all of their culture and technology. They are too antisocial to preserve knowledge, and no longer smart enough to want to change their existence.

Using This Setting

This setting intentionally leans toward space opera, and away from hard science fiction. (Really, if you *could* build a Dyson sphere by disassembling planets and stars, you probably wouldn't *need* to.) In compatible campaigns, however, the massive relics of the Dysonians can be added with few changes to the history of the universe. The discovery and exploration of a sphere could easily form the basis of a campaign.

THE OROBORNIANS

Perhaps, given time, they might by their own efforts have come to the awesome and brilliant concept of using natural weapons as artificial tools. But the odds were all against them, and even now there were endless opportunities for failure in the ages that lay ahead.

The man-apes had been given their first chance. There would be no second one; the future was, very literally, in their own hands.

— Arthur C. Clarke, *2001: A Space Odyssey*

The galaxy is eating itself. Instabilities in the galactic core, millennia ago, produced massive waves of radiation that will sweep local space in just under 2,000 years. The radiation will render every known planet uninhabitable for eons to come. When the time comes, many species will flee the galaxy in FTL generation ships. The fastest will still take centuries to reach safe stellar clusters beyond the galactic rim. A few humans, however, will discover another solution and flee into the past.

Time travel, discovered shortly before the mass exodus, is a barely usable technology. It requires massive amounts of energy, and for backward

travel needs more energy the *shorter* the distance traveled. The people who came to call themselves the Ouroborians found that they could not aim for any point less than two *billion* years ago.

Arriving in the Precambrian Era, they discovered Earth covered in single-celled life, as expected. Their time-travel science said that it was impossible to change the past, so they took the opportunity to visit Earth and study the prokaryotic and eukaryotic life. To their shock they found that it showed unmistakable traces of genetic engineering – *human* genetic engineering.

Ouroborian philosophy is that humanity exists within a temporal loop.

Searching the Solar System, they found faint traces indicating that they had been there before. Years of debate ended with a decision: Some of them would travel back in time another two billion years to the theorized dawn of life on Earth, to seed the planet themselves as the gengineering traces indicated they must have done. Others would travel forward, to key points in Earth's history, to make sure everything worked out as history recorded. The remainder settled on the Moon, creating a small outpost on the far side from Earth.

Throughout four billion years, the Ouroborians shepherded life on Earth. They made no more journeys backward. Most of the subgroups scattered throughout time eventually died out, but a few in the Pleistocene managed to create an enduring civilization on the Moon, building on top of their own unspeakably ancient ruins. When *Homo sapiens* finally evolved, most of the Ouroborians decided their work was done. They abandoned the Moon, went down to Earth, and integrated themselves into the primitive life of their ancestors. What happened to the rest is up to the GM.

Ouroborian Relics

The Ouroborians had reliable interstellar FTL travel, and left outposts all over the Solar System and local space. Over the course of up to four billion years most of these outposts disintegrated or were destroyed without trace. Some survived, however, and human explorers discovered them on the Moon and elsewhere as humanity expanded into the galaxy. (The Ouroborians had records of the discoveries and were sadly amused to learn that they themselves were responsible for them.) Contemporary scientists have noted that the ruins seem very human in design, but have not yet found any conclusive evidence about who these Precursors (as they call them) really were.

The Ouroborians carefully left behind no information on the instabilities at the galactic core. After centuries of creating and living in a temporal loop, their philosophy is that humanity exists in a circle. They see the fact that, outside the loop, the galaxy becomes uninhabitable as irrelevant and a potential distraction for their ancestors and descendants.

Time Travel

The laws of time travel in this setting hold that the past cannot be changed. Paradoxes are blunted by the fact that travel backwards is very hard – it's difficult to create one at a remove of billions of years. One potential conflict is that when the Ouroborians went back in time, they did not know the truth about the Precursor sites. Thus, if the PCs discover that the Precursors were human, it should be kept secret to preserve the setting's logic. Alternately, the GM can simply say that by the time of the galactic exodus, no one cares any more and the Ouroborians didn't know through simple ignorance and bad records.

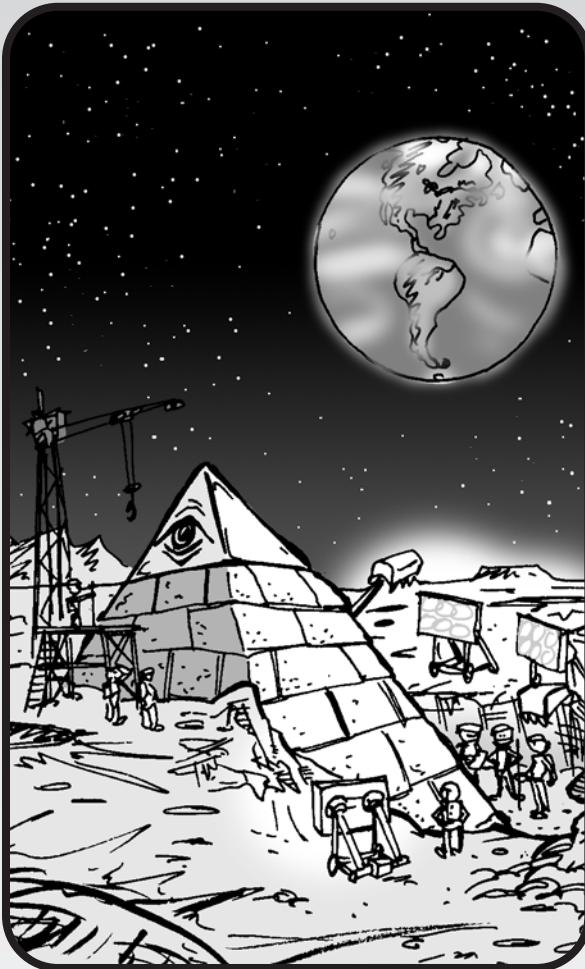
Using This Setting

Learning the secret of the Ouroborians is the intended focus of a campaign. The story can include site investigation, the discovery of ever-more-recent sites with better-preserved artifacts, and the revelation that the Precursors were apparently human. The climax can be the appearance of Ouroborian time travelers materializing in one of their old homes!

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For all of its faults, the Library is where everything begins and ends.

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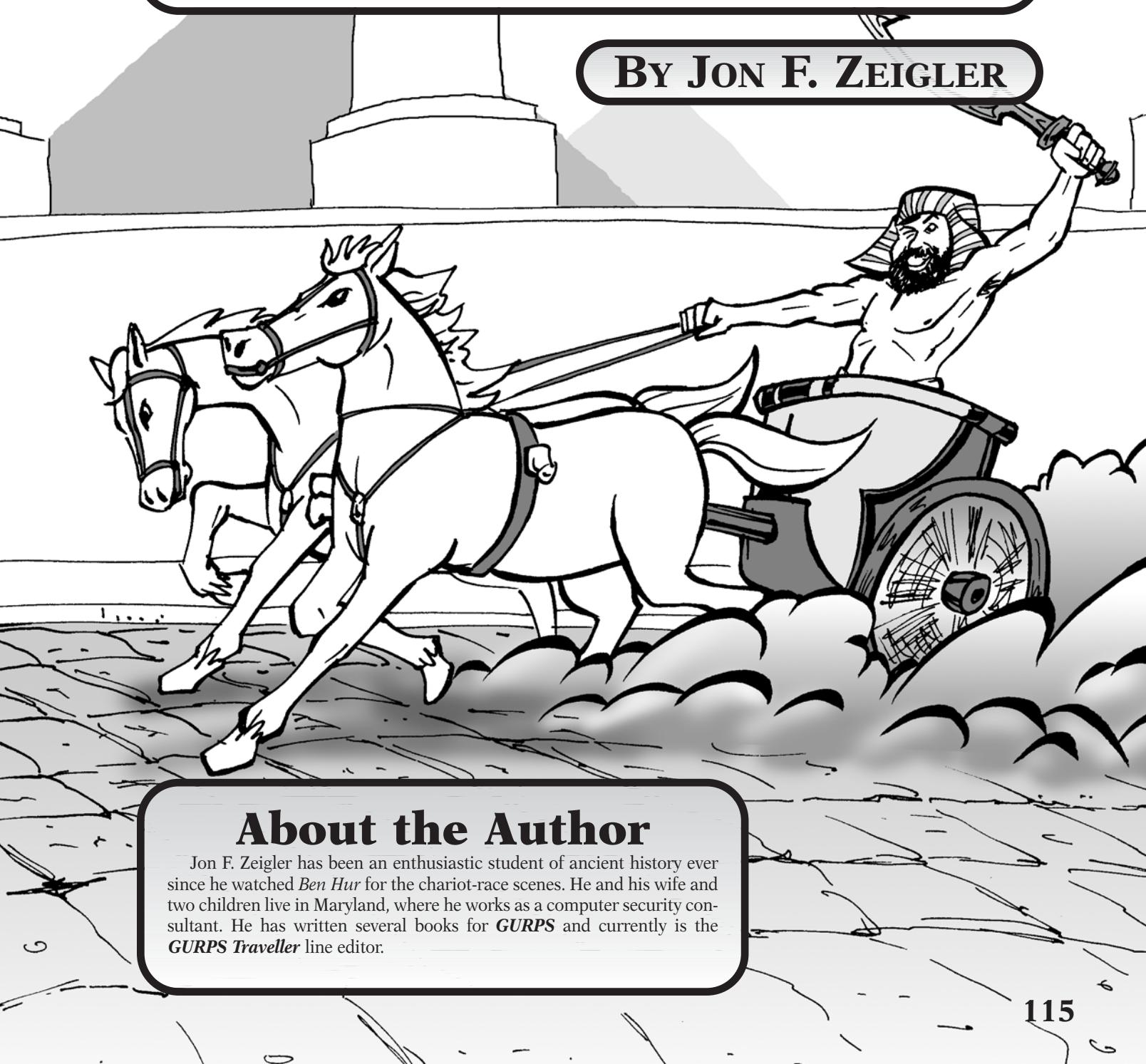
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CHAPTER NINE

