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# WANDERER: A DikuMUD Game Design with Educational Pretensions

Anne-Scott Whitmire

June 5, 1996

## Abstract

WANDERER is the author's conception of the way in which a DikuMUD computer game might be adapted to become an informational resource and potential educational tool. This paper discusses the MUD phenomenon, explains why the author thinks the game has educational potential, and presents a summary of the research which was done in the creation of this prototype of an informational MUD.

## Introduction

During my undergraduate career I became one of many students who are hopelessly addicted to playing a type of Internet-based computer game known as a MUD, or Multi-User Domain. I began to see a potential in these games for educational use; the design of the games and their attraction for students seemed to make them ideal tools for education. Thus this project, the attempt to create an educational MUD game, was born. This paper describes the development of the game (called WANDERER), explains why it failed to entirely live up to my expectations, and suggests what would have to be done to make it work properly.

In my naiveté, I had assumed that my sixteen or seventeen years as a student might qualify me to some extent to pursue the goal of creating an "educational" game. This assumption, of course, failed to take into consideration the fact that "education" is a discipline as well as a process. Having run afoul, late in the progress of this project, of an establishment mentality that attempted to insist that WANDERER and I go wandering in the murky realms of rigorous testing and methods by which professional educationists define the term "educational", I feel the necessity to state explicitly at once what I have and have not done here. I am not an educator; I am a mathematics and computer science student who is also an avid MUD player. I set out to determine the feasibility of incorporating information into an existing MUD game code which would make the game useful in a classroom as well as entertaining. I did a brief literature survey in order to determine how professional educators see games, particularly role-playing games, as educational tools. I made no attempt whatsoever to address either the ongoing discussion among educators and sociologists as to the liabilities of unlimited access to the Internet, or the concerns of those who object to the fantasy aspects of MUDs and other role-playing games.

The educational literature is replete with both rationale and direction for the use of simulation and role playing as well as new technology in the modern curriculum. In the Preface to Learning and the Simulation Game, the authors assert that "today's simulations

and games are no longer a schoolroom ... diversion but are being seen as an academic technique of wide relevance throughout all levels of education ... (Taylor)." In <u>Role-</u><u>Playing in the Curriculum</u> Fannie and George Shaftel describe its use in many different areas. For example, on the subject of history they write:

Many teachers use role playing as a very rewarding method of recreating historical crises. Children, by assuming roles of individuals in historic settings, step into the shoes of people who had to make difficult choices at critical times in human affairs; they thereby achieve a deeper understanding of the emotional impact of such historical demands on people. (9)

Modern technology has added a new dimension to classroom instruction. Joyce Van Tassel-Baska writes that "It is important to recognize the power of technological tools in the educational process and to find powerful ways to harness them to the complex task of learning (397)." Today's students are increasingly computer literate -- but beyond that, many of them are increasingly "computer addicted". The challenge is to channel the addiction in constructive directions. One of the things that motivated me to undertake this project was an awareness of how many people, particularly students, spend a great deal of their time playing MUD games. Originally the majority of players were college students, but as more high schools and junior highs become attached to the Internet, the teenagers who have always formed the majority of role-players are flocking to MUDs also. Given the drawing power these games have, it seems worthwhile to explore their possible uses as educational resources.

Many games which claim to be "educational" fail because they are not also entertaining. As John Taylor and Rex Walford write in Learning and the Simulation Game, "Much assiduous preparation and design falls to naught ... because the designer fails to take one final step -- to consider the game as it looks to the participant.... In some ways this is the most difficult thing of all to do...(47)." The authors suggest that a valid test for the game would be "informal trials with a friendly group in a situation when the success or failure of the simulation [game] is *not* a matter of prestige, pride, or *educational* importance (emphasis mine) (48)." The "theory" behind my attempt to *adapt* an already very popular

game for educational use is obvious -- unless one is very clumsy in the adaptation, one should be able to avoid the difficulties Taylor and Walford warn against.

