

ALPHA
By James M. Ward

METAMORPHOSIS

Fantastic Role-Playing
Game of Science Fiction
Adventures

Published by
TSR Rules
Price \$5.00

3001



FOREWORD

METAMORPHOSIS ALPHA is one of the new breed of role-playing games. It is designed such that the referee and players will develop their own "game world" as they go along. **METAMORPHOSIS ALPHA** plays much like a good science-fiction book reads. Each player takes the role of a person, humanoid mutation or creature mutation on a vast, radiation-ridden starship which is out of control in deep space. Radiation has caused all knowledge to be "lost" and humans are in a state of semi-barbarism. The players must learn to survive in a world of fantastic mutations and hostile radiation, using only their natural cunning and such sophisticated space equipment as they can find and learn to use.

METAMORPHOSIS ALPHA is a free-form system, giving rules and guidelines for the basics of play and setting up the starship, but allowing the players and referee unlimited use of their imagination to create new problems and methods of solving them. Using the guidelines of the rules, the referee "creates" the starship (beginning a little at a time), sets up social structures for his people, plans the various mutations, places clues about the starship for the players to find, and any other of a multitude of possible happenings. The players take it from there as they explore the starship ("seeing" only what they actually would, as the referee keeps his plans and notes secret), trying to gain the knowledge and technological devices they need to survive. From then on, the referee can add new facets to the game as they become desirable. The game is a continuous adventure which need never end.

Readers familiar with TSR's *DUNGEONS & DRAGONS* will immediately recognize many similarities between the two game systems, and they will just as quickly note the numerous important differences which make **METAMORPHOSIS ALPHA** a similar but outstandingly different sort of contest. On the other hand, the existing parallels in the games make it a simple move for the players to go from one to the other, and those with existing *DUNGEONS & DRAGONS* campaigns may wish to incorporate ideas from this game into their campaign "worlds."

GARY GYGAX
15 July 1976

BRIAN BLUME
15 July 1976

METAMORPHOSIS

ALPHA

Fantastic Role-Playing Game of Science Fiction Adventures On A Lost Starship



by James Ward

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Note: A perforated page at the end of this booklet is designed for easy removal to use as an aid in playing the game. This page shows the most important game charts.

INTRODUCTION

Mankind's urge to explore and expand its frontiers finally caused another push into the vastness of space — first interplanetary, then interstellar. By the 23rd Century a great migration wave was spreading from Old Terra to the hundreds of inhabitable worlds which had been discovered in the Milky Way galaxy. During the next hundred years colonization ships of all types and descriptions went out to the stars, bearing seedling colonies seeking a better life. Many found their new homes — for better or for worse — but for one reason or another scores of these starships never reached their destination. This game is based on just such an event, the fate of a colony ship which became lost . . .

The starship *Warden* was created from the designs used in the United Western Starship Cartel program, and it was laid down in the Trans-Plutonian Spaceyards in 2277. The design was the most ambitious ever attempted, the blueprints calling for an oval spheroid of tremendous size using a new metal alloy of tensile strength previously unknown. The ship was an incredible 50 miles in length, with a width of 25 miles, and a height of eight and one-half miles. Additional levels above and below the central one brought the total number of decks to 17. *Warden* required 11 years to complete, and it did not leave the Sol System until 2290 because of the effort required to outfit the starship. The vessel contained complete Terran environments, and the colonists were not rigidly screened for the expedition, for it was held that *Warden's* accommodations would place few physical or psychological stresses upon colonist or crewman.

A description of the starship's levels, as well as some of the equipment typically found on each, follows. The vessel was basically given over to large, open areas, with a simple system of electronic locks used to insure that colonists did not stray into command or possibly harmful areas. With its cargo of the flora and fauna of Earth, 1½ million colonists, and 50,000 crew members, the wonder of the Interstellar Colonization Age set forth to found a new world many light years from its old home.

DISASTER:

Some one-third of the way to the planetary destination which had been selected for *Warden* stretched the very fringe of a cloud of space radiation. This cloud had been charted and analyzed, so that *Warden's* captain was aware that he was to plot a course to avoid any possible danger. Somehow the vessel came too close to the radiation, and the cloud contained disaster. The energy given off at the fringes of this celestial hazard was foreign to all previously known radiation types. It passed through every one of the ship's protection systems and defense screens. The effects on the ship itself were startling. The worst hit were the colonists aboard, and most of the human beings exposed to the radiation simply turned to piles of calcium with no advance symptoms. Hard hit also were the flora and fauna which underwent mutation if they even survived at all. Even some of the vessel's systems were affected, and unstable, radioactive areas were caused from the cloud's radiation. The humans who survived the initial exposure discovered too late that life forms in their natural setting — such as the ecologically prepared forest areas and the like — seemed to have the greatest resistance to the effects of the radiation. A few of the crew and colonists then took to living in the huge parks of *Warden*. A handful remained who tried to restore sanity and order to the starship. They failed.

Life became a struggle merely to survive for those humans that were left. In this struggle all knowledge of the ship's mission or even, in fact, that the humans were on a ship was lost. Ship's systems were maintained in a minimum operative state by the vessel's main computer and the robots that were operating at the time of the cloud's entrance into the starship. Later generations of humans lost all sense of identity, with the ship regressing into a state of savagery. Life quickly stabilized (as life has a habit of doing) with new life forms created from exposure to the unknown radiation. The humans settled into a tribal way of life and those few that traveled and came back told of areas where the animals walked like men and plants were able to talk and move. The vessel traveled on past its assigned planet with its safety systems preventing the ship's destruction by crashing into a planet or burning up in the sun. It is only a matter of time until even those almost perfect systems fail and the starship dies. Until that time, life continues to flourish and the *Warden* travels on, much changed from what it once was.

SURVIVAL:

The players of the game are put into this situation as humans, mutated humanoids, or intelligent monsters. What they do and how they survive the dangers of the ship makes for an interesting situation for all participants alike. The travels up and down through the starship are only accomplished by using bits and pieces of ancient knowledge the players are able to gather from the referee and their starting point. Traveling throughout the ship forces the players to gain technological devices and information just to survive on a day to day basis. They can also make use of the secretions and liquids produced by the mutated plants and creatures of the forest levels.

THE GAME

Age Level: Adults 12 years and up.

Number of Participants: 1 referee and 2 to 24 players.

Much of the material herein is presented in order to give participants the proper "feel" for play. This may cause some readers to hesitate to become involved in a game which has, seemingly, so many rules, but actually the system is quite simple; and it provides a nearly endless, multi-leveled, and completely absorbing science fiction game which will offer a challenge to the most imaginative intellect.

The *referee* is that participant who decides he would enjoy running the game and is willing to accept the burden of drawing the starship levels and locating the life forms on each level as well as noting where various technological items and/or information is to be found. This book gives complete instructions to guide the new referee in this activity. The referee will find that imagination and creativity are most helpful in his role as Supreme Arbiter (or Starship Master) of the course of the game. He must carefully balance risk and reward. His starship must not be so laden with deadly hazards as to make survival of player characters impossible — or even nearly so. On the other hand he must not be so kindly as to make the game too easy and the rewards too great, for that will remove all of the challenge, and play will quickly become boring routine. At the beginning of the game the referee must plan to present his players with problems which are not too difficult to overcome and rewards which are correspondingly low in value. As players become more adept, he can then increase the difficulty of the problems they will face, and at the same time increase the value of the items they find if they solve the problems — animal, vegetable, mechanical or something else entirely.

The *players* cannot begin the game (called a campaign because each episode of play will be connected to the next with results going forward from game to game) until the referee has prepared one to three levels. Once the referee has made the necessary preparations, the players create game *personas*, called characters herein. The players then assume the various roles which they have selected for their characters — pure human, mutated human, humanoid, intelligent animal, or whatever. Each player keeps careful records of his character and his character's possessions as well as of what areas his character has explored and mapped. The creation of the game persona is completely explained later. Simply stated, each player will generate a series of random numbers (most easily done by rolling special dice which are listed below) to determine the characteristics of his or her persona. With a supply of paper and pencil at hand, they are then ready to begin playing.

While these rules are complete guidelines for conducting a campaign, certain other equipment is necessary or helpful to the running of the game,

SUGGESTED ADDITIONAL EQUIPMENT:

Random Number Generator: Random numbers can be generated by means of a small electronic calculator, by drawing numbered chips from a container, by selecting cards from packets of specially selected playing cards, etc. The simplest system is to roll one or more special percentile dice. These dice are available from your hobby dealer or from the publisher of this book. They are twenty-sided dice numbered 0 to 9 twice.

Several pairs of 6-sided (ordinary) dice are most helpful for speedy play.

Polyhedra (Multi-sided) Dice: A set of polyhedra dice (4, 8, 12, and 20-sided) will be found useful for some aspects of the game if alternate means of randomizing (other than the suggestions given above) are desired.

Graph Paper: The referee will find that several types of graph paper will be needed — 4, 6 and 8 lines to the inch in both 8½" × 11" and 11" × 17" sizes are suggested. Each participant should likewise have a pad of some sort of graph paper on which to map areas of the starship which he or she explores.

Hexagon Paper: The referee may also wish to use 8½" × 11" paper overprinted with hexagons on which he will draw his large scale starship level maps. This special paper is also found at hobby shops or can be purchased directly from the publisher. It is by no means necessary.

Sheet Protectors: The referee will find that mylar sheet protectors are needed in order to preserve the hard work he has put into his starship levels, for constant handling of unprotected maps will quickly smear color (or even plain pencil markings), fray the paper, and so on.

Notebooks: All participants in the campaign will find it very helpful to keep all game-related material in a notebook. The referee will usually have two: one will contain his maps and matrices showing what is keyed onto each level; the second is used to keep his copies of records on player characters and similar miscellaneous information.

Pencils and Paper: A good supply of both is most useful. While the referee will need colored pencils to help to delineate his level maps, most players will need only common "lead" pencils. Paper here means just about any form of scratch paper handy.

Imagination: Both referee and players need plenty, but neither would be interested in a game of this sort if they didn't already possess a high degree of this important commodity!

One Very Patient Referee.

Players: The more the merrier!

THE STARSHIP

The gigantic starship *Warden* is ellipsoidal in shape, being approximately 50 miles long at its extremes, 25 miles wide, and $8\frac{1}{2}$ miles tall, with an additional $\frac{1}{2}$ mile high dome on the top of the ship.

The starship is divided into 17 levels, or "decks." These levels vary in height, length and width. As a safety factor, the hull of the ship is up to a half-mile thick, but the hull is not completely solid — it is segmented with strong and thick bulwarks and contains supports, cables, conduits, machinery and other such items with paths and crawlways throughout. Access is limited to this area for engineering purposes only, and the few access points will open only for command or engineering color bands.

The floors between the levels are each approximately 330 feet thick. This area contains supports, machinery, electrical wiring systems, plumbing tubes and the like. Additionally, this area may also contain transportation systems (such as subways or transport tubes), supply transport tubes, or other such facilities. There are pathways within this labyrinth, but again access is greatly restricted, and the few entrances will admit only those with a command or engineering color band.

There is an elevator system running down the center of the ship. There are four heavy-duty cargo elevators with varying capacities of 5 tons, 20 tons, 50 tons and 100 tons. These elevators will operate only in response to the use of two color bands, either engineering or command type (two of the same, or one of each). There are 20 personnel elevators, each with a capacity of approximately 30 persons. Of these, one elevator is a top security elevator used only during emergencies and which will operate only in response to a command color band. Note: some levels may have elevator shafts passing through them, but without direct entrance or exit from the elevators, depending upon the level and security considerations. In addition, if a level was divided by a bulwark near the elevators, doors might open on one side only to allow access only to a certain area (one side of the bulwark divider). And, access to certain areas or levels might be impossible without a specific type of color band. The personnel elevators will operate with the brown general purpose bands, though exits to certain levels may be restricted.

There may also be other elevators of a secondary nature located elsewhere connecting various levels, depending upon design considerations.

The following descriptions of the levels and what they contain are intended only as examples to illustrate what the ship interior might look like. Each referee should design his ship interior to his own specifications, using these descriptions as guidelines for gaining ideas only. A referee's concept of the interior of the *Warden* should vary considerably from the example presented here, so that players will be unaware of its layout and will be able to learn its details only by exploration — not by referring to this booklet for other than an example of what might be discovered. The factors of newness, surprise and the unknown will only add to the campaign's enjoyment.

Level 1 ($31 \times 13 \times \frac{1}{4}$ miles): This level is filled with supplies destined to be used on the colony planet. There are gigantic stacks of raw materials, refined metals, plastics, glass, emergency food rations, etc. etc. Ramps and catwalks connect the stacks. Robots are usually used to pick up the needed supplies. There is a large, reinforced pressure hatch on one part of the hull for on-planet removal of supplies from this level.

Entrance to this level is by the main elevators and 4 inclined planes or spiral ramps leading down to level 2. Access to this level is gained only through use of the command or security bands.

Level 2 ($34 \times 15 \times \frac{1}{8}$ miles): This level is similar to level 1, but the supplies stored are more of a finished nature: electrical components, wire, machine parts, farming tools, geology equipment, land-clearing machines, prefabricated molds for home units, home accessories, etc. etc. There are also several types of computers for on-planet settling computations. Robots are used in this area as on level 1.

Access to this level is by the main elevators and 4 inclined planes or spiral ramps leading up to level 1 and down to level 3. The ramps and planes have a standard width of 50 feet, and are located in the ship's hull with entrances to and from the levels indicated. Not all levels are interconnected, however.

Level 3 ($37 \times 17 \times \frac{1}{4}$ miles): This level contains supplies for use in the factories on levels 4 and 5. In other respects this level is similar to levels 1 and 2.

Entrances are the main elevators, 4 ramps or planes leading up to level 2, and 1 ramp leading to level 4.

Level 4 ($39 \times 18\frac{1}{2} \times \frac{1}{4}$ miles): This level contains mothballed factories (A) which are intended for use after arrival at the new planet. These are surrounded by an uninhabited wilderness forest area (B). Although there are no human settlements in the forest, the entire area abounds with forest animals which live among the deciduous trees and conifers. The area has a number of forest-type ecology robots which operate in the forest, and human visitors visit the area on occasion for camping and wilderness outings.

Access to the level is by the main elevators and via one ramp leading up to level 3 and down to level 5.

Level 5 ($41 \times 20 \times \frac{1}{4}$ miles): This level contains more factories which are designed for use after arrival at the destination planet. The factory areas are surrounded by large areas of open grasslands which form into mixed forest areas on the outer edges of the level. There are some small village settlements scattered throughout the level, each with dwelling units for up to 50 families. Forest ecology robots are also used on the level.

Entrance to the level is via the main elevators and one spiral ramp up to level 4.

Level 6 ($42 \times 20\frac{1}{2} \times \frac{1}{8}$ miles): This level contains features of both the engineering and ecology fields. The developed area has various laboratories for manufacturing and scientific use — metal working shops, chemical refineries (plus a secured area for chemical storage), power experimentation labs, energy generators, biological laboratories, and a large botanical growth center with variable light systems. The latter is located as a part of the mixed-forest area which surrounds the developed section. The mixed-forest area contains rolling woodland, small lakes and streams, several swamps, and a variety of flora and fauna. There are 100 engineering, 50 general purpose, and 25 of each type of ecological robot assigned to the level.

Entrance to this level is via the main elevators or by the ramp which leads down to level 7. Access is limited to those with command, security, engineering, or horticultural color bands.

Level 7 ($45 \times 21\frac{1}{2} \times \frac{1}{8}$ miles): This level is one of vast, rolling grasslands with a few widely dispersed ranches marking the prairie-like terrain. Groups of families live on these ranches, and raise cattle or sheep which feed on the surrounding areas, but the families are largely isolated. A small number of "forest" ecology robots assist with work on each of the ranches. Besides the domesticated animals, some herds of wild animals (like antelopes or buffalo) also roam on the level. Although the terrain is largely dry and the climate arid, there are some small streams on the level and numerous patches of trees nearby these sources of water.

Entrance to the level is from either the main elevators or by one ramp leading up to level 6, or either of two inclined planes down to level 8. Access to the level is possible by use of the command, security or horticultural color bands.

Level 8 ($47 \times 22\frac{1}{2} \times \frac{1}{2}$ miles): This level features extensive farmlands with rural farms and villages for those families who favor the "outdoor" life of a farm setting. One large section is a horticultural test area with botanical laboratories for various types of experimentation. The farm areas feature large crop-growing areas, interspersed with light woods, occasional lakes, and so on. Individual farms vary in size — some are for individual families, some are for groups of families, and others are complete villages. A number of "garden" ecology robots assist with tasks. Rural wildlife of varying types is also found throughout the entire level.

Entrance to the level is via the main elevators or through use of either of two inclined planes leading to level 7.

Level 9 ($48 \times 23 \times \frac{1}{2}$ miles): This level contains administrative and security facilities and is divided into a number of parts: ship security (F), administrative/civil affairs section (G), family housing for personnel of the level (H), a section housing small space ships for scouting missions (I), a storage area for munitions (J), and the ship's weapon systems (K). There is a repair center for weapons systems and a supply area for items needed in each of these areas. A forested area is also prominent on this level, and features the trees and animals common to level 4 but with a greater proportion of hostile or dangerous predator type animals (such as bears, tigers, etc.).

The security section of this level includes, among other things, storage of various items in different locations: 100 deactivated security robots, extra color bands for issue as needed (10,000 brown, 250 steel gray, 250 green, 250 white, 100 red, and 50 blue-red command bands), 50 sonic disruptors ("metal" sensitive), 50 disruptor pistols ("protein" sensitive), 25 paralysis rods, 50 laser pistols, 5 laser rifles, 25 gas ejectors, 5,000 hydrogen power cells, 525 water hydrogen energy cell rechargers, 50 shield attachments, 100 clips of gas darts (25 per clip), and other lesser items (clubs, teargas, etc.). Access to weapons storage areas requires a command color ring or 2 command color bands to open the special locks. The security section also includes a sizable detention area for holding up to 2,000 persons in a secured area.

Entrance to this level is restricted, and is only accomplished by the main elevators and the use of either a command or security color band. There is a special elevator connecting this level with level 10, restricted only to use by those with a command color band.

Level 10 (16 mile diameter circle $\times \frac{1}{4}$ mile ceiling): This level is the control center of the ship and has restricted entrance. It contains the command center or "bridge," the main ship's computer and auxiliary units for complete operation of the ship's systems, and housing units for the personnel of this level and their families. The housing quarters are on the outer edge of the circular area and afford a superb view of the forest/mountain area below (level 11).

The ship's command center contains a storage section with materials selected for the control and maintenance of ground-based operations, science and engineering labs for secret work (with several attendant robots), and the master control area. The master control area is divided into 8 sections: 1) The captain's chair and command console, which has extensive monitors and tie-ins to every station in the area; 2) The computer science room for master programming and instant retrieval of necessary analyses; 3) The security monitoring section which ties in with a similar room on level 9 and contains monitoring screens, a computer tie-in, a secondary intraship communications system, and audio pickup recorders; 4) The intraship environmental control room with 4 general monitors, 16 specific environmental monitors, and a computer that aids in the control of intraship environments; 5) The primary engineering bay, with numerous monitoring screens for power and on-ship operation, per level telltales, and a computer for efficiency levels analysis; 6) The navigation and power section, with main navigational controls, power monitors, and a special screen for plotting the present and future course of the ship; 7) The primary communications room with direct line hookups to various parts of all the levels, large and small monitors, and various display screens; 8) The emergency control area, with command of the

outside ship's offensive and defensive weapons systems, an extensive engineering tie-in to coordinate damage control, a computer for related analyses, and a special emergency system for flooding any area of any level inside the ship with paralysis gas in cases of extreme necessity.

Although the main elevators pass through this level, there is no entrance to the level except from level 9 and the special elevator.

Level 11 ($49 \times 24 \times \frac{1}{2}$ or $\frac{3}{4}$ miles): This level contains forested area which features a large hill in the center and rough mountains all around the rim of the level. Wild animals of all sorts live on this level, and some may be dangerous to humans. Several small villages are found on this level, but they are largely isolated and the area is in a "wild" state. As on level 4, human visitors occasionally explore the area for camping and wilderness outings. A small number of "forest" ecology robots are on the level to perform tasks as needed.

Entrance is by the main elevators or by either of two spiral ramps leading down to level 12.

Level 12 ($48\frac{1}{2} \times 23\frac{1}{2} \times \frac{1}{2}$ miles): This level contains a tropical jungle which fills the entire area and contains all the flora and fauna of such a forest. The vegetation is thick and lush in many places, although there are several main "paths" throughout the level, with some secondary branches. Although entrance is not restricted in the normal manner, warnings are posted due to the number of potentially dangerous animals found on the level. The jungle is used for human groups who wish to adventure and explore the area. A small number of "forest" ecology robots work on the level as needed, and there is one biological station near the main elevators.

Entrance to the level is by the main elevators or via the spiral ramps leading from level 11.

Level 13 ($47\frac{1}{2} \times 22\frac{1}{2} \times \frac{1}{4}$ miles): This level contains primarily supplies for levels 11, 12 and 14 and is in some respects itself similar to level 1. There is also a storage facility and repair area containing 50 deactivated "forest" ecology robots and 50 deactivated "garden" ecology robots.

Entrance to this level is by the main elevators or via one inclined plane leading down to level 14.

Level 14 ($47 \times 22 \times \frac{1}{4}$ miles): This level is the city level. With high-rise living units, the potential population could be up to 10 million people, but the city on the **Warden** contains about $1\frac{1}{2}$ million persons (95% of all the colonists on board).

The city is made up of family and bachelor dwellings, plus all the other features of cities on Terra: shopping areas, recreation centers, a wide variety of dining areas, entertainment centers, extensive parks, sports arenas and playing areas, and so on. The city also features several medical areas, plus one large complex where there are complete android fabrication laboratories containing the necessary facilities for production: formulation vats, mental matrix circuit facilities, programming energizers, chemical storage, and a test area. Also on the level is the main medical section of the ship with a large number of monitored beds, recuperative therapy areas, radiation labs, operating theaters, a medical school, and other facilities. There are 100 medical robots assigned to this complex and entrance to the area requires a command, security, or medical color band.

The city features a sub-level transportation system, plus several tracked systems for personal transport. There are also several other features of interest: a general library with extensive facilities (including large data banks), a museum of Terran history (with a technological section of interest), and a large zoo featuring many of the species of animals and insects brought on board. Parts of the city also are broken up with small farming plots where city-dwellers can grow food and flower crops of their choice.

Surrounding the larger city is a farming area with several farming villages, and also marked with some small forest areas. This area is similar to the farm area which comprises level 8.

Entrance to this level is by the main elevators or via either an inclined plane to level 13 or a spiral ramp to level 15.

Level 15 ($44 \times 20\frac{1}{2} \times \frac{1}{2}$ miles): This level contains the water supply for the ship and is $\frac{1}{2}$ mile in total thickness — with the water ranging up to $\frac{1}{4}$ mile deep and the ceiling of the level being $\frac{1}{4}$ mile above the water level. The level contains approximately 600 square miles of water.

In the gigantic lake, fish abound in great numbers. The islands are lightly forested, and several are inhabited with small villages. Recreational boating of various sorts is popular, as is swimming — all under desirable conditions.

About $\frac{1}{4}$ of the level is taken up with the large recycling system and purification center which operates in response to the main ship's computer, the device which monitors the quality and purity of all the water on all the levels.

Entrance to the level is via the main elevators or by one ramp up to level 14 or one ramp down to level 16.

Level 16 ($40 \times 18\frac{1}{2} \times \frac{1}{2}$ miles): This level contains the activated factories where many of the city dwellers work. Besides producing supplies for the ship, certain production is prepared for the new planet and stored in large storage areas.

One restricted section houses chemicals and contains a 5 year supply of all known stable chemicals which might be used by a new, on-planet colony plus sizable supplies of extra energy cells (solar, chemical, and hydrogen) and several hundred water/hydrogen energy converters. Another section houses a repair and storage section for the various types of robots, including the following deactivated models: 500 general purpose robots, 500 medical robots, 500 engineering robots, 500 security robots, and 500 of each type of ecology robots. There is also a large analogic computer system deactivated and reserved for on-planet use. Entrance to the restricted areas is limited to the use of a command color band or two security color bands.

Access to the level is via the main elevators or by one ramp up to level 15.

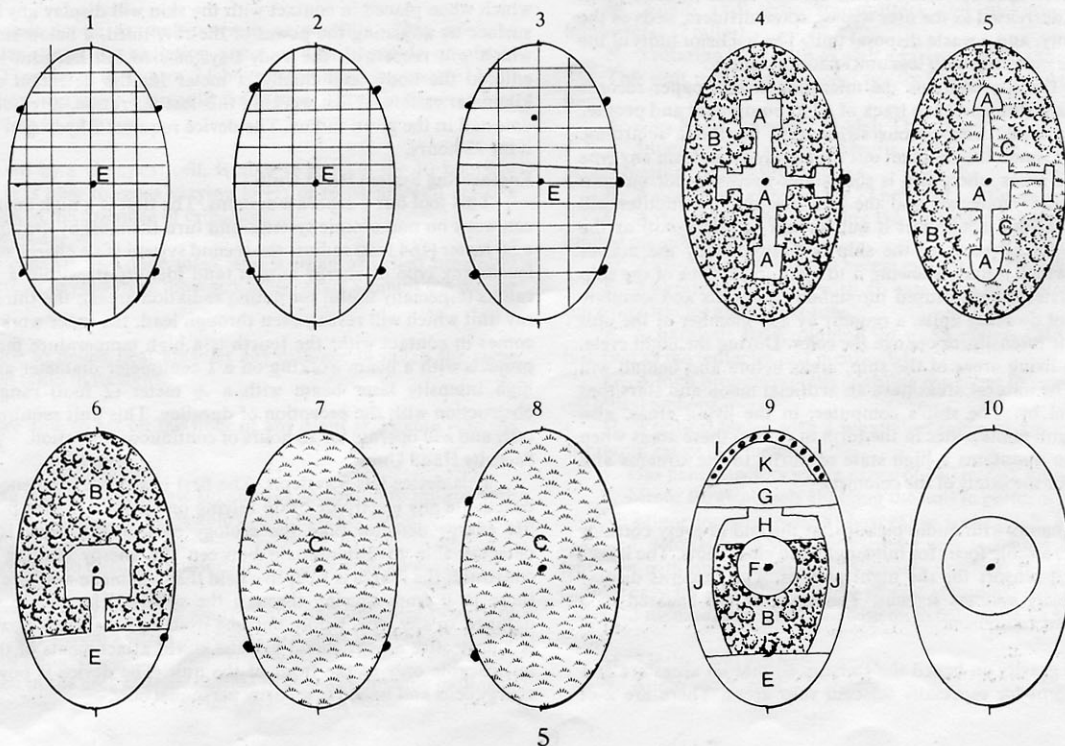
Level 17 ($40 \times 18\frac{1}{2} \times 1$ miles): This level contains all the engines, motors, dynamos, reactors, and the various power producing devices that supply the whole ship with the needed power to maintain life, run the machinery and robots, and to power all the devices on board. Large anti-gravity engines are reserved for use in landing the ship on its colony planet. External ion engines push the ship through space.