THE

CHARIOT AGE

BY JON F. ZEIGLER



About the Author

Jon F. Zeigler has been an enthusiastic student of ancient history ever since he watched *Ben Hur* for the chariot-race scenes. He and his wife and two children live in Maryland, where he works as a computer security consultant. He has written several books for **GURPS** and currently is the **GURPS Traveller** line editor.

To Amenhotep, King of Egypt, my brother, say: Thus says Tushratta, King of Mitanni, your brother. It is well with me. May it be well with you; with Gilukhepa, my sister, may it be well; with your household, your wives, your sons, your nobles, your warriors, your horses, your chariots, and throughout your land may it be very well.

When I first sat upon my father's throne, I was still young. Tuhi did evil in my land, he who had killed his lord, my brother Artashumara. Therefore he did not treat me well, nor anyone who was on friendly terms with me. Because of those evils which were perpetrated on my land, I made no delay. The murderers of my brother I killed, taking all that they had.

Because you were friendly with my father, I sent and spoke to you, so that you might hear of this deed and rejoice. My father loved you, and you loved my father still more. Because of his love for you, my father gave my sister to you. Who else stood with my father as you did? The very next year, moreover, my enemies returned, bringing with them the whole land of Hatti. As the enemy came to my land, Teshub my god gave them into my hand, and I destroyed them. Not one of them returned to his own land.

Behold, out of the booty from the land of Hatti I have sent you one chariot, two horses, one male slave, and one female slave. As a further gift for my brother, I send you five chariots and five teams of horses. And as a gift for Gilukhepa, my sister, I send one set of gold pins, one set of gold earrings, one gold idol, and one container of sweet oil . . .

— King Tushratta of Mitanni, from the Amarna letters

The world is young and the ancient gods are still close at hand. A cluster



of civilized nations stands at the sunlit place where Europe, Asia, and Africa all meet. It is a time of grand adventure, a time of gold and bronze – the Chariot Age.

For over 1,000 years, the Great Kings of the known world have contended for power and prestige. Empires have risen and fallen, fantastic dynasties have appeared and withered away. However, the pace of events accelerated considerably about 300 years ago, when a revolution in warfare technology took place.

This revolution began in the northern highlands. There the local half-barbarian tribes had spent generations developing a set of closely related technologies: large-scale horse breeding, the light chariot with two spoked wheels, and the powerful composite bow. With these, the highlanders developed a new style of

warfare, emphasizing speed, maneuverability, and the archer's power to strike at range.

Small groups of chariot warriors soon appeared as mercenaries in the armies of lowland kings. Such mercenaries helped the kings of Hatti-land establish a great empire. They fought on behalf of the Canaanite chieftains, who conquered much of wealthy Egypt. Then they returned home laden with plunder and began to consider what to do next.

The Chariot People were divided among a number of different tribes: Aryans, Hurrians, Kassites, and others. They had often fought each other for honor and possession of the best grazing lands. Now it seemed that the lowland kingdoms were ripe for the taking, as their neighbors did not yet understand the full potential of bow and chariot. So the Chariot People swept down out of the highlands. From Achaea in the west to the Indus Valley in the east, the charioteers toppled old dynasties and took thrones for themselves.

Today the charioteers still dominate the known world. The past few decades have been a time of relative stability and prosperity for all. Yet all that is about to change . . .

Where and When?

The Chariot Age is set in a historical period: the ancient Near East during the Late Bronze Age, in the fifth year of the reign of Pharaoh Akhenaten of Egypt. The exact date in modern reckoning is uncertain, but the year is likely around 1348 B.C. A map is on p. 128.

LANDS OF THE CHARIOTEERS

In the Chariot Age, the most important concept in international diplomacy is that of the Great Kingdom. The world is full of kings – every city-state and valley has a king of its own. However, only a very few rulers have any claim to the title of Great King.

To be a Great King, a ruler must be *independent*. He cannot be the vassal of any other king, paying tribute, or sending soldiers to fight in the other king's wars. Indeed, it helps if the ruler is himself the overlord of other kings. The Great King must also be a ruler with a substantial army, able to hold his own in the field when opposing other Great Kings.

At present, the world's Great Kingdoms include Babylonia, Egypt, Hatti-land, and Mitanni. Assyria has pretensions to Great Kingdom status, but is still a vassal of the Mitanni kings.

EGYPT

Egypt is the center of the world. Its civilization is over 2,000 years old and has been more or less continuous throughout that time. Egyptian art, architecture, religion, medicine, and philosophy are very influential. Although it is not a seafaring nation, its vast wealth and natural resources bring traders from all around the Middle Sea.

Egypt was never directly conquered by the Chariot People. However, about 300 years ago a foreign community took over much of Egypt: the *hikau-khoswet* or "Princes of Foreign Lands," later called the Hyksos. These invaders were originally lords of southern Canaan and the desert country to the east, but at a time of Egyptian weakness they were able to set up ruling dynasties in the northern half of Egypt.

After the Chariot People embarked on their conquests to the north, similar techniques of chariot warfare were adopted by the Hyksos and, later, the native Egyptians themselves. Eventually, the Egyptians expelled the Hyksos. Today they are masters of large-scale chariot warfare and have one of the most powerful armies in the world.

General Conditions

Egypt is a monarchy, whose king, or *Pharaoh*, is considered divine. Pharaoh commands the armies, and it

is assumed that he will lead the army personally if he can – the current Pharaoh is an exception. He also commands an extensive bureaucracy, which enforces the law and controls commerce. Government officials are usually drawn from the ranks of long-established noble families, but even a wealthy commoner's son can get the necessary education and enter government service.

Egypt's temples are extremely important. They own most of the land, control most of the peasantry, and provide the advanced education needed by those hoping for high government office. Since the royal family is considered divine, the ruling dynasty usually has the support of the temples. On the other hand, a nontraditional or impious king soon finds himself in trouble as this support is withdrawn – as the current Pharaoh is discovering.

Akhenaten is Egypt's current king, the most recent member of a dynasty that has held power for over 200 years. He holds all foreigners in contempt, even the Great Kings who rule outside Egypt, and therefore gives almost no attention to diplomacy. He ignores the decay of Egypt's foreign empire, and neglects the army. Meanwhile, his *internal* policies are provoking widespread unrest.

Akhenaten's policies are aimed at the great temple cults, the only institutions within Egypt that can challenge the absoluteness of Pharaoh's rule. The cult of the deity Amun is the most powerful of these, and has often interfered in the king's rule over Egypt. The kings have struggled for decades to limit the influence of the priests of Amun.

The royal family's most recent approach to this religious challenge has been to promote a cult of its own. In the time of Akhenaten's father, the dynasty forged marriage ties with an influential family from the city of Heliopolis, an ancient center of solar worship. Pharaoh's new Great Royal Wife and her kinsmen were among those who revered the sun in the form of the solar disk, which they called the *Aten*. This relatively minor cult seemed likely to fit Pharaoh's political purpose – especially since Egyptian kings had long been identified with Ra, another solar deity. Pharaoh promoted the cult of the Aten, using it to give his rule a

religious foundation independent of the Amun-cult.