My intent has been to design a useful game which can be integrated into a complete learning environment, much like a book or a film. It could be particularly useful to teachers of gifted students, especially in classrooms which are made up of students at many levels of achievement and which place excessive demands on a teacher's time with each student. Dorothy Sisk, in <u>Creative Teaching of the Gifted</u>, traces the rise in interest in special education for gifted students to the establishment of the federal government's Office of Gifted and Talented in 1972 and subsequent federal support (money) to states which initiated program development (19). Hers is one of many books on the subject of education of gifted students, and most of them encourage the use of games, role playing, and self-directed learning activities. She notes that "simulation motivates gifted students because it builds on their curiosity and keen sense of observation. It affords them opportunities to use their inquiry skills and their problem-solving abilities...(115)." In the 1986 Handbook for Differential Education of the Gifted, the authors note that "Play [and] games...allow for cooperation, competition, and originality -- elements which are seen as pedagogical essentials for DEG in order to create an achievement-oriented and enjoyable learning climate (Jellen 80)." And on the subject of computer games, Frederick Goodman quotes a study which compared the use of computer games with conventional classroom teaching and which found that "students in the experimental group attained approximately the same amount of learning with considerably less investment of time." The researchers concluded that "in this sense of learning effectiveness...the games appear superior to conventional classroom teaching (133)."

WANDERER was created in an attempt to determine whether or not the MUD is a viable basis game in the simulation genre.

## Background

The first edition of the game Dungeons and Dragons was released sometime around 1974 (Hahn), causing an immediate sensation among lovers of science fiction and fantasy. Popularly known as D&D, the game and the many other "role-playing games", or RPGs, that followed became (and remain) extremely popular. In D&D and other games of the sort, a player creates a character which he or she will assume for the game. One person in the game, who is known as the dungeon master, has the job of describing the world in which the players find their characters. The object of the game is for the players to think through the situations which are presented to them and find the best solutions; D&D is essentially a game of wits.

Typically, these games have a medieval setting and players choose the parts of adventurers in a fantastic medieval land. Common types of characters are fighters, thieves, clerics, and magic-users, each of whom has specific abilities universally understood by players of the game and a vital role in a party of players. A typical game might find the characters on a quest to retrieve a magic wand stolen by an evil magician. Along the way they might have to fight monsters controlled by the magician, hence the need for strong fighters -- who might be injured and need healing, which is done by clerics. Magical spells often aid in difficult battles, as well as providing abilities such as walking through walls, flying, or becoming invisible, all of which might come in handy while attempting to recover the stolen wand. The players might well encounter locked or hidden doors and booby traps, with which a good thief can deal.

Many of the same people who enjoy RPGs are computer enthusiasts, and so it wasn't long before this sort of game was translated into electronic form. This was a great boon to those who lived far away from other players, didn't have time to get together with a group, or just didn't have the time and energy it takes to create a good character or an interesting scenario. With a computerized RPG, the game is already designed and waiting, with no need for a dungeon master or other players. But these games lack the opportunities

for interaction with other live players that made the original games so exciting. The advent of the Internet, with its power to connect people from all over the world, made it possible to have the best of both worlds -- a game that was there whenever one had time to play, but which also had other living humans controlling characters. The programs became known as Multi-User Domains, or MUDs.

MUDs come in many varieties. Some, such as the AberMUD and the LPMUD, tend to concentrate more on combat. Others, known as MOOs and MUSHes, are mostly concerned with social interaction of players and development of detailed characters (Smith). In between these is the very popular DikuMUD, which retains much of the structure of classic D&D-type games but gives plenty of room for creativity and design of challenging puzzles. For this project I chose the DikuMUD, for several reasons: it is the type with which I am most familiar; it is widely used and therefore many players would already be familiar with the basic mechanics of the game; it is written in the C computer language, which is very popular; and it allows the creation of almost any sort of scenario. The basic code which makes the game run has been made available by its authors for anyone to use or modify (Myers). For this project, I selected a version of the DikuMUD code known as Merc 2.2, primarily because of its inclusion of a simple language of "MOBProgs", short for MOBile Programs, which allow one to attach a script of actions to a creature in the game. The creature then performs the scripted actions when a described trigger, such as someone entering a room or starting a fight, takes place. This language was designed to allow those unfamiliar with C programming to add complicated functions to the game. My hope in choosing Merc was to create a game which could be expanded easily by teachers and students without a great investment of time spent learning the C language and the complicated internal functions of the program.