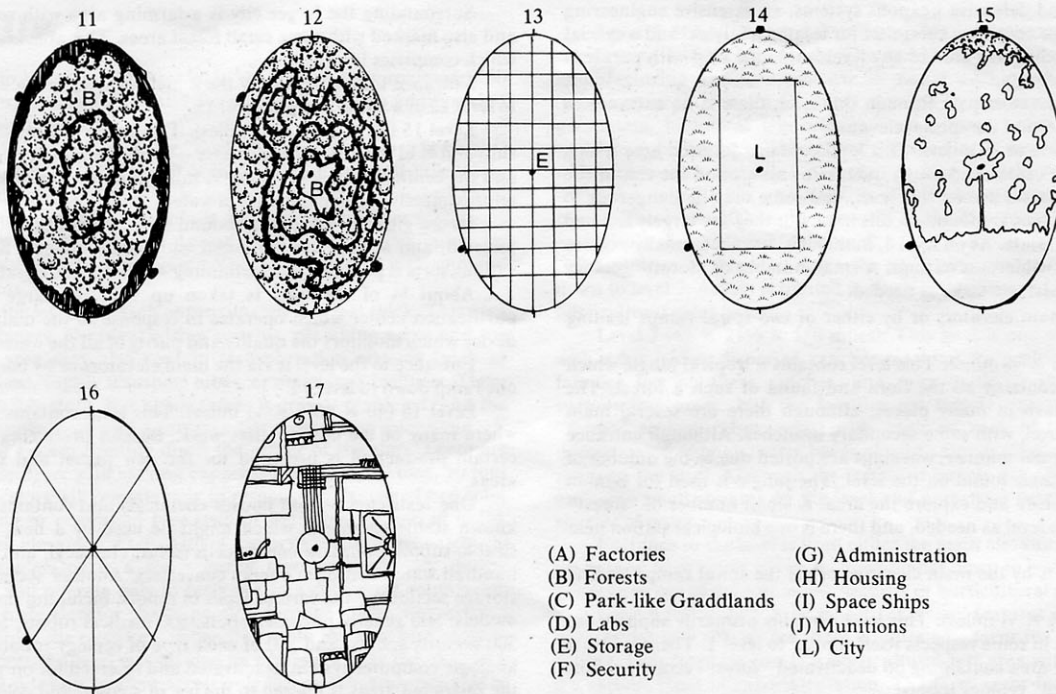
Entrance to this level is restricted and only possible via the main elevators which permit access to those with either a command or engineering color band.

Observation Dome: On the top of the ship at its center is a small observation dome which appears as a small bubble on the ship's hull. This dome contains an observation area for astronomical viewing and a large astronomy lab for scientific work which features optical and radio telescopes as well as the other types of specialized equipment used in such work. One restricted area of the dome contains a secondary command bridge with communications to the main command area on level 10.

Access to the dome is by the main elevators. Entrance to the secondary command area is restricted and is only possible with the use of a command ring.

The reader of this might think that the scale of these sections seems quite big, but bigness is exactly what the ship's designers wanted to combat the psychological feeling of being closed in!





- | | |
|--------------------------|--------------------|
| (A) Factories | (G) Administration |
| (B) Forests | (H) Housing |
| (C) Park-like Graddlands | (I) Space Ships |
| (D) Labs | (J) Munitions |
| (E) Storage | (L) City |
| (F) Security | |

SHIP DEVICES AND UNITS:

Color Bands:

The radiated bracelets with one of six different color frequencies on them are the system used to permit entrance into any of the sections of the ship and to control many of the devices. These bands have various harmless radiations implanted in them according to their color. The radiation has a half life of 1,000 years and activates all the opening mechanisms.

The 4 captains of the ship have special radiated *rings* serving the same purpose as the bracelets. The command personnel band is alternating *blue and red*. The horticultural band is bright *green*. The security band is *red*. The general purpose band issued to all members of the ship is *brown*. The engineering band is *steel gray*. The medical band is *white*. All areas sensitive to these bands have the appropriate color in a 3 by 8 inch rectangle. Devices are activated by touching the ring or band of the appropriate color to the device.

City Units:

While all family units in the city have the same standard equipment, the stress is on the decorative wishes of the members living in the unit. There is no limit to the variations of the furniture and fixtures of each room of each unit. All units have: a monitor screen able to broadcast entertainment channels and communications, a wardrobe area for every room, cabinet space in each room which can be expanded or decreased as the user wishes, room dividers, beds as the owners need them, a lavatory, and a waste disposal unit. The bachelor units of the city contain much the same materials with less unit space provided.

The office section of the city contains the microfilmed and paper records necessary to operate the giant ship and keep track of all its equipment and people.

The entire ship is equipped with porous strips used for flame retarding. These strips use a system of sonics that blanket out the energy given from any type fire. In the case of natural areas where fire is sometimes necessary for outdoor cooking, elimination of minor materials and the like, the ship's computer will analyze the danger potential and act to put it out (or not to put it out) as the situation demands. Light for all parts of the ship is controlled by the master computer. It has sensors, which it uses, allowing it to light up sections of the ship when needed. The light systems are diffused throughout the walls and simulate sunlight, and, in the case of dwelling units, a request by any member of the unit can increase or decrease the intensity, or change the color. During the night cycle, when traveling in the non-living areas of the ship, areas before and behind will light up for the traveler. The natural areas have an artificial moon and stars that cast enough light to travel by. The ship's computer, in the living areas, also monitors the eco-systems and emits water in the form of rain to these areas when they need moisture. It also maintains a high state of purity in the streams and lakes of the natural areas for the safety of the colonists.

Hall Monitors:

These are 3 lensed cameras with audio pickups, at the end of every corridor on every level. They have a variable focus for full length and close shots. The lenses are equipped with infrared sensors for the night periods. The cameras display their pictures on the security systems screens. The cameras are encased in a polysynthetic cube to prevent vandalism.

Gravity Generators:

These devices control gravity on board the starship so that all areas are at 1 standard earth gravity except for especially selected ship areas. There are 2 of

these units on every level at opposite ends of the oval. They appear as large black discs on the wall sections. A force field surrounds each preventing tampering. Only the energy generated by an engineering color band can pass. The generators are powered by the ship's broadcast power. Each disc affects exactly one-half of the level.

Engineering Walk Ways:

Between every level and running along the sides of the vessel are 5 foot tunnels where engineering can make repairs on vital machinery and enter otherwise hard-to-reach areas. Entrances to these areas are hatches requiring the gray color band to open them and enter.

Inclined Planes:

These take the place of stairs going up and down between the levels of the ship. At the top and bottom of every sloping path is an entrance requiring the application of a correct color band to open it. The paths are 100 yards wide and able to stand any weight. Anti-grav sleds are provided at the end of each plane, but they are constructed so that they cannot leave the plane.

Ecology Life Analyzer Hand Unit:

This tool has 4 separate uses — first, a sonic sterilizer which will destroy any microbes or germs on the surface of the skin or wound; second, an x-ray screen which when placed in contact with the skin will display any level below the skin's surface by adjusting the power of the ray; third, a below-surface germ destroyer which will react with the body's systems to kill harmful substances that have entered the body; and finally, a meter for the detection of life energy in a 1 kilometer radius. When working this last operation, any body of any size can be detected in the given radius. The device requires 2 hydrogen energy cells to power it for 25 hours.

Engineering System Hand Unit:

This tool has 5 separate systems. The first is a high energy neutralizer which can work on non-atomic systems and turn them off by draining them away within a 50 meter (164 feet) radius; the second system is an energy sensor which is able to locate any type of energy output (and identify it) within a 100 meter (328 feet) radius (especially useful for noting radiation areas); the third system is a sonic x-ray unit which will reveal, even through lead, the inner workings of any system it comes in contact with; the fourth is a high temperature melter used in welding projects with a beam working on a 1 centimeter diameter area; and the last is a high intensity laser beam with a .6 meter (2 foot) range able to melt any obstruction with the exception of duralloy. This unit requires 2 hydrogen energy cells and will operate for 15 hours of continuous operation.

Security Hand Unit:

This device has 5 systems. The first is a robot frequency scrambler that will deactivate any electronic brain relying on energy cells for power; the second is a life energy detector (like the ecology device); the third is an android energy detector able to differentiate between the energy reading of a human and a construct; the fourth is a captive field that will make a sphere of energy preventing those in it from moving through the sphere. The sphere will take 10 dice of damage, of any type, before burning itself and the unit's power cells out. The last is a protective energy shield like the shield attachments of the primary weapons, but useable only to the front of the unit. The device is powered by 3 hydrogen energy cells and issued to security personnel only.

Ecology Energy Tracer Unit:

Sometimes it is necessary to take creatures from one forest level to another to maintain a proper eco-system. This is accomplished by this unit. It has a propulsion system like that of a "forest" robot, 2 optical lens cameras, analyzers for identification of every feature of the wanted creature, audio and radio receivers and senders, and a computer engram spotter that is able to select from many life readings the desired reading. This unit when finding the desired creature will summon a "forest" robot for the capturing operation. The unit is powered by an energy cell good for 48 hours of operation. The unit has an effective detecting range of 500 meters.

Security Tracer Unit:

This device has 5 systems — first, a propulsion unit like that of a "forest" robot; second, a capture sphere like that of a "security" hand unit but twice as strong; third, a life energy detector like that of the "ecology life" unit; fourth, an engram spotter that is able to select from any member of the ship the one desired (or may work in a 200 kilometer (125 miles) circle on a planet); lastly, audio, visual and radio receptors and receivers. The unit is powered by a power cell that allows the device to operate for 72 hours.

Medical Hand Analyzer and Healer:

This is a special unit that enables even the novice to give himself and others first aid. It has 5 operations — the first is a sonic sterilizer for germs and viruses; the second, a sonic beamer that gives local and general anesthetization; the third, a group of chemicals that give a speeded healing action to any wound and provide protection from airborne microbes; the fourth, an x-ray unit; and the last is a powered vibro-scalpel for cutting away damaged material and other extraneous material. The unit takes a hydrogen energy cell that will operate the device for 48 hours.

Sonic Torch:

This device, powered for 15 hours by a hydrogen energy cell, is able to break down the metal surfaces of joined metal (things like bolts, metal welded together, or metals joined by other fastening means). This tool is not able to affect solid metal units. The process is a fast metal-aging process and requires a short amount of time to work (from 10-100 seconds). While it only has a range of 20 centimeters (8 inches), care must be taken so that the device is used with protective hearing equipment.

Atomic Torch:

This device is powered by an isotope of thorium and is able to cut through any material, given time. The device has a 1 millimeter effective cutting area and on all surfaces, except duralloy, the cutting process is immediate and leaves no radiation effects if contact is less than 1 minute. On duralloy it is necessary to apply contact for over 2 minutes to begin the cutting process and a decontamination step must be taken after the cutting process is finished.

Laser Torch:

This tool is used to bind metal together and has an effective area of 3 centimeters. It is powered by a hydrogen energy cell for 20 hours of operation. Its welding abilities are effective on any metal, even duralloy if given time. Care must be taken not to over-burn the metal due to the strength of the device.

Water/Hydrogen Energy Converter:

This simple device is able to draw hydrogen from water and store it in a hydrogen energy cell. A by-product of this process is oxygen which also has many uses. The unit can use any type of power cell or source for its operation and is purposely small to permit use both on a planet and on the ship. It only takes 5 minutes for the unit to power 1 energy cell.

Space Suits:

These suits are made to be as multipurpose as possible. They serve as protective suits for outer space, for radiation areas, and for possible on-planet hostile environments. They have their own 24 hour air supply, a powerful light source, and minor medical and water sources in the helmet. They are powered by a hydrogen energy cell for up to 24 hours.

Geiger Counter:

This device, powered by a chemical cell, is able to operate for 10 hours of continuous operation. It is able to sense varying levels of radiation and emits a loud clicking sound when in the presence of radiation.

Under Water Breathing Lung:

This small device consists of a face mask and a small attached breathing screen that is able to extract oxygen from the water in the exact amount the wearer needs.

Infrared Goggles:

This is a device able to detect heat areas at any distance in much the same manner as normal vision takes in its sights.

Chemical Defoliants:

These chemicals are able to act on the fiber of any plant and cause it to die and rot almost instantly.

Chemical Acids:

These chemicals are able to disintegrate substances according to the strength of the acid. Note that there are very few acids able to disintegrate metal.

Chemical Flammables:

These chemicals are able to burn with differing strengths and intensities.

Portable Energy Lamps:

These are light sources with differing energy cells and differing powers of light. The range in size can be from a small hand unit to a large flood light.

Sound Elimination Head Phones:

These are used when in the area of sonic devices to stop any possible damage.

Radioactive Material:

These substances have many medical as well as technical uses. Great care must be taken because they are also very dangerous and can cause great harm. Radiation can be found in solids, powders and liquids in any intensity. There are many unstable types and all have definite half lives ranging from 1 minute to 1,000 years. The types range from Strontium 90, Radium, Uranium 235 and 238 to the heaviest of all (Kuntzium) having an atomic number of 190 and being the most unstable and powerful of all isotopes.

Duralloy:

This is the metal starships are made from. It can be found in any engineering area in triangular pieces with each side 4 feet long. This metal is paper thin and the total triangle weighs only 5 ounces. This standard working piece of metal has holes drilled in each corner and 2 clamps spaced evenly in the middle to aid in working the piece since normal tools will not affect it.

STARSHIP EQUIPMENT:

Here is a listing of the various features and equipment on board the starship.

Anti-Grav Sleds: Movement of large bulky equipment is accomplished through the use of cargo handlers in the form of anti-gravity sleds. These low propulsion units with anti-grav lifters are able to travel at 54 kilometers (33 miles) an hour maximum, and are equipped with obstacle detectors so that they will never strike or collide with anything. On each side of the sled are 4 small coupling units that enable the user to lift up to 3,000 kilograms (6,600 pounds) with ease. These small coupling units use 1 hydrogen energy cell that has a working life of 25 hours. The sled is powered by 8 hydrogen energy cells and can operate for 48 hours of continuous operation. Passenger-carrying sleds are used on the inclined planes connecting the various levels of the ship.

Standard General Purpose Robot: This model is equipped with the following:

- A. A power cell energizing the device for 24 hours of continuous operation.
 - B. A recharging unit allowing the robot to recharge its cell while continuing limited operation.
 - C. 2 manipulative tentacles with an extension from tip to tip of 6.5 meters (21 feet), allowing the robot to operate any device.
 - D. A power grasping claw able to extend miniature tongs 3 meters (10 feet) and lift masses of up to 130 kilograms (286 pounds).
 - E. 1 microminiature manipulator able to adjust (on the micro level) all materials and objects, with an extension of 4.5 meters (15 feet).
 - F. Light tractor and repulsion beams to hold or repel, with a range of 7.5 meters (25 feet) and able to affect masses of up to 90 kilograms (200 pounds).
 - G. Coupled lenses effective as magnifiers with a 50 power range in the microscopic and telescopic fields.
 - H. Upper and lower light spectrum receivers, able to view into the infrared and ultra-violet ranges.
 - I. Anti-grav units with an excess capacity limit of 90 kilograms (200 pounds).
 - J. Low propulsion units enabling the unit to travel at 48 kilometers (30 miles) per hour maximum.
 - K. Variable programming circuits with verbal programming adaptors for changeable programs.
 - L. Light body armor allowing this unit to function in water, outer space, and in temperatures ranging from plus or minus 150 degrees Centigrade (-238 to +302 degrees Fahrenheit).
 - M. Audio and radio transmitters and pickups effective for up to 60 kilometers (37 miles).
 - N. 3 rotating light sources with a variance of 90 candlepower each.
- This unit responds to verbal orders from anyone wearing a general purpose band.

Ecology Robot "Forest" Model: This unit is equipped as follows:

- A. Independent action circuits enabling it to go beyond its normal programming to carry out its tasks.
- B. A power cell effective for 72 hours of continuous operation.
- C. A recharging unit allowing the device to recharge its cell while continuing limited operation.
- D. Anti-grav units with an excess capacity of 270 kilograms (595 pounds).
- E. 2 paralysis tentacles with an extension of 18 meters (60 feet) from tip to tip, primarily for animal capture.
- F. A paralysis field, ranging up to 65 meters (213 feet), serving the same function as the tentacles just mentioned.
- G. A high propulsion unit enabling the robot to travel at up to 96 kilometers (60 miles) an hour.
- H. 3 optical lenses with a maximum range of 1.6 kilometers (1 mile) and a minimum range of 1 meter.
- I. Gas pellet ejectors with a range of 150 meters for field operations.
- J. Minor surgical tools enabling the unit to perform simple field operations.
- K. Minor forestry tools: a short range sonic torch, a rake scope, a group of chemical defoliants, 3 variable capture nets weighted for throwing, 8 padded tentacles with an extension of 25 meters (80 feet) from tip to tip, and a small capture cage for animals requiring special attention.
- L. 3 manipulative tentacles with an extension of 13.5 meters (44 feet) from tip to tip.
- M. Limited soil analysis sensors.
- N. Audio and radio transmitters and pickups effective for up to 60

kilometers (37 miles).

O. 3 lenses able to view in the infra-red and the ultra-violet ranges.

P. 3 rotating light sources with a variance of 120 candlepower each.

This unit is controllable by verbal orders from anyone wearing a command or horticultural band.

Ecology Robot "Garden" Model: This unit is equipped with the following:

A. Operation tapes which enable it to do only the necessary tasks it is programmed to do.

B. An energy cell powering the unit for 24 hours of continuous operation.

C. Anti-grav units with an excess capacity of 22 kilograms (50 pounds).

D. A low propulsion unit enabling this model to travel 40 kilometers (25 miles) an hour maximum.

E. Extensive soil analysis sensors.

F. Fertilizers and chemical defoliants.

G. Horticultural tools ranging in use — hoe extenders, a mower, pruning shears, a heat torch, vibro saw, and 4 manipulative tentacles.

H. Optical lenses which are identical to those of the "forest" model.

I. Insecticide and herbicide sprayers with a range of 9 meters (30 feet).

J. Audio and radio transmitters and pickups effective for ranges up to 60 kilometers (37 miles).

K. Variable light sources which are the same as those of the "forest" model.

This unit is controllable by verbal orders from anyone wearing a command or horticultural band.

Medical Robot: This unit is equipped with the following:

A. Independent action circuits which are tied into the main ship's computer when on board the ship, which are usable to draw information for medical details only.

B. A broadcast pickup unit which enables the robot to draw energy from the hull of the ship or a broadcast power source.

C. Telescopic and microscopic lenses in triplicate.

D. Limited surgical equipment including: a vibro-blade, a vibro-scalpel, a sonic sterilizer, medical body sensors, and a wide range of chemicals for medical uses in varying situations.

E. 4 manipulative tentacles.

F. 3 variable light sources which are the same as the "forest" model.

G. A propulsion unit with a maximum speed of 45 kilometers (28 miles) per hour.

H. An anti-grav unit with a maximum capacity of 90 kilograms (200 pounds).

I. Radio and audio transmitters and receivers.

This unit will respond to verbal orders from anyone wearing a command or medical band.

Engineering Robot: This unit is equipped with the following:

A. Semi-independent action circuits, allowing the robot to undertake tasks other than just the repair work it is programmed for.

B. Broadcast power cells enabling the device to draw energy from the ship's hull or other broadcast power generators.

C. A power cell, providing the unit with power for 24 hours of continuous operation if no broadcast power is available.

D. Telescopic and microscopic lens with up to 50 power.

E. 3 lenses able to see in the infrared and ultra-violet spectrums.

F. 2 rotating light sources with a range of up to 250 candle power each.

G. 3 tentacle manipulators with special heavy duty extenders, usable at 12 meters (39 feet), which enable the tentacle to work with heavier than normal weights.

H. 2 power grasping claws able to extend up to 9 meters (30 feet) and lift masses of up to 262 kilograms (578 pounds).

I. Special tentacles with adaptors for handling the tools the robot can be equipped with: an atomic torch and assorted magnetic working tools which range from vibro-drivers to power wrenches.

J. A sample selection of replacement parts for the varied devices on the ship which the robot is capable of repairing.

K. A high propulsion unit enabling the robot to travel at up to 96 kilometers (60 miles) an hour.

This unit is controllable in response to verbal orders given by anyone wearing the command or engineering color bands.

Security Robot: Important: This robot is used only when qualified personnel are unavailable, and the robot can be issued for use only by command personnel. In operation, the robot will respond to verbal orders only from those wearing a command or security band. The unit is equipped with the following:

A. Four 4 meter (13 foot) extenders with touch paralysis fields (see the security rod for effect).

B. 2 Long range visual receptors with a range of up to 10 kilometers (6 miles).

C. Sound receptors sensitive for 90 meters (295 feet), or 9 meters (30 feet) through metal type obstructions.

D. One gas pellet ejector with 4 clips of pellets.

E. Independent action circuits which allow the unit to undertake tasks beyond its normal activities, if necessary.

F. A broadcast power unit with hull pickups and a receiver for on-planet broadcast power pickup.

G. A power cell powering the device for 72 hours of constant emergency

operation when no broadcast power is at hand (this is kept at full charge at all times).

H. Anti-grav and propulsion units which are the same as the "forest" model of ecology robot.

I. Heavy body armor and energy shields able to stop any concentration of non-primary weapons.

J. 2 third-stage slug ejectors that are usable only when the command is given by a person with a command band.

K. 6 clips of ammunition for the slug ejector.

L. A special radio circuit which only the frequency broadcaster on the command chair unit of the primary and secondary control rooms can operate. This circuit will take over any unit, superceding any previous or immediate order given it.

M. 3 padded tentacles with 12 meter (39 foot) extensions, with engineering-type heavy duty abilities enabling the unit to work with weights over the normal design specifications.

N. 4 lenses able to see into the infrared and ultra-violet spectrums.

O. A special activation switch which requires the use of a command color band to activate the robot if it is not operating.

P. Special circuitry which enables the robot to activate and control another general purpose or medical robot (one maximum) when its circuits tell it they are needed to save human lives.

Special note on robots: While they are the ultimate in mechanical systems, robots will never kill any type of life — this program is implanted in all primary logic circuits. Robots are programmed to assist humans, and they will react to the harming of life with immediate force (but to subdue rather than kill) — even if the aggressor is wearing a command color band.

Androids: In the 23rd Century the ability to make chemical life (androids) was well within the power of the medical specialists. But the question of whether man had the right to create any form of intelligent living being was not yet answered for all. In a move to placate those that did not wish these fabrications to be equal to men, limitations were put into every android.

All the androids have an effective life span of 2 years. All androids have a limited amount of memory storage space, so they can effectively be taught in only one field of endeavor. They have been made sensitive to sonics so that they are easily damaged by them. They are powered by electrical energy from a hydrogen energy cell. All programmed androids are implanted with the idea that to harm or even touch a human in any way is impossible for them. The usefulness of this type of creation is obvious.

They can be made to have great strength, can be made to be very small and thus fit in places an engineering robot cannot enter. They can be made radiation resistant so that they can operate in areas where even a man in a suit would be in danger for any length of time. The medical section of every U.W.H. Starship is given the responsibility for the creation of these constructs.

While the process can be run by androids themselves it is the usual policy for humans to work the process. Each android is designed so that when it is almost at the end of its life expectancy it will change color. This allows it to be recycled. The standard model is in a humanoid form and can operate for 24 hours from the energy given from the standard hydrogen energy cell. The brain structure of these constructs is made to be programmable directly by the ship's computer banks. Lack of energy after 24 hours will cause the android to collapse until energy is restored.

Weapons Systems:

A. Protein Disruptor:

This unit works on the protein material of any target it hits, and breaks it down to its chemical parts. At close range the lens can be adjusted to shoot a 2 meter circle (medium and long ranges becoming ineffective at this setting). In normal operation a 15 centimeter (6 inch) circle of damage is created.

	CLOSE RANGE	MEDIUM RANGE	MAXIMUM RANGE
PISTOL	1-10 Meters	11-24 Meters	25- 50 Meters
RIFLE	1-50 Meters	51-75 Meters	76-100 Meters

The target's distance, movement, and any substance covering the target will affect the damage done to the target: full penetration (20 dice), one-half penetration (15 dice), shallow penetration (third degree burns, 5 dice). The chart takes into account these factors and a roll of a die will tell where the beams hit: 1-head, 2-right arm, 3-left arm, 4-right leg, 5-left leg, 6-trunk of body.

PROTECTION (ROLL 3 SIX SIDED DICE) GRAPH SHOWS MINIMUM SCORE NEEDED

	RANGES	SHORT	MEDIUM	LONG
CLOTH		3-8	9-12	13-18
PLASTIC		7-9	10-15	16-18
GLASS FIBER		13-18	-	-
PLANT FIBER		9-12	13-18	-
LIGHT METAL BODY ARMOR		-	-	-

Rolling the minimum number needed to hit on the 3 dice means shallow hits, rolling any other number in the field at any given range yields one-half penetration, and rolling higher numbers than shown yields full penetration.