Akhenaten's father never insisted that his Aten-cult take precedence over Egypt's traditional gods. But his son has proved to be a king of very different ambitions. The first signs of change appeared two years ago, at the new king's first jubilee festival. During the festivities, the traditional Egyptian gods were almost entirely dismissed from public attention, replaced by celebrations of the Aten cult.

Since then, it has become clear that Pharaoh intends to crush the great temple hierarchies and concentrate all of the realm's power in himself. Monotheism is to be the central ideology of Egypt, a land "restored to its ancient values" under the absolute command of Pharaoh.

Naturally there has been resistance to Pharaoh's plans from both the temples and the common people. Earlier this year, an attempt was actually made on Pharaoh's life. The agency behind the failed assassin has not been discovered, but the king (probably correctly) assumes that the priests of Amun were involved. The incident has added paranoia to Pharaoh's religious zeal and megalomania.

Pharaoh has recently announced plans to abandon the capital city of Thebes, leaving its priests and its corruption behind. A new capital city will be built for Pharaoh's court. Many in Egypt fear that the move will signal the beginning of open persecution of the Amun-cult, possibly leading to civil war.

Points of Interest

Thebes is the current capital of Egypt, far up the Nile in the southern part of the country. Once a sleepy provincial town, it has grown in size and importance under the rule of the current dynasty of kings. It is notable for the palaces of Pharaoh and the local noble houses, as well as the great temple complex of Karnak outside the city.

Memphis is the oldest and largest town in the kingdom, just south of the Nile delta on the borders of Lower Egypt. It is the traditional capital, although the government and temple bureaucracies have long since moved to Thebes. Memphis remains one of the realm's centers of trade, religious worship, and learning.

Elephantine is the southernmost important town in Egypt proper, located just north of the First Cataract of the Nile. It exists primarily as a point of contact with the rich lands of Nubia to the south. Military expeditions once routinely set out from Elephantine to keep the Nubian tribes under control; these have been curtailed under Akhenaten's reign.

Major Personages

Akhenaten Neferkheperure (age 23) is the king of Egypt. He is a sickly man, unattractive in appearance and prone to small illnesses. His mind is in no better condition than his body. He is driven by religious fanaticism and political paranoia, and rarely turns aside from the course of action suggested by his inner demons. His advisors have found it almost impossible to get him to attend to the welfare of his realm. (For more information about Akhenaten/Amenhotep IV, see pp. EG51-52 and pp. WWI4-15.)

matters of importance before seeking an audience with Pharaoh.

Ay (age 44) is a priest and courtier, an ambitious man who hopes to rise to the highest levels of power. He is one of Pharaoh's closest relatives, the brother of Queen Mother Tiye and the father of Queen Nefertiti. He pays lip service to the Aten-cult and Pharaoh's policies, although he would betray Pharaoh if it was ever to his advantage to do so. Few men trust him, except for Pharaoh himself.

he does not approve of Pharaoh's religious policies and has nothing but contempt for the king's attitude toward foreign affairs.

For more information on Egypt, see *GURPS Egypt*.

CANAAN

Canaan is a fertile but narrow country, stretching about 400 miles along a north-south line from the northern borders of Egypt. Canaan's western boundary is the Middle Sea; the eastern boundary is desert and several small ranges of low mountains. In between, Canaan is a belt of fertile and rain-watered land.

Canaan has never been the home of a Great Kingdom, although the Hyksos kings who once ruled part of Egypt originated here. The local population is too small and divided to support a world-spanning empire. Instead, the region is the *crossroads* of the world. Rich trade routes pass through Canaan – and conquering armies have often passed through as well.

General Conditions

Canaan is divided into dozens of tiny states. Their size and population vary, although most of them are very small compared to Egypt or the great cities of Babylonia. Each local state is ruled by a nobleman. A few of these rulers claim royal honors, but most are simply "mayors" or "chiefs." Canaanite monarchs are traditionally weak and share power with the temples and with wealthy merchant clans.

Northern Canaan is fairly prosperous and densely populated. Southern Canaan was subjected to mass deportations in the time of Pharaoh Akhenaten's great-grandfather, and has never recovered. Most of the "cities" of southern Canaan have no more than a few hundred inhabitants apiece.



Nefertiti (age 19) is Pharaoh's Great Royal Wife as well as his first cousin. She is famous for her beauty, but she is also quite intelligent and plays an important role in Akhenaten's regime. Indeed, she often issues orders to the bureaucracy and army when Pharaoh cannot be bothered. She tries to mitigate the worst effects of Pharaoh's policies. Wise courtiers know to approach Nefertiti about most

Horemheb (age 24) is a military officer of common birth, rapidly rising in Pharaoh's service. A vigorous and cruel man, he commands Egyptian troops by earning their fear and respect. He is likely to be appointed a general soon, and is maneuvering to win command over the northern armies (including the Egyptian garrisons in Canaan). He is a staunch supporter of the monarchy, although

Libya

In the Chariot Age, Libya is the North African coastal region west of the Nile valley. It is inhabited by a variety of barbarian tribes, who provide accomplished but undisciplined archers. Some Libyans make their fortunes by entering Egyptian service as mercenaries. The Libyan tribes often raid caravan routes through the western desert, and are subject to punitive expeditions from Egypt.

Most Canaanite towns are Egyptian vassals. Some of the rulers are simply chosen by Egypt rather than through any principle of hereditary succession. Many noble and royal children are fostered at Pharaoh's court, serving as hostages and picking up a veneer of Egyptian culture. Each vassal town hosts a garrison of Egyptian soldiers, there to help the mayor keep order – or depose him if he proves disloyal. Egyptian government officials live in several of the larger towns, administering the flow of trade and ensuring that the proper tribute goes to Pharaoh.

Unfortunately, since Pharaoh Akhenaten has failed to give his foreign empire any attention, Canaan is starting to slide into disorder and anarchy.

The most serious trouble has erupted in the extreme north. Amurru is a small principality in the northern Canaanite hills, which has long been restless under Egyptian domination. Several years ago, its ruler Abdi-Ashirta was murdered by Egyptian soldiers after carelessly allowing his ambitions to become too obvious. Abdi-Ashirta's son Aziru is equally ambitious but more cunning. Since discovering the depth of Pharaoh's inattention, Aziru has begun openly raiding the towns around him, hoping to expand Amurru's influence.

To the south, another local potentate named Labayu has been stirring up trouble of his own. He is a prince of the southern Canaanite hill-tribes, but he also holds a position in the Egyptian provincial government. If anything, his loyalties are even less certain than those of Amurru. Like Aziru, he is currently mounting raids against neighboring towns.

Points of Interest

Ugarit is the northernmost town in Canaan, located close to the border with Mitanni. It is a seaport and trading center, second only to Byblos in wealth and prestige. Although it is an Egyptian vassal, its ruler Niqmaddu II claims the title of king.

Sumur is the primary Egyptian administrative center for northern Canaan, and houses a relatively large military garrison. Unfortunately, the town is likely to fall to Amurru within the year unless reinforcements arrive from Egypt.

Byblos is one of the most important port towns in Canaan. It is very ancient, and has been allied with Egypt for over a thousand years. The alliance

remains close today and many Egyptians visit the town every year. Byblos is currently holding out against the aggression of King Aziru, who is raiding the hinterland and threatening to lay siege to the town itself.

Sidon is a Canaanite seaport town, often overshadowed by its neighbors Byblos and Tyre. Its mayor Zimredda is ostensibly an Egyptian vassal, but he has allied with King Aziru and has been cooperating with Amurru's raids in the area.

Tyre was once a very large town, but it suffered greatly in the Egyptian deportations of a century ago and has yet to fully recover. It does serve as an important trading center, sending many ships out to work the trade routes in the Middle Sea. Today its ruler, Abi-Milku, is concerned about the growth of Amurru's power in the north. So far Tyre has suffered no serious attacks, although neighboring Sidon has been harassing Tyrian shipping along the coast.

Hazor is an important way-station on various trade routes. For example, it

is well known as a center of the tin trade, critical in the manufacture of bronze. Hazor is by far the largest city in Canaan, with a population of about 10,000. Although Hazor pays tribute to Egypt, its ruler Abdi-Tarsi claims royal honors, and the city enjoys some autonomy.

Shechem is a town in the hill country of central Canaan. The surrounding countryside is more fertile and habitable than it appears at first glance, and a relatively large population exists in the area. Many of the local hill-settlements are inhabited by *apiru*.