How can such a game be used as a general educational tool? While the players are necessarily taking the parts of medieval adventurers, the scenarios in which they find themselves need not be the typical dragon-slaying, princess-saving quests. Any area can

be included in the game, and the basis of the game in fantasy allows one to include features which might seem odd in another context -- when magic is normal, a bit of teleportation or time travel is unremarkable.

The MUD provides an excellent environment for role playing, allowing students to be part of the scenario rather than just imagining it. Using the facilities of the game, a teacher can appear to the students as a character from literature or history and create various challenges for them to face. To a large extent, once it is set up, the game can run itself, allowing a teacher to let more advanced students learn on their own while she is working with others.

## The Game Design

Initially I had planned to include three scenarios in this example educational MUD, showing its potential use in various areas:

1. A South American Rain Forest, 2000 A.D.

The players find themselves in a rain forest, charged with hunting plants and animals that might provide valuable medicines. They must find these and bring them back, while avoiding the many hazards of the region -- crocodiles, angry loggers, exotic diseases, etc.

2. The Lake District

Set in the Lake District of England during the Romantic Era. While visiting this hotbed of literary goings-on, players would find themselves faced with the opportunity to avert three of the major disasters of the era:

i. The players meet a man from the town of Porlock who is on his way to visitColeridge, who is busy writing "Kubla Khan" and will lose the inspiration if interrupted.The players will attempt to prevent the visit so that future generations will not have to read half a poem.

ii. The players meet Percy Shelley, who has decided to go sailing. They must convince him that it is not a good day to be out on the lake (and besides, he'll get his copy of Keats' poems wet) and thus prevent his untimely death.

iii. The players meet Lord Byron, who has decided that going off to fight in the Greek war is just the thing to satisfy his love of adventure. The players must stop him, thus preventing his death (caused, incidentally, not by fighting but disease).

#### 3. Spain, 1492

The Moors have been defeated and all of Spain is rejoicing. Christopher Columbus has realized that this joyful mood might well inspire Ferdinand and Isabella to sponsor his planned voyage to India. Unfortunately, he has come down with laryngitis and can't say a thing. He has an audience with the rulers scheduled for the very day on which the MUD players arrive. He beseeches them (in writing, one assumes) to appear before the king and queen and make his case for him. Hope they can speak Spanish!

It became apparent that this was too much to undertake, and so I decided to concentrate on creating the rain forest scenario. This decision was significant, because one of my goals in actually creating a MUD was to see if the amount of effort involved in research and design of an area was in the realm of possibility for most teachers. I discovered that there was quite a bit more time and work involved than I had envisioned, making it unfeasible for many teachers, no doubt. However, see the Conclusion for suggestions on how this major task might be simplified.

The concept of time travel is the feature which gives WANDERER sufficient flexibility for multiple educational uses. The scenario which I have developed in detail is a journey through a South American rain forest, set in the not-too-distant future. The emphasis in any scenario is on various quests or challenges which present themselves to the players -- they find someone or something which gives them a task to complete, and receive some reward for its completion. Several of these quests are built into the area of the rain forest. For example, the players will be asked to find a Spix's Macaw, one of the

world's rarest birds -- only two are known to live in the wild (Spix's 5). If they find this incredibly hard-to-find creature, they will receive huge rewards.

The use of a medieval setting as a basis for the game may seem odd considering the sorts of areas to which the players will journey, but in actuality it is an excellent starting point for several reasons. The popularity of medieval RPGs, both electronic and penciland-paper, ensures that a large base of players exists who understand the mechanics of the game without any explanation; in particular, the widespread use of DikuMUD code means that a lot of players will already thoroughly understand the basic workings of the game and will be ready to help those who don't. In addition, the setting provides an easy means of rewarding players for completing goals of the game -- they are given new spells, skills, weapons, and armor to improve their characters, as well as gold with which they can buy basics such as food and water and eventually even things like personal houses in the game. Also, such a setting makes players expect the fantastic, as they are accustomed to magic spells and strange monsters. This makes the basic premise of the game, the ability to travel in time, seem acceptable. In most DikuMUDs, fighting various monsters is an important aspect of the game. While fighting is not emphasized in this game, I have tried to include enough "combat" to satisfy the typical MUDder's taste for battle.