Example: range-short, protection-cloth. A roll of 3 is a shallow penetration, 4-8 is a one-half penetration, and 9 or more is a full penetration hit. The pistol is powered by a hydrogen energy cell that enables the weapon to shoot 25 times, the rifle shoots 10 times on the same type cell.

Optional Shield Attachment:

This device has its own hydrogen energy cell. It creates an energy field which is operational for 5 hours. This shield will not permit entrance of physical matter, and only radiated energy in radioactive and heat forms can penetrate it. It should be noted that it is necessary to shut down the field to gain fresh air every hour of continuous operation.

B. Sonic Metal Disruptor:

This unit makes a sonic field around its target and will shatter processed metal by vibration at full effect. Medium effect will cause the metal to melt. The minimum effect results in the weakening of the structure of the metal which will result in a break down if it is hit again at **any** time. Effective target area at short range is .9 meters (3 feet), medium range .6 meters (2 feet), and maximum range .3 meters (1 foot). Ranges for the pistol and rifle are the same as those of the protein disruptor. This device will work only on refined metal as opposed to raw materials from the earth. Duralloy, the metal of space ships, is the only metal able to resist its effect for any length of time. As with the protein pistol, movement, distance, and protection will change the effectiveness.

PROTECTION (ROLL 3 SIX SIDED DICE) GRAPH SHOWS MINIMUM SCORE NEEDED

RANGES	SHORT	MEDIUM	LONG
BARE METAL	7-10	11-14	15-18
CLOTH	9-11	12-15	16-18
VEGETATION	13-15	16-17	18
GLASS FIBER	10-12	13-15	16-18
PLASTIC	13-15	16-18	-

This chart is used exactly like the protein disruptor. A minimum score on 3 dice means shallow hits causing a weakening of the metal. Normal rolls mean the metal melts, and large rolls mean part of the metal shatters. It will destroy any device-type audio pickup and while not harmful to the human body it will cause deafness for a variable time from 3-18 hours, (roll 3 six sided dice). The standard hydrogen energy cell powers the pistol for 10 shots and the rifle for 5 shots. This device also has the optional shield unit.

The protein and metal disruptor units are **primary weapons** and only legally usable by command personnel.

C. Paralysis Rod:

A *secondary weapon*, this device reacts to any type of electrical nervous system, overloading the synapsis to the brain causing complete unconsciousness for 3-18 hours. The standard unit is .9 meters (3 feet) long with a .3 meter (1 foot) extender. It is only effective when in direct contact with flesh and only needs a fraction of a second to affect the being. It can employ all types of energy cells; a chemical cell powering the rod for 3 hours, solar cell powering the rod for 5 hours, and the hydrogen cell powering the rod for 10 hours. The rod takes 3-18 minutes to warm up to operational status before it will be effective.

D. Paralysis Dart:

Also a *secondary weapon*, this device acts in the same manner as the rod but is a projectile ejected from a spring cylinder and charged by a portable hand charger. They are one-shot, streamlined projectiles with an effective range of 70 meters (230 feet). This device is highly useful in security work, as it is soundless and works at a greater range than the rod. The cylinder is bolt action and fires 2 darts per action.

E. Laser Pistol:

This amplified light device is a heat weapon of great power and therefore is purposely limited in force. Made for killing and maiming, it is issued by command personnel to security forces only (as are all *secondary weapons*). The least it can do is cause third degree burns from a grazing shot, (5 dice damage). A direct hit will puncture and burn exposed flesh (15 dice of damage). All obstacles such as cloth, plastic, glass fiber, and plant fiber, will present no resistance to the action of the beam. Light body armor, on the first direct hit, will give the wearer third degree burns and 5 dice damage in that area; with the second direct hit in that same area resulting in melting of the armor and 15 dice damage. Heavy body armor will take 3 hits, with the fourth causing the third degree burns and the fifth causing the melting action. The pistol shoots 5 shots per energy cell and takes 15 minutes to repower after the last shot. The maximum range for this weapon is 22 meters (72 feet), with the beam diffusing into uselessness beyond that point. Rifles of this type have triple the range and do twice the damage, but are stored away on all colonizing ships to be used *only* on a planet.

F. Third Stage Slug Projector:

This unit shoots a blunted latex dum-dum pellet which will incapacitate a being. A bolt action device, it fires 20 rounds per action and has a clip of 50 pellets. One hit does 2 dice of subduing damage. Take the total hit points of a being or creature and when one-half of those points has been sustained in subduing damage, the being is unconscious for 3-18 hours. Light body armor or shields will negate the effect of the pellet. Maximum range is 100 meters.

G. Third Stage Gas Ejector:

This unit shoots a dart with a liquid chemical which immediately tranquilizes any oxygen-breathing creature. It does not affect plants. The effects last from 3-18 hours. A clip holds 25 darts and it fires 5 darts per action. All *third stage weapons*

can be issued by security personnel to colonists in case of emergencies. Range for both of these weapons is the same (100 Meters). Roll 3 six-sided dice to hit:

RANGE:	1-25 Meters	26-75 Meters	76-100 Meters
SCORE TO HIT:	9-18	12-18	15-18

Indirect fire is impossible with these type weapons.

H. Portable Hand Dart Charger:

This small portable unit powered by a hydrogen energy cell will charge 500 darts before expending all the energy of the cell. Charging is immediate and the unit can charge 2 darts at a time. The charge given to the dart lasts only for 1 hour or the first impact. An uncharged paralysis dart will do 1 to 6 points of damage.

EARTH ANIMALS OF THE SHIP

The following is a general sampling of the creatures found in the forests, mountains and tropics of the ship.

FORESTS	MOUNTAINS	TROPICS
Horses	Horses	Panther
Black Bear	Golden Bear	Alligator
Martin	Badger	Wood Chuck
Chipmunk	Ground Squirrel	Swamp Deer
Deer	Deer	Black Fox
Raccoon	Raccoon	Beaver
Elk	Moose	Bobcat
Bobcat	Bobcat	Jaguar
Cougar	Mt. Lion	Python
Ground Snake	Mt. Snake	Flying Squirrel
Red Fox	Timber Wolf	Rabbit
Red Squirrel	Rabbit	Porcupine
Porcupine	Porcupine	Water Snake
Wolf	Coyote	Dog
Robin	Robin	Stork
Woodpecker	Woodpecker	Woodpecker
Turkey	Turkey	Heron
Pheasant	Grouse	Black Bird
Grouse	Starling	Blue Jay
Sparrow Hawk	Sparrow Hawk	Scarlet Tanager
Owl	Owl	Speckled Hawk
Cardinal	Cardinal	Ducks
Wolf Spider	Garden Spider	Swamp Spider
Ants	Ants	Ants
Grubs	Grubs	Grubs
Lady Bugs	Lady Bugs	Lady Bugs
Bees	Bees	Bees
Worms	Worms	Worms
Ass't Butterflies	Ass't Butterflies	Ass't Butterflies
Ass't Moths	Ass't Moths	Ass't Moths
Termites	Termites	Termites
Pickrel	Pike	Catfish
Trout	Trout	Gar
Bass	Bass	Carp
Salmon	Salmon	Dogfish
Ass't Pan Fish	Ass't Pan Fish	Ass't Pan Fish
Snails	Carp	Snails
Suckers	Snails	Bass

It should be noted that while this list is the normal type of creatures placed on a starship, any horticultural member may request other types be introduced for his or her study.

BEGINNING THE GAME AND DEVELOPING CHARACTERS

To begin a game, the referee will set up his version of parts of the starship and then work with the individual players in developing their game characters. Players are given limited choices when characters are being determined, but some aspects of their choices will be affected by the uncertainties of chance.

If a beginning player is a human, he or she will start the game in one of the human settlements (which are more like a village than anything else) — enjoying the protection and supplies such an area provides. A human player will roll 3 six-sided dice several times for the abilities he or she has at the start of the game. Each player has the following abilities: *radiation resistance, mental resistance, dexterity, constitution, strength, and leadership potential.*

A player choosing to be a mutation, whether humanoid or monster-like, has the first 5 abilities (but no leadership potential) — plus physical and mental mutations. These last two abilities are determined by rolling a four-sided die once

for physical mutations and once for mental mutations and allowing the player to pick from one to four powers, with the only limiting factor being the number of powers given by the die roll. Player mutations start in the forested area of the ship, with no material goods.

The judge will also roll randomly for one physical or mental *defect* (or one of *each* if the player has 5 or more total mutations) for the mutated player. Players and judge will keep a record of the abilities and limitations of their characters, and each character's abilities will be initially unknown to other players (but will be learned during the game through contact, observation, or interaction).

If the mutated player is a humanoid mutant, he or she can pick mutations that will allow them to pass among humans — remembering that while looking like a human can at times be an advantage, many powerful physical mutations are being passed up for this advantage.

The referee must make sure that the monster mutations taken by players when choosing are consistent. That is, if a player chooses to have wings, then he or she cannot also expect to be taller (and thus heavier). The referee should, as always, use his judgment and discretion in limiting such matters. A further explanation on keeping characters consistent is given in the section dealing with mental and physical mutations.

Once the referee has set up the players with their respective characters and has an area of the starship mapped out for his own reference and use, he may begin the game. To do so, he "sets the stage" for the players and places them in a given area where they begin their adventures — the numerous players may be together, scattered, or even lost, depending upon their types and the referee's whim. From there, the referee moderates game activity and the game starts with the players undertaking activities as they wish. The players then go about their ways as they please, with the referee monitoring all such activities (and random encounters) as the players experience the adventures and hazards of the starship environment and the other creatures therein — some friendly but most dangerously harmful. The game then goes on as a series of continuing "adventures" and experiences, to be undertaken as a series of games at the convenience of the referee and the individual players. There is no end to the game except at the eventual agreement of the players and referee, and even then a game (or a "campaign," as such an extended game would be called) can go on for literally years. Players whose game characters are eliminated in the harsh and hostile environment of the game may reappear in some new form and begin anew, at the discretion of the referee. The possibilities are myriad.

ABILITY EXPLANATIONS

A. RADIATION RESISTANCE

This ability deals with a player character's resistance to the damaging effects of radiation. Since there are many different types of radiation and different radiation levels (or intensities), it is necessary for the referee to be always aware of what type (intensity) of radiation the being is exposed to. Treat radiation damage just like hit dice damage (explained later), with the stronger the radiation the more damage occurring. Therefore a player with a resistance of 18 to radiation can withstand a level 17 intensity radiation for 1 melee turn. This resistance, while good for 1 melee turn, will not keep the player unaffected for longer periods. The referee is to treat longer exposures as a minus 1 resistance point per melee turn (only while they stay in the radiation). The player with an 18 resistance is considered to have only a 17 on his second melee turn of exposure, a 16 on his 3rd turn, and so on. Radioactive material does not have to glow or show its presence in any way (except for the burning damage it does). There are protective devices and chemicals, and even mutated materials that make a being more resistant to the effects of radiation, but nothing will save players over the long run.

RADIATION INTENSITY LEVEL

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
R	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
A	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
D	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
I	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
A	14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4
T	13	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
I	14	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
O	13	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
N	12	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D
R	11	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D
S	10	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D
E	9	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D
S	8	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D
I	7	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D
T	6	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D
A	5	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D
N	4	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D
C	3	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D	D

The graph reflects exposure after one melee turn. The "D" represents death caused by exposure for that 1 melee turn no matter how many hit points the player or creature has. A number is the number of dice of damage a being sustains each melee turn while exposed to the radiation.

When the chart indicates death, there is a 20% chance that the player or creature will be mutated instead of dying. The referee will roll randomly to determine if the mutation is physical or mental (50% chance for each) and to see what it is using the whole chart (good as well as defective mutations). If this instance occurs in a human, his leadership potential is negated and his followers will at first feel uneasy around him and later leave no matter what he does. Also if there is damage done by radiation, there is a 1% chance per die of damage received for a mutation to take place. This mutation will show itself within 1 week's time.

B. MENTAL RESISTANCE:

This ability deals with the player's power to withstand an attack on his or her mind by mental energy. Unlike other factors this power is strengthened by use. The rationale behind this is that the mind, after surviving an attack, forms new barriers to that type of attack. These barriers are always up without thought or special effort on the part of the player. Therefore, for every 5 aggressive mental attacks which a being survives and resists successfully, his or her mental resistance factor increases by one (until he or she reaches the 18 figure). Every mutation that has more than 1 mental power *must* have at least a mental resistance of 12. The chart given is for these types of battles. When rolling for simultaneous attacks, if both attackers make the roll needed both of the attacks negate each other. Physical action prohibits a being from making a mental attack.

Mental activity by one being is not interrupted by a mental attack from another being. That is, defense against the attack may be made while continuing the activity. A successful mental attack will have effect depending upon its type (mental blast, illusion generation, etc.), not necessarily interrupting the original activity.

MENTAL STRENGTH CHART:

POWER OF THE BEING ATTACKING

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	18	—	—	—	—	—	—	18	17	16	15	14	13	12	11	10
E	17	—	—	—	—	—	18	17	16	15	14	13	12	11	10	9
N	16	—	—	—	—	18	17	16	15	14	13	12	11	10	9	8
T	15	—	—	—	18	17	16	15	14	13	12	11	10	9	8	7
A	14	—	—	18	17	16	15	14	13	12	11	10	9	8	7	6
L	13	—	18	17	16	15	14	13	12	11	10	9	8	7	6	5
	12	—	18	17	16	15	14	13	12	11	10	9	8	7	6	5
R	11	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4
E	10	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
S	9	16	15	14	13	12	11	10	9	8	7	6	5	4	3	*
I	8	15	14	13	12	11	10	9	8	7	6	5	4	3	*	*
S	7	14	13	12	11	10	9	8	7	6	5	4	3	*	*	*
T	6	13	12	11	10	9	8	7	6	5	4	3	*	*	*	*
A	5	12	11	10	9	8	7	6	5	4	3	*	*	*	*	*
N	4	11	10	9	8	7	6	5	4	3	*	*	*	*	*	*
C	3	10	9	8	7	6	5	4	3	*	*	*	*	*	*	*
E																

The power of the being attacking is equal to his *original* mental resistance, before it was adjusted for defects or experience.

A number is the score which must be beaten on a roll of 3 six-sided dice. "*" means that the attack is successful without a roll. "—" means that there is no attack possible in that situation. Any being or mutation that does not have a stated mental resistance factor has a 3 for the purposes of this game. This chart is used for *any* type of mental attack.

C. DEXTERITY:

This ability indicates the speed at which a player is able to function, and the player's reaction time to various situations. A being with a dexterity of 16 will act before a being with a dexterity of 10. For example, two humans see each other at the same time and neither is surprised and both have bows. Player A has a dexterity of 18 and player B has a dexterity of 9. Player A gets her shot off twice as fast as player B, hits player B and kills him with her poisoned arrow (player B failed to make his poison saving throw). Unfortunately for A, player B's big brother, C, who has a dexterity of 18 comes along, both A and C spot each other, both have bows, and neither one is surprised. Since both have 18's the referee rolls a die to determine who shoots first and C gets his arrow off first, (lucky him), hits and kills her, (she did not make her poison saving throw).

When a being is surprised and has a dexterity 4 numbers greater than the surprier, they attack simultaneously as the better dexterity negates the surprise.

D. STRENGTH:

This ability indicates a player's damaging power in any given battle situation. Every point over 14 increases the damage done by the player by 1, with regard to striking weapons only. A being using a bow and having a strength of 18 will do only the normal damage done by a bow. The same factor works in reverse, with a strength of 6, causing damage at a minus 1 point.

E. LEADERSHIP POTENTIAL:

This leadership factor is used not only to see how many men will follow a person, but to determine if other creatures (mutations) will follow him. The

leadership potential is usually given to humans of pure strain because a feeling of distrust is so developed in nonhumans of any type that it takes a human (and a human's innate desire for control) to be able to command the respect of a nonhuman being. When dealing with a mutated human, because of the change in him, he is too close to the "creature" and not close enough to the "human" to have this leadership potential.

LEADERSHIP POTENTIAL

- 18

25% chance a friendly mutated being will follow
45% chance a friendly mutated human will follow
12 maximum followers of the human type
- 17

20% chance a friendly mutated being will follow
30% chance a friendly mutated human will follow
10 maximum followers of the human type
- 16

15% chance a friendly mutated being will follow
15% chance a friendly mutated human will follow
6 maximum followers of the human type
- 15

5% chance a friendly mutated being will follow
10% chance a friendly mutated human will follow
5 maximum followers of the human type
- 14-12

0% chance a friendly mutated being will follow
5% chance a friendly mutated human will follow
4 maximum followers of the human type
- 11-8

0% chance a friendly mutated being will follow
0% chance a friendly mutated human will follow
3 maximum followers of the human type
- 7-5

0% chance a friendly mutated being will follow
0% chance a friendly mutated human will follow
2 maximum followers of the human type
- 4-3

0% chance a friendly mutated being will follow
0% chance a friendly mutated human will follow
1 maximum follower of the human type

Note: a player may not give up a mutated follower of any type just to get another mutated follower that they think might be better. Any follower they get stays until death or the *follower* decides to leave. If this decision is forced on the part of the master it may result in a revenge-type move on the part of the follower.

Example of Player Trying to Get a Follower:

Scar-lock has a leadership potential of 17 and he approaches a humanoid type number 1 from the mutant charts and is able to talk with it by using the ancient tongue Scar-lock has learned from the shaman of his village. He offers this small man a slug ejector Scar-lock found in a non-forested area. The judge rolls the percentile dice with Scar-lock needing from 1-40 (a bonus of 10 is given because of the generous offer of a slug projector) for the little man to accept and a 99 is rolled, which tells the judge that the humanoid is not impressed one bit. Well, the humanoid tries to use his blow gun on our hero and Scar-lock puts 3 slugs in him incapacitating him for 9 hours ("Serves the little beggar right!" says Scar-lock). A little while later, our hero meets another of these humanoids and this time knowing that they do not seem to be impressed by slug ejectors and not wanting a poisoned blow gun dart in the guts, Scar-lock offers the little chap his duralloy shield (again gain a bonus of 10 for a generous offer) and the judge rolls a 06 and our man Scar-lock has himself a bodyguard.

F. CONSTITUTION:

This category is used for 2 things in the game. First, the constitution rating is used to find how many hit dice a player has. This roll is never increased unless some new variable in the form of a mutation is added to the game. Example: a radiated berry that adds one die to a player's constitution or takes one away depending on what season it is picked in (and when it is eaten after picking).

If a player rolls a constitution of 13, he then rolls 13 six-sided dice to determine the total number of "Accumulative Hits" he can take. Thus the player rolls 13 times and gets scores of 4,1,1,3,6,5,1,1,2,5,1,1,3, totalling 34 hit points. This number is the number of points of damage the player could sustain before death. Whether or not sustaining hits (thus subtracting hit points) will affect, slow down, or impair player performance is left to the discretion of the referee.

The other aspect of the constitution roll is for the surviving of poisons. The *Poison Chart* is used to determine if a being survives the contact with poison. There are many types and strengths of poison, as with radiation, and the chart gives the reaction of the body to any given poison. "*" means that the poison has no given effect on the being. "D" means that the person is dead no matter how many hit points they have. A number is the number of dice rolled to determine how much damage the being sustains. The poison will affect the being in the first melee turn.

		POISON CHART																	
Strength of Poison		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
C O N S T I T U T I O N	18	*	*	*	*	*	*	*	*	*	*	*	*	1	2	3	D		
	17	*	*	*	*	*	*	*	*	*	*	*	1	2	3	D	D		
	16	*	*	*	*	*	*	*	*	*	*	1	2	3	D	D	D		
	15	*	*	*	*	*	*	*	*	*	1	2	3	D	D	D	D		
	14	*	*	*	*	*	*	*	*	1	2	3	D	D	D	D	D		
	13	*	*	*	*	*	*	*	1	2	3	D	D	D	D	D	D		
	12	*	*	*	*	*	*	1	2	3	D	D	D	D	D	D	D		
	11	*	*	*	*	*	1	2	3	D	D	D	D	D	D	D	D		
	10	*	*	*	*	1	2	3	D	D	D	D	D	D	D	D	D		
	9	*	*	*	1	2	3	D	D	D	D	D	D	D	D	D	D		
N	8	*	*	1	2	3	D	D	D	D	D	D	D	D	D	D	D		
	7	*	1	2	3	D	D	D	D	D	D	D	D	D	D	D	D		
	6	1	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D		
	5	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
	4	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		

While some might think that the chances of surviving poison are rather low, when you consider that there is an antidote for almost any type of poison, the chances of living increase. If a proper antidote is given to any player that received a "D" within 2 melee turns, he or she will survive the effects with only 1 die of damage.

Because of the damaging power of a poison dart, arrow, or sword, there is a high incidence of natives and mutations wearing light body armor of many different types, and using poison weapons.

When a being or player uses any type of poisoned weapon or other poisoned device, it is necessary that the user take some kind of measures to insure that he or she does not become endangered by the poisoned weapon or the poison itself. These measures may take the form of tough hand coverings (gloves) or other types of protection. The referee should be guided by personal discretion.

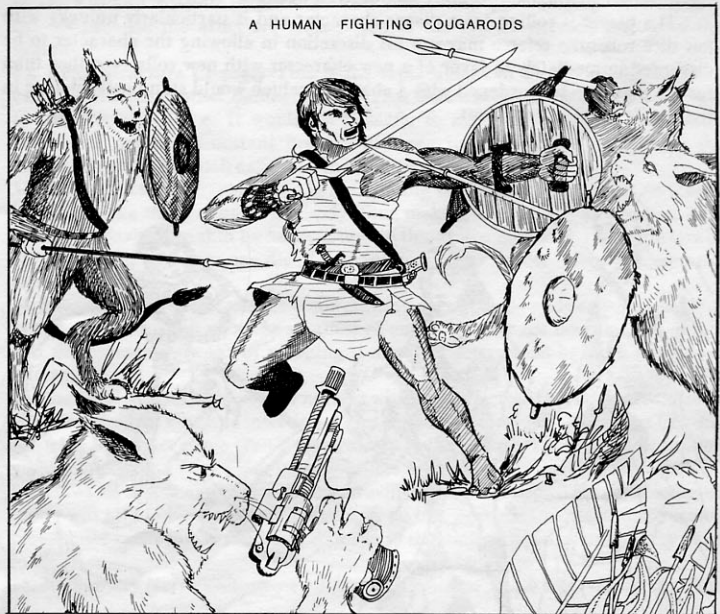
Example of a Beginning Player Character of the Human Type

Name: Scar-lock

Radiation Resistance: 16
Mental Resistance: 18
Dexterity: 7

Constitution: 9
Strength: 12
Leadership Potential: 17

Scar-lock rolls his hit points using 9 (his constitution rating) six-sided dice and scores 6,1,5,3,4,4,4,1,2 — totalling 30 accumulated hit points (the number of hits he can withstand before dying). He can have up to 10 human followers because of his high leadership potential (and will have a 20% chance for attracting a mutated creature or 30% for attracting a mutated human to follow him, should he ever meet any). To start, Scar-lock will be assumed to possess the normal living materials common to his tribe (clothes, weapons, etc.) plus any other assorted items the referee sees fit to give him to start with.



Example of a Beginning Player Character That Is a Mutated Humanoid

Name: Lock-scar

Radiation Resistance: 18
Mental Resistance: 6
Dexterity: 17

Constitution: 5
Strength: 18

Lock-scar gets a roll of 4 on the four-sided die for the number of physical mutations and a roll of 2 for mental mutations. He picks the following:

PHYSICAL MUTATIONS

1. Poisoned claws
(intensity level at judge's option)
2. Radiated eyes
3. Physical reflection
4. Regeneration
(because of his poor constitution)

MENTAL MUTATIONS

1. Mental control
2. Mental blast

The referee then rolls for the defects of the mutation and determines that Lock-scar is "near-sighted" and "epileptic" (with a 5% chance of the epilepsy occurring in every combat situation).

Example of a Beginning Player Character That Is a Mutated Creature

Name: Racs-kcol

Radiation Resistance: 14
Mental Resistance: 13
Dexterity: 17

Constitution: 11
Strength: 18

This player chose to start out with a bear's body. He rolled a 4 for physical mutations and a 2 for mental mutations and he picked the following:

PHYSICAL MUTATIONS

1. Poison claws
(intensity level at judge's option)
2. New body parts
3. Smaller
4. Wings

MENTAL MUTATIONS

1. Teleportation
2. Telepathy (so he can communicate with others; bears can't normally talk)

The referee then rolls for defects for this creature: "hemophilia" and "fear impulse for humans." The referee then places this player, and any others that might be starting with him, in some forest area. Note: while different species may flee or fight each other on sight in given situations, it is possible for different player character mutations to play together.

A special suggestion to the judge — if more balanced characters are desired, allow the players to roll all 5 or 6 ability rolls and then allow them to assign them to the abilities of their choice for their exact characteristics of ability. Normally, each category of ability is stated by the player and he then rolls for his rating, but this alternate method allows more flexibility, if desired.

If a player is rolling for a player character and is particularly unlucky with low dice rolls, the referee may use his discretion in allowing the character to be discarded immediately in favor of a new character with new rolls — rather than force a player to be burdened with a character which would stand little chance in the hostile game environment.

G. PHYSICAL AND MENTAL MUTATIONS:

The player may pick from the 2 lists given after rolling a 4-sided die for each to see how many he or she may choose. The judge will then roll and give the player a defect in either/or both the physical and mental mutation charts.

