

the

No. 2, \$2

JOURNAL

of the Travellers' Aid Society



VICTORIA



TRAVELLER



Traveller is a game system intended for role-playing situations in the far future. It envisions certain standards for human behavior, for space travel, and for alien worlds. It details the basics of life and of endeavor. From that background, players assume the role of adventurer and set out into the universe in search of fame, glory, fortune, and power.

To begin, **Book 1** covers the details of persons, how they are defined and generated, and what forms of knowledge are at their command. It continues by covering combat with bare hands, laser guns, and everything in between.

Book 2 is concerned with starships and space travel. Securing passage on a starship, and encountering its costs and its comforts, gives everyone an idea of the pleasures and dangers of interstellar flight. Additional information covers how an individual may procure his own personal ship, how much it will cost to operate, and what it takes to crew it. Players may instead attempt to sign on as crew for working passage. More details cover space combat, commerce, and experience.

Book 3 indicates what kinds of worlds will be encountered, including the details of size, atmosphere, populace and government. Separate sections address the potential for animal encounters, patron encounters, and for psionics.

In essence, the **Traveller** Basic Set (Books 1, 2, and 3, boxed) provide a set of ground rules revealing how the universe operates. Players and referees are then free to venture in search of whatever they desire.

Traveller is a role-playing game. Although intended for use by a referee with from 2 to 5 players, any number can play, and solitaire play is extremely simple. Because it is a role-playing game, much of the action is cooperative in nature, rather than strictly competitive, and everyone has ample opportunity to participate and contribute.

Traveller — Science-Fiction Adventure in the Far Future. Boxed \$11.98

Available from hobby and game shops, or direct from

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203 North Street, Normal, Illinois 61761

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Dates in this issue of the Journal are stated in accordance with an arbitrary Imperial calendar of 365 days. The expression of date consists of a three-digit day number (showing the current day of the year) followed by four-digit year number (showing the current year since the founding of the Imperium).

The date of this issue is 274-1105; the 274th day of the 1105th year of the Imperium. All dates given in this issue correspond to this dating.

The Journal of the Travellers' Aid Society is a science-fiction gaming magazine dedicated to Traveller, GDW's role-playing game set in the far future.

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Submissions: We welcome articles and illustrations for the Journal. Please inquire before submitting manuscripts; we will send a style and want sheet.

From the Management

The June 1979 issue of *The Dragon* (Vol III, no. 12) contained a review of *Mercenary* by Mark S. Day. While the review was generally favorable, we would like to take this opportunity to respond to some of Mr Day's criticisms.

All of the points with which we shall take issue are contained in the seventh paragraph of the review. For those of you who did not see it, we quote:

"Personally, I would have liked to have seen rules for mercenaries from the navy and Scouts as well as Army and Marines. Laser pistols were missing from hardware, even though such bizarre monstrosities as plasma rifles were represented. ...

Finally, I would like it a great deal if the folks at GDW would put out a correction for their earlier rules, where it is stated that the only effect of a vacuum on combat with conventional weapons is that they are silent. Even my limited recall of chemistry suggests that it is impossible to sustain an explosion without oxygen, so that without using expensive cartridges containing an a built-in oxidizer, combat with "conventional" weapons in outer space is impossible."

With his first point, Mr Day in effect criticizes us for not having made *Mercenary* longer by including other material. To criticize a set of rules or a game because it has omitted some vital aspect of its subject matter is one thing, but to downgrade rules because they do not cover something beyond their scope is a little like saying "Squad Leader is a fairly good game, but I would have liked it to have had more about air-to-air combat in it."

Mercenary was intended to deal with a limited section of ground combat (infantry action) in terms of Traveller (and does so quite well in our opinion). To have included material on other services would have meant that we would have had to expand the book beyond a reasonable size or deal with the army and marines in less detail. Neither of these was acceptable to us. (As an aside, we deal with naval characters in *High Guard*, and will cover scouts in a future book.)

We did not include laser pistols because we did not feel they were appropriate for the book. More on this subject below.

The statement that caused the greatest reaction here was the last, about conventional weapons in a vacuum. Our first reaction was somewhat stunned disbelief. "How can anyone say that? " we asked ourselves, "it's so clearly not true." Discussing the matter a little further, we found each of the staff who read the review had concluded the statement was false for different reasons. One of us happened to

have a little better knowledge of chemistry than Mr Day, another reasoned that guns work underwater, and do not get oxygen from the water, therefore they must work in a vacuum. Another staffer, reasoning that rifle cartridges are sealed, estimated the amount of air in one, deducted a small amount for the space taken up by the powder charge, and, knowing that 20% of normal air is oxygen, concluded that there was not enough oxygen in a cartridge to support the reaction, therefore cartridge propellants must contain their own oxygen. We further concluded that anyone who consulted any sort of reasonable reference work (high school chemistry text, encyclopedia, etc) could have obtained all the information he needed to come to the same conclusion, regardless of his previous chemical knowledge.

The point of this discussion is that the players and referees of Traveller have an obligation to think. Traveller deals intimately with science and technology, and demands that its players and (especially) it's referees have a general knowledge of the sciences and of science fiction. It is not necessary that you be an expert in all things, or even in anything, but it is necessary to be widely read, to know where to look to find things out, and to think.

Take, for example, the laser pistol. Although it does not specifically mention them, Traveller provides all the information needed to enable a referee to create them, with a little mental effort. Since, as referee, we are running the world, we declare that a laser pistol should be to a laser carbine as a conventional pistol is to a conventional carbine. A conventional pistol usually has no shoulder stock, and has a shorter barrel than a conventional carbine. Pistols often have lower powered cartridges, even if the caliber is the same, but this is not always true. As the

pistol's barrel is shorter, the sight radius is also shorter, and the pistol is less accurate at a given range than the carbine. The general principles of operation are the same for both weapons.

Referring to book 1 (pp. 35-37) , we find that a laser carbine is 800 mm long, weighs 5000 grams, has a power pack which enables it to fire 50 shots before recharging, and costs Cr 2500.

We decide that our laser pistol should be the same weight as an automatic pistol, but that the barrel should be only 100 mm shorter than the laser carbine. Subtracting 100 mm plus the length of a shoulder stock from the length of the laser carbine, we get a length of 350 mm, which is a little clumsy to handle, but we want it that way. For the purposes of firing, we will treat our laser pistol as if it were a laser carbine but with a DM of -1 at medium and -2 at long range to reflect the fact that the lack of a shoulder stock makes it harder to aim. Note: If we wanted to make the laser pistol less clumsy, we could decrease the length of the barrel further, but we would then have to make the accuracy worse. We choose to make no change to the power pack (but, we could, if desired, make it weigh less, and radically reduce the number of charges it held, or make available more compact PP's at higher tech levels). Since most of the cost of the weapon is the "lasing" part of it's innards, we set the cost at Cr 2000.

Characteristics - Length: 350 mm.
Weight: 750 grams. Base Price: Cr 2000.

The above example indicates how the Traveller rules can be used to create something not present in the rules. We don't have room to describe everything. With a little imagination, a little research, and a lot of thought, almost anything can be made compatible with Traveller.

Loren Wiseman

Pass in REVIEW:

The Creature That Ate Sheboygan

The monster of your choice attempts to destroy a city. 100 counters, 11 x 17 map, rules and charts in a polyvinyl envelope. \$4.00.

Design - Greg Costikyan

Publisher - SPI, 257 Park Ave South, New York, NY 10010.

Star Gate

Combat between rival starfleets, fought in several planes and dimensions. 100 counters, 11 x 17 map, rules and charts in a polyvinyl envelope. \$4.00.

Design - John Butterfield

Publisher - SPI, 257 Park Ave South, New York, NY 10010.

Titan Strike!

Ground forces battle it out for control of a source of vital fissionables. 100 counters, 11 x 17 map, rules and charts in a polyvinyl envelope. \$4.00.

Design - Phil Kosnett

Publisher - SPI, 257 Park Ave South, New York, NY 10010.

Vector 3

Three-dimensional ship-to-ship combat. Players build their own spacecraft. 100 counters, 11 x 17 map, rules and charts in a poly envelope. \$4.00.

Design - Greg Costikyan

Publisher - SPI, 257 Park Ave South, New York, NY 10010.

Colony Delta

Humans and Insectoids fight over a rich colony world. 508 counters, two 11 x 17 mounted maps, rules and charts in a box. \$12.00.

Design - Adam Gruen

Publisher - Fantasy Games Unlimited, PO Box 182, Roslyn, NY, 11576.

War of the Sky Cities

Tabletop game of conflict between floating cities in earth's distant future. 26 page rule booklet, cut-out playing pieces. \$4.50.

Design - Bob Reed

Publisher - Fantasy Games Unlimited, PO Box 182, Roslyn, NY, 11576.

Dune

Game version of Frank Herbert's classic SF novel. Two 8 x 16 mounted maps, 212 counters, 2 decks of cards, six player shields, 2 combat wheels and rules in a box. \$15.00.

Design - Future Pastimes

Publisher - Avalon Hill, 4517 Harford Road, Baltimore, MD 21214.

Freedom in the Galaxy

Plucky rebels vs the imperial juggernaut. 400 counters, 22 x 34 map, 140 cards, galactic guide, rules and charts in a box. \$19.95.

Design - Howard Barasch, John Butterfield

Publisher - SPI, 257 Park Ave South, New York, NY 10010.

Starfleet Battles

Ship-to-ship combat inspired by Star Trek. 108 counters, 17 x 22 map, rules and charts in a polyvinyl bag. \$4.95.

Design - Stephen Cole

Publisher - Task Force Games, 405 South Crockett, Amarillo, TX 79129.

Task Force Games does not sell its wares by direct mail, preferring to work wholly through distributors and hobby stores. Their games, like most of the games listed here, are sold in hobby stores, or are available by mail from Judge's Guild, 1165 N. University, Decatur, Illinois 62526.



TRAVELLER NEWS SERVICE

REGINA/REGINA (0310-A788899-A)

Date: 097-1105

¶ Officials of the General Shipyards on Regina today announced that they have completed negotiations with Tukera Lines to locally manufacture L-Hyd drop tanks for use on high-capacity commercial vessels. The first production examples are expected to be available within six months, at which time Tukera Lines will begin high capacity service from the interior. Component assembly will be carried out at General's more modern facilities on Pixie (0303-A100103-D).