Urusalim is neither large nor particularly wealthy, although it is well fortified and commands the hill-country of southern Canaan. It is a minor religious center for the surrounding country. In recent years it has come under increasing pressure from *apiru* bandits. The usual Egyptian garrison (about 50 soldiers) was recently withdrawn, and the ruler is having great difficulty controlling anything outside his walls with only his own troops to draw on.

The *Apiru*

In the time of Akhenaten, the word *apiru* was used to designate a separate class within Canaanite society – renegades, wandering nomads who lived outside the bounds of Canaanite or Egyptian law. They were people who had fled from urban life, in order to live a free existence in the hills or on the edge of the desert. Such outcasts were particularly common in the Akhenaten's time, and could be found anywhere in Canaan.

The *apiru* often turned to banditry, causing trouble for small towns on the frontiers of civilization. They also sometimes served as mercenaries, and flocked to the banner of any prince who wanted to overturn the established order of things.

Despite some similarity in sound, the relationship of the *apiru* to the Biblical Hebrews is very uncertain. The term *apiru* is used to describe a social class, not a specific ethnic or religious community. Thus if the Hebrews existed during the time of the Amarna letters, they may well have been described as *apiru* by the "more civilized" townsmen and Egyptian officials who corresponded with Pharaoh. Still, not all *apiru* can have been Hebrews; the social class could be found even in parts of Canaan that were not in the pertinent stories from the Bible.

Naturally, a GM who wishes to bring the Biblical epic into his *Chariot Age* campaign may do so. Even scholars who accept the Biblical account of the Exodus disagree as to its date and its relationship to the time of Akhenaten. The Hebrews may still be living in Egypt. Perhaps they left some years ago, and are currently wandering in the wilderness east of Egypt and Canaan. Or they may now be entering Canaan, forming part of the *apiru* forces which currently plague Egyptian authorities.

Some revisionist historians have made even more startling suggestions. One identifies the "Labayu" of the Amarna letters with the Bible's King Saul. Another historian has suggested that Moses was Akhenaten himself, returning to Egypt years after faking his own death and going into exile!

Major Personages

Aziru (age 28) is the self-styled "King of Amurru." He is extremely ambitious and cunning, with a keen political sense. In person he is a jovial and enthusiastic man, fond of date wine, attractive women, and fast horses. He can be a very loyal friend, even to those few Egyptian individuals who have earned his trust. Those who cross him learn that he also has a strong impulse toward revenge.

Rib-Addi (age 54) is the mayor of Byblos, one of the most important officials of northern Canaan. Unfortunately, his prestige has so far been insufficient to garner any military aid against Amurru incursions. *Rib-Addi* is still sharp of mind, but he is aging and no longer feels equal to his responsibilities.

Niqmaddu II (age 30) is the king of Ugarit. He is thoroughly Canaanite in background, but he also greatly admires Egyptian culture and has even married a lady from the Egyptian royal harem. He is a very pragmatic man, interested only in the prosperity of Ugarit in a world dominated by larger kingdoms. At present his loyalty to Egypt is firm, but if the political situation changes he might be willing to change allegiances.

Labayu (age 42) is the *sheikh*, or chieftain, of the hill-tribes around Shechem. He holds a position in the Egyptian provincial government, but he is driven solely by self-interest and greed. He has a habit of raiding neighboring cities, sometimes allying with local *apiru* bands and then writing letters to Pharaoh angrily defending his deeds. *Labayu* lacks the strategic sense to be a real threat to Egypt, but his aggressive streak is certainly enough to destabilize his own region.

Abdi-Heba (age 31) is the king of Uruslim. He is the epitome of the minor Egyptian vassal-prince – educated in Egypt, sophisticated and civilized, but now trapped in a tiny town on the edge of the barbarian wilderness. He angrily refuses to admit his origins as a Canaanite chieftain, claiming instead to be an Egyptian soldier. He is staunchly loyal to Egypt, but has become extremely frustrated with the lack of military support.

Addaya (age 40) is the Egyptian governor in charge of southern Canaan. He is a corrupt man and an inefficient administrator, more interested in lining his own purse than in



providing good government to his province. He nevertheless has the full confidence of Pharaoh and is unlikely to be replaced anytime soon.

MITANNI

The land of Mitanni is centered on the upper reaches of the great Tigris and Euphrates Rivers. The country is rich and fertile, and Mitanni controls some important trade routes. The most serious disadvantage of its position is that it has no natural boundaries. Aside from the highlands to the north, themselves not a very solid defense, the borders of Mitanni have always been open to invasion.

Mitanni is inhabited by the Hurrians, an ancient race whose distinctive language and religious beliefs are widely influential. The Hyksos lords of old Egypt included a few Hurrian nobles among their number. When the Aryan branch of the Chariot People swept down out of the mountains, some of them took over the Hurrian kingdoms and formed the realm of Mitanni. Today Mitanni remains a mixed nation, the bulk of its population Hurrian but its ruling class almost entirely Aryan.

General Conditions

Mitanni is the foremost "chariot kingdom" in the known world. Most

of the country in and around Mitanni is open, ideal for fast deployment of large chariot forces. Its warrior-aristocrats are superb charioteers, spending most of their lives training. The king of Mitanni is expected to be a mighty war-leader and strategist – the aristocracy has often deposed kings who failed in this area.

This military skill is necessary, for Mitanni's strategic situation has never been easy. Its frontier with Canaan is relatively safe – the small city-states of the region are no threat to the Great King's army. However, on its other sides Mitanni is trapped among the ambitious kings of Hatti-land, Assyria, and Babylonia. Even the northern highlands are a minor threat; it is always possible that some new wave of half-barbarian invaders will come down, as the Chariot People did long ago.

Until recently, Mitanni compensated for its dangerous position by maintaining a firm alliance with Egypt. For many years strong marriage ties bound the two royal families, and the kingdoms exchanged trade and polite diplomatic messages. This alliance was critical in maintaining an international balance of power, which has kept the peace for over 70 years.

Unfortunately, the alliance has essentially collapsed since Akhenaten's rise to power. Akhenaten is him-

self married to a Mitanni princess, but the relationship seems to have no effect on his planning. Mitanni's enemies are already searching for weakness, while King Tushratta has begun to all but accuse Pharaoh of cowardice in his letters.

Points of Interest

Wassukkanni is the capital of Mitanni, sitting on a branch of the Euphrates River in the central region of the country. It is a beautiful town, rich with wood and precious stones, but is small for the capital of a Great Kingdom. Aside from the king and his court, most of the inhabitants are members of various trading clans. The bulk of the aristocracy lives on large estates out in the country, ruling their Hurrian villages and coming to the capital only for important religious rites or the war-muster.

Carchemish is an old Hurrian city, standing on the upper Euphrates River west of Wassukkanni. Once independent, it is currently a Mitanni vassal and the keystone of the realm's western defenses. Carchemish is large (about 7,000 people) and wealthy, located at the junction of several major caravan routes.

Aleppo is a Canaanite city, once the capital of a realm with pretensions to Great Kingdom status. It was conquered by the Hurrians about 300 years ago and has since become a vassal-city of Mitanni. Like nearby Carchemish, it is large and prosperous due to its location on major trade routes.

Major Personages

Tushratta (age 44) is the Great King of Mitanni. Ever since his older brother Artashumara was murdered, Tushratta has fended off foreign enemies, stayed ahead of would-be internal rivals, and improved the wealth and prestige of his realm. He is fiercely proud of his accomplishments, but secretly afraid that they will not be sufficient. Tushratta works hard to be smarter, tougher, and more ruthless than anyone around him. Only his family and close friends see the genuine affection and humor of which he is capable.

Artatama (age 45) is one of the great aristocrats of the Mitanni realm, descended from the royal house and lord over wide lands in the eastern part of the kingdom. He is very ambitious, and nearly moved to seize

the throne in the short period of chaos after the murder of King Artashumara. Today he pays lip-service to King Tushratta while quietly scheming to take advantage of any change in the realm's fortunes. Artatama has trade and marriage connections in Assyria, and may be one of the Mitanni noblemen most sympathetic to the movement for Assyrian independence.

Kikkuli (age 38) is not a warrior-aristocrat at all, but something even more rare and valuable: an expert horse trainer. He has been in Tushratta's service for over a decade, and is one of the king's most valued servants. Recently he dictated a book on the training of chariot horses, which is likely to become a standard text throughout the civilized world. Kikkuli is almost obsessive about the welfare of his equine charges; he loves and cares for them a good deal more than he cares for human beings.