PHYSICAL MUTATIONS:

1. Taller
2. Shorter
3. Out sized body parts
4. New body parts
5. Poison claws or fangs
6. Multiple body parts
7. Regeneration
8. Gas generation
9. Quills
10. Gills
11. Chameleon powers
12. Radiated eyes
13. Electrical or heat generation
14. Sonic abilities
15. Light generation
16. Physical reflection
17. Partial carapace
18. Total carapace
19. Heightened smell
20. Heightened hearing
21. Heightened touch
22. Heightened vision
23. Heightened taste
24. Heightened dexterity
25. Heightened strength
26. Heightened precision
27. Heightened balance
28. Wings
29. Shapechange (reptile/animal/insect/all of them)
30. Density control (self)

PHYSICAL MUTATIONAL DEFECTS:

31. Multi-armed, 1-10 (no control)
32. Body structure change
33. Skin structure change
34. Hemophilia
35. Bacterial nonresistance
36. No sensory nerve endings
37. Poor respiration systems
38. Diminished senses
39. Attraction odor
40. Near-sightedness/or double vision
41. No resistance to poison
42. Double effect of physical forces

As explained earlier, some physical mutations may make it impossible to have other physical mutations:

Mutations

TALLER

Limitations

Cannot be shorter (obviously)
Cannot have gills (they could not serve increased body weight/air needs)
Cannot have a total carapace (it would be too heavy)
Cannot have wings (the body would be too heavy)
Heightened strength is reduced to having the strength of a normal sized man
Will negate any sonic abilities

SHORTER

GILLS

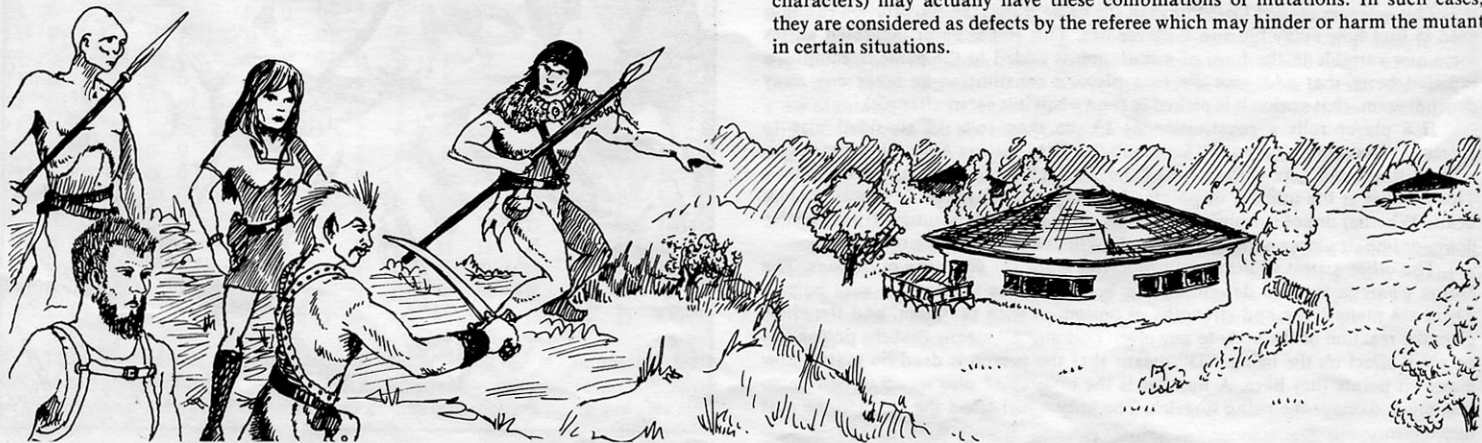
PARTIAL OR TOTAL CARAPACE

Will negate the following:
being taller (total carapace negated only)
having chameleon powers
light generation
heightened dexterity
heightened precision
heightened balance
wings
shapechange

WINGS

Will negate the following:
being taller
having a total carapace

Note: shipboard creature mutations encountered (in other words, nonplayer characters) may actually have these combinations of mutations. In such cases, they are considered as defects by the referee which may hinder or harm the mutant in certain situations.



Physical Mutations Explained:

1. **Taller:** With 6 feet being the normal size, this mutation may range up to an effective limit of 25 feet. This height increase calls for a greater metabolic rate, and increases in the strength potential of the being making double, triple, or quadruple the possible damage done by the being (judges option).
2. **Shorter:** With 6 feet being the norm, this mutation may range down to an effective limit of 1 inch. This change decreases the metabolic rate and the strength potential of the being, and makes it harder for him to be struck in physical combat (referee's option).
3. **Out-Sized Body Parts:** This is an increase in certain areas of the body, with a subsequent increase in power. Example: larger eyes for greater vision, a larger heart for greater endurance. Only one item of a being's body may be increased when choosing this mutation.
4. **New Body Parts:** These are things not usually found on the human body. Example: a heat sensing organ, tentacles, or a gas generating gland.
5. **Poison Claws or Fangs:** The secretions of a new gland in the body that makes a toxic fluid injected by a piercing agent. The intensity of the poison is up to the referee.
6. **Multiple Body Parts:** These are appendages not usually found on the body in excess numbers. These include things like the complete use of 1-10 extra arms, or a greater number of eyes, or a greater number of legs.
7. **Regeneration:** This allows the being to use his body weight to heal himself of lost hit points, (figure 10 pounds of body weight regenerates 1 hit point per day).
8. **Gas Generation:** Much like the skunk, this could be an odor expelled from the lungs or other areas of the body, causing things like unconsciousness or death in other beings that inhale it (as determined by the referee).
9. **Quills:** These are usually along the arms or legs and serve mainly to prevent contact with the skin by other beings (treat the touch of each quill as doing dagger damage) or they may be thrown for short ranges, (1-10 feet).
10. **Gills:** These give a mutant the power to live under the water, but require a much more extensive respiratory system (meaning the body shape will change to make room for the larger lungs).
11. **Chameleon Powers:** This is the ability to change body color to fit into the surroundings. The color change will be almost instantaneous and, once changed, the mutant need not concentrate on the color desired.
12. **Radiated Eyes:** The power to focus radiation through the lens of the eyes to emit a damaging blast of radiation with an intensity of 10 on the radiation chart. This power is limited to once every 4 melee turns and has an effective range of 10 yards.
13. **Electrical or Heat Generation:** This gives a being an "eel" type power in emitting electrical shocks or heat damage for 3 dice (each melee turn) to those touching the mutant (use normal **To Hit** procedure).
14. **Sonic Abilities:** A power to generate high sonic frequencies that are damaging to tissues (like exposed skin areas) at short ranges. The damage amounts to 3 dice per melee turn and can be repeated once every 4 melee turns. It cannot be selective in that it does damage to all in a radius of 10 yards except the mutant doing it. It is in the form of burn-type damage.
15. **Light Generation:** The ability to emit high candle power beams of light with a blinding effect on those nearby (even in full daylight) that incapacitates the viewer for 1-4 melee turns; effective range 25 feet.
16. **Physical Reflection:** The ability to have a skin able to resist the effects of certain types of energies in such a way that these energies are reflected in a random direction away from the body. This resistance should be for only one type of energy, example: heat ray, paralyzation dart, electrical, radiation, etc.
17. **Partial Carapace:** A thick shell covering over the back and head that will reduce the damage done to the body if hit in those areas by one-half. If the shell is cracked by a blow or an energy weapon it takes from 1-12 months to grow back and during that time all damage done to the mutant will be doubled. This also increases the basic armor class of the mutant.
18. **Total Carapace:** A thick shell over the entire body that reduces all damage done to the mutant by one-half, and reduces the speed of the mutant by one-fourth. The systems of the body are so closely tied to the shell covering that it heals as fast as normal healing time for hit point damage. However, when a mutant with this mutation has sustained over one-half of his total hit point damage, he will suffer triple damage until the wounds are healed. This also increases the basic armor class of the mutation.
19. **Heightened Smell:** The ability to sense and identify separate odors from a great distance (200 feet). A mutant with this mutation can never be ambushed (check definition, it is different from being surprised) by non-plant creatures. A being with this power can identify campsites and possessions of other beings after smelling them once. This familiarity with other things must be learned through contact with these other beings. This mutant can follow any trail less than a day old over any surface except water.
20. **Heightened Hearing:** The ability to sense and identify separate sounds in a 200 foot (62 meter) radius. This mutant can never be surprised because the mutation works through and around solid objects.
21. **Heightened Touch:** This mutation will allow a better chance of a being figuring out ancient devices because the mutant can "feel" the logical use of the device he holds. Mutants with this power can, given time (judges option), feel the weak points of any given object, causing the object's eventual destruction.
22. **Heightened Vision:** The ability to see clearly and over long distances (1 mile)

and the power to see into the infra-red and ultra-violet spectrums.

23. **Heightened Taste:** The ability to identify any poisonous substances at a touch of the tongue. This mutation can also identify all plant substances as edible food material or not.
24. **Heightened Dexterity:** This mutation allows the mutant to dodge, jump, or shift body position (making the mutant have an armor class of 1, without the need of that type of armor). This mutation only works completely when the mutant is not encumbered in any way (reduce the armor class if he is carrying anything heavy).
25. **Heightened Strength:** The increase of physical power above and beyond the 18 possible roll. This allows the mutant to cause 3 dice of damage over and above all damage he would normally do with non-powered weapons (with the same exceptions as given to the strength ability).
26. **Heightened Precision:** The instinctive ability to determine weak points on opponents and structural weaknesses in material objects. Because of this mutation the mutant does an extra 2 dice of damage over and above his or her normal damage with any weapon used.
27. **Heightened Balance:** The ability to maintain balance in difficult circumstances. This mutant will never fall into a pit, trip over a rope or wire, or land any way but on his or her feet. This mutant can also climb sheer walls, and walk over one-half inch ropes suspended in the air with no chance of falling if left undisturbed.
28. **Wings:** The growth of usable wings for a mutant which makes it possible to travel through the air, going 100 yards per melee turn. Flight can only be accomplished if the mutant is relatively free of extra weight (figure the mutant can carry no more than one-fourth his or her own body weight).
29. **Shapechange:** The ability to assume the outer appearance of one of the 3 groups of mutations (animal, insect or reptile), but not have the powers of those mutations. Only one group may be chosen normally, and must be chosen at the start of the campaign. This change requires 2 melee turns of complete inactivity to be accomplished. If the mutant is a shapechanger, he or she may have no other physical mutation if they select to be able to change into any shape instead of just one. If the mutant picks only one of the types listed then they may choose other mutations as well.
"Subclassification of Shapechange": An offshoot of the shapechange mutation is the ability to sense radiation areas, draw power from these and imitate the force so that the mutant is unaffected by the damaging radiation. This imitation is immediate and works as a defense against the radiated eyes mutation. It should be considered separate from the above shapechanging mutation and can be picked alone or with other mutations.
30. **Density Control:** This mutation allows the mutant to change the molecular structure of his or her body thus increasing the armor class of their body. Starting with the being's normal armor class, every melee turn the mutant changes his or her density they change their armor class by one (losing mobility in direct proportion to the armor class achieved). If a mutant goes to an armor class of 2 he or she will be completely immobile (but very unpiercible). An armor class of 5 allows the mutant to move at one-half speed. This change lasts from 1-10 full turns and can be negated immediately by the mutant. The power can only be used once a day.

Physical Defects:

31. **Multi-armed (1-10 extra arms):** These arms interfere with the manipulation ability of the mutant, subtracting 1 from the hitting possibility of the mutant for every extra arm. There is a slight advantage in that the mutant can concentrate and use any 2 of his or her arms at one time, making it very difficult to tie the mutant up. Note: if a tricky player tries to cut off these extra bothersome arms he or she will lose 2 points of dexterity and 2 hit points permanently for every arm cut off because the arms are closely tied to the central nervous system of the mutant.
32. **Body Structure Change:** This is the replacement in the body and bones of calcium with some other damaging substance that will lower the body's resistance to some outside force. It would be possible to make parts of the body water soluble or make the mutant breathe nitrogen instead of oxygen (slowing the mutant down by as much as 50%). Any change *must* be a defect.
33. **Skin Structure Change:** This is the altering of the skin so that it is no longer just flesh: like the scaling of the body (thus making the mutant as much as 50% slower) or having the skin be nonresistant to things like heat over a temperature of 76° F causing burns for one die of damage every hour exposed. Any change *must* always be a defect.
34. **Hemophilia:** The absence of blood clotting agents in the body causing bleeding of a serious nature in even the smallest of cuts. The damage done by this defect and the necessary means of stopping it must be determined by each individual referee.
35. **Bacterial Nonresistance:** The mutant with this defect will have no resistance to sickness, thus making any infection a very serious thing. Note: if a referee has this defect in his or her game then it is necessary to have things cause sickness in your game, examples: a sword that is rusty causes a very nasty case of blood poisoning, the claws of any meat eating mutation will cause infection, living in a tribe or group will give him a head cold that might go into pneumonia. All of these examples should cause about 10 dice of damage to the mutant per day and be very hard to cure.
36. **No Sensory Nerve Endings:** This means a mutant cannot feel pain or use their

sense of touch in any way. While the less intelligent person might think "Oh boy! I will not be bothered by sword cuts," this defect cancels the body's warning systems. A mutant will be unable to feel a surprise attack from behind, or even tell when he is being punctured; there could be 4 arrows in his back and he wouldn't even know it!

37. Poor Respiration Systems: This is the failure of the body to get needed oxygen to the blood stream. This lack will make a mutant weaker and give the mutant no endurance which means that he could effectively fight for only 5 melee turns before he must rest or he will faint for an hour or two.

38. Diminished Senses: This is the failure of senses like hearing and touch to operate at normal human levels (it should only work on one sense).

39. Attraction Odor: This universal secretion comes from the mutant's body and makes the mutant smell very edible to *any* meat eating creature.

40. Near-sightedness/or Double Vision: Vision so bad that the mutant will be almost stumbling along without a compensating mental or physical power. This reduces the chance of the mutant to hit in physical attacks by 50%.

41. No Resistance to Poison: This mutation results in death to the mutant whenever he or she is exposed to poison unless an antidote is given in time (no matter what their constitution roll is).

42. Double Effect of Physical Forces: This is having a body so fragile that damage sustained by the mutant is always at double effect.

MENTAL MUTATIONS:

1. Heightened intelligence
2. Mental paralysis
3. Teleportation
4. Levitation
5. Telepathy
6. Multiple increasing of power through contact with similar entities (mass mind)
7. Precognition
8. Illusion generation
9. Mental control
10. Telekenesis
11. Force field generation
12. Repulsion field
13. Mental blast
14. Mental defense shield
15. Reflection power
16. Pyrokinesis
17. Cryogenics
18. Weather manipulation
19. Life leech
20. Charismatic effect
21. Magnetic control
22. Density control (others)
23. Mental transparency
24. Absorption
25. Molecular disruption
26. Time field manipulation
27. Death field generation
28. Planar travel
29. Will force
30. Mental control over physical state
31. De-evolution
32. Telekinetic arm
33. Dual brain
34. Heightened brain talent
35. Military or scientific or economic genius
36. Temporal fugue
37. Intuition

MENTAL DEFECTS:

38. Complete mental block
 - A. Technological
 - B. Robotic
 - C. Plant type
 - D. Animal type
39. Fear impulses for types
40. Mental defenselessness
41. Multiple damage
42. Epilepsy
43. Poor dual brain
44. Anti-leadership potential
45. Anti-reflection

Mental Mutations Explained:

1. Heightened Intelligence: This translates into a greater mental resistance factor (plus 4, but a player may never go over 18) and increases the ability to figure out ancient ship devices. This power is *necessary* for all mutated animals and plants (if they need to communicate and react logically) and it is necessary to choose it if a being rolls a 4 for his or her mental mutation abilities roll.

2. Mental Paralysis: The ability to override the nerve centers of another being, causing nonmovement. If maintained for over 3 melee turns, the victim will die.

3. Teleportation: The mental transference of the mutant's physical self to another area of the ship (range 3 miles). Note: only the mutant is able to travel thus; he or she cannot send others. If the mutant tries to travel to an area that he or she has not spent at least 8 hours memorizing, then they will have a 25% chance of receiving 10 dice of damage as they teleport into that area.

4. Levitation: The power to lift oneself into the air. This power applies only to vertical movement and the mutant will only be able to lift (besides himself) all the weight he could normally carry in one hand. This lifting force can last up to 25

melee turns with a subsequent need to rest for 5 melee turns immediately thereafter. No other activities are undertaken while levitating.

5. Telepathy: The power to translate another creature's thoughts and/or emotions and send your own to them. This power works regardless of whether the mutants speak the same language, and it works on all beings up to 25 feet away from the mutant.

6. Mass Mind: This mutation allows the mutant to empathize with creatures of a like nature (same species) or like power (all having mental control, etc.), to increase the existing abilities of the commanding mutant. It would be possible to send a double strength mind blast or to use precognition a day ahead instead of just a few minutes. This power works in direct proportion to the number of beings working together, example: 4 mutated humanoids and 4 bearoids get together and 1 of the humanoids has the "mass mind" mutation. These mutants together (through the mass mind mutant) can use any of the other mental powers they *all* have, at a ratio of 7 times the normal distance, duration, and power. There is a 5% possibility of death (by mind burnout) after the first melee turn, increasing by 5% every melee turn thereafter for all participants.

7. Precognition: The power to sense dangerous situations which will affect personally the mutant having the power. This is effective only 3 minutes into the future and requires intense concentration to work, but is great when used just before entering a door to see what is immediately behind the door! It is perfectly all right for the mutant to change the course of history by acting on this information and not, for example, die by opening a door and being mind blasted.

8. Illusion Generation: The ability to create images in the mind of other beings within 100 feet (31 meters) of the mutant using this mutation, and only touch will convince the being that the image is false. The illusion goes as far as having odor and sound to whatever extent the being seeing it expects.

9. Mental Control: The takeover of another being's ability to command his or her body. When a mutant is in command of another being it experiences all the feelings and sensory impressions of the controlled (and the controller is unable to use his or her own body). If the controlled being gets knocked out or dies, then the controller suffers the same fate. There is an initial range limitation of 50 feet (15.5 meters) for the first attack, but after control is established, there is no range limitation. The controller may give up control at any time and returns immediately to his own body.

10. Telekinesis: The mental power to lift objects (besides yourself) into the air and move them about. There is a weight limit of only lifting what the mutant can normally lift himself. The maximum time this weight can be lifted is 5 melee turns with a subsequent necessary rest of 5 more melee turns immediately after the lifting. When trying to lift things that are alive or things that are being used by other living beings, the referee must treat the attempt as a mental attack on the being.

11. Force Field Generation: The power to make an invisible wall of energy that will not allow a physical object to pass. This wall will form only in front of the mutant with this power (about 5 inches away from the body) and will take 5 dice of accumulated damage before being forced down. It takes damage just as the human body does from the things like swords and ray guns. It takes no effort to maintain the shield if the mutant remains motionless. After the shield's destruction, there is a need to rest 1 day before making another one.

12. Repulsion Field Generation: Similar to the force field except this will move to a maximum range of 50 feet (15.5 meters) and can surround and trap other beings in a sort of bubble. In all other respects it is as a force field.

13. Mental Blast: The ability to cause direct damage with the mind. This damage is worth 3 hit dice per melee turn of successful attack.

14. Mental Defense Shield: This is always in force and will add 4 points to a being's mental resistance rating (with the rating never going over 18). It will also allow the mutant to be aware of any other mutant with mental powers within a 30 meter radius.

15. Reflection Power: This mutation, through mental concentration, repels damaging energies directed at the body. This manifests itself in reflecting hit dice damage of *any type*. On the first melee turn of concentration 3 dice of damage is reflected, on the second turn 4 dice is reflected, going to the 18th turn of concentration in which 20 dice is reflected. The only thing wrong with this power is that the mutant must not move at all and is subject to simple attacks that do no damage but do incapacitate a person. After using this mutation the mutant is unable to do it again for a day.

16. Pyrokinesis: The ability to cause living matter, or the product of living matter, to suffer heat damage and eventually burst into fire. On the first melee turn 1 die of burning damage is done (not necessarily fire) and through undisturbed concentration up to 10 dice of damage can be accomplished in the 10th melee turn with the referee deciding when the actual fire starts. There is a range limitation of 25 meters for this mutation to be effective.

17. Cryogenics: This mutation uses the same limitations as pyrokinesis except it applies to a freezing power. The use of this mutation for 10 melee turns will cause complete freezing of an object or being.

18. Weather Manipulation: This mutation is essentially a control of air pressure on a massive scale, with a little bit of luck thrown in to get some of the effects wanted. Percentile dice are used at the beginning of the attempt and if the roll is not made for the listed weather condition wanted the pressure systems will not bend to the will of the mutant for at least 24 hours.

Weather Conditions	Chance of Occurring	Time It Takes in Melee Turns
Light Breeze	1-90%	1
Gusty Winds	1-75%	2
Light Rain	1-65%	3
Thunder Storm	1-50%	4
Fog	1-45%	5
Light Snow Storm	1-30%	6
Blizzard	1-25%	7
Below Zero Weather	1-10%	8

Add a plus 10% to each roll if the weather conditions already there resemble the ones wanted by the mutant. These new created weather conditions will last as long as the mutant concentrates on them. Note: the computer has a 25% possibility of immediately correcting any weather disturbance in the starship.

19. Life Leech: The power to drain energy from living organisms. This mutation works in a 30 foot diameter around the mutant affecting friend and foe alike. For every 4 points of mental resistance a mutant has, the ring of effectiveness increases by 10 feet. This mutation will drain away 6 hit points per melee turn from the beings within the circle and transfer them directly to the mutant for a 24 hour period. This leeching ability only works on semi-intelligent and intelligent beings.

20. Charismatic Effect: The ability to project flashing, blinding light patterns at an effective range of 50 feet from the mutant. It is a 5 foot diameter field that can be moved to surround beings that has the effect of blinding them for 1-10 melee turns.

21. Magnetic Control: The power to repel, attract, or utilize anything of a ferrous nature by the control of magnetic fields. This mutation works fully only on non-animate, non-powered materials. Treat all objects as having a mental resistance of 12. With this mutation the mutant can lift anything ferrous, no matter what the weight. The power lasts for 25 melee turns and is effective for a maximum range of 100 yards; example: our good friend Scar-lock runs up to attack a mutant and Scar-lock is using a sword. The mutant tries to make the sword lift into the air to get it out of our hero's grasp. The mutant rolls the necessary roll for beating a mental resistance of 12 and the sword does whatever the mutant desires, which is in this case rising into the air for a distance of 100 yards. Scar-lock, not wanting to lose such a valuable object hangs on for dear life and rises with the sword (which requires no extra effort for the mutant). The mutant then deposits our hero, much ruffled, into the nearest "sword bush" and leaves laughing.

22. Density Control (others): This mutation does exactly the same thing to others that the physical mutation number 30 does to the mutant. The advantage in having it is that you slow other attackers down.

23. Mental Transparency: A strong form of illusion, this mutation makes it impossible for non-intelligent beings, and intelligent beings not making their mental resistance roll, to see the user. While it is impossible to see this mutant, it can be heard, smelled or touched. The effective range limit of this mutation is 100 feet (31 meters). A mutant may move while using mental transparency, but may not make any form of attack.

24. Absorption: This mutation absorbs one of the following energy states: cold, heat, light, paralysis rays, radiation or mental blasts. The mutant can absorb up to the number of hit points he or she has each day. If a mutant has already absorbed all the points he or she has, every melee thereafter it sustains double damage from that form of attack. This double damage effect lasts for 24 hours.

25. Molecular Disruption: This mutation is a dangerous, powerful one-shot ability which can only be used infrequently. Upon using it, whether it works or not, the mutant is reduced to 1 hit point for 7 full days and moves at one-half speed for that amount of time. The mutation affects different states of matter differently: metal and dense material have 3% chance of being affected per mental resistance point (affecting up to 100 pounds of material at a time), stone and nonmetal material have a 4% chance of being affected per mental resistance point (affecting 100 pounds of material), and biological organisms at a 5% per mental resistance point (affecting any amount of material in a single unit). This effect manifests itself in the disappearance of the material forever.

26. Time Field Manipulation: The ability to travel or send objects through the currents of time. The use of this mutation requires an 18 intelligence and a "heightened intelligence" on the part of the mutant. The force required to send objects through time varies with the material involved. While material moves through time it does not move through space, so wherever the material started in the ship is where the material ends. The energy required drains one-half the hit points from the mutant for 1-8 days and reduces the mutant to one-half speed for 1-12 days. Using the percentile dice the following graph is used for time traveling:

BACK IN TIME:	PERCENT CHANCE OF WORKING:
1 week	1-95%
25 weeks	1-85%
1 year	1-80%
5 years	1-75%
10 years	1-60%
25 years	1-50%
50 years	1-30%
100 years	1-20%
250 years	1-10%

With resisting material (defined as being owned by another person) there is less of a chance of being sent into time: metal & powered units -10%, stone and other inorganic material -15%, biological material -20%. If objects are to be sent into the future for the given times subtract 25% for each division. The only limit in the amount of material sent is that the sender can only send what he or she is touching at the time. The draining and slowing down of the mutant happens even if the material does not get sent into time.

27. Death Field Generation: This mutation drains all the hit points but 1 from all beings (friends or foe) within 60 feet of the mutant in 1 melee turn. When a mutant uses this mutation he is not affected by it except that he can do nothing else for 1-20 melee turns.

28. Planer Travel: The ability to open ways to alternate planes of existence. This mutation manifests itself in a 10 by 10 opening lasting up to 3 full turns. These planes of existence may or may not be populated (by referee-inspired creatures), but once entering there is no way to leave them (unless a mutant reopens the plane), so they make perfect jails. Only one of these may be made in a week.

29. Will Force: The ability, through sheer force of will, to double any one facet of a mutants abilities. It can be used in conjunction with any other powers, or it may be used to increase hitting ability by 1, etc. It lasts from 1-10 full turns and cannot be used again for 2 days.

30. Mental Control Over Physical States: This mutation is the unconscious ability to disregard things like pain warnings and override things like fatigue and blood loss for up to 1 day. This also increases the mutant's chances of surviving mortal wounds in that he or she can heal four times as fast as normal. In situations of overwhelming danger (judge's option) the mutant will have double his or her normal strength, dexterity, and speed for 5-50 melee turns (usable once a week).