¶ L-Hyd drop ships have only been in service for the last dozen years in the interior, being made possible by recent advances in the field of capacitor engineering, a joint press release explained. Commercial vessels equipped with the new generation of long-storage jump capacitors carry jump fuel in specially designed L-Hyd drop tanks in excess of their rated tonnage. Upon conversion of the fuel to the massive energy required for jump, the drop tanks are explosively jettisoned through the use of break-away connections and explosive bolts. Jump is executed when the remains of the tanks are a safe distance from the vessel.

¶ A spokesman for General Shipyards explained that local yards are not yet capable of manufacturing the long-storage capacitors required for the process, but that production of the drop tanks is possible, thus allowing the high capacity starships of the Tukera Lines to begin service to the Regina subsector.

¶ L-Hyd drop tanks are not reusable, and thus increase the absolute cost per jump. However, experience has shown that the increase in cargo tonnage resulting from the elimination of internal J-fuel storage more than makes up for this, the press release explained.

¶ The joint press release concluded by stating that local manufacture of L-Hyd drop tanks marked the dawn of a new era of commerce and prosperity in the Regina subsector. Following the announcement, common stock in Oberlindes Lines plummeted 27 points on the Regina exchange before trading was suspended. Officials of Oberlindes Lines were not available for comment. Ω

REGINA/REGINA (0310-A788899-A)

Date: 101-1105

¶ Close on the heels of the joint announcement by General Shipyards and Tukera Lines that L-Hyd drop tanks would soon be manufactured in the Regina subsector, came word by express boat from the Imperial core that a decision has been made to deploy Jump-6 L-Hyd drop tank express boats on all major express routes. Initial feasibility studies indicate that such a system could average jump-5.5 per week by executing maximum jumps where possible, and leaving current xboat units to disseminate information between the new major relay points. The system is expected to cut communication time to the Imperial hub to under 25 weeks. The Initial System Deployment Schedule indicates that the Regina subsector can expect to be fully integrated into the network within a decade. Ω

Traveller News Service is another Imperium-wide benefit of membership in the *Travellers' Aid Society*.

While displacement aircraft such as the semi-rigid airship were superseded many years ago as a means of air transport, several models are still available for sporting or special purposes. Occasionally, airships such as these are used by visitors to worlds where the technology or other factors make it necessary for them to be inconspicuous. A typical lighter-than-air ship of this sort is described below.

Airship

TL 7

Cr 500,000

Constructed with a semi-rigid envelope, this craft moves through the air powered by two fuel-cell driven propellers. The craft has four main gas bags within the envelope, plus several smaller trim bags which are emptied or filled as required to keep the craft on an even keel. Altitude is changed by pumping gas in or out of the main bags. Inflated, the craft is 70 meters long, and 30 meters in diameter.

The gas bags are constructed of a synthetic fabric covered by an outer skin from which the cupola is suspended. The envelope has a capacity of 45,000 cubic meters, and the craft masses 40 tons without gas. Lift capacity varies with temperature and pressure, but will average five tons (5000 kilograms). In normal use, the airship contains cramped quarters for six (more spacious and comfortable for fewer) passengers, and space for 2500 kilograms of cargo.

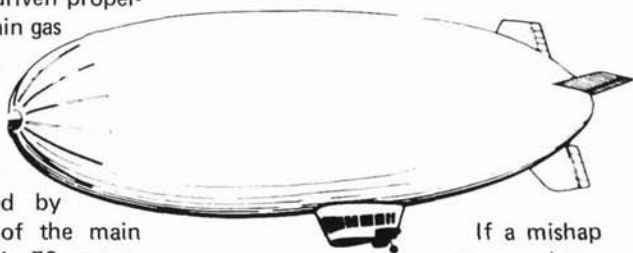
The airship is collapsible (for stowage aboard a starship), producing a bundle

THE SHIP'S - LOCKER -

requiring twenty tons (280 cubic meters). Collapsing the airship requires about six hours of work by one person. Setting up the ship from its collapsed state requires about three hours work by one person.

The airship can achieve 35 kph in still air; wind velocity will affect this performance. The fuel cells will provide power for thirty days of continuous operation before requiring refuelling.

Operating an airship requires vehicle skill, especially in rough weather. Apply LTA craft skill (+2 per level of skill) as a DM on a roll for mishap when confronted with bad weather and other dangers.



If a mishap occurs, determine the nature of the mishap (1D) below:

1-2: Fuel cell malfunction. Ship cannot move except to drift with the wind.

3-5: Excessive loss of gas. Airship can no longer gain altitude.

6: Catastrophic loss of gas. Airship must make a forced landing. Roll 8+, with DMs: if achieved, the ship has crashed. Referee must implement chances of death, injury, and ship damage.

Lift: Assuming 1G on a world of size 8 and atmosphere 6 (Terra), one cubic meter of hydrogen will lift 1.21 kilograms, and one cubic meter of helium will lift 1.13 kilogram. Airships will not work with any real efficiency in atmospheres less than type 6. For atmospheres 8 and 9, increase the lift potential for hydrogen or helium by about 20%.

UNDERWATER ACTIVITIES

Underwater sports are popular on many planets, and about one person in six has some familiarity with the techniques and equipment used. Roll 6 (1D) exactly for each character to determine if that character is familiar with diving in general. If so, roll 6 exactly (1D) for each set of equipment listed below, except for swimming equipment, which anyone familiar with diving will know the use of.

A character familiar with diving will have a mishap on a roll of 2D for 8+, and a fatal mishap if 11+ is rolled. Roll once per 30 minutes underwater, or fraction thereof. DM's -3 for familiarity with equipment used, +2 for each ten meters total depth of dive.

Average descent/ascent speed is one meter per second. If unable to breathe (due to being caught under the surface when air supply expires, breath runs out, etc) the diver will take 2D of damage per quarter minute the lack of air persists. When unconscious, the diver will take 5D of damage per quarter minute. If unconscious, the diver will float toward the surface at a rate of .5 meter per second unless wearing weighty equipment such as oxygen tanks or otherwise prevented from floating (if caught in wreckage, for instance).

An untrained individual can hold their breath for an average of 30 seconds. A person with experience can extend this time to 90 - 120 seconds. (If a player claims a longer time, have him or her demonstrate.)

Swimming Equipment

TL 3 **Cr 200**

This equipment does not permit a character to breathe underwater, it merely permits improved vision, and faster movement. The user may dive to any depth desired, but consideration

must be given to getting back to the surface again. A player with 60 seconds lung capacity could, for instance, dive to 10 meters, stay there 40 seconds, and surface within the time limit of his lungs. An inexperienced player who dives to a depth of 10 meters and spends 20 seconds there is in trouble.

Oxygen Tanks

TL 5 **Cr 150**

As described in book 3. These are not suited to use underwater unless modifications are made to the regulator. Attempting to use them unmodified will increase the chance of a mishap (DM +6). Mechanical expertise on the part of the character who performs the modifications will also effect the likelihood of a mishap. DM -2 per level of Mechanical skill, -3 if mechanical tool kit is used, +3 if no Mechanical expertise.

Compressor

TL 5 **Cr 300**

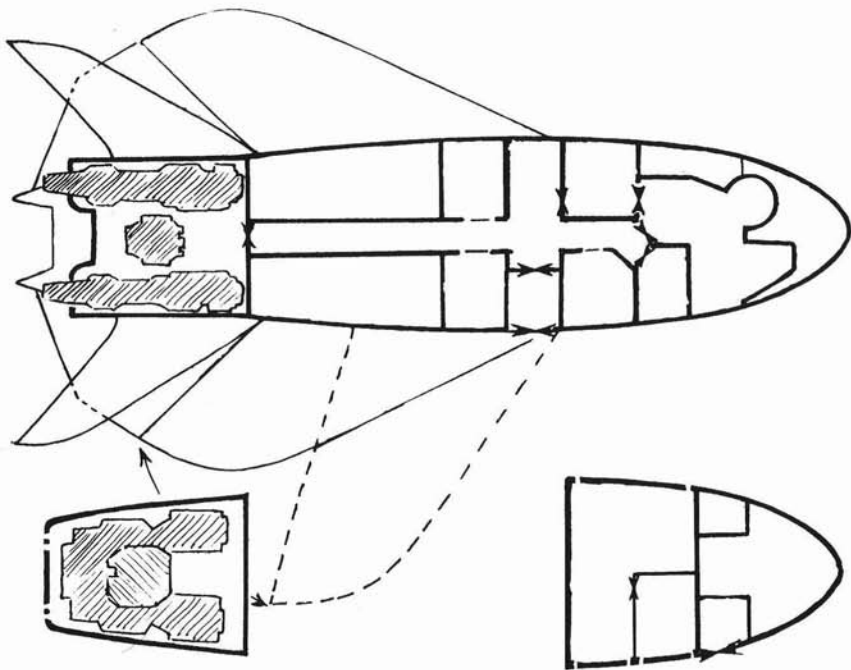
This device is used to refill air tanks in the field. A DM of +4 to the mishap roll is in effect if the tanks are filled by a person unfamiliar with diving. Note: a compressor can be jerry-rigged from a respirator by anyone with Mechanical-3 or greater and a mechanical tool kit.

Vacc Suit

TL 7 **Cr 10000**

As described in book 3. This equipment may be used underwater if modified as per the oxygen tanks described above. The same DM's apply.

Any of the above equipment can be created on an ad hoc basis by a character with high mechanical skills and the proper materials and tools. The referee should determine chances for success and likelihood of mishap based on his knowledge of the situation.



Serpent Class Scout Ships

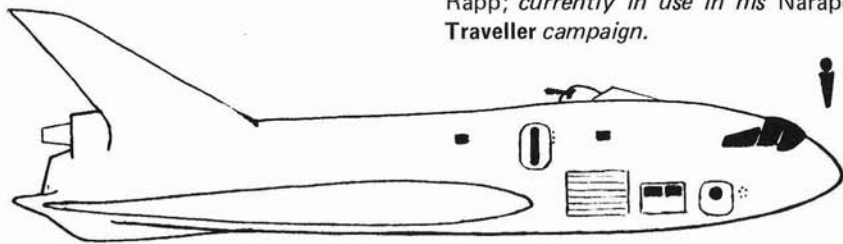
Using a type 100 (modified) hull, the Serpent Class scout ship meets all normal specifications for the Type S Scout Starship. The hull is streamlined and features variable-sweep airfoils for atmospheric maneuvering and landings.

Names reported in use for the Serpent Class include Asp, Cobra, Deceiver, Eel, Python, Reptile, Snake, and Viper.