## The Rain Forest

The following description of WANDERER's Rain Forest includes a description of the area, comments about the literature search on which it is based, and discussion of both what I hoped to present to the players and the difficulties I encountered in doing so. I tried to use known facts to create a probable near future. The setting is a rain forest somewhere in northern South America, around the year 2000. My intent was to give players enough information about rain forests to enable them to get some sense of the biodiversity and resources that they contain and what would be lost with their destruction.

Upon entering the area, players will find themselves in the jungle near a small town. Originally a simple marketplace for the rural people of the area, the town has grown with the addition of a small laboratory from which expeditions into the forest in search of medically valuable and biologically important plants and animals are directed. To aid in their searches the scientists at the laboratory often hire locals to gather specimens, and this is what the players of the game will likely find themselves doing. This is not an unprecedented idea -- a program of hiring local people to aid in scientific searches is already in place in Costa Rica (Thernstrom 14). The players will be given some brief training in how to recognize and gather potentially valuable flora and fauna and access to a "library" containing information about some known resources and hazards of the forest (see Appendix A), and then they will be taken out into the jungle.

There is a wealth of evidence that this sort of "informed gathering" can be very worthwhile. Many important drugs have been developed from plants. The rosy periwinkle of Madagascar has yielded the only effective treatment we have for Hodgkin's disease and acute lymphocytic leukemia, increasing survival of Hodgkin's victims from 2% to 58% and survival of lymphocytic leukemia from 20% to 80% (Thernstrom 14). The European herb foxglove is the source of digitalis, a very important drug in the treatment of heart problems (Wallace 39). Animals can also provide useful medicines; spider venom has effects on the nervous system which researchers believe may aid in treatment of paralysis, and a newly discovered species of poison arrow frog has yielded an analgesic which is as effective as morphine but potentially nonaddictive (Rodgers 62). The importance of drugs derived from natural sources is likely to increase in the future because, as Sam Thernstrom writes,

Despite the success drug companies have had with plant-based drugs, in the last several decades pharmaceutical research has focused heavily on manmade compounds.... Fewer than three percent of the world's known flowering plants have even been screened for medicinally useful compounds. But recently the focus has begun to shift back to the biological world. As Charles McChesney of the University of Mississippi explains, "The synthetic chemists have made the easy molecules;" new plants now seem worth investigating. (12)

Many bacteria and viruses have developed resistance to common medicines; new chemicals from natural materials may help fight this problem. For example, it has recently been proven that a substance called artemisinin, derived from a type of wormwood and long used by the Chinese as a treatment for malaria, is an effective treatment for the disease. It is hoped that artemisinin will help combat those strains of malaria which have grown resistant to quinine (Wallace 38).

Previously, financial concerns have been the major obstacle to extensive plant testing; thoroughly examining a plant for interesting compounds can be a lengthy and expensive process. But efforts have been made recently to design simple plant screening tests that can be done in a field laboratory, so that only those with real potential will be sent on for more involved testing. These simple tests involve such cheap methods as using brine shrimp to test for toxicity and testing potential anti-tumor medicines on potato growths (Local 22). This is again an area in which the people of the region being explored can work, bringing them the immediate benefit of jobs.