31. De-evolution: The power to strip abilities from mutants by regressing them along their ancestral lines. If this power works (treat as mental attack) it begins with the being's greatest special ability (judge's option) being taken away forever, and removing 2 more abilities on every subsequent melee turn the force is in action. This power is usable only once every 7 days. This power will last to the end of the combat, be it 1 melee round or 100.

32. Telekinetic Arm: This mutation takes on the form of a tangible arm with the power to fight as a human with the strength of 18 up to 50 yards away from the mutant, floating always from 1-6 feet off the ground. The arm cannot be hit by nonpowered weapons. The arm must always be visible to the controlling mutant.

33. Dual Brain: This mutation takes the form of 2 brains with all the powers 2 brains imply (not necessarily in 1 head). This allows a being to figure out any given artifact faster, and while a mental attack may affect 1 brain, the other brain can over-ride any harmful effects and control the body. These brains may have only 3 other mental mutations (total).

34. Heightened Brain Talent: This mutant will be able to figure out the workings of any artifact in one third the time. This mutant gets 2 saving throws against mental attack. It is impossible to tell a lie to a mutant with this power without his knowing it.

35. Genius (either military, scientific or economical): This mutation splits itself into having only one of the following:

A Military Genius will have a plus 4 chance of hitting with any weapon and will do one dice of damage over and above any given weapon damage.

A Scientific Genius will have a plus 10% chance for figuring out any given artifact, and any weapon he or she makes will do 4 extra points of damage. It takes 3 times as long to make weapons of this type, however.

An Economic Genius will be able to turn a triple profit on anything he or she tries to sell, and will have a leadership potential like a human.

36. Temporal Fugue: A mutant's ability to make perfect replicas of himself by shunting back and forth in the time stream (never staying). The mutant is able to make 1-10 doubles of himself per week that will last 5 full turns or until death. For each double killed in battle the mutant must rest after the battle for 1 week. All doubles appear together but each will fight as an individual with no real coordinated attack plan. It is up to the referee to decide how many can be produced in a day's time without exceeding the limitation. Example: It could take 10 seconds to produce one copy, but the player would not be able to produce another copy for 18 hours thereafter. The referee can check for each game week to determine how many copies can be produced in that period, basing it on a 1 to 10.

37. Intuition: The ability to be aware subconsciously of the factors of chance and precognition. This allows the mutant to do a plus 3 on damage, have a plus 1 chance of hitting, and never be surprised. It is not useable when other powers are working.

Mental Defects:

38. Complete Mental Block: This is the inability of a being to see or even come near one of the items listed. While the being can operate logically in the presence of his or her block, the being cannot use or touch this object or even be aware of it if it attacks them. The four items should be self-explanatory and apply to only 1 item in the given categories. The individual types are determined by the referee (i.e. fish, bird, wolf, etc.).

39. Fear Impulses for Types: This mutation, for one reason or another, simply causes a fear of an object or animal and makes the mutant unable, for any reason, to look at that thing without feeling total fear and running away from it (dropping everything in his haste).

40. Mental Defenselessness: This is a mutation that gives the mutant a 3 on his or her mental resistance chart, regardless of what he or she rolled to begin with.

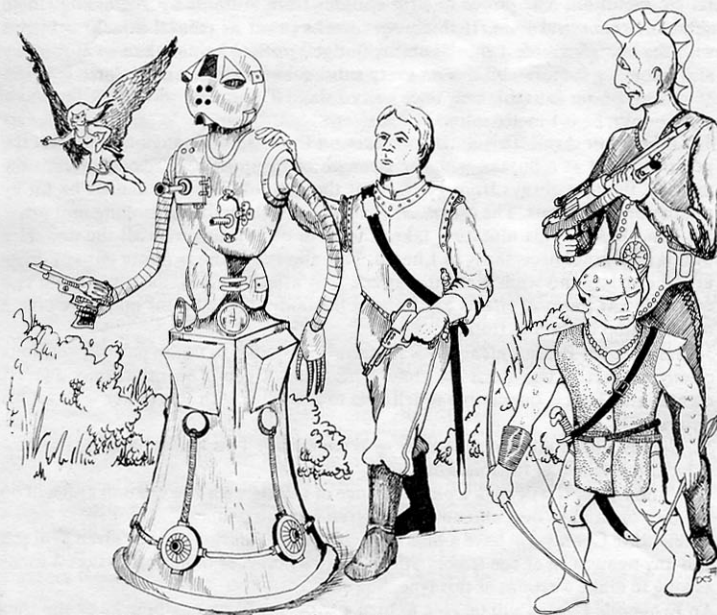
41. Multiple Damage: This mutation causes the doubling or even tripling of the damage done by any type of attack on the mutant; not because it physically does more damage, but because the mind makes the body believe it has been damaged more.

42. Epilepsy: This is a body paralysis that takes place at random times and for variable reasons. When attacks come on, the body is unable to respond to the environment around it and it remains motionless. The judge should set up a consistent set of variables for the person going epileptic.

43. Poor Dual Brain: This is another brain in the body that is a handicap to the mutant — taking over the body at strange times, having a large amount of other defects, and/or counteracting mental powers of the good brain in difficult situations.

44. Anti-Leadership Potential: A mental, unconscious field with a range of 30 yards radius that causes this mutant to be so unpopular that it makes others actually want to fight with the mutant (happens on a 25% chance every day with every human or humanoid the mutant meets). Only beings with intelligences of 17 or 18 can resist this effect.

45. Anti-Reflection: The most dangerous of all the mutations; it causes any mental attacks made by the mutant that has this defect to be reflected back and damage himself. It also causes any defensive measures by the mutant to be placed on the beings he or she was trying to defend against. This has a 25% chance of happening in each attack.



A HUMAN LEADER WITH A SECURITY ROBOT AND THREE MUTATED HUMANS

Mutation Generation Charts for (Animals):

All of the 42 physical mutations of humans apply with the addition of the following for animals:

43. Speed Increase
44. Symbiotic Attachment
45. Fur Change
46. Teeth or Fangs

43. Speed Increase: This mutation takes the form of a special gland in the body of the mutant that allows the mutant to move twice as fast as normal in times of stress. It acts much like a super adrenal gland and gives the mutant this power for 5 melee turns twice a day.

44. Symbiotic Attachment: This mutation is the ability to link the nervous system of another creature with the mutant, the mutant then being in complete control of both bodies. It can be done to any creature, given enough time for the link up. This mutation requires an effective hit by the attacking attachment appendage (in the form of a fang, stinger, etc.) and takes 3 melee turns of constant contact to succeed. Only the death of the symbiotic creature within the 3 melee turns stops the takeover and touch of the creature must always be maintained after the takeover.

45. Fur Change: This mutation is a change in the normal color of the mutant or the ability of the fur to resist energies and forces that it normally could not resist (such as lasers, radiation, etc.).

46. Teeth or Fangs: This mutation is given to creatures who formerly lacked them for one reason or another.

All of the mental powers given to humans can be applied to animals.

Mutation Generation Charts for (Plants):

All of the mental powers given to humans can be applied to plants.

Note: Plants are *not* intelligent unless intelligence has been raised due to mutation.

1. Tangle Vines
2. Poison Vines
3. Poison Thorns
4. Poison Throwing Thorns
5. Contact Poison Sap
6. Squeeze Vines
7. Aromatic Powers
8. Berries
9. Larger Than Normal
10. Smaller Than Normal
11. Dissolving Juices
12. Mobility
13. Increased Senses
14. Manipulation Vines
15. Texture Changes
16. Radiation Sensitivity and Imitation
17. Divisional Body Segments
18. Symbiotic Attachment
19. Radiated Plant Fiber
20. Electrical or Heat Generation
21. New Plant Parts
22. New Senses
23. Sonic Powers
24. Physical Reflection
25. Stasis in Periods of Darkness
26. Attraction Odor

Explanation of Plant Mutations:

1. Tangle Vines: A weak vine able to move only slightly and slowly, having no real strength to it.

2. Poison Vines: A prickly vine that is able to inject its toxic fluid (intensity level is at referee's option) at a touch on the skin.

3. Poison Thorns: A hollow sharp thorn filled with poison (intensity level is at judge's option) that releases its fluids upon penetration.

4. Poison Throwing Thorns: These are larger thorns (about 6 inches long) that a plant can launch through the air at short ranges (from 2-12 feet) that release their poison (intensity level at judge's option) upon penetration.

5. Contact Poison Sap: A toxic substance that is able to cause damage even though it does not penetrate the blood stream (intensity level is up to the referee.)

6. Squeeze Vine: This is a much more powerful vine that has the power of rapid movement and can do 4 dice of damage per melee turn. Once these vines grab on, the only way to be released is to cut a way out.

7. Aromatic Powers: This is the ability to lure victims by scent. It even affects intelligent creatures by making them unable to do anything else the first 4 melee turns but come close and smell the fragrance (saving throw like an 8 intensity poison) where the plant can catch or kill the being.

8. Berries: These are fruits of all different types that are able to do things like heal damage, cause regeneration of body parts, increase mental powers, or decrease mental powers, etc.

9. Larger Than Normal: This makes a normally small plant a giant of the species (size is the judge's option). Example: a venus fly trap can become a 9 foot monster.

10. Smaller Than Normal: This makes a possibly large dangerous plant very small and therefore very unnoticeable. Example: bamboo which is one inch tall growing among normal grasses and having a deadly poison barb.

11. Dissolving Juices: This is an acid coming from the plant that speeds decomposition of the body that is trapped in its grasp. It causes 4 dice of acid type damage per melee turn and no type of covering is protection.

12. Mobility: The power to move at varying speeds. This does not necessarily mean that the plant is intelligent.

13. Increased Senses: These are new powers of detection given to the plant, such as sight, hearing, smell, etc.

14. Manipulation Vines: These are appendages that act as hands for the plant with little of the strength of the squeeze vine but much more grasping and texture control.

15. Texture Change: This mutation makes the plant surface different. Example: a plant having metal scales, shelled, or with a type of mineral armor.

16. Radiation Sensitivity and Imitation: This is much like the shapechange mutational power of the humanoids. It allows the plant to blend in with the damaging power of any given radiation and not be affected. The plants can activate color band machinery by matching radiation types.

17. Divisional Body Segments: These are vines, or limbs, or anything on a plant that can have mobility all their own under the primary control of the main plant. These things could grab, poison, or trap other beings for the main plant's benefit.

18. Symbiotic Attachment: Same as the animal trait (#32).

19. Radiated Plant Fiber: Parts of the plant emit radiation without harming the whole plant. This radiation may not go higher than an intensity level of 15.

20. Electrical or Heat Generation: Same as the human trait (#13)

21. **New Plant Parts:** This is the plant having things like eyes, human type arms, etc.
22. **New Senses:** Same as one of the human mutations dealing with heightened senses.
23. **Sonic Power:** Same as the human trait (#14).
24. **Physical Reflection:** Same as the human trait (#16).
25. **(Defect) Stasis in Periods of Darkness:** This forces a plant to be totally inactive while light does not shine on its sensing organs.
26. **(Defect) Attraction Odor:** Same as the human trait on the defect list (#39).

Many of these abilities have been described in such a way that the judges can use varying degrees of the type and intensity of the mutations. This allows for a greater degree of change in every type of creature and in every referee's ship.

THE MUTANTS

The following list of mutations is by no means a final or comprehensive list, but a starting point based on the *Warden's* ship list of earth creatures brought on board.

MUTATION NAME	NUMBER USUALLY APPEARING	ARMOR CLASS	MOVEMENT IN YARDS PER MELEE TURN	HIT DICE
HISSE	1	4	10	5
PIERCER	1	5	8	8
METALED ONE	1	2	10	4
SHOCKER				
BEAST	2	7	12	3
COUGAROID	2	5	10	5
DEER	1-4	7	18	2
BEAROID	1	5	7	9
UNICORN	1	8	20	4
PEGASUS	2	3	9/18	5
JEGET	2	5	12	5
DART				
CREATURE	1	4	6	2
THIEF BEAST	2	7	8	3
WINGED				
BITER	1	4	5/12	2
WOLFOID	2	5	12	4
CHANGER	2	4	16	1
STABBER	2	2	15	3
HAWKOID	2	8	12	5
IMITATOR	1	7	10	3
BLOOD BIRD	2	4	12	2
THE BLACK				
ONE	1	3	7	5
SMALL				
WARRIOR	50-1,000	6	7	1
BUZZERS	25-500	7	12	2
MIRROR				
CREATURE	1	6	4	3
GRABBER	1	5	0	9
DREAM BUSH	1	7	0	2
THE JAWED				
PLANT	2-12	4	6	3
THE SINGING				
VINE	2-8	3	8	2
THE DEATH				
TREE	3-12	5	0	10
THE SWORD				
BUSH	1	6	10	5
PASSION				
WEED	1	6	0	1
RED STINGER	2-5	5	0	1
MIRROR OAK	1-6	4	0	10
DARK FUNGUS	1 Patch	-	0	1
DEATH				
GROWTH	1 Patch	-	0	1
DART WEED	1	5	0	1
BLISTER				
PLANT	2-8	5	0	1
HUMANOID #1	1	6	6	5
HUMANOID #2	1	5	10	4
HUMANOID #3	2-12	2	3	8
HUMANOID #4	2-16	5	12	5
HUMANOID #5	4-16	7	9	9

Movement: Second number is flying speed

MUTATED ANIMALS:

Hisser (alligator): These creatures are much smaller than their nonmutated cousins, with the biggest one ever found being only 4 feet long. They have much longer webbed legs, which make them faster on the land; they have 2 tentacles on their head which cause paralysis at a touch (as a mental attack with a strength of 12), and their skin is resistant to all forms of radiation. They remain solitary creatures except during the mating season when they are especially vicious. They always enter battle emitting a loud hissing noise. Their bite is not used for attacking.

Piercer (black bear): This creature stands about 9 feet tall, with short, bristly fur, rows of 3 inch quills along its arms and shoulders (these should be treated as arrow damage when the bear hits), and it has an altered throat arrangement. It has the ability to change color to match the surroundings perfectly, it can regenerate wounds at the rate of 3 hit points per melee round, and finally when it feels it is threatened it emits a sonic blast causing fear in those unable to resist its effects (treat as a mental strength attack of 14).

Metaled One (badger): This creature is about 3 feet long with a mutated fur that is composed of a hard mineral instead of calcium giving it a sort of armor. It has a high order of intelligence, is extremely near-sighted, can mentally paralyze (with a range of 6 feet), has the power of telekinesis with a maximum weight of 150 pounds, and it has a fear impulse for any type of intelligent plant. Its 2 claws are like swords when causing damage.

Shocker (bob cat): This creature is about 3 feet long and seems to be just like its non mutated relative except that it is able to cast electrical bolts of energy from its eyes that do 5 dice of damage. The range of these bolts is 30 feet and it continuously emits them when attacked or attacking at the rate of 2 per melee turn.

Cougaroid (cougar): This former cat now walks upright, has the intelligence of a human and fur that is resistant to paralysis, lasers, and electrical energy. It has a mental block on robots, has manipulative paws, and its brain is completely resistant to any form of mental attack. The creature has an attraction odor that prevents it from congregating in any number.

Deer: This animal has developed a highly toxic poison (intensity level 15) emanating from its antlers that is effective on contact. It is otherwise normal in all respects and its antlers should be treated as 2 spear jabs.

Bearoid (golden bear): This creature is about 12 feet tall, has intelligence and the following mental powers: teleportation, precognition, telepathy, and mental control. It has manipulative paws, is near-sighted, and has no resistance to gases or paralyzing attacks. It uses bows and clubs (treat as heavy mace) in battle.

Unicorn (horse): This creature is about 3 feet tall, with a horn projecting from its head, and skin that gives off a silvery light. It can project radiated energy from its horn for a distance of 20 feet for 4 dice of damage per melee turn, and is able to attune its body to any type of radiation and therefore be not affected by it. When any being tries to touch or tame it, it emits a high intensity heat blast with a range of 15 feet and doing 6 dice of damage. The beast is limited in this last power in that it can only produce this heat a maximum of 3 melee turns a day. Because of the nature of the beast, it lives in or near centers of high radiation.

Pegasus (horse): This creature is about 3 feet tall and usually white in color. It is much lighter than its nonmutated cousin because of its hollow bone structure. This feature makes it very fragile, but nature has provided for this by giving the creature an unusually tough skin that is extremely difficult to pierce. It can be domesticated but due to its small size, only very small intelligent beings can take advantage of this fact. This flying creature has never been known to be attacked by any other flying type. Its feathered wing span is usually 5 feet and its hooves should be treated as heavy maces for damage.

Jeget (jaguar): Only 2 feet long, this creature has powers far exceeding its small size. It is very intelligent and its mental powers include: levitation, telepathy, precognition, fear generation, telekinesis, and force field generation. It has manipulative paws, an attraction odor, a fear impulse for all intelligent plants, and very little resistance to any type of poison (4 on the poison chart). Its 2 claws do 1-4 points of damage each.

Dart Creature (porcupine): This beast appears as the nonmutated cousin, but its quills are much different. These are hollow and filled with a toxic poison (intensity level 15). The creature is able to cast 3-18 of these a range of 20 feet once per melee turn.

Thief Beast (raccoon): This highly intelligent creature has mental powers including: telepathy, illusion generation, telekinesis, a repulsion field, and empathy used to create illusions that will be the most effective in frightening its enemies. It has manipulative paws and the power to generate a dazzling light from its skin. It constantly seeks out technological devices and studies them. Of all the animal mutations of the ship, it uses these devices the most.

Winged Biter (python): This snake averages only 3 feet in length with a feathered wing span of 4 feet. This snake is resistant to all forms of paralysis, and poison. This snake is omnivorous and has a poison bite (intensity level 13). It displays the power of precognition not just when it is concentrating on that power, but all the time without the seeming need to concentrate. When it is in its early developing state it is possible to tame it and use it for protection, as it will always give warning before an attack. Its favorite egg laying place is on or near a *mirror oak*.

Wolfoid (timber wolf): This biped stands about 4 feet tall and has manipulative paws. Its fur reflects all types of energy and is resistant to contact poison. It is fully intelligent, with the power to regenerate its wounds at 5 hit points per melee turn, and it has radiated eyes. It has no sensory nerve endings and therefore has taken

to wearing heavy plant fiber clothes to prevent being punctured and not knowing it. This race has been able to master many of the mutated beasts and use them as guards and protectors which they surround their living area with. It has been known to use swords.

Flying Types

Changer (robin): This type is able to change its color to match its surroundings, has precognition all the time (like the winged biter), and is resistant to all poisons and has a brain too small to be affected by mental attacks.

Stabber (woodpecker): This flyer has increased 2 feet in height and is now 3 feet long. It has aluminum based feathers and the same type of beak (now 5 inches long). Its primary method of attack is to dive on its victim and pierce the body doing 3-30 points of damage. It uses a high pitched whistle to frighten and paralyze its nonintelligent victims and is completely silent when attacking its more intelligent prey. Because of the smooth nature of the feathers and beak, it can easily extricate itself from any pierced wound. It, as *all* other flyers, has a mental block for the pegasus.

Hawkoid (sparrow hawk): This creature is much larger than its nonmutated cousin (being about 4 feet tall when reaching full adulthood). It is fully intelligent, with appendages extending from its body ending in hands that do not hamper its flight. Its mental powers include: fear generation, levitation, and the ability to generate a force shield. It is not afraid to take on creatures much larger than itself and has a constant appetite. It uses bows and rocks from the air to deadly effect.

Imitator (golden hawk): This flyer is fully intelligent but does not have the manipulative appendages to take advantage of it. It can completely shapechange into any creature within 25 feet of it, thus making it resistant to the powers of that creature; plus it retains its own radiated eye ability. This transformation unlike other chameleon changes is complete and lasts as long as the bird wishes. Due to the energy used in changing, the bird can only accomplish this once a month.

Blood Bird (scarlet tanager): This mutated flyer is 2 feet tall and retains the startling plumage of its nonmutated cousin. Its body constantly gives off radiation at an intensity of 10, and its beak is now changed so that it can eat meat. Its mind is resistant to all forms of mental attack as its brain is too small.

Insects

The Black One (wolf spider): This mutated spider is 4 feet tall and is a fearsome creature with a brain too small to be affected by any mental attack but illusions. It is able to generate electrical energy for short periods of time (3 melee turns) in its attempt to kill its victims. This energy does 4 dice of damage per melee turn. The arachnid's web has been known to span a 100 foot area in clearings or darkened forests. It does not usually leave its web.

Small Warrior (ant): This insect is only slightly larger than its nonmutated cousin. The creature, in numbers over 100, can, in a type of mass mind, generate a force field to protect its hill from the many predators that love fresh ants. The breeding rate of the queen is much lower than its nonmutated cousin, but it lives much longer. The warriors have a toxic sting (intensity 16) that can kill any size creature in a very short period of time. Its nests are usually found in areas where the artificial sun does not shine or where there are game trails.

Buzzers (bees): These mutated cousins are attracted by the expending of mental energy and are enraged by it. They expend a high energy blast upon contact with a being, causing 4 dice of damage and rendering the buzzer unconscious for 3-18 minutes.

Mirror Creature (worm): This creature is about 3 feet long and has several strange traits. It is attracted to high heat or electrical energy outputs, and reflects 100% of any heat or electrical force directed at it (this force after leaving the body of the worm is magnified 4 times).

Plants

Grabber: This plant is a normal looking willow tree with vines that it is able to move for its own purposes. At the center of its branches is a cluster of glands that emit dissolving enzymes that make the creatures it grabs decompose faster, thus turning them into fertilizer for the plant's use. The tree has heat and sound sensitive appendages at the tip of many of the grabbing vines. The trees vary in size with 3-30 vines per tree.

Dream Bush: This small bush emits a fragrance from its petals that makes any creature with a sense of smell see what they most want to see. The fragrance has an affecting range of 10 feet and a prolonged contact will cause addiction in any creature. Repeated contact will cause a speeding up of the metabolic process resulting in death by exhaustion.

The Jawed Plant: This is a 9 foot tall venus fly trap, with full mobility and the power to mentally paralyze its victims within a 25 foot range. The sap issuing from its jawed sides can dissolve a victim in 5 melee turns. It moves at fast speed and is heat sensitive within a 30 feet radius of it.

The Singing Vine: This fully intelligent plant is able to move and converse with any creature, as it is telepathic. Any intelligent creature that is aware of the plant's presence is unable to harm it, as it is able to use sonics to cancel all violent action on the part of any possible enemy. Unfortunately for it, the sap it emits is very tasty to nonintelligent creatures and it is just such creatures that the sonics do not work on. The plant can move at a slow pace and it carries with it an unusually

large amount of knowledge that it will give for objects to aid in its survival. It of all the plants has the best set of manipulative vines.

The Death Tree (cherry tree): Formerly this tree contained fruit that was tasty, but now it has berries that are radiated and upon contact unleash a terrible radiation at the 15th intensity. It is able to manipulate its branches and cast 3-18 of these berries up to 20 feet. The tree is fruitful all year except for 4 weeks of every year when the berries turn into normal seeds. It is able to sense life in a 40 feet radius by means of life energy detectors in the main trunk of the tree. Many small quick flying creatures nest in its branches, as the tree will not cast seeds within 10 feet of itself and the birds fly too fast for the senses of the tree to react to them.

The Sword Bush: This former fern is fully intelligent and has many mental and physical powers. It is able to teleport itself, has precognition, can mentally control, is able to generate a force field, and is forced into stasis when it is dark on the ship. Physically the large plants have 18 metallic leaves that are much more like swords than leaves. The plant can move, has life energy detectors (effective for a range of 50 feet at the top of the plant stalk), has 3 manipulative tentacles, and a maw like a small venus fly trap with dissolving enzymes. It has been known to use ancient devices and to travel up and down the levels by using color bands.

Passion Weed: This very rare, very small weed, makes a strange enzyme that upon contact with flesh causes the contacting creature to be enraged beyond all reason. The affected creature will try to kill any other creature around, and, in the absence of living things, kill itself. Nothing works as an antidote for the enzyme.

Red Stinger: This plant is a thorn-bearing bush with a variable size. The thorns bear a deadly poison (intensity level 17) and the berries have the ability to give temporary resistance to all forms of radiation if taken in large enough amounts (over 90 berries). The bush is always bright red and grows very near areas of high intensity radioactivity.

The Mirror Oak: This oak tree looks in all respects normal, but is able to reflect any type of energy directed at it or near it (within 5 feet) with a 100% efficiency. This feature makes it the home of many of the less powerful creatures of the woods.

The Dark Fungus: This fungus spore, when massed in large concentrations (over 10 pounds), is able to form a mass mind with intelligence and considerable mental power. The parasite has the powers of illusion generation, telepathy, force field generation, and is mentally defenseless. When in its intelligent state, its only concern is increasing its mass, which is able to gain sustenance from any living matter. Its growth rate is much slower than most fungus types and requires more than one type of protein for growth. Touching it does 10 dice of damage.

The Death Growth: A relatively small concentration of this parasite fungus forms a symbiotic attachment to any warm blooded creature in a matter of 2-20 seconds. Only the instant application of extreme heat can stop the takeover (75% chance of killing the creature). When the parasite is in command, the being acts with its full powers for a period of 2 weeks after which that body decomposes and the parasite is stationary on the spot where the body dies, until it can infect a new host. The fungus is unaffected by any mental attack because the attack only works on one of the billions of spores. Attachment is by touch and the spores can shoot themselves in mass a distance of 5 feet when sensing a new host.

Dart Weed: This plant is sensitive to *any* male of *any* species and is able to shoot a seed into a being coming within 30 feet of it. This seed if unnoticed will burrow painlessly into the body and start to swell, causing death if not cut out (judges option on how much damage this does). The plant appears as a brown tall stalk and thrives near running water. Swelling starts within 3-18 melee turns of entering the body. Death will occur in another 3-18 melee turns.

Blister Plant: This small, round, red plant grows in clusters that usually are found near radioactive areas (but there have been exceptions that grow orange in color and are found in swamps). The plant has a deadly contact poison (intensity level 16) that causes swelling of the touched area immediately and the swelling will continue through the body reaching the heart and causing it to stop. Death takes from 3-18 melee turns to occur.