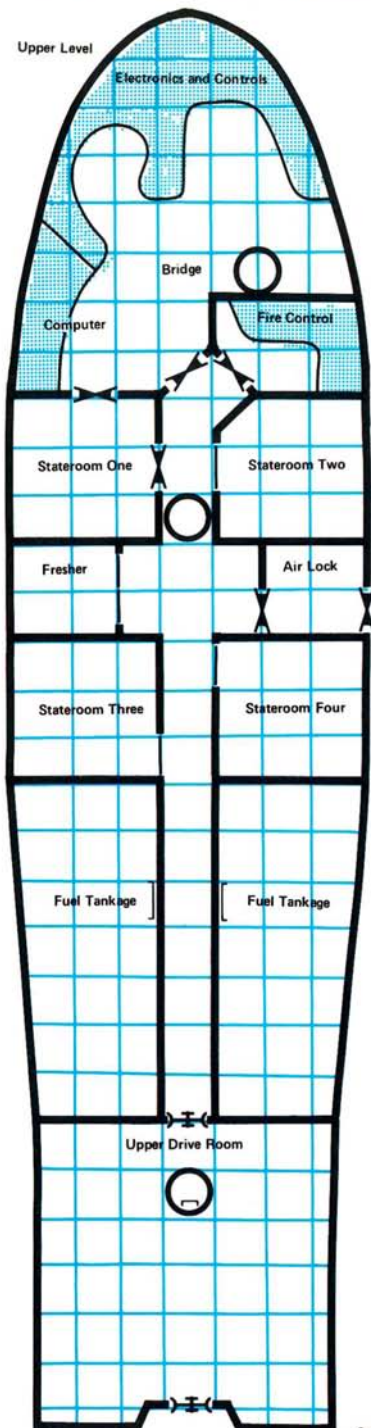
Typically placed with scouts of exemplary service, this class is capable of being highly modified. The vee tail and the variable sweep wing, coupled with hovering and VTOL capabilities, make the Serpent Class ships highly sought after.

Base price: Cr 27,630,000

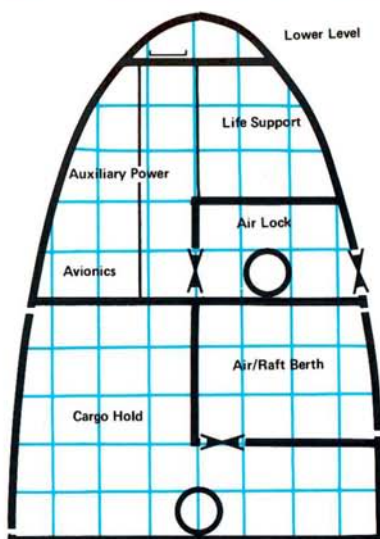
—Adapted from a design by Donald Rapp; currently in use in his Narapoia Traveller campaign.



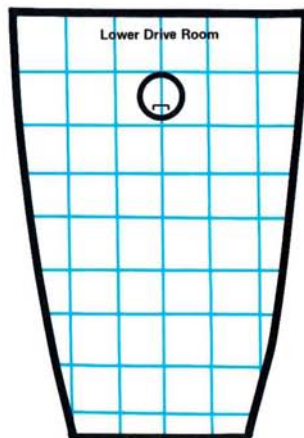
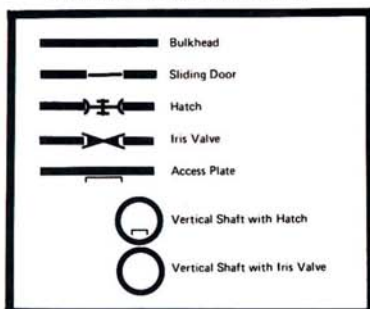
Upper Level



Lower Level

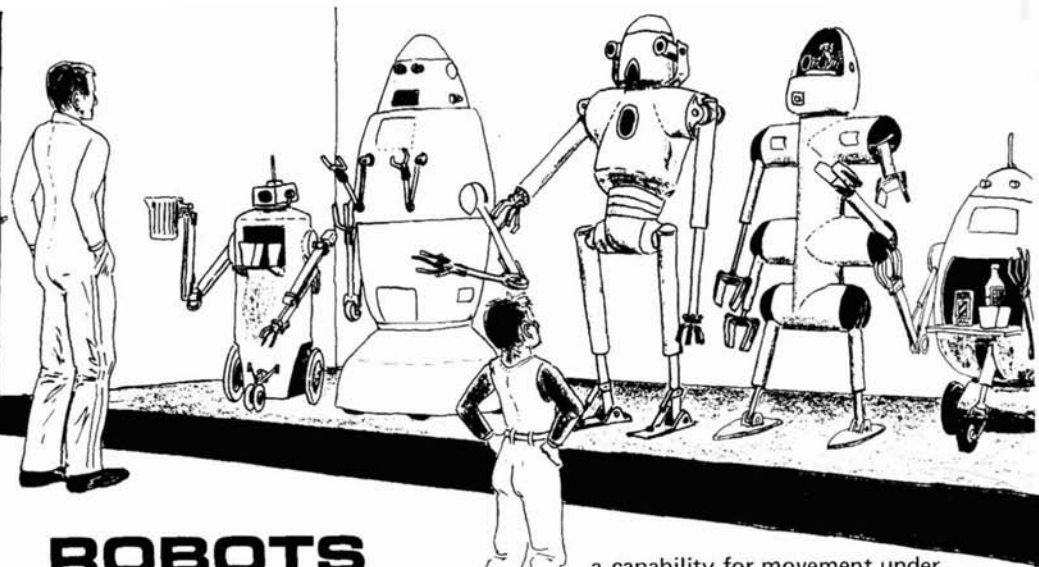


SERPENT CLASS SCOUT SHIP, TYPE S



Square Grid uses 1.5 meter intervals.

From a design by Don Rapp



ROBOTS

androids, and mechanical men have always played a great role in science fiction. From the very beginnings of history, people have viewed mechanical, non-human intelligence with a mixture of fear and fascination. From Capek's *R.U.R.* through Asimov's robots and Saberhagen's berserkers (as well as countless others) to the droids of *Star Wars* and Ash of *Alien*, robots have been an integral part of SF literature.

Before addressing the general idea of robots, it is necessary to define exactly what we are talking about. Is a robot a highly-polished, anthropomorphic English butler type like C3-P0, or is it a squat, utilitarian R2 unit? Does a computer-controlled tank qualify as a robot, and what about a smart bomb? What about an assembly-line welding machine? How do you classify an artificial person (perhaps the Franken-

a capability for movement under its own power, sensory apparatus to allow input from the environment, and the ability to interpret and act upon information. These assumptions are not necessarily inviolable; some circumstances may arise which call for exceptions.

THE CLASSIFICATION OF BEINGS

The concept of artificial beings dictates a classification system which is based on the natural beings being emulated. This is possible within a two dimensional context, ranging from the natural to the artificial and from the biological to the mechanical. For example, human beings are both natural and biological while the traditional concept of robot is mechanical and artificial.

Figure 1 shows this two-dimensional context, with the ranges for most types of the beings shown. It is important to remember that

ref's notes

stein monster is the best example)? For the purposes of these ref's notes, we consider the requirements for a being, artificial or natural, to be a self-contained machine (in the broadest sense) endowed with artificial intelligence. Subordinate assumptions include

rarely will a category occupy only a point on the table; many humans are completely natural, but the addition of fillings in teeth, eyeglasses, replacement joints, or artificial nails prompts some shading into the artificial range. Similarly, surgical replacement of organs with

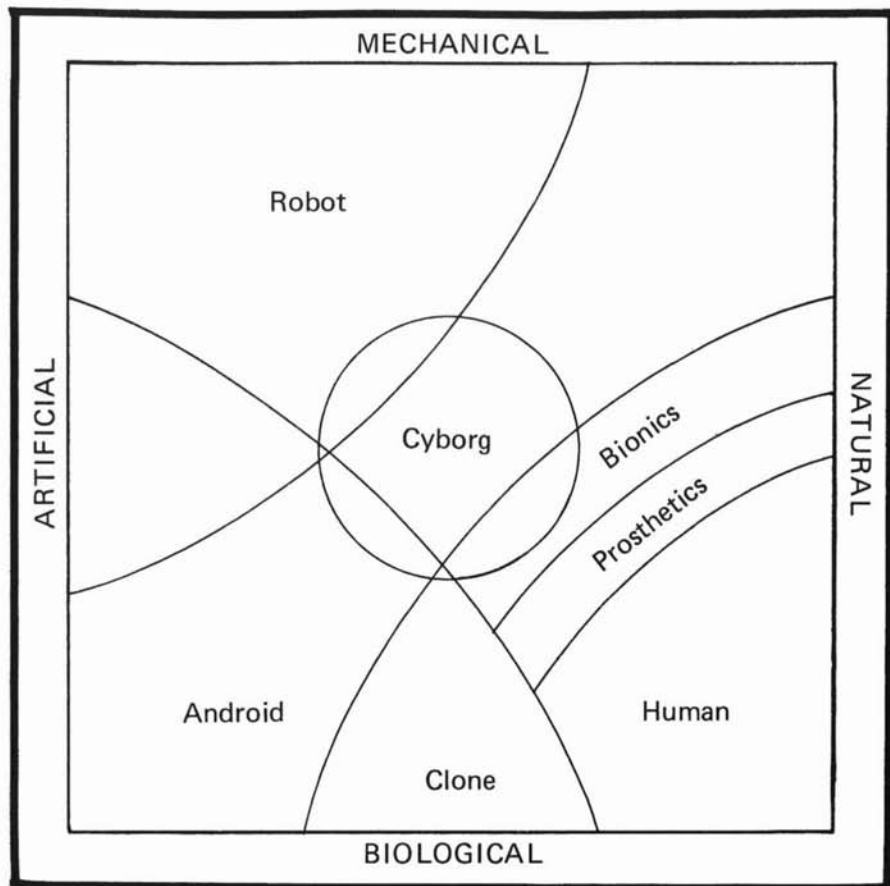


Figure 1. *Ranges of Beings (Natural to Artificial, and Biological to Mechanical)*

cloned organs, dictates shading from the purely natural toward the artificial.

DEFINITIONS

The following definitions of various beings should provide a framework within which future ref's notes on this subject will build.