ASSYRIA

Assyria – the “land of Ashur,” named for the dominant local deity – is located on both banks of the upper Tigris River, close to the northern mountains.

The Assyrians are a very tough and warlike people. They have often had to resist foreign invasion and have sometimes been forced into vassalage, but they have never been conquered outright. Most notably, they are the only major nation of Mesopotamia *not* taken over by any branch of the Chariot People in recent centuries. The ruling class has accepted the techniques of chariot warfare, but remains distinctively Assyrian. This stubborn independence is backed by an approach to warfare that is unusually ruthless, even for the Chariot Age.

Belying their image as warriors, the Assyrians are also mighty merchants. Over 1,000 years ago, they were already sending merchant caravans and building trading posts all over the known world. Today they remain interested in the control of resources and trade routes, as committed to wealth as they are to military supremacy.

General Conditions

Assyria is a unified state, ruled by an absolute monarch. The Assyrian king is the mortal representative of

the god Ashur; any rebellion against the king is considered to be rebellion against the god. There exists a chariot-driving aristocracy, but the great noble houses rarely oppose the king's wishes.

The Assyrian army and bureaucracy are direct, efficient, and somewhat brutal. On the other hand, corruption is rare and cruelty is never used for its own sake. Those who fit into the Assyrian social order are left alone, and can usually prosper. Criminals, rebels, and foreign enemies are ruthlessly punished.

The Assyrian kings have owed fealty to foreigners for the past 300 years. The Kassite kings of Babylonia have an ancient claim to Assyrian allegiance, although that claim is little regarded today. More recently, the Assyrians have paid tribute to the kings of Mitanni. The Assyrian army has also grown considerably in recent years, acquiring the newest techniques of chariot warfare and exhibiting superb discipline.

Meanwhile, Assyria has been very active on the diplomatic front. The Assyrian king has opened direct diplomatic ties to Egypt, despite opposition from Babylon and Mitanni. Emissaries have also traveled to Hattiland, to investigate the possibility of an alliance there. Meanwhile, the Assyrian king has worked to “soften up” even his worst enemies. One of his daughters recently married the king of Babylonia, and her sons will be first in line to that throne. The king has also built close ties with dissidents among the Mitanni aristocracy.

Should anything happen to cause Mitanni's grip to weaken, the Assyrians may be ready to launch a bid for independence.

Points of Interest

Ashur is the ancient capital of Assyria, named after the dominant local deity. Its location on the upper Tigris River is not particularly strategic or very defensible. Its role as the nation's capital derives from its ancient origins and its status as the primary cult center for the Assyrian gods. Unlike many of the cities of Mesopotamia, Ashur is built largely of stone – it has a blocky, sturdy look that reflects the stubborn Assyrian character.

Major Personages

Ashur-Uballit (age 51) is the king of Assyria. He carefully cultivates the image of a tough, ruthless warlord, and is likely to respond to any challenge with great brutality. However, he is actually a thoughtful and forward-looking man, well able to use diplomacy instead of violence to get what he wants. He has a long-range plan to gain Assyria's independence and begin the process of building it into a Great Kingdom; his greatest fear is that he will die before he can put that plan into effect. Despite his age, *Ashur-Uballit* is still a vigorous man, as often encountered in the field as at court.

BABYLONIA

Babylon is a very ancient city, and has been an important trade center for almost 1,000 years. Centuries ago, the Babylonian king Hammurabi built one of the world's largest empires. Although that empire failed soon after Hammurabi's death, the southern half of Mesopotamia remains a Great Kingdom.

Babylon was the target of one of the Chariot People: the Kassites. These highlanders began attacking Babylonia soon after Hammurabi's death, finding little success at first. About 200 years ago, the king of Hatti-land mounted a remarkable long-distance raid all the way down the Euphrates River, defeating the last of Hammurabi's successors and sacking Babylon itself. With the kingdom thus weakened, the Kassites were finally able to put in their own dynasty.

Today, Babylonia's ancient mixture of Sumerian and Semitic peoples is ruled by a Kassite aristocracy of horse-breeding charioteers. The ancient city of Babylon remains the center of the realm.

General Conditions

Babylonia is ruled by a king, although in practice the Kassite aristocracy exerts a great deal of independent influence. The aristocrats keep large estates throughout the country, raising horses and maintaining the kingdom's chariot force. Most of the kingdom's government is in the hands of a professional class of scribes, who manage trade and taxation on behalf of the ruling class.

Despite their origins as a tribe of marauding highlanders, the Kassites

of Babylonia are not particularly warlike. Their last great conquest was over a century ago. Although there are always occasional skirmishes on the borders, and the Elamite tribes in the eastern mountains often cause trouble, the Kassite kings are rarely called on to lead troops in the field. For several decades, they have been more concerned with keeping Babylonia's extensive canal network in good order and restoring the ancient cities and temples.

Dur-Kurizalgu is a relatively small town, built a few decades ago as the official residence of the Kassite kings. It is an attractive but rather quiet place, with little activity except when the nobility come to escape the reeking height of summer in Babylon itself. The city contains palaces for the kings and important nobles, as well as a few small temples to deities that the Kassites brought with them from the north.

Elam

Elam is a semicivilized kingdom in the mountains east of Babylonia. The Elamites have been in contact with the civilized lowlands for over 1,000 years, and have adopted many civilized habits of their own. They sometimes raid into Babylonia, and are subject to punitive expeditions in return. Elamite spearmen and archers often enter the armies of the Great Kingdoms, traveling as far as Hatti-land to take service.

There is little political unrest or dissent in Babylonia at present. The major point of conflict is the recent marriage of King *Burnaburiash* to an Assyrian princess. Within living memory Assyria was a thoroughly subjected vassal of Babylonia – so the prospect of a half-Assyrian king on the throne angers many of the Kassite noblemen. At present the Assyrian queen's enemies are content to whisper in dark corners. The issue may disappear entirely, or it may flare into open dissension, depending on whether she produces an heir for the Babylonian throne.

Points of Interest

Babylon stands on the Euphrates River. It is one of the largest cities in the world, with over 10,000 inhabitants inside the city walls. A royal palace and fortress are located at the north wall of the city. In the city center is a great walled enclosure, containing the great ziggurat called *Etemenanki* and a temple-complex dedicated to the god Marduk. Much of the city is a beehive of houses and multi-layered apartments, large and comfortable for the wealthy, small and squalid for the poor. Babylon has all the problems that one might expect in a truly *huge* city of the era. Sanitation is very bad, contagious disease is common, and some streets are host to crowds of beggars who cannot find work.

Major Personages

Burnaburiash II (age 25) is the king of Babylonia. He is a young and rather ineffectual monarch. He is usually content to leave matters in the hands of his advisors and leading noblemen, while he hunts in the countryside or seeks out new women for his harem. He has no real interest in diplomacy or warfare and does little to assert his rights as a Great King. On the other hand, he *does* insist on proper protocol at his court, and has been known to take *mortal* offense at those who treat him with personal disrespect.

HATTI-LAND

In the northwest is a mountainous country, inhabited by a people foreign to those of the Mesopotamian lowlands. The dominant tribe in these highlands is known as the *Hatti*, and most of their neighbors know their country as *Hatti-land*. The ruling class is distantly related to the Chariot People, but the nation as a whole remains distinct and apart from the rest of the civilized lands. Only in recent years has it become obvious that *Hatti-land* is a sleeping giant – a Great Kingdom only beginning to make its mark on the world.

The Western Lands

West of Hatti-land are a scattering of half-barbarian kingdoms. These play little part in the great events of the Chariot Age – although in about 150 years they will be critical to the events that bring the Age to an end.

Arzawa is a relatively large kingdom. Its inhabitants are distantly related to the Hatti and also have ties to the lands across the sea to the west. Arzawa is currently subject to King Suppiluliumas, but it is restless under Hatti rule and may break into rebellion at any time. The most important city in Arzawa is Millawanda.

Wilusa is a minor kingdom northwest of the Hatti homeland, not under direct Hatti rule but usually allied with the Hatti kings. Its most important city is Troy.

Ahhiyawa (Achaea) is a collection of kingdoms across the narrow sea west of Arzawa. Although the Achaean “homeland” is in the northern district of Thessaly, the most powerful Achaean state is centered on the city of Mycenae in the south. Achaean traders and pirates often travel as far east as Canaan.