Mutated Human Types

Humanoid #1: This being stands about 4 feet tall and has triple-ply muscles giving the being a strength factor of 24. It is also able to generate heat energy in its hands that will cause 3 dice of damage or will ignite any fiber or flammable substance it comes in contact with. This race of beings is only semi-intelligent, but they do use blowguns and bows. They usually live in the mountains and hilly areas of the ship.

Humanoid #2: This being is in all ways normal in appearance; in fact, it looks very weak. Its great strength is in its mental state, with powers including: a mental factor of 18, being able to teleport, having a force field, a repulsion field, telepathy, and a fear impulse for any intelligent plant. The race usually wears light body armor in the form of cured pegasus hide when they can get the hide.

Humanoid #3: This being stands only 1 foot tall and can survive only because of its great resistance to all forms of attack. It is resistant to all known forms of poison, radiation, paralyzation, illusions, gases, chemical acids, and lasers. It has precognition, and the race has a mental resistance score of 17. While the race as a whole does not work with technological devices, they do have a very extensive knowledge of the antidotes for all mutated dangers.

Humanoid #4: Hardly even close to the human form anymore, this being no longer walks erect, but on all fours at all times. Its hands are now much more pawlike, with claws having poison sacs at the ends (intensity level 14). It can most commonly be found hunting in packs, but at times it hunts alone. It has a sort of fur

that makes it resistant to contact poisons and paralyzation attacks. This mutation has precognition but no mental defenses.

Humanoid #5: This mutation is the most common of all the humanoid mutations. It has 4 arms, an unusually high mental resistance (15 or more), and a skin that reflects all types of energy. The being is fully intelligent and commonly employs both mutated and technological materials.

CREATING NON-PLAYER CREATURE MUTATIONS

In order to create other non-player creature mutations which inhabit the starship, use the following system:

- 1) Choose a basic animal type from the list of types carried by the Starship Warden.
- 2) The creatures will mutate for 1 to 10 generations (determine randomly).
- 3) For each generation that the creature type mutates, roll once on the following chart:
 01-50 Physical mutation
 51-80 Mental Mutation
 81-85 1 Physical and 1 Mental mutation
 86-00 No mutation in this generation
- 4) For each physical mutation or mental mutation, generate a number from 1 to 50 and compare it with the chart for Physical mutations or Mental mutations, as applicable. If it is a Physical mutation, and the number generated is from 1 to 42, that is the number of the mutation, as shown on the chart. If the number is from 43 to 50, the mutation will be either TALLER (on a roll of 1 or 2), NEW BODY PARTS: hands and arms (on a roll of 3 or 4) or POISON CLAWS OR FANGS (on a roll of 5 or 6).
 If it was a Mental mutation, and the roll was from 1 to 45, that is the number of the mutation as shown on the Mental mutation chart. If the roll was from 46 to 50, the mutation will automatically be HEIGHTENED INTELLIGENCE.
- 5) If the creature type mutates in a defective manner for the first two or three generations, and will obviously not be able to survive, choose a new animal type and start again.

WEAPONS AND COMBAT

When fighting, many factors must be taken into account. First is what the combatants are wearing (or not wearing) for protection against weapon attacks.

	ARMOR CLASS
NO ARMOR AND NO SHIELD	8
HEAVY FUR OR SKINS	7
SHIELD OF A NONMETAL SUBSTANCE OR PARTIAL CARAPACE	6
CURED HIDE OR PLANT FIBER ARMOR	5
CURED HIDE OR PLANT FIBER ARMOR & SHIELD	4
THIN METAL ARMOR OR FULL CARAPACE	3
THIN METAL ARMOR & SHIELD	2
DURALLOY SHIELD	1

This armor class simply translates into the stopping power of a player for objects hitting him or her. *Everything* has an armor class and this factor must be considered in battle.

In the same manner, the hitting and damage-inflicting ability of any given weapon must be considered. This concept is referred to as weapon class, examples: a human wearing cured hide armor and shield (armor class 4) and using a sword (weapon class 3: see chart) attacks another human in heavy furs (armor class 7) using a paralysis dart ejector (weapon class 4). The swordsman stabs and he rolls a 6 on a 20-sided die for his hit and consults the fighting chart and sees that against that armor class he needs at least a 7, so he misses. The fur armored man shoots his dart ejector, rolls the dice and gets a 13 and consults the chart and sees that he needs a 14, so he also misses. The swordsman again stabs (moving first because he also has a better dexterity) and rolls a 13 and hits and does 7 points of damage out of a possible 1-8, but the tricky devil had poison of an intensity of 18 on his blade and the poor fur armored man does not make his saving throw against poison! Logic now enters the picture. Since a melee round only lasts 10 seconds the fur armored human should have at least 1 shot left before he dies, but that is left to the discretion of the judge. It is now his or her decision whether or not the dart ejector can shoot again before the fur armored man is dead. The judge says yes, but the dart bounces off the armor anyway (a 4 was rolled) and the swordsman has obtained a new weapon (it may take him quite a while to figure out how to use it, however). Note: all devices from before the radiation cloud can *not* be instantly used, but must be studied and tested, which is another instance where the referee must use judgment.

The types of weapons on the ship are listed below in terms of weapons classes. Any new weapons the judge creates should be placed on this chart on an equivalent basis; for example: a large hand ax is not listed, but it can be placed in class 3 since it has a sharp edge and a bludgeon type side.

WEAPON CLASS	TYPE OF WEAPON
1	BOWS & BLOW GUNS
2	CROSSBOWS & SPEAR TYPES
3	SWORDS & DAGGERS & BLUDGEON TYPES
4	PARALYSIS DART EJECTOR
5	GAS PELLET & SLUG EJECTOR
6	LASER PISTOL
7	DISRUPTOR PISTOL "METAL"
8	DISRUPTOR PISTOL "PROTEIN"

Weapon Class and Armor Class are combined in a chart to find if the attacker strikes or not.

Weapon Class	1	2	3	4	5	6	7	8
	18	17	16	18	14	18	12	18
	2	17	16	15	17	14	16	10
	3	16	15	14	16	13	15	9
	4	15	14	13	14	12	10	NE
Armor Class	5	13	11	12	13	11	9	NE
	6	11	10	9	11	8	8	NE
	7	9	8	7	8	6	7	NE
	8	7	6	5	6	4	6	NE

To use the chart, cross-index the weapon class of the attacking weapon with the armor class of the target. The result is the number which must be equalled or exceeded on the generation of a random number from 1-20. Results of "NE" mean no effect, as will rolls which do not equal or exceed numbers listed on the chart. A "*" means that a hit is automatic.

All energy weapons have stated ranges of use explained in another section. Bows and crossbows have varying ranges, as follows:

Type of Bow	Short Range	Medium Range	Long Range
Light Bow	1-50 yds.	51- 99 yds.	100-150 yds.
Light Crossbow	1-60 yds.	61-120 yds.	121-180 yds.
Longbow	1-70 yds.	71-140 yds.	141-210 yds.
Heavy Crossbow	1-80 yds.	81-160 yds.	161-240 yds.

The following table can be used as an alternative hit/miss system for bows, and the judge can decide which to employ:

Type of Bow	Short Range	Medium Range	Long Range
Light Bow	6	10	12
Light Crossbow	5	8	11
Longbow	4	6	9
Heavy Crossbow	3	5	8

When using this table, roll 2 six-sided dice, with the number shown as the minimum needed to hit, regardless of armor class.

The following chart details the damage caused by weapons that are used by many of the beings on the ship. The numbers listed will tell how many points of damage are possible from each hit, and the appropriate die is then thrown to determine how many points are suffered by the target (for instance, 1-8 means an eight-sided die is cast and the result is the number of hit points sustained in the attack).

Target:	Humanoid Beings	Mutated Creatures	True Humans
Weapon:			
Dagger	1-4	1-4	1-4
Normal Ax	1-6	1-6	1-8
Normal Mace	1-8	1-6	1-8
Normal Sword	1-6	1-4	1-8
Spear	1-6	1-4	1-6
Normal Bow	1-6	1-6	1-6
Longbow	1-8	1-8	1-12
Crossbow	1-12	1-12	1-12
Larger, Heavier Sword	1-8	1-6	1-12
Larger, Heavier Ax	1-8	1-8	1-10
Larger, Heavier Mace	1-8 plus 2	1-8	1-12
Flail*	1-8 plus 3	1-8 plus 2	1-12 plus 2
Vibro Blade**	12	10	12
Vibro Saw**	15	12	18
Pike Type Weapons	1-12	1-12	1-12
Sling	1-6	1-4 plus 1	1-6

Explanation of symbols: The flail (*) type weapon requires a lot of space to use and, besides its ability to cause damage, may also entwine the opponent's weapon (a 10% chance) and prevent its use the next turn. The power devices (**), while not made as weapons, will, when used as such, cause the stated number of points damage to whatever they touch.

WEAPONS DAMAGE

Protein Disruptor	5, 15, or 20 six-sided dice of damage
Sonic Metal Disruptor	affects only metal (3-18 hours of deafness)
Paralysis Rod	3-18 hours of unconsciousness
Paralysis Dart	1 six-sided die of damage, plus 3-18 hours of unconsciousness if charged
Laser Pistol	5, 10, 15 six-sided dice of damage
Slug Projector	2 six-sided dice of subduing (see <i>Weapons Systems</i> , F.)
Gas Ejector	3-18 hours of unconsciousness
Engineering System	
Hand Unit (Laser Beam)	5 six-sided dice of damage (note 2' range)
Medical Hand Analyzer (Vibro Scalpel)	same as Vibro Blade
Sonic Torch	3-18 hours of deafness
Atomic Torch	5 six-sided dice of damage (note 3' range)
Laser Torch	5 six-sided dice of damage (note 4' range)
Chemical Defoliant	a powerful irritant causing skin rash with 1 six-sided die of damage, blindness if brought into contact with eyes, and level 8 poisoning if ingested
Chemical Acid	3 six-sided dice of damage from burns and blisters, blindness if brought into contact with eyes, and poisoning if ingested (roll 2 six-sided dice and add 2 to determine level of from 4-18)
Radioactive Material	poisoning of from level 3-18 to be near or in contact with (see <i>Ability</i> Explanations)

All combat and encounter situations are divided up timewise into *melee* turns, each being approximately 10 seconds long. In this time, it is possible for each side to attack once and defend once. Dexterity may play a big role in determining who gets the first attack each time. When non-player monsters are encountered, it is suggested that the referee roll the monster's dexterity to determine its fighting ability and determine who will strike first.

MOVEMENT

Movement must be considered in two separate cases: *general* and *special*.

GENERAL MOVEMENT:

This type of movement refers to that of an exploratory nature or simply traveling by a character. The basic rate assumes a speed of two miles per hour, with appropriate stops for rests, over a maximum period of ten travel-hours. A character with very little equipment is able to increase this basic rate to three miles per hour, while encumbrance (heavy armor, considerable equipment, pulling or pushing a cart, etc.) slows movement to one mile per hour.

Mounted movement overland riding horses or horse-like creatures is at twice basic rate, or four miles per hour, and bonus or penalty for lack of equipment carried or encumbering items apply.

Aerial movement is at triple basic rate, and it assumes the bonus and penalty previously noted, modified for the travel mode.

If a standard measurement of one-half mile per space is assumed, movement rates are:

GENERAL MOVEMENT TABLE

Type of Travel	Spaces Traveled per Hour		
	Light Equipment	Standard	Encumbered
Afoot	6	4	2
Mounted	12	8	4
Aerial	18	12	6
Standard Robot	-	60	-
Ecology Robot	-	120	-
Eco. Garden Robot	-	50	-
Medical Robot	-	56	-
Engineering Robot	-	40	-
Security Robot	-	120	-
Anti-Gravity Sled	-	66	-

Terrain will affect movement speed.

SPECIAL MOVEMENT:

Special movement refers to situations where other beings are encountered and a conflict situation might occur. At this time the turn changes from a basic game-hour to a short interval of but 10 seconds. Of course, during each 10 second encounter turn many things (conversation, attack by projectile weapon, combat melee, and so on) can take place. We are concerned only with movement, however, leaving the other occurrences to whatever section of this work they fall under or according to the referee's judgment as the case may be.

When special movement takes place, it might be helpful to place the parties upon a graph, and show movement by means of markers.

Assuming a standard measurement of 2 yards per space, in a 10 second turn movement rates are:

SPECIAL MOVEMENT TABLE

Human/Humanoid	Spaces Moved per Melee Round		
	Normal	Evasive	Charging
No armor	6	10	12
Furs, shield, or leather	6	8	10
Leather & shield	5	7	9
Plate armor	4	6	8
Plate & shield	4	5	8
Duralloy armor	4	5	7

Mounted, aerial and vehicular/robotic movement is not given. If robotic movement is desired equate yards to meters and then cut speed to one-tenth. For example, a standard robot traveling 96 kilometers per hour travels 96,000 yards per hour, 16,000 per ten minutes, 1,600 per 1 minute, or 267 yards per 10 second melee round. This converts to 13 spaces per turn.

DISTRIBUTION OF MONSTERS (MUTATIONS) AND TREASURE

As a general rule, in the nonforested areas there will be more uninhabited space than space occupied. The determination of just where the "monsters" should be placed, and whether or not they will be guarding treasure (useful things) can become burdensome when the referee is faced with several to do at one time. It is a good idea to carefully place some of the best treasures (useful things) with or without guards in hard-to-find places in one or two of the levels and then add a few random items in the balance of the level using a 6 sided die:

- 1-2 indicates a monster in the area only
- 3-4 indicates a monster and a *small* treasure
- 5 indicates a monster and a good treasure
- 6 indicates a very strong monster and a good treasure

20 or 30 separately placed things are more than enough on any given level.

It should be noted that there is a tendency on the part of a new referee to fill the areas with many treasures, making for an unbalanced game with players that are so strong they easily beat all monsters. This is a dull, self-defeating situation!

Treasure can be defined as many things: devices, the standard monetary unit common to both mutations and man alike, things like furs, or even knowledge of devices and other things. Note: a player cannot shoot a gun on board ship just because he or she can in real life! The player must learn how first. If trial & error is used, this may take up to 6 months time.

As mutations (monsters) inhabiting rooms, spaces and corridors on a level are destroyed, the level will become drab and dull. Also, players will make fairly accurate maps of the area so it will be changeless in this way too. The revamping of such areas is recommended and methods are suggested:

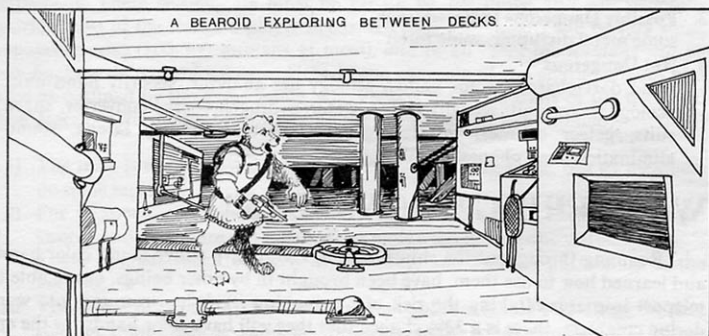
1. Make minor level alterations: block corridors with rubble, make new passages, fill in rooms that were empty.
2. Replace already located monsters with new ones.
3. Add new monsters where none existed before.

It has been previously stated that a player can usually move 2 miles in one full turn. This can be further subdivided into 4 movement turns in which a player can move one-half mile. Time must be taken to rest, so for every 4 full turns of constant action the player must rest 1 full turn (1 hour). Melee or combat turns are explained in another section and they last 10 seconds.

It is necessary to carry a light source (torch, etc.) in the forested areas of the ship for travel in the night cycle. Travel in the nonplanted areas of the ship is automatically lighted by the main ship's computer.

Monsters (mutations) will usually attack and/or pursue any player they sense, with the exception of a monster that is intelligent enough to run from a superior party or the player being similar to the mutation. There is no chance of avoiding a monster if the monster has surprised a player or group. If the players are not surprised and decide to flee, the monster will continue to pursue in a straight line. When a corner is turned, a door passed through, or an inclined plane taken, the monster will only follow on a roll of a 1 or a 2 on a six-sided die. Distance between men and monsters will open or close according to the relative speeds of monster

and man determined by the encumbrances a man has (armor, devices carried etc.) and the speed given for the monster. A man with no encumbrances normally moves 12 yards in 1 melee turn.



TREASURE ITEM LIST FOR THE SHIP

A list of possible items to place on the levels of the ship, both technological and mutated, is given to aid the referee. The list should not be considered an end in itself, but a starting point for the prospective referee or campaigner who is imaginative. These items should be guarded by various creatures or hazards in most cases.

In no way should a game judge feel bound by this list, or any other within this book. The information contained herein gives a wide basis for campaigns, but individual referees will enjoy adding their own ideas for specific parts of their own campaigns.

TECHNOLOGICAL:

- 01: Solar Cells (1-10)
- 02: Chemical Cells (1-10)
- 03: Hydrogen Energy Cells (1-10)
- 04: Disruptor Pistol, Protein
- 05: Disruptor Pistol, Metal
- 06: Shield Attachment
- 07: Paralysis Rod
- 08: Paralysis Dart
- 09: Paralysis Dart Ejector
- 10: Paralysis Dart Charger
- 11: Laser Pistol
- 12: Slug Projector
- 13: Slug Projector Ammunition Clip
- 14: Gas Pellet Ejector
- 15: Gas Pellet Ejector Ammunition Clip
- 16: General Purpose Robot
- 17-54: Brown Color Band
- 55-60: White Color Band
- 61-65: Steel Gray Color Band
- 66-69: Green Color Band
- 70-71: Red Color Band
- 72: Blue/Red Color Band
- 73: Ecology Robot
- 74: Medical Robot
- 75: Engineering Robot
- 76: Security Robot
- 77: Portable Anti-Grav Unit
- 78: Sonic Torch
- 79: Atomic Torch
- 80: Laser Torch
- 81: Medical Analyzer Unit (Hand Type)
- 82: Engineering Analyzer (Hand Unit)
- 83: Security Tracker
- 84: Anti-Grav Sled
- 85: Water Hydrogen Energy Converter
- 86: Space Suits (Radiation & Heat Resistant)
- 87: Geiger Counter Employing a Chemical Energy Cell
- 88: Underwater Breathing Device
- 89: Infra-Red Goggles
- 90: Chemical Defoliants
- 91: Chemical Acids
- 92: Chemical Flammables
- 93: Medical Drugs
- 94: Chemical Explosives
- 95: Chemical Radiation Neutralizers
- 96: Chemical Flammable Retardants
- 97: Portable Energy Lamps (900 Candle Power)
- 98: Sound Elimination Headphones
- 99: Sensory Intensifiers
- 100: Radioactive Material in Containment

MUTATED SUBSTANCES:

- 01: Parasitic Fungus that decomposes most metals on contact
- 02: Parasitic Fungus that decomposes most proteins on contact
- 03: Poison Thorn useable for arrows
- 04: Contact Poison Sap
- 05: Berry that gives resistance to radiation when ingested
- 06: Berry that restores lost hit points when ingested
- 07-19: Gland that, when ingested, increases the hit dice of a being by 1 for one day.
- 20-24: Gland, which when ingested, makes the being unaffected by lasers for one day.
- 25-29: Skin of the Cougaroid; makes the wearer partially unaffected by lasers for one day.
- 30-33: Essence of attraction odor
- 34: Horn of the Unicorn; makes any poison substance put inside the horn foam
- 36-39: Quills of Poison; perfect for a blow gun, (from the dwarf creature)
- 40-44: Poison from the small warriors.
- 45-49: Addictive drugs from the dream bush
- 50-54: Sap of the Jawed Plant; decomposes flesh it covers in 3 melee turns
- 55-59: Powdered Singing Vine; a tranquilizer of great power
- 60-61: Berries of the Red Death Tree; act as missiles
- 62-67: Thistle Weed Sap; causes enragement
- 68: Essence of the Sleep Flower; causes instant sleep
- 69-73: Roots that dull the senses when ingested
- 74-76: Sap able to give temporary telepathy when ingested
- 77-79: Berry giving speed twice as fast as normal when ingested
- 80-84: Powdered Root that gives the ingester the ability to withstand illusions
- 85-90: Berry that enables the ingester to make mental reflective shields
- 91-100: Gland, which when ingested, gives resistance to poison.

This list is easily expanded upon by taking the powers of any of your mutations and using their glands, skin or fur. It is also suggested that the tribal shaman know many of these materials. In an attempt to acquire any of these items the referee must keep in mind that many of these, like the command band and the security robot, are *very rare* and *very powerful*! Also the knowledge of the use of any of these things must be gotten by trial and error. Information of any type may be considered a treasure equal, and more so, to things like guns and robots.

DEVICES, EQUIPMENT, DUALS AND WEAPONS

Because the items found or encountered for the first time on the ship are foreign to the character, the ability to properly employ each item should be based on the nature of the item and the intelligence of the finder. Items are listed below by categories number 1.-10., with 1. being most complicated and 10. least complicated. Items are also listed in four categories according to the danger involved in mishandling them. While there is no separate category of intelligence, it is subsumed in leadership potential. To determine successful uses of an item simply cross index the complexity rating of the item against the leadership potential force of the character; the number shown is the score to be made with percentile dice in order to successfully utilize the item.

ITEM COMPLEXITY

1. radioactive material (1), computers
2. ecology life analyzer, medical unit
3. ecology energy tracer, space suit, engineering system unit, security tracer
4. gravity generators, computer tie-in, robots, security unit
5. color bands, underwater breathing lung, water/hydrogen converter, sound stopping headphones (will understand what they are for)
6. atomic torch, paralysis dart (1) (charged), sonic torch, portable hand dart charger
7. laser torch, geiger counter, slug projector, grav-sleds
8. protein disrupter, paralysis dart (2) (uncharged), laser pistol gas ejector
9. radioactive material (2), chemical flammables, bow & arrow, paralysis rod, portable lamps
10. infrared goggles, chemical defoliants, chemical acids, duralloy, sword

Radioactive Material: This item is listed twice for the following reason. (1) refers to the degree of sophistication necessary to employ the item for its proper use as a power source. However, it is known as a poison at level 9, and the second listing, (2), is therefore given; at this stage the item is understood as an ingredient for traps or for poisoning.

Paralysis Dart: This item is likewise listed twice because of varying degrees of sophistication in its usage. At level 6 the true use of the dart is understood, and it will be charged with the hand dart charger under reference (1). With respect to reference (2), the user simply understands that the dart can be employed as a normal missile weapon — doing 1-6 points of damage.

Character Leadership Potential

	ITEM COMPLEXITY LEVEL									
	1	2	3	4	5	6	7	8	9	10
3.	-	-	-	-	-	-	-	-	100	90
4.	-	-	-	-	-	-	-	100	90	85
5.	-	-	-	-	-	-	100	90	85	80
6.	-	-	-	-	-	100	90	90	80	75
7.	-	-	-	100	95	90	90	85	75	70
8.	-	-	-	95	95	90	85	80	70	65
9.	-	-	100	95	90	85	80	75	65	60
10.	-	100	95	90	85	80	75	70	60	55
11.	100	95	90	85	80	75	70	65	60	55
12.	95	90	85	80	75	70	65	60	55	50
13.	90	85	80	75	70	65	60	55	50	45
14.	85	80	75	70	65	60	55	50	45	40
15.	80	75	70	65	60	55	50	45	40	35
16.	75	70	65	60	55	50	45	40	35	30
17.	70	65	60	55	50	45	40	35	30	25
18.	65	60	55	50	45	40	35	30	25	20

A roll equal to or greater than the number listed means the item has been understood by the character. He now can use the item. This roll should be made once a week until the use of the item is learned or the item is lost.

If the dice roll is less than the listed number, the item has a chance of harming or killing the handler or somebody standing nearby.

CHANCE OF INJURY BY DANGER CATEGORY

Danger Category	Chance to Injure Self	Injure Other
1.	30%	20%
2.	20%	20%
3.	10%	05%
4.	0%	0%

If injury occurs, there is a 10% chance it will be fatal by danger category. So category 1. has a 30% fatality rate, category 2. a 20% rate, and category 3. a 10% rate.

DANGER CATEGORY

1. Most Dangerous

protein disrupter, laser pistol, gravity generators, atomic torch, laser torch, radioactive material

2. Dangerous Tools

paralysis rod, paralysis dart (charged or not), slug projector, gas ejector, engineering system hand unit, medical analyzer & healer, aqua-lung, chemical defoliants, chemical acids, chemical flammables

3. Possibly Dangerous to Possessions

sonic metal disrupter, sonic torch

4. Not Dangerous

hand dart charger, color bands, ecology life analyzer, security hand unit, ecology tracer unit, security tracer, water/hydrogen energy converter, space suits, geiger counter, infrared goggles, portable energy lamps, sound elimination head phones, duralloy

WANDERING "MONSTERS"

Roaming throughout the ship are beings who have either found color bands and learned how to use them, have been brought in by other beings, or are able to teleport into areas (taking the risk of not making it). When running into wandering creatures, there is a 33% chance that they will have color bands for the entrance of any nonforested level that they are found in.

At the end of every full turn (1 hour) it is necessary for the referee to roll a die to see if the player or players have encountered a wandering creature (mutation) as the players travel throughout the starship. When in a forested or planted area these encounters happen on a roll of a 5 or 6. When in a nonforested area they happen on a roll of a 6. The type of monster encountered is determined by using the wandering monster tables given. When a judge rolls for these monsters, it is based on how far the player group travels. If players can move 4 squares in one hour, or have done extensive searching in one of those squares, the judge rolls a die. It is also possible that a group will argue among themselves or stall in other ways, and then the referee may be obliged to roll. When a monster (mutation) is rolled for, the referee rolls a six sided die to determine how far away in yards the monster is with respect to the party. A roll of 1-2 means the monster is upon them and rolls of 3-6 force the monster to close first and lose any possible surprise. If a monster is rolled for, the judge should also roll to see if either group is surprised.