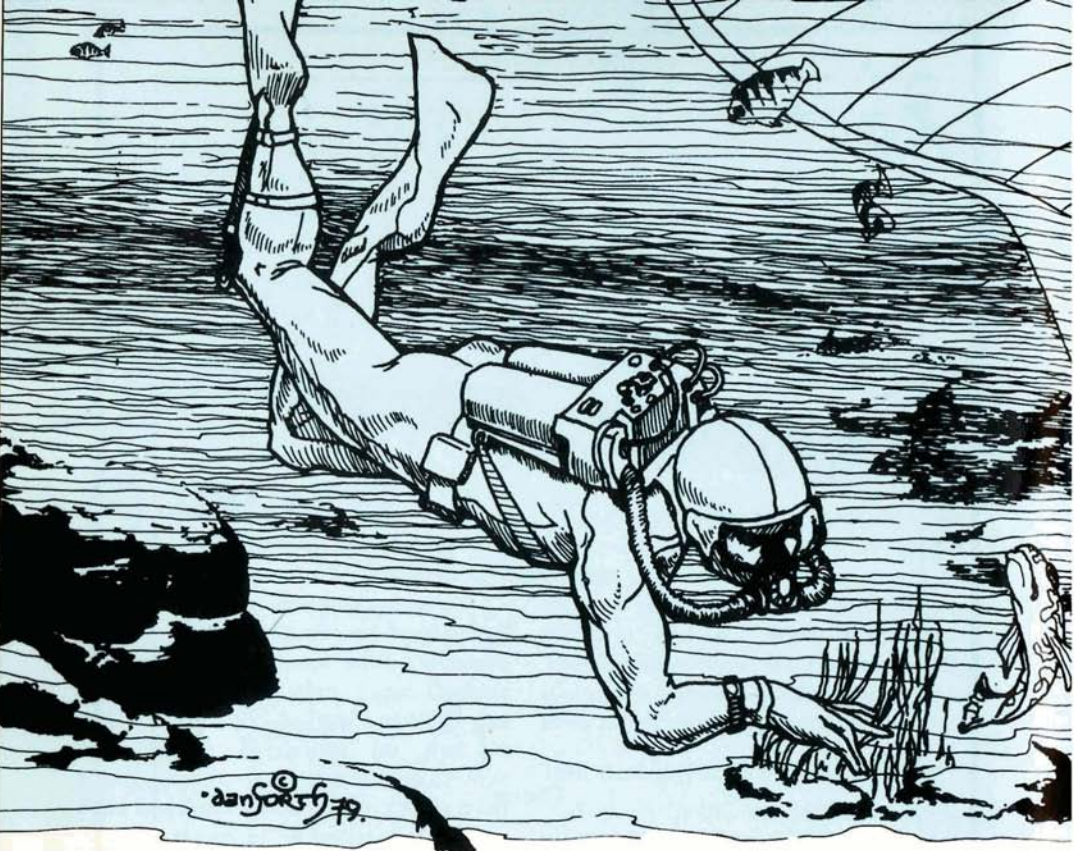
Being: A self-aware, self-powered individual with the capacity to sense its environment and react to it. Humans, intelligent aliens, robots, and androids are all beings.

Robot: A mechanically-based artifact manufactured to some set of specifications. A robot may, or may not, be anthropomorphic. Examples of robots

include the robot from *Forbidden Planet*, and C3-P0 from *Star Wars*.

Android: A biologically-based being created to a set of specifications for some purpose or duty. Androids exhibit life, in that they are biologically living; their distinction is that they were created, rather than having evolved. Androids generally are incapable of reproduction, and can be identified by close inspection. Some suggestions concerning androids in science fiction include permanent identifying marks such as tattoos or a blue dyed skin. Ash, from *Alien*, may be an android.

Clone: A biological copy of an
—continued on page 30



In the course of seeking gainful employment, the players are contacted by a representative of Sternmetal Horizons, LIC.

The initial survey of the planet Cocta found it worthless for any major exploitation and thus the planet has been a backwater for many years. Recently, however, rumors have gotten out that the initial report was forged, and that extensive and valuable mineral deposits lie hidden in the region known as the Take Yabu, a dense jungle area three hundred kilometers north of Atarishii Okayama, the capital/spaceport. Sternmetal sent an undercover survey team into the region several months ago, but the report they were to send back was never received. Investigation revealed that the team had apparently com-

pleted their survey and was returning to the spaceport by a tourist excursion steamer when the ship was attacked by a band of terrorists.

The wreck of the steamer was never located, and the local government officials are reluctant to speak of it. Apparently, only a cursory investigation was made, as the area was (and still is) infested with guerillas hostile to the local government.

Amber Zone

Sternmetal Horizons, LIC, will pay CR 2000000 for the recovery of the lost survey report, or CR 100000 for the location of the wreck of the ship. They provide the following additional information:

The government of Cocta is desperate for tourists (virtually its only means of getting off-planet currency) which has been on the wane since the rebellion in the outback began. They have, therefore, taken steps to conceal the extent of the rebellion and restricted tourists to the relatively safe areas south of the capital.

Locally available transport includes hovercraft, ATV's, air/rafts, and local beasts of burden similar to terran mules, all available at .01% of the book 3 purchase price per week, including guide. (Guides are mandatory. Tourists bring their own transport must hire one guide per vehicle at a cost of CR 100 per day).

Due to the activities of the rebels, import restrictions on weapons are very tight, but Sternmetal has arranged for a quantity of weapons to be smuggled on-planet (one VRF Gauss gun and 2000 rounds for the group as a whole, and one ACR with 300 rounds of ammunition and 10 HE RAM grenades per member of the party.

The party may retain the weapons after the mission is completed, but are responsible for getting them off-planet.

Standard operating procedures for clandestine operations of this nature permit Sternmetal to describe the probable nature of the container of the report.

Referee's Information:

The referee should prepare a rough map of the terrain around the capital for several hundred kilometers in all directions. The steamer was sunk in about 50 meters of water in a large lake (about 150 km by 300 km), located about two hundred kilometers north of the city.

For each week spent traveling to or from the lake, or spent in search of the

wreck of the ship, roll 2D for 4+ for the party to be attacked by guerillas. If a 10+ is rolled, the party is taken completely by surprise. The referee should adjust the size and armament of the attacking guerillas to the size of the party.

After arrival at the lake, two die rolls should be made to determine if the hulk of the ship can be located, and the report recovered. For location of the wreck— 2D for 12+, DM +4 if using sonar or metal detection equipment, +5 if diving equipment is used for the search (these rolls are additive). This roll may be made only once per week.

For the recovery of the report— 2D for 8+, DM of -6 if no diving equipment is used. This roll may only be made once per week, after the wreck has been located.

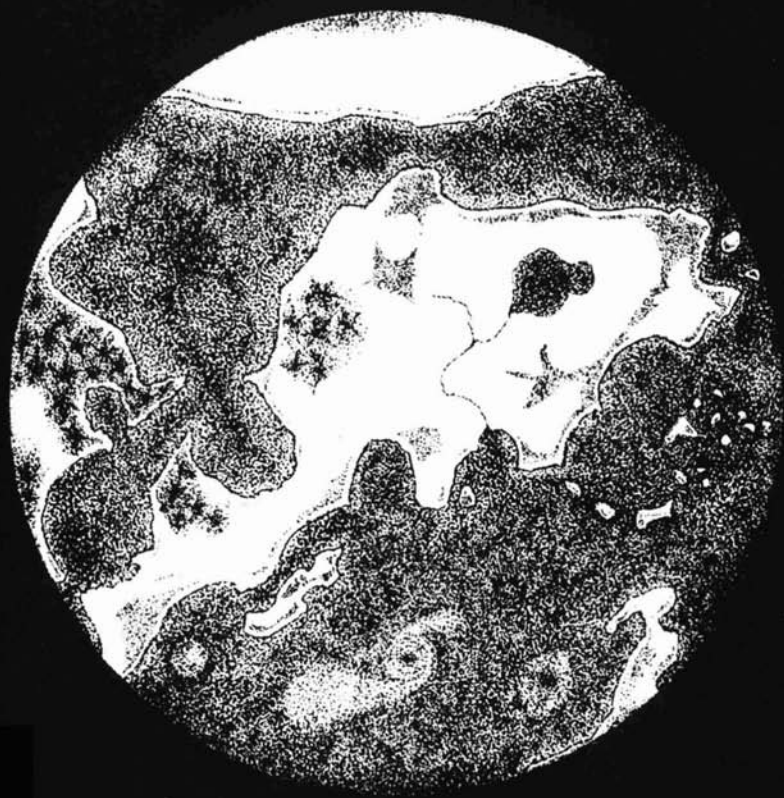
The referee should determine likelihood of arms or equipment being destroyed by guerilla attacks, and the possibility of ad hoc diving equipment being fabricated on the spot.

Note: the party will have to deal with the guide(s) in some fashion (kill them, bribe them, etc) before venturing north of the city, or the party will be intercepted and arrested by units of the local army. Guides are armed with one automatic pistol each.

If the party returns to Atarishii Okayama with the arms they will be arrested unless they have taken measures to conceal them. Some means of explaining the absence of the guide(s) (if they have been killed) will have to be devised before the locals will allow the party to leave Cocta.

The weapons may be sold outside the city for 1D x 10% of their book value. Selling them will take 2D weeks, DM -2 per level of streetwise. Roll 2D for 8+ for the local police to discover the deal and arrest all involved.

Loren Wiseman



VICTORIA

APPROACHING the Victoria system from space, its most striking feature is its large gas giant, radiating a small but detectable quantity of heat, as well as displaying notable emissions throughout the electromagnetic spectrum. These emissions indicate that the gas giant is midway in identity between a planet and a star: very large for a planet, but not radiating enough to be readily classified as a star. Use of ordinary ship detectors will soon reveal the presence of several other bodies in orbit around the primary.

Closest to the star is E800000 - 0, an atmosphereless ball of rock locked one face to the star. Spectroscopically, it reveals itself to be composed of light elements, including lithium, silica, and aluminum. All are locked in compounds as rock, and mining or metal recovery operations appear potentially economical.

Second from the star is Victoria, X697770 - 4, a relatively small world with a dense, tainted atmosphere and oceans covering much of the surface area.

Visible near Victoria is Albert, classified E251000 - 0. This satellite has a breathable atmosphere and a small percentage of open water. Vegetation is present, and the moon has at least one built-up settlement obvious to observers.

Third from the star is E641000 - 0, an uninhabited world with vast ice caps and extensive blue-brown deserts. There is some evidence of low-order flora in the few moist valleys.