Krete was once the home of a magnificent maritime civilization, whose traders were well-known in Canaan and Egypt. The island hit hard times 40 years ago, when mainland Achaeans sacked the capital of Knossos. Today Krete is still recovering from the sack, and is a shadow of its ancient glory.

For more information on Achaea and Krete, see *GURPS Greece*. Note that most of the Greek “heroic age” is still decades in the future.

General Conditions

Hatti-land is a feudal empire. The king rules over the Hatti homeland with a very firm hand, but the other “provinces” are controlled more loosely. Some are ruled by vassal-kings who have kinship or marriage ties to the Hatti ruling dynasty. Others are recently conquered lands, ruled by resentful native princes. Still others are half-barbarian districts, constantly in a state of rebellion.

The Hatti feudal structure is inherently unstable, and has a tendency to threaten collapse every time a new king succeeds to the Hatti throne. In

response, the Hatti have developed a tradition of tough warriors and superb military leadership. The Hatti kings mount a full military expedition almost every summer, putting down rebellion within the empire or occasionally moving to expand its borders. In the rare times of peace, the Hatti kingdom is austere but well-ordered. The nobles rule firmly but fairly, with the aid of a fairly sophisticated code of laws.

The current king of Hatti-land is a talented ruler, with a strong sense of diplomatic and military strategy. At the top of his agenda is the settling of scores with Mitanni, a long-standing

rival of the Hatti kingdom. He has already made one attack against Mitanni, which was repulsed with heavy losses. Since then he has played a waiting game, hoping to divide Mitanni from its Egyptian ally. Early contacts with Pharaoh Akhenaten have been very encouraging, as Pharaoh seems willing to consider closer ties to the Hatti.

Points of Interest

Hattusas is the capital of the Hatti kingdom. The town stands high above a broad plain, which is quite fertile and provides the Hatti kings with superb horse-grazing pasture. Hattusas is very austere, a mountain fortress rather than a cultural or economic center. As with many Hatti settlements, it is strongly fortified, with high stone walls and gates of sophisticated design. Outsiders often find the town a grim place, although it is full of works of art in the characteristic Hatti style of stone carving.

Major Personages

Suppiluliumas (age 39) may be the greatest military genius alive today. He was a chariot officer at the age of 14, commanded large armies at the age of 25, and only succeeded to the Hatti throne after defeating two potential usurpers in open battle. Today, having finally secured the empire his father held, he is looking for ways to expand his power. By nature, Suppiluliumas is an affable man with a very hearty sense of humor, but few people ever see this side of him. Most encounters with him are with the dread Hatti king: cold, ruthless, and supremely cunning.

CHARACTERS

TYPES OF CHARACTERS

The following character types are particularly appropriate for a Chariot Age campaign emphasizing military action. Courtiers, foot soldiers, priests, scribes, and peasants are also good possibilities – see *GURPS Egypt* for ideas.

The words of the officer Ahmose son of Abana, the justified. I speak to you, all those who stand before me. I let you know how I was favored. Seven times have I been rewarded with gold in the sight of the whole land, and with male and female slaves as well. I have been endowed with very many fields. The name of the brave man is in that which he has done; it will not perish in the land forever.

– Egyptian tomb inscription

Chariot Driver

You are an expert chariot driver, the kind of man chariot warriors depend on in battle. You take your warrior partner to battle, you maneuver to protect him and give him the best chance to strike at the enemy, and if all else fails you drive like the wind in retreat. You may not be as nobly born as your partner, but everyone recognizes your value.

Typical advantages: Combat Reflexes, High Pain Threshold,

Military Tactics

Most Chariot Age adventures are likely to have a military orientation. Here are some of the considerations affecting military tactics in the period.

Massed chariots can attack unprotected infantry with impunity, using speed and long range to avoid any possible counterattack. At present, the only known way to defeat one massed chariot force is with another such force – hence most of the Great Kingdoms emphasize chariotry in battle. Infantry is most often used in situations where chariots cannot go – attacking or occupying cities, pursuing barbarians into rough terrain, and so on.

When Great Kings fight one another, both sides take care to select a battlefield where chariots can easily operate. In some cases, one side or the other might even take the time to *plow* the battlefield, removing stones and other obstructions to give chariots room to maneuver.

Battle usually opens with massed chariot charges. Chariots attack in successive waves, trying to break the enemy chariot force. A clever general might maneuver to draw the enemy out, possibly concealing part of his chariot force behind trees or a ridgeline in order to spring a trap at the right moment. Shattered chariot units will withdraw behind the infantry line in order to regroup. Once one chariot force or the other has been defeated, the attack is pressed home against now-unprotected infantry. The winning side's infantry may join the attack at this point, to shatter the enemy line; this is usually the signal for the defeated army to withdraw.

Egypt is the only Great Kingdom to emphasize infantry rather than chariot tactics. The Egyptian army deploys chariots to support infantry, not the other way around. Egyptian infantry includes large numbers of archers, who use volley fire against enemy chariots as they approach. Egyptian chariots maneuver to keep enemy chariots at bay, and to counterattack any positions in which enemy forces have broken through the infantry line.

One peculiarity of Chariot Age tactics is the presence of infantry units called "chariot runners." These are lightly armed skirmishers who fight with the chariotry, running up in support of the initial chariot charges. Chariot runners rescue friendly chariot crewmen whose vehicles have crashed, capture stranded enemy charioteers, scout paths through rough terrain, and so on. All of the Chariot Age kingdoms use chariot runners, although the Egyptians are particularly noted for the technique.

Siege warfare is not well developed in the Chariot Age. The best way to capture an enemy city is to destroy its defending chariots and then starve out the inhabitants. Battering rams are sometimes used to attack city gates. Smaller fortifications with mud-brick walls can be attacked using tools as simple as a pick and shovel.

Military Rank 1, Patron (Noble charioteer), Reputation, or Toughness.

Typical skills: Chariot drivers need Knife, Shield, and Shortsword skills to handle their usual weapons, and high levels of the Tactics and Teamster skills to handle the chariot effectively in battle. If using the charioteering rules from *GURPS Low-Tech*, the chariot driver will want the Sharp Turn maneuver (p. LT52). Chariot drivers care for the horses, so modest levels of Animal Handling and Veterinary skills are appropriate.

The Chariot Driver character type also covers the third man in the Hatti chariot crew: the shield-bearer. Such a character has less responsibility for driving the chariot (and so less Teamster skill) but should have higher weapon skills and very high Shield skill.

Chariot Warrior

You are one of the elite warriors of the Chariot Age, the Egyptian *seneny* or Chariot People *maryannu* who make up the core of every Great King's

retinue. You spend much of your time training to fight, and you look forward to every campaign in the hope of glory and plunder.

Typical advantages: Combat Reflexes, High Pain Threshold, Military Rank 2 or higher, Reputation, Status 2 or higher, Toughness, or Wealth (to buy armor, weapons, and chariot). Many chariot warriors have high ST, in order to wear heavy bronze armor without tiring and get the most range out of the composite bow.

Typical skills: Chariot warriors need Bow, Knife, Shortsword, Spear, and Spear Throwing skills to handle their usual weapons. They will want to invest in the Chariot Warrior maneuver (p. LT52). They also need Teamster to drive the chariot itself, although most chariot warriors work with an expert driver during battle so that they can concentrate on fighting. Even ordinary chariot warriors are military officers and have some level of Leadership, Savoir-Faire, and Tactics.

Craftsman

Chariot warfare relies on several linked technologies, all of which require skilled craftsmen. You are one of those artisans, the men who make the equipment that others take to battle. You often accompany armies in the field, performing repairs and maintenance. You may be of common birth, but even kings praise and reward your skill.

Typical advantages: Patron (Nobleman), Status 1 or higher, or Wealth. Very accomplished craftsmen are likely to be Literate.

Typical disadvantages: Craftsmen who work with bronze a great deal may suffer from chronic arsenic poisoning, since some bronzes are made with arsenic rather than tin. Such craftsmen may have a variety of physical disadvantages reflecting their poor health, notably Lame.

Typical skills: Craftsmen associated with chariot warfare naturally need high levels of some Craft skill. Most also have Armoury skill, preferably specializing in Armor, Bows and Arrows, or Hand Weapons. Carpentry, Mechanic (Chariot), and Woodworking are all required to build and repair of chariots. Leatherworking is useful in creating warrior's equipment and horse harness.

Craftsmen who work with bronze need Blacksmith (Bronze) skill.

Blacksmith (Iron) is a different specialty (see p. LT38) and is extremely rare. Finally, Merchant skill (for selling wares) and Savoir-Faire skill (for dealing with noble patrons) are useful.