The wandering monster list must be of 5 parts, with one list for the forested areas, where you would naturally find a larger amount of animals and plants, and the other lists having less wild types and more intelligent types since these areas (nonforested areas) are harder to get into.

While the possible list of creatures (mutations) is endless, those presented in the list shown are the dominant strains on the ship — referees may wish to expand the lists and add ideas of their own.

In using these charts, some judge's discretion should be used. For instance, if players are traveling in a forested area and cross a hex where a human tribe lives and a wandering monster is found to be present, then it might simply be a human from the tribe. Common sense is often the guide in such situations.

ENCOUNTER TABLE

DIE	City	Grasslands	Forest	Mountains	Lake Shores or Swamps
1.	dart creature	hisser	piercer	piercer	hisser
2.	thief beast	metaled one	metaled one	metaled one	piercer
3.	winged biter	shocker beast	cougaroid	shocker beast	deer
4.	shocker beast	deer	deer	deer	pegasus
5.	cougaroid	unicorn	bearoid	cougaroid	jeget
6.	bearoid	dart creature	jeget	bearoid	dart creature
7.	wolfoid	winged biter	wolfoid	unicorn	thief beast
8.	changer	changer	stabber	pegasus	bearoid
9.	hawkoid	stabber	black one	winged biter	golden hawk
10.	blood bird	blood bird	buzzers	wolfoid	blood bird
11.	black one	small warrior	grabber	hawkoid	buzzers
12.	small warrior	mirror creature	dream bush	golden hawk	grabber
13.	buzzers	passion weed	jawed plant	black one	jawed plant
14.	singing vine	red stinger	singing vine	dream bush	singing vine
15.	death tree	dark fungus	death tree	sword bush	death tree
16.	sword bush	death growth	sword bush	mirror oak	passion weed
17.	dark fungus	humanoid 2	mirror oak	dark fungus	red stinger
18.	death growth	humanoid 3	death growth	humanoid 1	dart weed
19.	humanoid 2	humanoid 4	humanoid 3	humanoid 4	blister plant
20.	humanoid 5	humanoid 5	humanoid 5	humanoid 5	humanoid 5

HUMAN TRIBAL AREAS

It has been previously stated that all humans start out in some type of human settlement. These settlements must be set up by the judge and will generally provide most of the things a player needs. All such settlements will be very small population-wise (100-300 humans at most), and in all cases the humans will be very backwards technology-wise. Here is one example of the characteristics of a tribe as outlined by the game judge, who creates the basic traits of the tribe and then describes the details briefly around the basic traits he has outlined:

- 1) The tribe is barely past the root and berry-gathering stage, but its members do some hunting.
- 2) For weapons, the tribe members use bows and arrows and slings. Metal swords and armor are unknown, since none exist in the tribe's area.
- 3) There is great social equality in the tribe, and females participate in the hunting.
- 4) The leader of the tribe (shaman) has great abilities (usually 15-18 on the dice rolls for game purposes) and has the loyalty of the tribal members.
- 5) The shaman has a small amount of poison in his possession which is regarded rather mystically by the tribal followers. He puts this poison on arrows for individual members of the tribe as a show of favor in return for information or devices.
- 6) Technological devices are mostly unknown, although one man of the tribe has a laser and 2 power cells for it, which he uses for hunting with great effect. But he will not tell anyone where he got it.
- 7) A broken-down horticultural robot sits in the center of the tribal village and is an object of curiosity to the tribe.
- 8) The second strongest human in the tribe is a woman with a singing vine for a follower.
- 9) The tribe grows plots of corn around the village.
- 10) The tribe has dogs of several various types, but none of them have tails.
- 11) Not much is known about areas outside the tribe's village and its environs. Legends told around the campfire discuss other areas which are said to exist far away.
- 12) The social structure of the tribe is based upon loyalty to the shaman and to other members of the tribe. Violence and quarrels between the members are unusual.
- 13) Mating of tribal adolescents occurs in a tribal ceremony where a number of such pairings are arranged. This ritual occurs at irregular intervals, and the occasion is marked with a day of rejoicing preceded by a day of solemn rituals.

As can be seen, considerable information is provided in this example by the judge's outline. However, a number of questions are left unanswered, such as: Where is the village located?, Are any other tribes known?, and so on. The answers to many questions will only be gained by players after they enter the game situation and explore the possibilities open to them.

While the beginning player character is given all the things needed to start, from then on he or she must survive in some manner, attempting to cope with the realities and dangers of his or her own personal situation.

FORESTED AREAS

The planted areas of the ship consist of all the features common to such places on Earth: forests, small villages (built to last and not wear out), and large villas (mansion-type buildings). Some areas are still maintained by robots; but in some parts, the inhabitants resented the robots' actions and destroyed them.

Terrain in these areas must be well mapped out by the referee (who will find that hex paper is most useful in doing so), and all encounter areas should be marked on his map. This wilderness map will be unknown to the players, who will have to explore parts of the area and construct their own maps using the information and observations they discover. They may also mark where various things are searched for or encountered.

Movement in different types of terrain will involve penalties, depending upon the scale used and the relative difficulty of the terrain features. For example, in clear terrain a referee may have designated that players can move 4 hexes in one hour. When moving through other more difficult areas, the cost may be greater per hex, and each hex will be entered at a cost of more than 1 clear terrain hex, such as: hills-2 hexes; heavy trees-2 hexes; mountains-3 hexes or swamps-2 hexes. This would mean that in areas with hills, movement is generally about half of what it would be on clear terrain (i.e., about 2 hexes per hour).

When players are adventuring through the wilderness, the referee will generally roll for wandering creatures only after the end of the night cycle and after the end of the day cycle.

TIME

As the game gets into full swing, it is likely that various players and groups will be adventuring in every direction and at different time periods. It is suggested that the referee keep an accurate record of each player and he should also moderate the passage of time as well, keeping the time aspect in proper and accurate perspective.

THE MAIN SHIP'S COMPUTER

The main ship's computer is a masterful piece of machinery with wide-ranging abilities. It was designed to serve a multitude of functions and did so, but since the radiation catastrophe it has lost control of some aspects of the ship's life. Still, it functions in many ways in this strange new environment and still retains responsibility for many functions.

The computer is fully aware of the problems that this new radiation has caused. Its program makes it want to help the humans on the ship in any way possible — not only to live on the ship but to someday reach a safe planet, even though that is now impossible under the new conditions borne of the radiation disaster. Whenever a human gets to a computer tie-in, he can usually receive most of the information he wants. However, whenever a mutant gets to a computer tie-in or near computer-operated areas, the mutant will be treated like any other dangerous creature in the response of the computer.

Within these guidelines, individual judges will determine the exact nature and operating functions of the main ship's computer for their own games.

NON-PLAYER CHARACTERS

All followers a human player might attract or hire are similar to the players in that all of their abilities are rolled for, as well (strength, mental resistance, etc.) Any given player character who wants a helper must search them out in the group he or she is with (or while traveling) and offer them things that will convince them that traveling with the player character is beneficial. Men and mutations will serve as retainers with relative loyalty so long as they receive their pay or reward in some form, are treated fairly, and are not continually exposed to extra-hazardous duty. They likewise should be able to expect a bonus for taking part in dangerous situations, but the judge will use his observations in judging whether such characters are well-treated by the player characters they are loyal to.

Once a nonplayer character is persuaded to join with a player character, his abilities are rolled in the normal manner. At the same time, the judge makes a secret loyalty roll, using 3 six-sided dice. This number is used to determine the future actions of the new follower and is compared to the table below:

Loyalty Score	Morale
3	Will desert at first opportunity
4-6	-2 on morale dice
7-8	-1 on morale dice
9-12	Average morale dice
13-14	+1 on morale dice
15-18	Need never check morale

An example of follower loyalty: Remember our friend Scar-lock and the follower he gained when he offered a humanoid a shield? At that time, the humanoid became a follower of Scar-lock, but the referee rolled a secret loyalty roll of 3. Scar-lock and his man traveled together for a week, but then one day when they were walking in a new area of forest, they both ran into a "metaled one." While it engaged Scar-lock, the humanoid ran away (taking the shield with him). Scar-lock managed to barely defeat the hazard, but had lost his fickle follower — and his shield!

RELATIVES

When a player character dies, it is logical to assume that someone will get his possessions. This can be handled by the referee in a number of ways, depending upon the situation.

First, a "relative" of the deceased character might have claim on his possessions. If such a relative exists, the character's remaining possessions would be his. The referee might then decide whether this relative should now be played by the player whose character was just lost, or if the possessions should just pass into obscurity. If the player character returns to the game as this relative, he does so accepting this relative's abilities, which are rolled for in the normal manner.

Second, possessions might go to a most loyal follower or might be divided (or fought over) by a group of followers. In some cases, possessions may simply be lost or pass into obscurity.

Players whose characters are lost in the course of the campaign may return to the game at the discretion of the judge, who may give them a choice of a new character. However, prior knowledge of certain areas gained by the previous character should not be used to advantage by the player, and the referee may start him in a different area of the ship.

HEALING OF BODY DAMAGE

When a player or any other character suffers damage which results in loss of accumulated hit points, it is necessary for that injured being to rest and regain those lost hit points. Points can generally be regained at the rate of 1 point per day of rest — which means the player undertakes no extensive traveling or strenuous activity. A judge can adjust the rate according to his discretion, if desired, depending upon the type of wound and the situation.

LANGUAGES

Because so many of the shipboard mutations use telepathy, a common language has evolved among all *speaking* species on the starship. This language is closely related to human speech.

The main ship's computer has heard enough of this new language to understand it fully and it continually updates its robots in the speech patterns so that they will be usable by humans on the ship who possess the proper color bands. Any robots deactivated prior to the radiation disaster, however, will not be controllable when activated; such robots will immediately go to the nearest computer tie-in for instructions and may then be reprogrammed by the main ship's computer.

SURPRISE

A condition of surprise may exist when a player or player group is unaware of the presence of other players or beings. Some mental powers can negate surprise. If the possibility of surprise exists, the referee rolls a six-sided die for each player or group of players as a whole — a 1 or 2 indicates the party is surprised, otherwise the existence of the unknown beings or players is discovered.

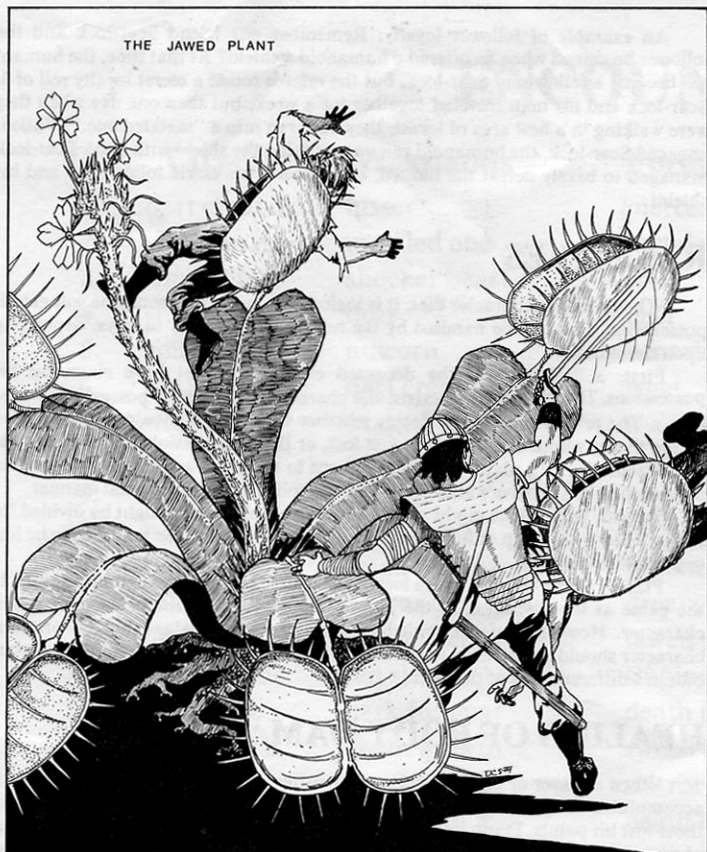
Surprise gives the advantage of a free melee turn's movement — which may be fleeing, mentally attacking, or engaging in physical combat with the surprised group. Note that dexterity can change this in some instances. If monsters (mutations) gain surprise, they will either close the distance between themselves and the others, or actually attack.

MEANS OF EXCHANGE

Prior to the disaster, the basic monetary unit used on board the ship was the "domar," a small, lightweight plastic type of coin that was indestructible (or reasonably so given the technology of the time). Still, since all normal functions were provided on shipboard, there was no need for "money" as such, so the domar was not widely used except for gambling and other such diversions. The ideas of wealth or poverty were unknown since all inhabitants of the ship shared equally in its provisions for life and leisure on shipboard.

In the alteration of life that occurred in the radiation disaster, the inhabitants and their descendants have been reduced to a lower form of existence where survival is the key. As such, inequalities have arisen and possessions have taken on importance.

In the current time, domars exist and are accorded value by those inhabitants who handle and trade with them; still, since they were never in great numbers, domars are in short supply. Accordingly, the use of the barter and trade method of dealing has developed to a large degree.



EXAMPLE OF A REFEREE MODERATING AN ADVENTURE

This example illustrates a portion of a sample adventure aboard the ship to the city section level. The players are all human, equipped and ready, and are starting from the main ship's elevator — as one of them has a brown color band. All of them are armed with swords (weapon class 3) and are wearing heavy furs (armor class 7) for protection. The referee's part is represented as R, that of the "caller" (the player representing the group) is noted as C.

R: The elevator opens up to an expansive corridor, over a mile wide, going in the direction of what would be the ship's north.

C: Since it is impossible for us to see both sides of the corridor, we'll go to the east side of this one and look all around for signs of movement or any open doors.

The referee consults his master map and plots the group's movement in the desired direction. The group awaits the referee's word on the result of their decision.

R: After walking for about 10 minutes, you arrive at the side of the corridor and see several piles of white dust and an open door. Looking down the corridor, you see many doors — some opened and some closed. About every 50 meters is a door with a small box-like thing about 4 feet up along the wall beside the doors.

The caller momentarily consults with the other players on what the group should do. Several courses of action are suggested and argued very briefly (including one player's urging to head elsewhere), but in a minute the group has reached a consensus to try the first door.

C: We'll go to the first open door, look in, and check this box-like thing.

R: Who's going in the room first and who will check the box?

C: Zendor and Kareb will enter the room together, and I'll check out the box myself, but just by looking at it first.

R: OK, the light comes on in the room (the referee knows that the light was triggered by the ship's computer, but the players do not know that and the referee gives them no indication of it). You see furniture around and a big screen on one wall.

C: What about the box?

R: Well, the only thing you can notice is that the exterior has one small indentation and has some tiny lines in that indentation.

C: Does it look like my finger?

R: Yes, the mark looks like a fingerprint.

C: OK, we'll ignore the box for a minute. Have everybody enter the room, and put Lukash guarding the doorway.

R: All right, everybody's in the room. Now what?

C: Well, how big is the room?

R: The room is about 30 meters wide, both north and south and east and west. The door you came in is in the northeast corner of the room. The big screen is in the middle of the east wall. Near the southwest corner is a small door, and there is another larger door in the middle of the south wall.

C: Is there anything else in the room? (If the caller doesn't ask for anything more, the referee does not have to reveal further information. The extent of the players' observations and their thoroughness depend upon their questions).

R: Yes, there are several chests of drawers in the room, one with 4 drawers and two with 3 drawers.

Caller again consults with the players on what course of action they will take. One player wants to whack at the big screen with his sword, but the rest seem more interested in the chests. After a moment, they decide to open them up for examination of the contents.

C: OK, we'll open up the big chest.

R: Who is going to open it?

Caller consults with the others. The player playing Kareb volunteers.

C: Kareb will open it, starting with the top drawer.

R: Is anyone helping him?

C: No, not unless it doesn't want to open. The rest of us will stand back a ways. Referee rolls a number of dice, first to determine if Kareb has difficulty opening the drawer, then for the effects of the contents inside. After finishing the rolls, he announces the results — or the results discernible to the players.

R: Kareb opens the drawer with ease. Then, however, he suddenly screams as the drawer opens and falls to the floor! You all notice a strange glow from the drawer he opened.

The referee pauses, awaiting the response of the players and noting their quickness in acting in face of this sudden danger. He has already rolled for Kareb, who succumbed to the intensity of the radiation level of some object within the drawer.

C: Radiation; it must be! We'll get out of the room right away.

The other players quickly agree. The referee rolls dice to determine if the radiation has any other effect, but the players are fortunate to escape its effects in time — partly due to the fact that they were not as close as the unlucky Kareb. And so, the players leave the room and travel onward — toward what strange fate, they do not know...

EXAMPLE: LEVEL 14 (THE CITY SECTION)

This example illustrates a possible referee's conception of one level of the ship. This example shows some details of what might be included on this level; of course, different judges will portray such details quite differently.

KEY

- 1) Medical Area with full medical facilities: thousands of beds, numerous operating areas, special recuperative facilities, biological experimentation station, offices, storage area for supplies and drugs, and living units for the medical staff. Emergency medical sleds are housed in the area (there are several) and a number of medical type robots are found in the facilities.
- 2) Detention Area containing: monitored jail cells, cooking areas, offices, exercise and recreation areas, and a secure weapons storage facility.
- 3) Bachelor Dwelling Area, with each individual unit including the following: living room, bedroom, bathroom, work room, large recreation room, closets and storage space.
- 4) Family Dwelling Area, with each individual unit including the following: living room, several bedrooms depending upon number of family members, two bathrooms, three work rooms, a play room, recreation room, closets, and storage space.
- 5) Schools Area containing: schools and technical institutes each with desk consoles, intership communications devices, offices, libraries of several types, work areas and equipment.
- 6) Recreation Area featuring: parks and scenic attractions, gyms, pools and small lakes.
- 7) Main Ship's Elevator
- 8) Inclined Plane, connecting levels
- 9) Theatre/Entertainment area including: numerous theatres of various types, multi-media studios, music and cultural buildings, sports arenas, etc.
- 10) Dining Areas including: a myriad of restaurants featuring foods of all kinds and types.
- 11) Office Area with individual units featuring: small and large compartmented rooms, desk consoles, filing cabinets and data storage computers, intership communications devices, etc.
- 12) Rural Villages containing a relatively small number of family dwellings.
- 13) Country Villas for large families with normal facilities, but spacious.
- 14) Forests and Lakes, of varying size appearing in the farming area.
- 15) Human Tribal Areas (established since the disaster)
- R) Radiation Areas, with intensity noted by number.

Scale 1 Square = 2 miles

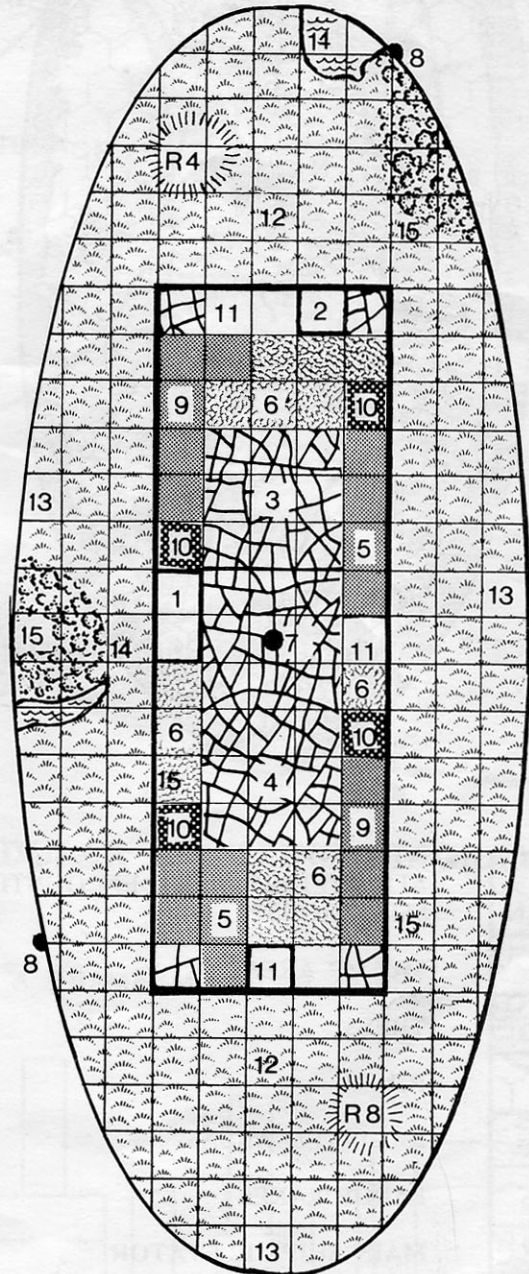
It should be stressed again that this is only an example, and judges should use their own imagination in devising similar ideas. The example does not go into minute detail (for instance, certain special facilities might be located within general dwelling areas), but this is not necessary for such a basic map — the amount of variety or sameness in a given area is up to the individual judge. Likewise, the 20 or 30 treasures and monsters nearby as well as any other encounter areas are not shown — the individual judge can mark them in their locations using a simple letter code on his map.

THE CITY

Transportation: It was generally held that the best method of short-distance travel in the city was simply walking. However, for any considerable distance a multi-band moving way was constructed beneath the city. Entrances to this system were located at one-half mile intervals, with escalators to move traffic down or up from the moving way. The "slidewalk" itself was constructed in three bands, the first being slowest, the middle faster, and the third an express belt traveling at 30 kilometers per hour. Beneath the passenger way a second transportation beltway was constructed for the movement of freight and similar goods. Cargo was loaded and unloaded onto the slowly moving way by means of robots. Emergency transportation was accomplished by means of grav-sleds or through special pneumatic tubes paralleling the upper moving way, the latter mode being available only to special color band holders.

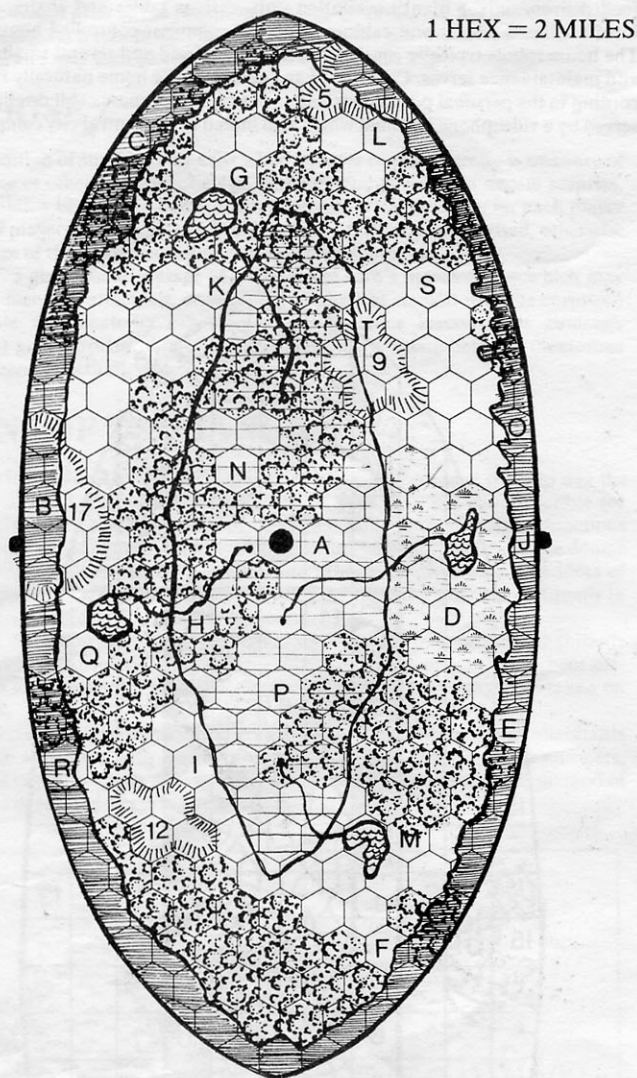
Residential Areas: The city was constructed with two separate and distinct types of dwelling modes in mind. Near the city center large, multiple-person dwellings were constructed. These units housed either unmarried persons or those families who desired a very urban atmosphere. At some distance from the heart of the city large lots were set aside for the single-family residences. These dwellings came in two typical forms. The simplest was the round unit typically utilized by families with one or two children. A more complex modular building also proved to be popular, for the basic unit was ideal for couples, and it could be added to easily as the family grew. All such single-family dwellings were placed in carefully landscaped settings at considerable distance from each other, so it was possible to live within the city without any feeling of confinement or crowding. Illustrations of single family dwellings are given below. Note that there were also modular "A" frame units with the basic family needs contained within the first unit.

Typical Dwelling Contents: All sorts of dwellings were planned so as to have computer operation. In multi-person buildings, these computers were much less evident than in the single-family dwellings. The latter were often built around the computer. The computer regulated the temperature and humidity of the dwelling, cleaned and maintained it, awoke the occupants according to its verbal programming, operated the learning center, and so forth. Within a typical dwelling there was besides the computer (or a terminal in the case of the multi-person buildings) a tri-D, learning center, exercise area (with computer-controlled apparatus), a food delivery unit, a utensil sanitation unit, various tables and chairs, lounging furniture, beds, chests and cabinets, and the computer-controlled house robots. The house robots typically consisted of a tutor android and several small cleaning and maintenance servos. Contents of any apartment or home naturally varied according to the personal possessions and tastes of the occupants. All dwellings were served by a videophone terminal which also linked to the central city computer.



EXAMPLE OF SHIP'S LEVEL 11

What follows is an example drawn on hex paper of level 11 of the ship, with a judge's key following the example.