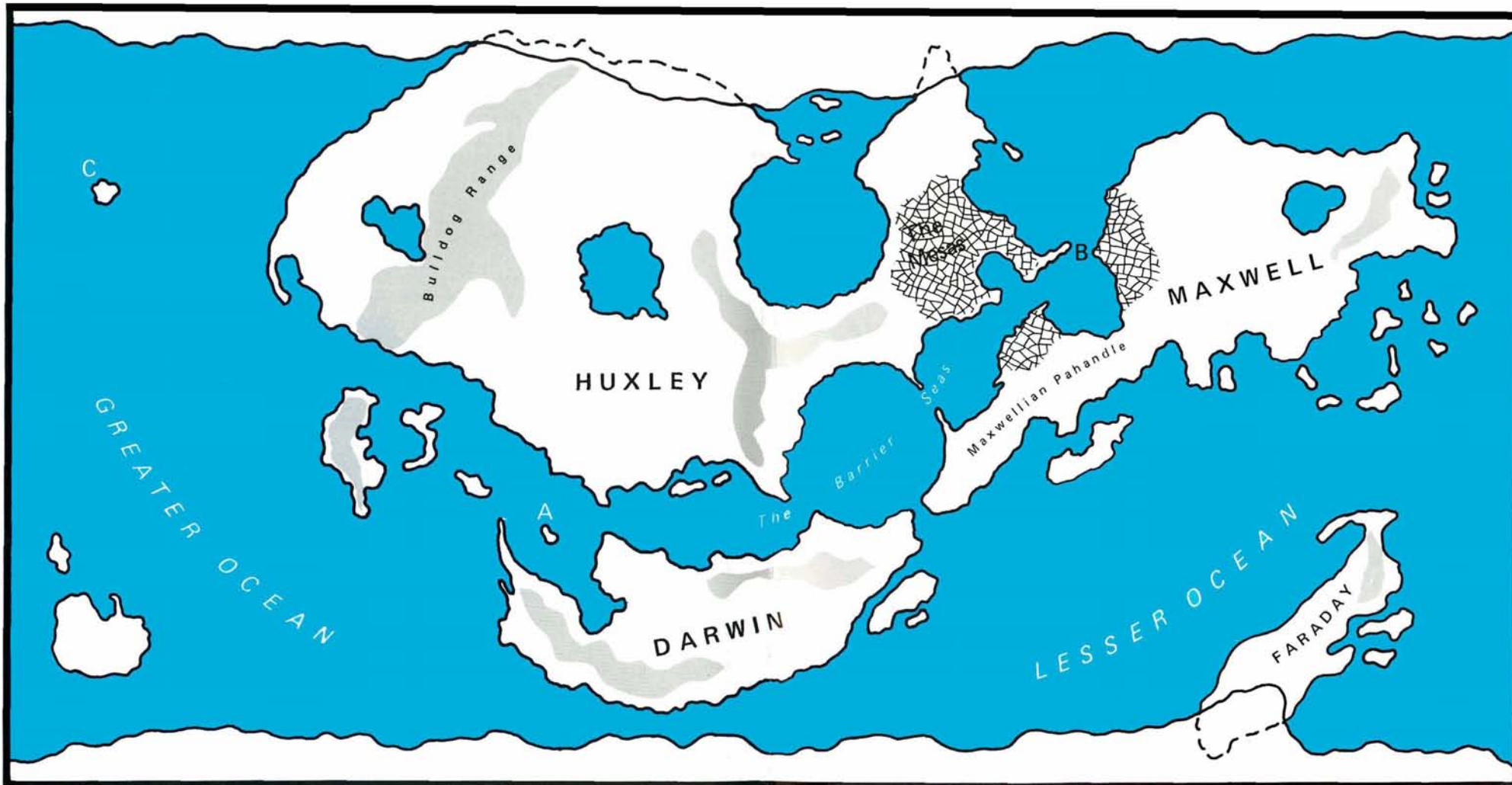
In the fourth orbital ring is a sparse asteroid belt containing chunks (in about equal proportion) of frozen gases, rock, and nickel-iron or other metals. The sizes of these chunks range from a few meters to several hundred meters in diameter.

The looming gas giant occupies the system's fifth orbital position, and has no large satellites. Small asteroids have been captured in the leading and trailing trojan points and some few small ones have been captured as transient moons.

VICTORIA is a very old world, circling a Population II star, and thus is deficient in metals and heavy elements. It shows cratering as a result of an intense planetary bombardment in which asteroids were evidently used as missiles. Erosion dating (a copy of the initial contact and exploration report by the Scout Service should be on file in the ship's library) indicated the attack occurred about 300,000 PI (Pre-Imperium), a date which matches with established period of the final holocaust of the Ancients.

The bombardment of Victoria was extensive and certainly beat the planet almost to complete destruction. Calculations have been made which indicate that one more asteroid hit at the time could have cracked the crust and fragmented the world into a new asteroid belt.

—continued on page 18



VICTORIA X697770-4

Victoria is a moderate-sized planet measuring 11 000 kilometers (8 000 miles) in diameter at the equator; equatorial circumference is 34 400 kilometers. The atmosphere is dense, with a natural taint at low altitudes (below 1 000 meters) which is apparently not effectively dealt with by filter masks. Individuals must wear oxygen masks, or remain above 1 000 meters elevation. Hydrographic coverage of the world is 70%, most of which are shallow seas.

Estimates place human population of Victoria at ten million, with a range of error of plus or minus 20%. Nearly all humans live in the Mesas, at altitudes above 1 000 meters. There is no single world government, resulting in a classification of balkanized: typical government types include representative democracy, bureaucracy, and monarchy. There is no established law level for all locations. Techno-

logical level is 4— external combustion engines, but severely hindered by lack of metal resources on the world.

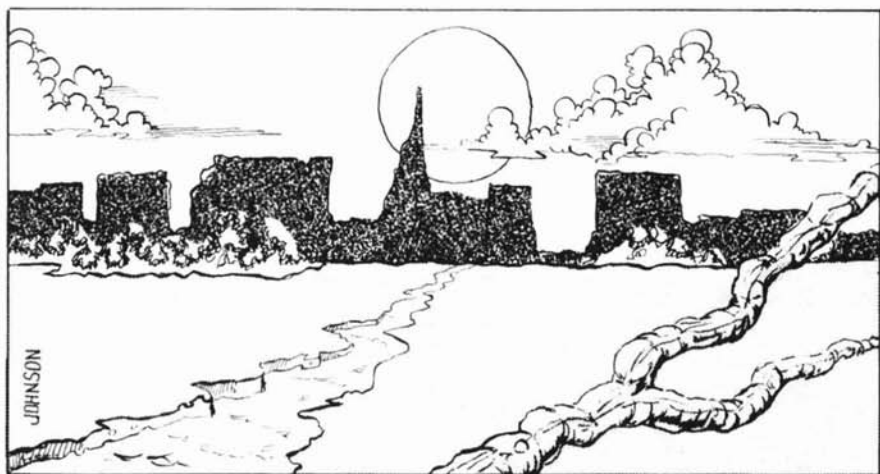
Geological and geographical evidence show Victoria to have once been bombarded with asteroids in some sort of conflict. Many seas and much of the terrain are a result of this action. Point A is a typical impact location, complete with a raised central island formed by the remains of the asteroid. Point C is similar, with the circular crater completely submerged.

Extensive commerce between communities on Victoria depends on airship transport. Point B indicates a major airship route over open sea; it connects the major mesa settlements on the east and west shores of the Barrier Seas.

Victoria was rediscovered by the Imperial Scout Service in 901 and declared interdicted after a short period of clandestine observation and contact. The stated purpose of the interdiction was to shield the developing culture as it coped with its lack of metal resources.



Intentionally
blank.



WHEN the bombardment hit Victoria, it actually did crack the crust in several places, creating as a result one of the most interesting geological phenomenon on the planet: the Mesas. Closely spaced asteroid hits caused magma to well up in isolated locations. On solidifying, the magma created an area of high tablelands averaging 1200 to 3000 meters above sea level. On most such mesas, their tops are reasonably flat, ranging in size from one kilometer by one kilometer to extensive mesas 100 by 100 kilometers. They boast varied terrain, occasional lakes and rivers. Their soil supports agriculture, and transplanted domesticated livestock thrives.

Mesas are close set, separated by chasms ranging from 500 to 2000 meters wide. These chasms are fed by waterfalls and mesa top watershed, and nearly always contain rivers or lakes draining toward the sea. In some cases, the chasms are filled with rubble from collapsed walls or contain the entrances to caverns cut by erosive action over the centuries. Indeed, land bridges between various mesas are common. Long

stretches of natural tunnel, some sharing river surface, and others either dry or choked with vegetation, are known to exist within the chasms.

VICTORIA'S atmosphere exhibits a peculiar variety of taint. At high altitudes (above 1000 meters, varying slightly depending on barometric pressure), the atmosphere is normal and supports human life without apparent problem. Below 1000 meters, the atmosphere shows a concentration of a carboxyl radical which accumulates in the human bloodstream. For humans, this accumulation acts as a slow poison, affecting the nervous system, especially muscle control. In general, human dexterity deteriorates in direct proportion to the length of time spent in the presence of the poison. Ultimately, long exposure (two to three months) will result in permanent coma, and death. Fortunately, the poison is shed by the body when in clean air again; thus, a simple recovery period gradually counteracts the effects of the poison.

The mesas have served as an ideal colonial location because they provide

living areas above the carboxyl poison's lethal range. The lowlands remain a forbidden land for the human settlers of Victoria, although limited hunting or mining expeditions into other areas have proved possible, when proper precautions are taken. In addition, some natural highlands and mountain valleys have been found which provide land for agricultural use or which allow mining in a relatively safe environment.

VICTORIA is a metal-poor world, and all local technology has grown to depend on non-metallic resources, including wood, gazelle bone (locally known as ivory), and ceramics. Naturally, this has kept technological development at a rather low level. Metal, what precious little there is, is used for vital fittings, fishhooks, and very expensive weaponry such as knives or simple projectile guns. In point of fact, any ordinary iron or steel implement commands an exorbitant price. Unfortunately, there is little in the way of foreign exchange on the world, and most commerce with outsiders is by barter. And there is little of value for export purposes.

THE flora and fauna of Victoria show apparent influences of re-seeding and genetic manipulation. Many of the varieties of animal and plant life appear to have been placed on the world after the bombardment; in fact, several distinct types of life-forms are present, obviously originally evolved on other worlds. The ivory gazelle (see the Bestiary, page 26) is an example of genetic manipulation; evidence indicates that these examples were placed on the world in the course of the reseeded.

Most striking is a unique plant form locally known as the balloon or gas plant; it prefers moist, jungle-type terrain. Unknown elsewhere in the

explored Imperium, the gas plant appears in the depths of the chasms. Each plant has a central taproot and ground-hugging runners which hold the leaves and gas sacs.