Horse Trainer

Every chariot army relies on its horses to be healthy, well-trained, and ready for battle. You are the specialist who makes sure that happens, and like the skilled craftsman you are highly valued by the chariot warriors who depend on you.

Typical advantages: Animal Empathy.

Typical skills: Horse trainers need high levels in Animal Handling, Teamster, and Veterinary in order to train and care for their charges. They may also have Savoir-Faire to deal with their noble patrons, and Teaching to train young aristocrats in the finer points of horsemanship. Horse trainers do not necessarily have high levels of combat skill, although those who accompany the army likely want at least some capability for self-defense. They are *unlikely* to have Riding (Horse) skill, as the technique of *horseback* riding is only now coming into occasional use.

NOTES ON ADVANTAGES

The following advantages require special treatment in the Chariot Age.

Literacy *see p. B21*

Characters in the Chariot Age are illiterate by default, even those of high Status. Literacy is a 10-point advantage.

Military Rank

see p. B22

Almost all of the armies of the Chariot Age used the same system of ranks, heavily influenced by the original Hurrian military structure. Refer to the following tables.

Military Rank does *not* grant automatic levels of Status in the Chariot Age. Aristocratic birth (Status 2 or higher) certainly helps with an officer's military career, but it is not required. Many commoners have reached high rank in the armies of the Great Kingdoms.

Military Rank Table (Infantry)

Level Rank

8	Great King in military command
7	Prince or general commanding an entire army
6	Corps commander, leading up to 5,000 soldiers
5	Brigade commander, leading 500-1,000 infantrymen
4	Regimental commander or "Standard Bearer," leading 200 infantrymen
3	Company commander or "Captain of 50," leading 50 infantrymen
2	Squad commander or "Captain of 10," leading 10 infantrymen
1	Experienced infantryman
0	Infantry recruit, levied peasant

Military Rank Table (Chariotry)

Level Rank

8	Great King in military command
7	Prince or general commanding an entire army
6	Division commander, leading 600 chariots
5	Brigade commander, leading 200 chariots
4	Regimental commander or "Standard Bearer," leading 50 chariots
3	Squadron commander or "First Charioteer," leading 10 chariots
2	Chariot warrior (Egyptian <i>seneny</i> , Hurrian <i>maryannu</i>)
1	Chariot driver or shield-carrier (Egyptian <i>kedjen</i>)

Status Table

Level Notes

8	Great King or Pharaoh
7	Lesser or vassal king, vizier, provincial governor
6	Petty king, advisor to a Great King, high priest of a major cult
5	City mayor or governor, advisor to a lesser king or provincial governor, high priest of a minor cult
4	Advisor to a petty king or city governor, chief scribe, high-ranking priest
3	Nobleman, scribe, literate professional, mid-ranking priest
2	Minor nobleman, valued artisan or craftsman, low-ranking priest
1	Ordinary artisan or craftsman, illiterate professional, novice priest
0	Ordinary peasant
-1	Ordinary slave
-2	Foreign captive, beggar, or outlaw

Status *see p. B18*

The table above describes typical Status levels in the Chariot Age.

EQUIPMENT

Warriors of the Chariot Age can be divided into three categories: archers, shock infantry, and chariotry (light, medium, and heavy). Most soldiers are infantrymen, with widely varying levels of equipment and training. Chariots are the main striking arm, dominating tactical considerations and defining the course of most battles. Cavalry is almost completely unknown – very few people

know how to ride on horseback at all, and doing so in the midst of battle is unthinkable.

Archers usually wear very light cloth armor. At one extreme, Canaanite archers wear a tough cloth wrap that covers torso, arms, and legs but still permits good freedom of movement. At the other extreme, Egyptian archers usually wear only a cloth skirt that covers the hips and upper legs. Most archers are equipped with short bows and bronze daggers. Some elite units, especially in Egypt, are being provided with composite bows.

Shock Infantrymen still wear light cloth armor, although usually more

Magic to Taste

In most historical fiction covering the Chariot Age, magic is subtle or invisible. High adventure comes from interacting with the near-mythic figures of the ancient world, triumphing over huge armies, and affecting the fate of nations. Still, magic and extraordinary powers are certainly found in the legends of the time . . .

One way to introduce magic is to make individual heroes slightly more than human. During the Chariot Age, every king was a representative of the gods on earth, and belief in divine descent was very common. Very high attributes would be appropriate, especially ST (see *Enhanced Strength*, p. CI7). The advantages Blessed (p. CI34), Destiny (p. CI35), Divine Favor (p. CI36), and True Faith (p. CI47) are also appropriate.

If the GM and players *must* have magic, make it subtle and mysterious. Minor spells of protection or cursing might be fairly common. Flashy, obvious magic will be quite rare, controlled only by high priests or ancient scribes – and almost never available to PCs. The default *GURPS* magic system doesn't really fit the magical and religious beliefs of the time; consider using the Ritual Magic system from *GURPS Spirits* instead.

In civilized lands, the only “monsters” available are wild beasts – often hunted from chariots! Lions can be found in many parts of the civilized world, sometimes quite close to settled land. Elephants wander in wilderness areas of Egypt and the Fertile Crescent. In Egypt, crocodiles and hippopotami are considered deadly game.

More fantastic creatures are most likely found in high mountain valleys or in the deep desert; see *GURPS Bestiary* or one of the relevant *GURPS* historical sourcebooks for ideas. Demons and evil spirits are another strong possibility for a more fantastic campaign (see *GURPS Spirits*).

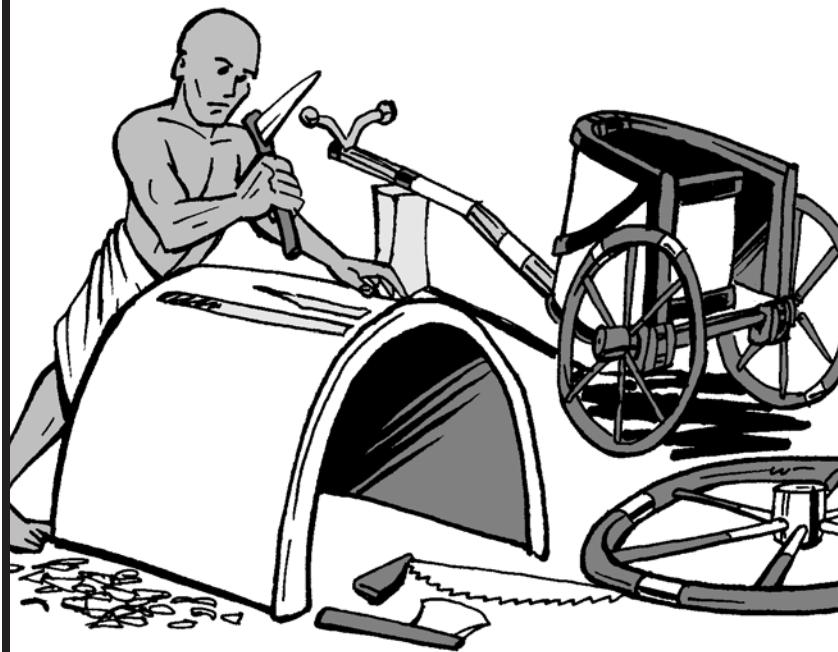
of it than the archers. For example, the Egyptian *nakhtu-aa* (“strong-arm men”) wear cloth armor giving full coverage to torso and legs. The weapons carried vary widely. Most shock infantry units are equipped with spears, daggers, or stabbing swords, and small or medium shields. Some units substitute axes for spear or sword, while many Egyptian infantry regiments are equipped with the *khopesh* (p. LT48). Most shock infantrymen also carry two to three javelins, for throwing just before the initial clash of battle.

Light Chariots are typical of the Egyptian chariot force, which relies on speed and high maneuverability rather than on sheer mass. The chariot is a light model, drawn by two ponies, carrying no additional armor. The driver wears little or no armor, and carries a small shield and a knife. The chariot warrior wears bronze lamellar armor and is armed with stabbing sword and composite bow. At least one spear, and possibly a few javelins, will also be on hand in the chariot cab.

Medium Chariots are typical of nations influenced by the Hurrians and other branches of the Chariot People, notably Mitanni. The chariot is a light model, drawn by two ponies. Medium chariots use more armor than the Egyptian light chariot; some armies use bardings to protect the chariot horses. The driver wears bronze lamellar armor and carries a small shield, but is armed with only a knife or stabbing sword. The chariot warrior also wears bronze lamellar armor, carrying a stabbing sword and composite bow.