ALL LETTERS MARK ENCOUNTER SITUATIONS

SWAMP AREAS

TREES

RIVER

RADIATED AREAS

LARGE LAKES

MAIN SHIPS ELEVATOR

INCLINED PLANE

MOUNTAINS

HILL

Key to Level 11

- A: Tribe of 20 male wolfoids plus 50 females and pups. The leader and his second in command both have engineering bands and know how to use them. There are 3 duralloy shields held in common by the tribe, and all members wear cured hide armor. The males all use swords. The tribe guards the elevator entrance: anyone encountered coming from it is subdued, stripped of armor, weapons and valuables and then let go.
- B: Storage area for 25 forest ecology robots, all deactivated. This area is a large steel building with a computer readout machine that tells basic information about the level verbally to qualified personnel (those with engineering color bands). Inside the building is a small recharging station for the robots.
- C: Territorial nesting area of 5 adult hawkoids. They dip their claws in a sticky liquid type of poison (intensity level 7) and will menace intruders in their area. Otherwise they fly and hunt over a wide area of the level. They also can pass to the level above, being able to pass through an air vent on the roof.
- D: Tribe of 9 hisser that live all around the lake in solitary areas.
- E: Family of 6 winged biters, with 4 adults and 2 young.
- F: Two mated piercers that live in a huge dead tree. Alongside is a wrecked forest ecology robot with all its supplies.
- G: Tribe of 11 male bearoids and 16 females with 9 cubs. All the adults use bows and the males use clubs to attack hand-to-hand, while the females flee with the cubs. Tribe treasures include an atomic torch and 3 portable flashlights. The tribe roams and may be encountered within several hexes of its marked location.
- H: Human settlement of 36 females and 10 males, plus 16 children. The females are amazon types who do all the fighting and hunting for the tribe. A poison is used (intensity level 18) for the tips of hunting arrows. The tribe may at first befriend strangers, but at an opportune time will subdue them if possible and enslave them. One of the slaves is a male who knows where a command color band is buried close to the village, and he knows how to operate any type of robot.
- I: Two mated shocker beasts live in this 3 hex territory and will attempt to kill any possible intruders.
- J: An imitator lives in this area and changes to copy anyone that comes out of the inclined plane. In the night it attempts to take over the person of its choice after using a blowgun with a poison dart (intensity level 18).
- K: A nest of small warriors living underground, with 2 duralloy shields they use as hatches for their nest openings.
- L: Location of a security robot, needing only the touch of the proper color band to activate.
- M: The abode of a lone human female, with 18's in all her categories. She possesses a protein disruptor pistol with 2 extra energy cells. She has a winged biter for a pet and is served by a sword bush that responds to her every command. She wishes only to be left alone, and will not cooperate with other beings.
- N: A small area which has patches of dark fungus lying on the ground.
- O: A cave in the mountain where 3 metaled ones live. The cave is not large, but includes a hole where a space suit is covered by the dung of the inhabitants.
- P: The living area of 4 mirror creatures.
- Q: The territory of a single singing vine. It protects itself with a sonic torch.
- R: A mated pair of cougaroids, which wear cured hide armor and use shields and swords.
- S: An empty log cabin where a hisser lives
- T: A patch of 3 death trees.

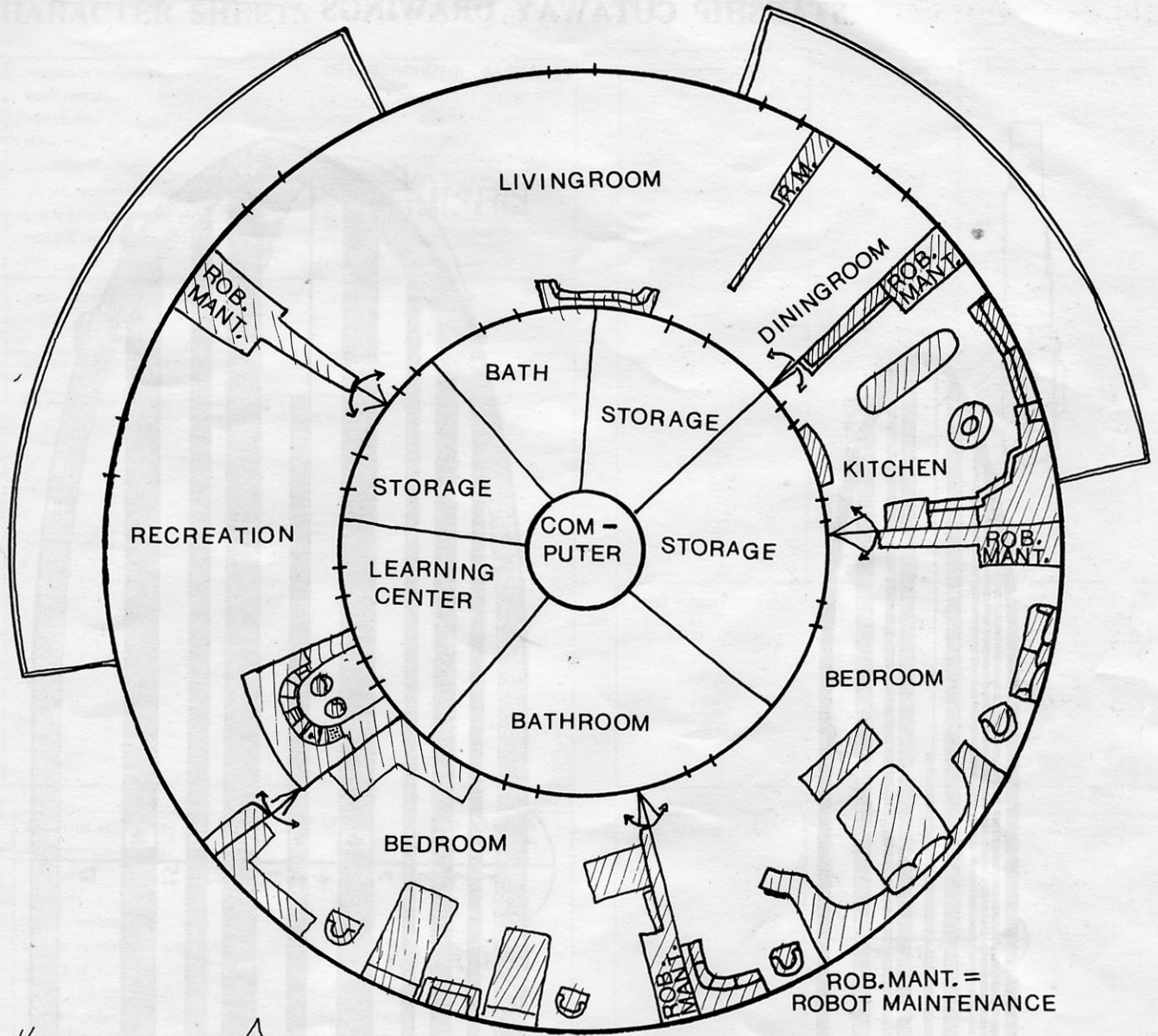
Any questions on these rules should be directed to TSR Hobbies, POB 756, Lake Geneva, WI 53147. Enclose a stamped, addressed envelope in order to insure a reply. **Remember, however, that these rules (and specific portions thereof) are only intended as guidelines — and that many details are best described by the individual game judge.** Science fiction can be completely open-ended, and so too this game of science fiction adventures!

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CREDITS

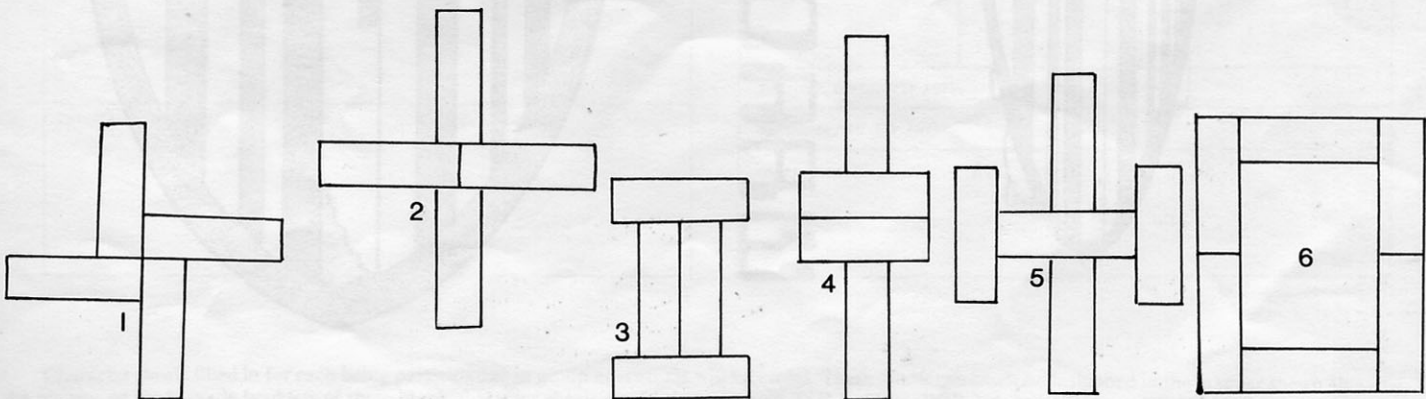
Game Design: James Ward
Development: Brian Blume
Editing Mike Carr and David Sutherland
Artwork: David Sutherland

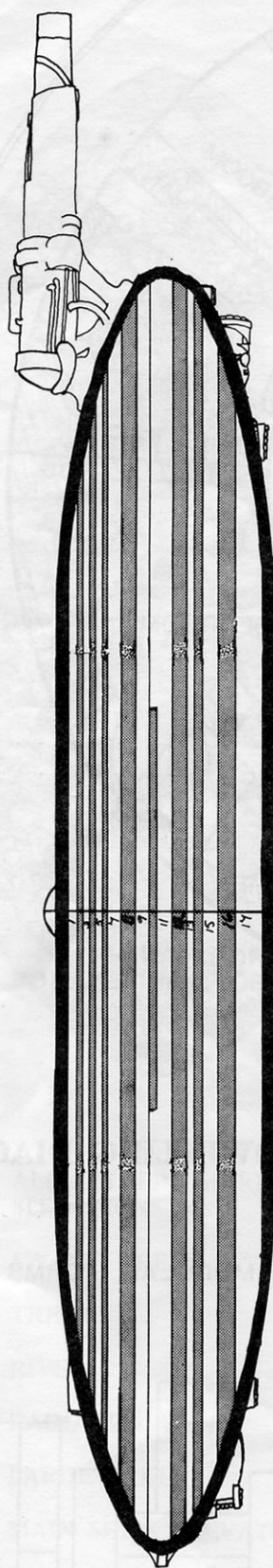
With special thanks to Gary Gyga



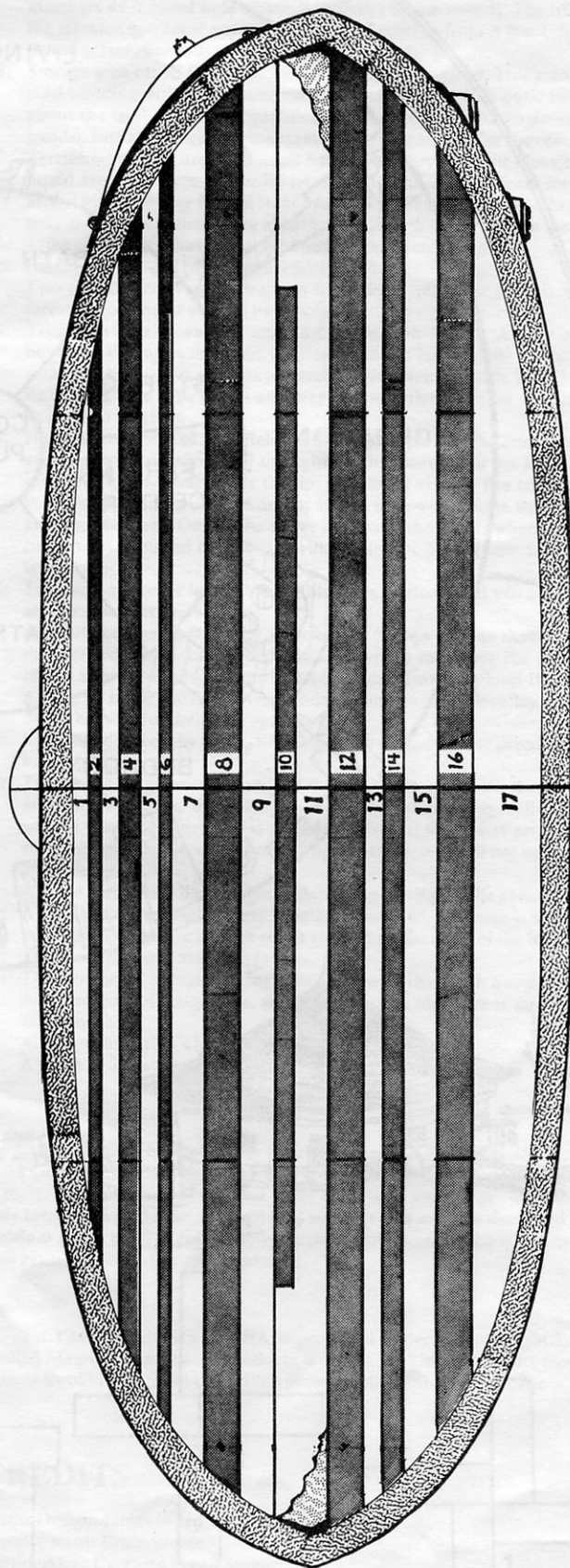
MODULAR DWELLING DIAGRAMS

TYPICAL "A" FRAME MODULAR FORMS





WARDEN



CHARACTER SHEETS

RADIATION RESISTANCE:		METAMORPHOSIS ALPHA	
CONSTITUTION:			
DEXTERITY:			
STRENGTH:			
LEADERSHIP POTENTIAL:			
MENTAL RESISTANCE:			
ARMOR TYPE AND CLASS:		HUMAN	
MAXIMUM DAMAGE (HIT POINTS):		NAME:	
		NEXT OF KIN:	
JUDGE-GIVEN SKILLS & ITEMS:			
NUMBER OF MENTAL ATTACKS RESISTED:		MORALE FACTOR (IF HIRELING):	
WEAPONS OWNED	RANGE AND DAMAGE POTENTIAL	+ OR - TO DAMAGE	SPECIAL OWNED ITEMS:
OTHER INFORMATION:			

ITEMS CARRIED / WHERE	ITEMS IN HAND	SPECIAL CHARACTERISTICS
OTHER NOTES:		

RADIATION RESISTANCE:		METAMORPHOSIS ALPHA	
CONSTITUTION:			
DEXTERITY:			
STRENGTH:			
MENTAL RESISTANCE:			
NUMBER OF PHYSICAL MUTATIONS:		Mutant	
NUMBER OF MENTAL MUTATIONS:		NAME:	
ARMOR TYPE AND CLASS:		CREATURE TYPE:	
MAXIMUM DAMAGE (HIT POINTS):			
JUDGE-GIVEN SKILLS & ITEMS:			
NUMBER OF MENTAL ATTACKS RESISTED:		MORALE FACTOR (IF HIRELING):	
WEAPONS OWNED	RANGE AND DAMAGE POTENTIAL	+ OR - TO DAMAGE	SPECIAL OWNED ITEMS:
MENTAL MUTATIONS		DESCRIPTION	
PHYSICAL MUTATIONS		DESCRIPTION	

ITEMS CARRIED / WHERE	ITEMS IN HAND	SPECIAL CHARACTERISTICS
PHYSICAL DEFECT (IF ANY):		
MENTAL DEFECT (IF ANY):		
OTHER NOTES:		

Character sheets filled in for each being participating in group adventures will be useful. These sheets can easily be fashioned in the manner shown above by the players, or ready-made booklets of these blank character sheets can be ordered from TSR Hobbies. POB 756, Lake Geneva, WI 53147. Cost per booklet is \$3.00.



MOVEMENT TABLES

Movement must be considered in two separate cases: *general* and *special*.

GENERAL MOVEMENT:

This type of movement refers to that of an exploratory nature or simply traveling by a character. The basic rate assumes a speed of two miles per hour, with appropriate stops for rests, over a maximum period of ten travel-hours. A character with very little equipment is able to increase this basic rate to three miles per hour, while encumbrance (heavy armor, considerable equipment, pulling or pushing a cart, etc.) slows movement to one mile per hour.

Mounted movement overland riding horses or horse-like creatures is at twice basic rate, or four miles per hour, and bonus or penalty for lack of equipment carried or encumbering items apply.

Aerial movement is at triple basic rate, and it assumes the bonus and penalty previously noted, modified for the travel mode.

If a standard measurement of one-half mile per space is assumed, movement rates are:

GENERAL MOVEMENT TABLE

Type of Travel	Spaces Traveled per Hour		
	Light Equipment	Standard	Encumbered
Afoot	6	4	2
Mounted	12	8	4
Aerial	18	12	6
Standard Robot	-	60	-
Ecology Robot	-	120	-
Eco. Garden Robot	-	50	-
Medical Robot	-	56	-
Engineering Robot	-	40	-
Security Robot	-	120	-
Anti-Gravity Sled	-	66	-

Terrain will affect movement speed.

SPECIAL MOVEMENT:

Special movement refers to situations where other beings are encountered and a conflict situation might occur. At this time the turn changes from a basic game-hour to a short interval of but 10 seconds. Of course, during each 10 second encounter turn many things (conversation, attack by projectile weapon, combat melee, and so on) can take place. We are concerned only with movement, however, leaving the other occurrences to whatever section of this work they fall under or according to the referee's judgment as the case may be.

When special movement takes place, it might be helpful to place the parties upon a graph, and show movement by means of markers.

Assuming a standard measurement of 2 yards per space, in a 10 second turn movement rates are:

SPECIAL MOVEMENT TABLE

Human/Humanoid	Spaces Moved per Melee Round		
	Normal	Evasive	Charging
No armor	6	10	12
Furs, shield, or leather	6	8	10
Leather & shield	5	7	9
Plate armor	4	6	8
Plate & shield	4	5	8
Duralloy armor	4	5	7

Mounted, aerial and vehicular/robotic movement is not given. If robotic movement is desired equate yards to meters and then cut speed to one-tenth. For example, a standard robot traveling 96 kilometers per hour travels 96,000 yards per hour, 16,000 per ten minutes, 1,600 per 1 minute, or 267 yards per 10 second melee round. This converts to 13 spaces per turn.

METAMORPHOSIS ALPHA

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ENCOUNTER TABLE

DIE	City	Grasslands	Forest	Mountains	Lake Shores or Swamps
1.	dart creature	hisser	piercer	piercer	hisser
2.	thief beast	metaled one	metaled one	metaled one	piercer
3.	winged biter	shocker beast	cougaroid	shocker beast	deer
4.	shocker beast	deer	deer	deer	pegasus
5.	cougaroid	unicorn	bearoid	cougaroid	jeget
6.	bearoid	dart creature	jeget	bearoid	dart creature
7.	wolfoid	winged biter	wolfoid	unicorn	thief beast
8.	changer	changer	stabber	pegasus	bearoid
9.	hawkoid	stabber	black one	winged biter	golden hawk
10.	blood bird	blood bird	buzzers	wolfoid	blood bird
11.	black one	small warrior	grabber	hawkoid	buzzers
12.	small warrior	mirror creature	dream bush	golden hawk	grabber
13.	buzzers	passion weed	jawed plant	black one	jawed plant
14.	singing vine	red stinger	singing vine	dream bush	singing vine
15.	death tree	dark fungus	death tree	sword bush	death tree
16.	sword bush	death growth	sword bush	mirror oak	passion weed
17.	dark fungus	humanoid 2	mirror oak	dark fungus	red stinger
18.	death growth	humanoid 3	death growth	humanoid 1	dart weed
19.	humanoid 2	humanoid 4	humanoid 3	humanoid 4	blister plant
20.	humanoid 5	humanoid 5	humanoid 5	humanoid 5	humanoid 5

HIT OR MISS CHART

Weapon Class and Armor Class are combined in a chart to find if the attacker strikes or not.

Weapon Class	1	2	3	4	5	6	7	8
1	18	17	16	18	14	18	12	18
2	17	16	15	17	14	16	10	19
3	16	15	14	16	13	15	9	17
4	15	14	13	14	12	10	NE	13
5	13	11	12	13	11	9	NE	12
6	11	10	9	11	8	8	NE	10
7	9	8	7	8	6	7	NE	*
8	7	6	5	6	4	6	NE	*

To use the chart, cross-index the weapon class of the attacking weapon with the armor class of the target. The result is the number which must be equalled or exceeded on the generation of a random number from 1-20. Results of "NE" mean no effect, as will rolls which do not equal or exceed numbers listed on the chart. A "*" means that a hit is automatic.

WEAPONS DAMAGE CHARTS

The following chart details the damage caused by weapons that are used by many of the beings on the ship. The numbers listed will tell how many points of damage are possible from each hit, and the appropriate die is then thrown to determine how many points are suffered by the target (for instance, 1-8 means an eight-sided die is cast and the result is the number of hit points sustained in the attack).

Target:	Humanoid Beings	Mutated Creatures	True Humans
Weapon:			
Dagger	1-4	1-4	1-4
Normal Ax	1-6	1-6	1-8
Normal Mace	1-8	1-6	1-8
Normal Sword	1-6	1-4	1-8
Spear	1-6	1-4	1-6
Normal Bow	1-6	1-6	1-6
Longbow	1-8	1-8	1-12
Crossbow	1-12	1-12	1-12
Larger, Heavier Sword	1-8	1-6	1-12
Larger, Heavier Ax	1-8	1-8	1-10
Larger, Heavier Mace	1-8 plus 2	1-8	1-12
Flail*	1-8 plus 3	1-8 plus 2	1-12 plus 2
Vibro Blade**	12	10	12
Vibro Saw**	15	12	18
Pike Type Weapons	1-12	1-12	1-12
Sling	1-6	1-4 plus 1	1-6

Protein Disruptor	5, 15, or 20 six-sided dice of damage
Sonic Metal Disruptor	affects only metal (3-18 hours of deafness)
Paralysis Rod	3-18 hours of unconsciousness
Paralysis Dart	1 six-sided die of damage, plus 3-18 hours of unconsciousness if charged
Laser Pistol	5, 10, 15 six-sided dice of damage
Slug Projector	2 six-sided dice of subduing (see <i>Weapons Systems</i> , F.)
Gas Ejector	3-18 hours of unconsciousness
Engineering System	
Hand Unit (Laser Beam)	5 six-sided dice of damage (note 2' range)
Medical Hand Analyzer (Vibro Scalpel)	same as Vibro Blade
Sonic Torch	3-18 hours of deafness
Atomic Torch	5 six-sided dice of damage (note 3' range)
Laser Torch	5 six-sided dice of damage (note 4' range)
Chemical Defoliant	a powerful irritant causing skin rash with 1 six-sided die of damage, blindness if brought into contact with eyes, and level 8 poisoning if ingested
Chemical Acid	3 six-sided dice of damage from burns and blisters, blindness if brought into contact with eyes, and poisoning if ingested (roll 2 six-sided dice and add 2 to determine level of from 4-18)
Radioactive Material	poisoning of from level 3-18 to be near or in contact with (see <i>Ability Explanations</i>)

RADIATION CHART

		RADIATION INTENSITY LEVEL																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
R	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
A	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
D	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
I	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
A	14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5
T	13	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6
I	14	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7
O	13	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8
N	12	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D
R	11	0	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D
E	10	0	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D
S	9	0	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D
I	8	0	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D
S	7	0	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D
T	6	0	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D
A	5	0	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D
N	4	0	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D	D
C	3	1	2	3	4	5	6	7	8	D	D	D	D	D	D	D	D	D	D

The graph reflects exposure after one melee turn. The "D" represents death caused by exposure for that 1 melee turn no matter how many hit points the player or creature has. A number is the number of dice of damage a being sustains each melee turn while exposed to the radiation.

MENTAL STRENGTH CHART

POWER OF THE BEING ATTACKING

		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	18	—	—	—	—	—	—	—	18	17	16	15	14	13	12	11	10
E	17	—	—	—	—	—	—	18	17	16	15	14	13	12	11	10	9
N	16	—	—	—	—	—	18	17	16	15	14	13	12	11	10	9	8
T	15	—	—	—	—	18	17	16	15	14	13	12	11	10	9	8	7
A	14	—	—	—	18	17	16	15	14	13	12	11	10	9	8	7	6
L	13	—	—	18	17	16	15	14	13	12	11	10	9	8	7	6	5
	12	—	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4
R	11	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
E	10	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	*
S	9	16	15	14	13	12	11	10	9	8	7	6	5	4	3	*	*
I	8	15	14	13	12	11	10	9	8	7	6	5	4	3	*	*	*
S	7	14	13	12	11	10	9	8	7	6	5	4	3	*	*	*	*
T	6	13	12	11	10	9	8	7	6	5	4	3	*	*	*	*	*
A	5	12	11	10	9	8	7	6	5	4	3	*	*	*	*	*	*
N	4	11	10	9	8	7	6	5	4	3	*	*	*	*	*	*	*
C	3	10	9	8	7	6	5	4	3	*	*	*	*	*	*	*	*

POISON CHART

		Strength of Poison																	
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
C O N S T I T U T I O N	18	*	*	*	*	*	*	*	*	*	*	*	*	1	2	3	D		
	17	*	*	*	*	*	*	*	*	*	*	*	1	2	3	D	D		
	16	*	*	*	*	*	*	*	*	*	*	1	2	3	D	D	D		
	15	*	*	*	*	*	*	*	*	*	1	2	3	D	D	D	D		
	14	*	*	*	*	*	*	*	*	1	2	3	D	D	D	D	D		
	13	*	*	*	*	*	*	*	1	2	3	D	D	D	D	D	D		
	12	*	*	*	*	*	*	1	2	3	D	D	D	D	D	D	D		
	11	*	*	*	*	*	1	2	3	D	D	D	D	D	D	D	D		
	10	*	*	*	*	1	2	3	D	D	D	D	D	D	D	D	D		
	9	*	*	1	2	3	D	D	D	D	D	D	D	D	D	D	D		
8	*	1	2	3	D	D	D	D	D	D	D	D	D	D	D	D			
7	*	1	2	3	D	D	D	D	D	D	D	D	D	D	D	D			
6	1	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D			
5	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
4	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			

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