Each gas plant produces, on a continuing basis, a crop of 10 to 60 sacs which gradually fill with hydrogen in practically pure form. Chemical analysis has shown this hydrogen to be pure mono-atomic hydrogen, with no presence of deuterium or tritium. Explanation of this phenomenon awaits further research and investigation.

The sacs each carry one large seed, surrounded by pulpy edible meat, considered a delicacy by the locals. When ripe, the balloons break free and drift on the wind. Because each ripe sac has a capacity of nearly 1 cubic meter, these plants serve as a ready source of hydrogen. Originally, locals used this gas as a fuel, but this was abandoned as the sacs proved too rare. Early on, however, a local entrepreneur turned the hydrogen to transportation; he built a tethered balloon to cross a chasm separating two settled mesas. The idea caught on immediately, especially as the balloons do not require much metal for construction.

At this point, the true benefit of the mesas and the chasms became apparent. While the atmospheric winds of Victoria are relatively normal, the chasms form a vast maze of intricate passages below the normal range of wind action. As a result, they form an immense convoluted windbreak which results in calm air throughout the chasm network for most of the time. Dirigibles were found to operate in this calm air with great efficiency; they soon grew to form the major inter-mesa transportation network. Of course, balloons also fly above the mesas and in the open air, but such activity is dangerous (primary dangers are wind and squalls) and is generally

held to a minimum. Therefore, much of the settled area on the mesas is near the edges (the shores, so to speak), close to the dirigible ports and routes.

Balloons, as well as other wind machines, have been pressed into service on Victoria for a variety of tasks. Tethered balloons, both hydrogen-filled, and hot-air, have been constructed for use as base stations in a heliograph system linking several of the mesas in a commercial message network. Individual hang gliders are used for fast transportation of small-sized shipments and for hunting; often several hunters will operate from a single mother-dirigible which provides the altitude necessary for launchings.

THE dirigibles themselves are remarkable constructions specifically tailored for the dense local atmosphere, having the experience of centuries to guide their building. A typical airship is a simple gas bag, often multi-celled, which contains the hydrogen lifting gas. Underslung on the craft is a basket, built long and slender, for the crew. In the calm air of the chasms, wind can be ignored much of the time, and the crew propels the ship by air rowing. Long, feathered sweeps project from each side of the ship, much like the oars of a galley. Experienced crews provide power on the backward stroke of the sweeps, and then feather the vanes 90 degrees to quickly push them back into position for another power stroke. Speeds of up to 30 kph have been achieved in calm air. In close quarters, the sweeps are used as guides which steady the craft near chasm walls or as poles which propel the ship by pushing against the rock faces.

Recent declines in the quality of crew personnel (due to the time required for training, and do to increased needs for crews to meet the growing

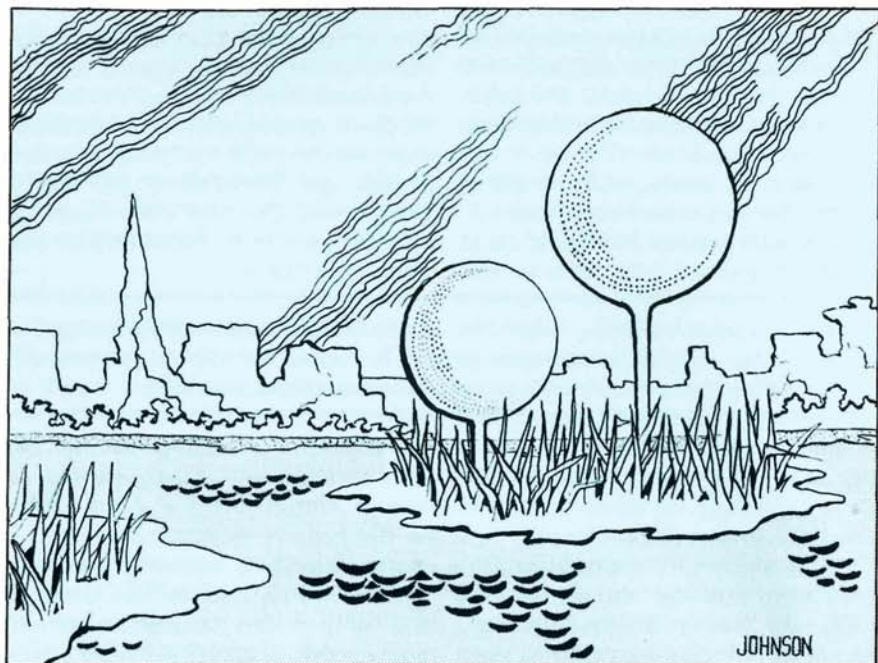
VICTORIA is loosely based on the world Durrent in the novel Prisoners of the Sky, by C. C. MacApp, published by Lancer Books, New York, 1969.

colony's demands for transport and communication) have forced advances in dirigible technology. The most important advance has been the propeller-driven dirigible. A central crankshaft extends through the underslung basket to a geared propeller mechanism set in vanes for steering; the traditional sweeps are retained in abbreviated form to allow close-quarters maneuvering, but rarely figure in long-distance operations.

For strength, the shaft must be carved from local wood or produced from laminated constructions. It is nearly 400mm in diameter, and operated by opposing pairs of crew who push on the shaft with the flats of their hands. While clumsy, the skill required to operate such a ship is much less than with the old sweep-propelled versions.

The crews for dirigibles are of several types. Conventional military ships tend to have highly trained, cohesive crews, most of whom man the sweeps, plus a captain, mate, and helmsman. In the few wars fought on Victoria, conscripted crews have manned all available warships; these crew are rotated often to keep the ships in operation while minimizing the effects of carboxyl poisoning. Commercial ships have a variety of crew types, in some cases even penal crews—virtual slaves who are worked until they die of carboxyl poisoning or fatigue.

Nearly all dirigibles are armed in one way or another, generally with cross-bows or harpoon guns. These weapons are used against flying predators or to puncture enemy gas bags. Hang glider



launches from dirigibles are commonplace, and free-fall drops (at very close quarters) to other dirigibles have been recorded. Flame weapons are rare, if only for the problem of preventing explosion aboard the attacking ship; when used, they are mounted on hot-air dirigibles, which have short range and limited maneuverability.

VICTORIA was probably settled by sublight colonial ships in the early pre-Imperium era, around 1450 PI. Initial development was impeded by the bad atmosphere which inhibited settlement except on the mesas and by the resulting communications problems created by the chasms. The original colonial government balkanized rather quickly, although true rivalry between governments has rarely emerged. In many ways, Victoria can be considered

to have several state or province governments without any central national government binding them. The development of balloon technology produced a surge in commerce and communication, sparking a renaissance for the world about two centuries ago, approximately at the time of Scout Service rediscovery. The interdicted designation was applied by the Scout Service to shield the world from potential exploitation and to allow experimental observation of a non-metal technology in process.

Strangely, the Navy has concurred in the interdiction for the same reasons. An alternative explanation for the Navy's position concerns jump routes. Victoria/Lanth 0308 lies four parsecs from Ivendo/Lanth 0709 and from Asgard/Vilis 0709. Four parsecs further on from Asgard is Garda-Vilis/Vilis

0308, a major subsector hub (these worlds are more fully covered and subsector maps provided in *The Spinward Marches*, Supplement 3). Messages from Ivendo to Garda-Vilis via xboat service take ten weeks, while the Navy has been known to route messenger task forces through Victoria and Asgard for a trip-time of slightly over three weeks.

This response has been described as a representative attitude on the part of the Imperial Navy, showing (on the one hand) a preparedness for potential unpleasantness with the nearby Zhodani Empire and their allies, the Sword Worlds, and (on the other hand) a definite penchant for intrigue and interservice rivalry.

The following information is intended for the use of Traveller referees in administering Victoria in adventures and campaigns. If you are not a referee, do yourself and your fellow travellers a favor, and refrain from reading this section.

CARBOXYL POISONING

Exposure of humans to the atmosphere of Victoria at altitudes of less than 1000 meters results in carboxyl poisoning, which stems from absorption of a carboxyl radical into the bloodstream. The process is slow, but quite sure. Any individual exposed to the conditions is automatically affected.

In game terms, an individual receives a reduction in his or her dexterity characteristic at the rate of -1 per week of exposure. Upon moving to a location above 1000 meters, recovery occurs at the rate of +1 on the dexterity characteristic per week (never to exceed natural dexterity, of course). Extreme exposure, where dexterity declines to zero, produces an unconsciousness which is considered to be a coma. Death will follow in 1 to 6 days (one die roll) without medical treatment and removal from the low altitude environment.

Oxygen tanks or independent air supplies provide protection from carboxyl exposure; filter masks and respirators do not.

A very intensive research operation (extending to several months of work, a Model/4 or better computer, and at least two characters with education 10+ and intelligence 10+) could be mounted to determine the cause and source of

the radical in the Victorian atmosphere. Such an effort will show the source to be a genetically modified plant similar to the balloon plant. This species is nearly ubiquitous, and occurs in both land and sea varieties. Its miniature gas sacs (only a few centimeters across) release the carboxyl radical with explosive force as a byproduct of a seed release mechanism.

It appears that elimination of these plants is a monumental and probably hopeless task.

METAL

The low availability of metals and heavy elements on Victoria has proven a definite roadblock in the march of progress. Prospecting has been conducted mainly in the mesas, in the chasms, and in the mountain ranges above 1000 meters. Strangely, no one has seen the most obvious source of metal on-planet: the asteroid strikes. In all probability, at least one third (if rock, frozen gas, and nickel-iron asteroids were used in equal proportions), and possibly one-half (if frozen gas asteroids were omitted from the strikes), of the strikes were by nickel-iron bodies. Most of the strikes are now situated underwater, but at least one crater has a raised central island which

could be a nickel-iron deposit amounting to several thousand tons.

Once a metal source has been located, however, the technological level of the world must be considered, as must the fact that there is no local experience in metal-refining, metal-casting, or metal-working except perhaps at the jeweler's level.

THE SEAS

The seas of Victoria are both shallow and extensive. Of particular noteworthy are the ice-capped polar seas; their shallow seabeds serve to anchor the ice-caps in place.

ALBERT

The single satellite of Victoria is listed in the Imperial navigation charts as Albert, E251000 - 0. No further information is given.

The surface of Albert is pock-marked with craters; nestled in one such crater is a small city easily detected from space. The remainder of the satellite has patches of forestation and some evidence of small animals, although nothing of any import. The city, however, is a center of major interest.