Heavy Chariots are used almost exclusively by the Hatti. The chariot is a heavy model, drawn by four ponies, and carries a three-man crew: driver, shield-bearer, and warrior. The driver and shield-bearer wear cloth armor. Both are armed with knife or stabbing sword, but the shield-bearer carries a medium shield to help protect all three crewmen. The warrior wears bronze lamellar armor, and carries a stabbing sword and composite bow. Hatti chariots always carry a long spear or lance, and make considerable use of it against enemy infantrymen on the field.

For more details on various items of Chariot Age equipment, see *GURPS Low-Tech*.



ADVENTURES

The following campaign frames are suggested for the Chariot Age.

The Hatti Blitzkrieg

King Suppiluliumas is planning to launch a massive attack against Mitanni. Past encounters have shown that attacking across open country in Canaan is not very productive. Instead, the Hatti are likely to cross the Euphrates River in the highlands, then sweep down to attack the Mitanni capital at Wassukkanni from the *north*. If the main Mitanni force is neutralized, Suppiluliumas will then turn west, recrossing the Euphrates River to conquer the Mitanni vassal-cities in northern Canaan. If everything goes well, the Hatti king will win great prestige among his fellow Great Kings. Those with him will doubtless win tremendous glory and plunder.

This campaign frame is a simple war story, but it offers a variety of encounters as events unfold. Characters should be Hatti warriors, possibly noble charioteers, with plenty of combat skills.

The earliest battles will be in Ishuwa, a critical border principality that is currently loosely allied with Mitanni. Ishuwa is mountainous and difficult for chariots, but it must be quickly secured before Suppiluliumas can move down into the plains. Even charioteer PCs may find themselves taking part in infantry actions, trying to trap and defeat Ishuwa's small army.

With Ishuwa conquered, the real war can begin. Battles against the Mitanni will probably involve maneuver and deception, as the Hatti army tries to outflank or overwhelm any force between it and Wassukkanni. The city itself is not well fortified, and will fall quickly if the Hatti manage to defeat or outmaneuver the main Mitanni army.

Once in northern Canaan, the Hatti will need to exercise a great deal of diplomacy as well as military might. PCs might be sent as envoys of the Hatti king, searching out political opportunities and trying to keep Egypt out of the war. Aziru of Amurru might prove a useful ally, if he can be trusted (see p. 119). Each of the Mitanni vassal-cities might have one or more internal factions willing to

support Suppiluliumas. Meanwhile, the Hatti will be operating very close to the Egyptian sphere of influence. Some Egyptian vassals might take it upon themselves to intervene in the war, and even Pharaoh Akhenaten might be provoked into action if the invaders are not very careful.

hired mercenaries from elsewhere. The general is a 10-point Patron (Powerful individual, 9 or less). He can provide gold to buy equipment and hire more men and intelligence to direct the team to where they can do the most good. The team's task is to deal with threats to the Egyptian empire before they become so large that nothing but the forbidden full-scale campaign will solve them.

Many adventures are possible in this campaign frame. The team may be sent to support the king of Urusalim against *apiru* bandits, to arrest a disloyal Canaanite chieftain, to search out a renegade Egyptian in the city of Hazor, to build an alliance of Canaanite cities against the renegade Labayu, and so on. Negotiation skills may be as critical as battlefield experience.

Tushratta's Venture

The king of Mitanni is in terrible danger. His long-standing alliance with Egypt is collapsing, and the kingdom is ringed by enemies who sense weakness. Over the next few years, King Tushratta will need to step very carefully if he wants to keep his kingdom.

Characters should be high-status Mitanni – charioteers, priests, scribes, or horse trainers – who are loyal to the king. Adventurers first have to take on the roles of diplomats or spies, searching out the most immediate threats to Tushratta's throne. Possibilities include Assyrian or Canaanite rebels, an aggressive Hatti king (see *The Hatti Blitzkrieg*, above), northern hill-barbarians, disloyal Mitanni aristocrats, or even an outbreak of assertiveness on the part of Babylon or Egypt. The GM could design adventures involving *all* of these parties, preferably with suitably villainous NPCs to make the quest personal.

Still, only one or two of the potential foes will pose an immediate threat to Mitannian sovereignty. Sooner or later the true villains will be unmasked and King Tushratta will be ready to take the field. This will be an opportunity for sweeping mass-combat scenes, dramatic confrontations with long-time adversaries, and (assuming success) a hero's reward from the Great King.



Horemheb's Scheme

General Horemheb has often approached Pharaoh about the danger threatening Egypt's empire in Canaan. Pharaoh shows no interest in maintaining the empire, and has refused to permit Horemheb to go on campaign. Horemheb is therefore seeking volunteers to represent Egypt's interests in the region *in spite* of Pharaoh.

Characters may be Egyptians with combat experience, or they may be



INDEX

Advantages, 83, 105-106, 125.
 Adventures, 127.
Airships, *glossary*, 100; *piloting*, 90-91; *types*, 89-90.
 Alchemy, 23-24.
 Allies advantage, 36.
Apiru, 119.
 Artifacts, 102.
 Assyria, 121-122.
 Babylonia, 122.
 Babysitters Unlimited (BU), 32; *assignments*, 36; *mission profiles*, 42.
 Balloons, 88.
 BDOs (Big Dumb Objects), 109.
 Bibliographies, 16, 85, 100, 114.
 Britain, 94-95.
 Campaigns, 30, 86, 96.
 Canaan, 118-120.
 Carthage, 66.
 Caves, 78-79.
 Characters, 4, 27-29, 52, 123-125.
 Cimmerians, 67.
 DELAG, 91.

Dependents disadvantage, 36.
 Dirigible, 88-89.
 Disadvantages, 83, 107-109.
 Dysonians, 111-113; *templates*, 112.
 Egypt, 68-69, 117-118.
 Elam, 122.
 Enemies disadvantage, 36.
 Equipment, 12-16, 29, 70-71, 84-86.
 Fairies, 25, 74.
 Fatigue, 8.
 Fossils, 80.
 Gaia Hypothesis, 77.
 Galactic cycles, 109-111.
 Galactic Railway, 55-57.
 Geocentric cosmos, 74.
 Geology, 77-78.
 Geological time, 75; *ages*, 76.
 Germany, 91-93.
 Ghost Form advantage, 6.
 Ghosts, 25; *communication*, 11; *investigating*, 11; *motives*, 7; *theories*, 5; *wards*, 12-13.
 Giants, 75.
 Golden Archipelago, 21.
 Graf Zeppelin, 88, 98-99.

Greece, 62, 64.
 Green Archipelago, 20.
GURPS Bestiary, 126.
GURPS Low-Tech, 126.
GURPS Spirits, 6, 126.
GURPS Undead, 6.
 Hatti, 122-123.
 Identity Shards, 49.
 Infinite Church, 50.
 Italy, 95-96.
 Kids, 40-41, 43.
 Known Lands, 18-22.
 Magic, 23, 44, 70, 79, 126.
 Magic items, 24.
 Maps, *Known Lands*, 28; *Greece*, 65; *Hellenistic World*, 63; *tectonic*, 84.
 Military Rank advantage, 125.
 Mitanni, 120-121.
 Mother, 33-34.
Munchkin, 40.
 Ouroborians, 113.
 Parents, 39.
 Planetary interiors, 76-77.
 Preservers, 51.
 Racial generation, 105-109.
 Religions, 24-25.
 Rome, 64.
 Selucid, 67-68.

Skills, 83-84.
 Solar Empire, 20-21.
 Sparta, 60-61.
 Spirits, 27, 80.
 Starships, 57-58.
 State of Mind, 48-49.
 Status, 30, 54, 125.
 Subterranean vehicles, 79.
 Supernatural, 70.
 Templates, *Angel parahuman*, 53; *cat*, 26; *Construction engineer*, 81-82; *Crystallloid*, 81; *Dysonian*, 112; *Flexbot*, 54; *Geologist*, 82; *Griffin*, 80; *Meridian mongrel*, 53-54; *Spartan*, 72; *Spelunker*, 82; *Troglodyte*, 82-83; *Xian*, 54.
 Timeline, *Meridian*, 46-47.
 Underworld spirits, 80.
 United States, 96-97.
 Virtuality Vaults, 51.
 Web of Harmony, 50.
 White Archipelago, 22.
 Woodland Dukedoms, 21.
 World War I, 91.
 Wormholes, 56.
 Zeppelin, Count Ferdinand von, 88.

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