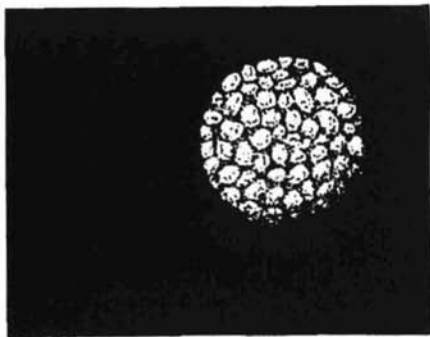
The city, not mentioned on the charts, and without a readily available name, is a constructed settlement made of cast stone (no metal visible), with irregular and angular towers and spires. In many respects, it appears crystalline, and reflects light in sparking showers at

certain times of the day.

Characters entering the city will find the entire area stripped of any movable objects. A slight amount of litter indicates that the Imperium has already been here, and found everything there is to find.

When entering any structure, adventurers will find large, high ceilinged rooms with tall triangular doorways without doors. The doorjambes are each embossed with an irregular hexagon having the appearance of a seal or crest. Interlevel connections include broad sloping ramps and no sign of lift shafts or elevators. There is some indication that some ramps may at one time have been moving surfaces like very advanced escalators, but they do not function now, and are solid-state: even destruction will not show their internal structure. There are many upper level balconies without railings; in fact, no railings are evident anywhere in the city. All balconies do extend over clear areas on the ground level, as if people could always jump to the ground, perhaps with grav belts. There is no evidence of working interior lights or of power or water connections within the buildings. The interiors are lit only from outside light coming in through broad doorways or balconies. The walls of the buildings are homogeneous stone, although many areas show a veining of white, yellow or orange metal flecks.

A determined exploration may yield additional results. There are approximately 100 buildings in the city; all of varying sizes and floorplans. Exploring a single building generally takes one person-day (one person exploring for a full twelve hours). In addition, familiarity and boredom gradually degrade the quality of exploration. The referee must determine which building holds the command center by selecting and noting a number from 1 to 100. In addition, a second number should be



selected as the building housing the tool shop. For exploratory purposes, adventurers each select the building (or buildings) they wish to investigate; individuals may team up for greater quality of search.

The referee should roll dice for each building as it is explored, but the result is important only if the correct building is being investigated. Throw 11 or less to find the command center; apply a DM of +1 for each building previously explored. Throw 12 or less for the tool shop to be found; apply a DM of +1 for each two buildings previously explored. In any case, apply a DM of -1 if more than one individual has joined as a team to explore. Once a building has been explored, others will respect the results obtained by the adventurers concerned, and they will not recheck the building.

The Tool Shop is a small room half-concealed at the end of a long twisting corridor. The room is easy to miss, and it is understandable, in a city as extensive as this, that it could have been missed by previous explorers. The walls of the room are of stone flecked with grains of orange metal. Wall racks usable by apparently humanoid individuals standing 1.1 to 1.3 meters tall line the room, with pegs (of stone integral with the walls) apparently for tools or instruments. One set of pegs forms a shelf at slightly above eye-level; concealed on the pegs is a dull red metal rod with a contoured end of convoluted shape. The use or purpose of this tool will not be immediately obvious, but detailed examination may spark a memory that the convoluted shape matches the irregular hexagon embossed in each doorway. Matching the tool to the doorway will cause a previously unnoticed panel to begin slowly closing, shutting the doorway. As this disrupts the embossed hexagon, the tool cannot

be reinserted, and the door cannot again be opened.

Further detailed examination will also show that the tool matches an indent near the stalled escalators, and will start them off applied to it.

The Command Center is accessed through a pivoted stone door, quite atypically set in the wall of an upper room. It is quite well hidden. It is at the end of a long, downward sloping and winding corridor 1.3 meters in height (allowing little headroom for most individuals). The room itself is a large, circular chamber lit by a glow from the walls themselves, although there is no evidence of radioactivity. In the center of the chamber is a raised circular dias formed from the same stone as the structure. Floating free in the center of the dias is a miniature representation of the Victoria system; the planetary models float as if above grav plates, without visible supports. The sparse asteroid belt is also represented as gravel or dust. A planet is shown in the sixth orbital position, and later investigation will confirm its existence, although missed by the initial detector scans.

Three asteroids in the belt are minutely visible as dull orange motes, as opposed to the black of the planets and other asteroids. In addition, close examination (requiring leaning over the dias and looking very hard) will show one orange asteroid orbiting the second planet in the system.

Attempting to move the pieces, or to alter their positions will generally not work; an explosion or fusion gunfire may do something, but will also destroy the display. If, however, any of the four orange asteroids are touched, they will easily move, although they cannot be shifted beyond the edges of the dias. When moved, each is replaced by a holographic image in its original location. As time passes, the holographic

image will move to the location of the orange asteroid. And, detector data will show (if the adventurers look) that the real body corresponding to the mote is also moving within the Victoria system. If a mote is placed near a world, it will assume orbit; if placed on a world surface, the mote will cling to the model world, and the real asteroid will impact in that location.

There is a 50% chance that any specific asteroid (of the four which can be maneuvered) will be nickel-iron; if not, then it is rock.

Destructive investigation of the command center will disable the mechanism, and there will be no actual information gained from such an effort. Extensive destructive investigation will probably result in volcanic activity and a collapse of the structures in the city.

SCENARIOS

Naturally, most of the responsibility for a specific adventure lies with the referee. But, the following suggestions should prove helpful—

Metal Search: Approaching locals may produce any number of requests for metal in any quantity or quality. The adventurers may determine to assist the locals even though the payment for such labor will be in barter and of relatively small value (for example, meat, foodstuffs, or perhaps ivory scrimshaw).

Metal can be secured from the first planet of the system, although only in small quantities. A mine could be established to take advantage of the various asteroid strikes. Or, the command center on Albert could be used to direct a new asteroid strike to a convenient location.

At this time, there is little, if any, chance that asteroid strikes will crack the crust of Victoria.

Hunting: The animal encounter

tables on pages 28 and 29 could be used to conduct a safari into the chasms. Transport might be by hired dirigible.

Marooned: As referee, you should not be adverse to unusual or even disastrous events. For example, an adventurer's ship could be attacked by a pirate ship in ambush, or an Imperial ship enforcing the interdiction, and a crash landing on Victoria could be the result.

The survivors are then faced with a time limit (the carboxyl poison), plus the necessity of obtaining metal or other material to repair their ship. Possibly, the survivors could be found by a roving dirigible, and helped, or press-ganged into service.

Evasion: Neither the Navy nor the Scout Service devote full time to enforcement of the interdiction of the Victoria system. Each does, however, maintain routine patrols through the system; an Imperial ship which discovers an intruder in the system will move to capture or destroy it.

—Marc W. Miller



food is passed through a series of gizzards, where it is ground up by stones swallowed for the purpose.

Kudies congregate in herds of 7 or more individuals, including one top male-female pair, (usually the parents of the rest of the adult members of the herd) and several family groups of 2-5 individuals each. When threatened, kudies either flee, or when cornered, form a circle, young inside, and fight to the death.

There are two sexes, male and female, which mate for a season or more, and raise from 1-3 young per year. The young are born early in the year, are capable of standing within a few minutes, and can run at full speed in an hour or two.

Kudies are hunted extensively by the inhabitants of Victoria, and their meat is a major source of protein and fat in the locals diet. The hides provide fur which is spun and woven into cloth, the hides are tanned and converted to leather. The "ivory" of the bones is prized over all other parts of the animal by the locals. It is light, strong, and can be readily carved to many shapes. On the mineral poor planet of Victoria, the bones of Kudebeck's gazelle are the only viable metal substitute. Without the kudies, complex mechanical devices such as the native dirigibles upon which planetary commerce depends, could not be constructed.

Kudies are usually found in the upland valleys of Victoria, where there is sufficient vegetation to support them, and rough ground to provide cover from predators. The six limbs give a slight advantage on rough slopes as they are able to use four legs for footing, and two for defense. The illustration is of a female in a typical fighting posture.

Kudies are usually a dark grey color on the back and sides, fading to a lighter shade on the underside.



Garan's Leech
(unclassified)

Garan's leech is native to Victoria, and is found nowhere else in the wild. Specimens as large as 75 cm in length and weighing as much as 2 kilograms have been found, but individuals more typically measure 6-10 cm, and weigh 200-300 grams. Specific anatomical features are not known, as well-preserved specimens are rare. Several forms are documented, but authorities disagree as to whether these represent separate species, sexes, or different stages of development.

Garans' leech is vermiform, radially symmetrical, invertebrate and endothermal. The animal feeds through a sucker-like mouth located anterior to a ring of tentacular projections. These tentacles are coated with small, horny toothed structures which penetrate the skin of the victim, holding the mouth in place. The victims fluids are sucked into a series of holding sacs just under the dermis of the leech. When they are filled, the leech detaches itself from its "head" and falls to the ground. The head remains embedded in the flesh of the victim, where it eventually rots away, usually causing a severe infection. The digestive system is a simple coiled tube running the length of the body, absorbing nutrients from the ingested food,

CHASM WALL Terrain**Victoria X - 679770 - 4 (8+)**

<i>Die</i>	<i>Animal</i>	<i>Weight</i>	<i>Hits</i>	<i>Armor</i>	<i>Wounds & Weapons</i>
2	1 Flying Intimidator	50kg	16/ 6	none	4 as blade A8 F6 S2
3	3 Hunters	12kg	9/ 9	jack	5 claws A5 F9 S1
4	2 Carrion-Eaters	6kg	3/ 4	mesh-1	4 teeth A4 F8 S1
5	1 Gatherer	25kg	11/ 3	none	7 claws A7 F7 S1
6	9 Flying Grazers	6kg	6/ 3	none+1	3 as blade F5 A8 S3
7	23 Flying Grazers	3kg	3/ 2	none	2 teeth F6 A8 S2
8	Event— Winds. High winds spring up making dangerous conditions for climbers and aircraft. Climbers must secure themselves with ropes or in sheltered areas, or risk being blown to their deaths (throw 9+). Dirigibles must moor on the ground within 10 minutes or risk being blown against the chasm wall and losing their gas bag (almost certain).				
9	1 Pouncer	12kg	9/ 7	jack	8 claws A0 F0 S3
10	Event— Waterfall. A spring hidden in the wall of the chasm produces a stream which flows for a short distance and then forms a very high waterfall. The water dissipates into a mist below. A dirigible flying below the waterfall will have its lift reduced by 20% due to condensation of water on the craft.				
11	Event— Mist. The entire chasm is obscured by mist or fog, making visual identification of the route impossible. Climbers can probably see the chasm wall well enough to continue climbing. A dirigible must continue blind, with a chance (throw 10+) that it will collide with a chasm wall.				
12	12 Flying Chasers	6kg	12/ 6	mesh	3 teeth A0 F8 S3

CHASM FLOOR JUNGLE Terrain**Victoria X - 679770 - 4 (7+)**

<i>Die</i>	<i>Animal</i>	<i>Weight</i>	<i>Hits</i>	<i>Armor</i>	<i>Wounds & Weapons</i>
2	3 Reducers	200kg	16/14	cloth	23 as pike A8 F4 S1
3	1 Eater	6000kg	38/12	mesh-1	43 teeth+1 A5 F9 S2
4	Event— Quicksand. Shallow water conceals a patch of quicksand. Anyone surprised by this event becomes trapped. Throw 15+ to be pulled under, per combat round, allowing a DM of +1 per round trapped. Companions not trapped may assist with a DM of -1 per individual. Trapped individuals escape 2D combat rounds, provided they have not been pulled under by that time.				
5	1 Gatherer	1600kg	35/ 7	jack	23 as foil A8 F6 S1
6	1 Filter	12kg	1/ 0	jack	3 teeth F5 A0 S2
7	1 Flying Grazer	3kg	2/ 0	none	4 as blade F8 A8 S2
8	Event— Gas Plant. A field of bulbous gas plants is encountered. The large gas sacs contain hydrogen in a nearly pure form. The field contains 5D sacs, each containing approximately 1 cubic meter of gas.				
9	6 Killers	6kg	8/ 4	none	5 teeth A4 F9 S3
10	Event— Rain Squall. A sudden storm appears above the chasm rim. In 4D minutes, heavy rain and wind along with thunder and lightning begin, continuing for 6D minutes. Lighter-than-air craft must be securely moored, and shelter is advised for comfort and safety.				
11	Event— Gas Plants. A field of bulbous gas plants is encountered. The large gas sacs contain hydrogen in nearly pure form. This field contains 10D sacs, each containing approximately 1 cubic meter of gas.				
12	1 Killer	50kg	10/ 3	none	12 teeth A7 F9 S2

CHASM FLOOR CLEAR Terrain**Victoria X - 679770 - 4 (8+)**

<i>Die</i>	<i>Animal</i>	<i>Weight</i>	<i>Hits</i>	<i>Armor</i>	<i>Wounds & Weapons</i>
2	12 Reducers	50kg	15/ 4	cloth	7 teeth-1 A8 F3 S2
3	Event— Lava Plain. This area is a barren ancient lava bed, characterized by a lack of vegetation. Near its edge it is ideal for mooring dirigibles, and the entire area allows good visibility by aircraft.				
4	4 Hijackers	6kg	9/ 3	jack	4 teeth A3 F6 S2
5	Event— Violent Rainstorm. A sudden storm reduces visibility to medium range. Continuing for 10D minutes, the storm may inflict damage on large objects such as tents, dirigibles, or instruments, depending on the amount of protection and care given to them prior to the storm.				
6	14 Flying Gatherers	3kg	3/ 1	none	5 as blade F8 A7 S2
7	1 Flying Intermittent	6kg	11/ 6	none	8 as foil F8 A9 S1
8	Event— Stream. A small stream flows across the area, leading toward the center of the chasm. If there has been recent rain, the stream will be swollen to an impassable barrier requiring detour or bridging.				
9	5 Killers	400kg	21/11	none	30 claws A5 F9 S3
10	Event— Poison Flora. Intriguingly pretty white flowers grow along the edge of the path. The flowers themselves are harmless, but the blue-green stalks exude an irritant poison sap which will inflict a severe chemical burn to individuals touching it. Each individual receives 2D hits, and an additional 1 hit point per minute until the sap is washed off.				
11	9 Chasers	50kg	11/10	none	8 as blade A0 F8 S1
12	12 Flying Chasers	6kg	15/ 9	mesh	5 teeth+1 A0 F9 S3

CHASM FLOOR RIVER Terrain**Victoria X - 679770 - 4 (8+)**

<i>Die</i>	<i>Animal</i>	<i>Weight</i>	<i>Hits</i>	<i>Armor</i>	<i>Wounds & Weapons</i>
2	1 Intimidator	50kg	13/ 5	none	5 teeth+1 A8 F8 S1
3	1 Swimming Hunter	1000kg	54/10	cloth	23 thrasher A6 F8 S1
4	6 Flying Hijackers	1kg	6/ 0	mesh	5 claws A7 F5 S1
5	Event— Flash Flood. Rains upriver have created a flash flood, and a wall of water rushes along the river bed, sweeping all before it. Vehicles throw 10+ to avoid being overturned; individuals throw dexterity or less to avoid 3D injury.				
6	Event— Electrical Storm. Heavy winds and lightning appear on the horizon approaching fast. After 5D minutes, the storm hits, forcing individuals to seek shelter. Dirigibles not well moored will be blown loose, to drift or to strike the chasm wall. Unprotected electrical equipment will be struck by lightning on a throw of 9+; the equipment will be rendered useless.				
7	7 Grazers	50kg	12/ 4	jack	5 hooves F8 A6 S3
8	20 Grazers	50kg	11/ 5	jack	6 hooves F8 A6 S3
9	1 Chaser	100kg	17/ 4	none	7 teeth+1 A0 F7 S4
10	Event— Rain Squall. A sudden storm appears above the chasm rim. In 3D minutes, heavy rain and wind along with thunder and lightning begin, continuing for 10D minutes. Lighter-than-air craft must be securely moored and shelter is advised for comfort and safety.				
11	1 Flying Chaser	12kg	9/ 6	jack	9 claws A0 F8 S3
12	1 Pouncer	100kg	19/ 6	none	6 teeth A0 F0 S1

and expelling undigestible material and other wastes from a posterior pore. New "heads" are constantly growing to replace those detached, and an individual will have several developing at one time.

Some forms reproduce by splitting sections off the tail of the main body after feeding, each section then developing into a complete leech. Other forms lay eggs on the flesh of their victims, which hatch, feed, and drop off. It is not known whether reproduction in these last forms is sexual, or in what form the exchange of genetic information occurs.

Apparently, there is no maximum size for an adult individual; growth seems to continue throughout life, although at a constantly decreasing rate. Larger forms of the leech seem to specialize in certain species of herbivores native to Victoria, but otherwise, Garan's leech does not seem to be particularly discriminating about what it eats.

Respiration of gases is accomplished through the skin, which must be kept moist to facilitate the process. As a result, Garan's leech is most commonly found in jungles, river banks, and lake shores, but individuals have been found almost anywhere there is a significant amount of standing water. It is postulated that there must be some form of encystment available to the organism allowing it to live through periods of drought, as dry soil samples have yielded animals when subjected to ample water supplies.

In addition to the loss of blood and infection caused by its attacks, the victims of Garan's leech often develop an allergic reaction to the anaesthetizing agent which the tentacles secrete to prevent the attack from being detected until too late. This reaction is often fatal in humans.

Ref's Notes (continued from page 11)

existing being. a clone is a duplicate produced through the use of technology; alterations in the being's attributes or qualities generally do not occur. The relicts from Jack Vance's novel, *To Live Forever*, are clones used to produce a form of immortality for certain individuals.

Prosthetics: Replacement parts of biological beings. Prosthetics are intended to duplicate ordinary capacity for individuals who have lost organs or limbs through accident or disease.

Bionics: Enhanced replacement parts for biological beings. Unlike prosthetics, bionics provide a function better than the original organ or limb.

Cyborg: A biological individual who has been replaced in great part by mechanical components, usually (although not always) for purposes which natural attributes will not function. A cyborg may be equipped with a very tough artificial skin, special vision lenses, and provision for special energy sources, thus making possible activity in vacuum or under great pressure.

USING CLONES

Clones are easily used on a wide variety of situations.

Clones can provide duplicate characters as a form of life insurance. John Varley's *The Persistence of Vision* deals with the recording of memories and their placement in cloned bodies when the original dies through age or mishap. All memories are accurate through the instant of recording, while the body is new and fresh. Problems, however, arise when the recording is used; the individual suffers at least momentary disorientation as he or she copes with the fact that he or she died and has started life anew.

John Varley's short stories, as well as his novel *The Ophiuchi Hotline*,

are suggested reading for greater insight into this use of clones. Jack Vance's *To Live Forever*, also gives some coverage of clones for immortality.

Clones can also provide duplication of individuals for a variety of jobs or functions. Damon Knight's *A For Anything* covers the use of multiple duplicates of single individuals, and a corresponding slavery (Knight's book uses a matter duplicator, rather than cloning, but the effect is the same).

The Mykin troop unit on the planet Somber

(*Bloodtree Rebellion*, a game by Lynn Willis, coming from GDW in November, 1979) is composed entirely of clones of a single individual. The troops spring from the same individual, and a common interest and affection for each other springs from their common genetic heritage.

—Marc W. Miller and Loren Wiseman

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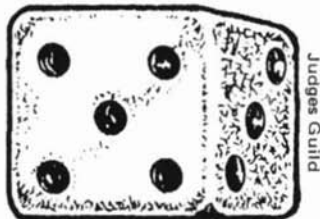
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Traveller Dice

THE idea had been lurking in the back of my mind for some time, but it came to fruition at GenCon XII. After looking over all the dealer tables, I simply could not find any dice in the Traveller color scheme, that's black dice with red spots. It became apparent that, if I wanted them, I would have to put some together myself.

The Armory table provided black half-inch six-sided dice, though with

white pips, at 20 cents each. A dice coloring crayon in red was available, but being designed for filling in polygon dice, it proved ineffective on the deep holes of ordinary cubical dice. Instead, I turned to the acrylic paints also being sold at the table and picked up a jar of British Crimson for 89 cents, and a brush. It was just a few minutes work in a corner of the convention site to produce a dozen truly great looking Traveller dice. Because the paint was acrylic, the excess washed up with water in a matter of minutes. I proceeded to use the dice in an adventure I ran later in the day.

Roy Lippman, who runs the Armory, informs me that his dice (in half-inch, as well as other sizes) and paints are available at many hobby shops, or directly from him. His address: the Armory, Dept. TAS, 3424 Janellen Dr, Baltimore, MD 21208.

—Marc W. Miller

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