No MUD is complete without hazards, and this scenario provides plenty of them. In the past year or so the ebola virus has been the subject of much discussion, and I have used the hypothetical nature of this part of the game to consider, based on what is known about the virus, how it might migrate from Africa to another part of the world -- in this case, to South America. Researchers have so far been unable to pinpoint the normal host of ebola; in both humans and monkeys, it kills too quickly for them to be effective hosts for spreading the disease. One theory, given that the virus seems to live in a cave in Africa which has a large bat population, is that bats may serve as vectors for ebola. Bats do serve a similar role for rabies. In the WANDERER rain forest there is a cave full of bats which have been infected by an escaped research animal brought from Africa. Also, in the area of the cave, some of the monkeys have been infected by the bats. If the players have contact with these animals, they may well contract the disease. (See Richard Preston's book <u>The</u> <u>Hot Zone</u> for the basis for this and other information about ebola.) It was while creating

this part of the scenario that I got the first indication that perhaps the MOBProg code was not all it should be; I had to go into the base code and modify it to make the illusion of "ebola" possible, something I had expected to be simple.

Of course, the players will no doubt meet various animals that, while not carrying a deadly virus, are still quite dangerous; being devoured by a crocodile or a large snake is certainly a hazard of a journey through the rain forest, and the many mosquitoes make it easy to contract malaria. Here again, in designing these hazards into the game I encountered a problem. The MOBProgs lack the ability to simply place an effect on a player. I had to have the mosquito cast a spell which makes the player sick, destroying a little bit of the illusion of the game -- mosquitoes that recite spell-casting words seem a bit out of place even in this only semi-realistic world! Even creatures which look harmless may in fact be hazardous; if the players want to collect frogs for research, they may discover the hard way that many are poisonous to the touch. Unfortunately, I have not been able to include this effect in the game; the game simply did not do what the MOBProg instructed it to do.

It was at this point that I went looking for help and discovered that the Merc programmers themselves had found so many bugs in the MOBProg code that they simply left it out of their next release of the DikuMUD game. The discovery that the difficulties I was encountering were essentially insurmountable forced me to leave out not only the poisonousness of the frogs but some other more complicated features which I had hoped to provide, including being able to converse to some extent with the local natives and having a translator available to help the players with signs in Spanish. I considered attempting to rewrite the MOBProg system, but realized that was outside the scope of this project. I have simply left the example area (the Rain Forest) at a point of being about 95% complete. The rest of the functions I had hoped to include can be simulated by a human controller of the game, but the current status of the Merc code simply does not allow them to be done

automatically without the writing of more complex special procedures in the C computer language.

Appendix A is the library as it is written for the program. Players will say "look (keyword)" and the information which the library contains about "keyword" will be presented to them. This feature makes it possible to include as much material as one wishes in order to enhance the informational aspects of the game. Appendix B is a map of the Rain Forest area; these maps are necessary in *designing* the game, not in playing it; they make it possible to program the game without risking total chaos. Appendix C is the MUD "language" for the Rain Forest area of WANDERER.

## Conclusion

While this project did not turn out entirely as I intended, I don't consider it a failure. My goal was to design an example area for an educational MUD game, determining along the way whether or not such use of this particular game genre is feasible. I learned that while this turned out to be more difficult than I had hoped, it is not impossible. The time and effort required to create an area of the game such as the Rain Forest are great -- many hours were spent researching the literature, mapping the area, and attempting to adapt its desired features to the DikuMUD format. Once all this has been done, however, one has an excellent resource which can be used for years afterward. Groups of teachers and/or students could work together on a large MUD; with Internet access becoming more and more available, several schools might work together in designing a game which all their students could use. Of course, the game need not be static -- the best MUDs are those which have active implementors building new areas all the time. It might even be rewarding to have the students design new areas and maintain the MUD, especially if the teacher has groups of students at various levels; some could create and others play -- one answer to the problem of providing appropriate activities for all students.

What about the bugs in the MOBProgs? My recommendation would be that someone with sufficient time and interest should develop a working script system, based on the original DikuMUD code, including broader functionality and paying particular attention to its use as an educational tool. Such a program could then be made available to interested teachers, allowing them to create MUDs simply, as I had originally envisioned. Even without such a system, however, the basic ability to create an area can be put to good use by a teacher and students who interact as characters in the game.

To sum up, I return to my original impetus in pursuing this effort: there are literally thousands of bright young people in the world today who are spending countless hours playing MUD games. It still seems to me that that is a fact worth harnessing to some constructive use; I have no doubt that any number of them could be challenged to create educational MUD games and could do an excellent job of it.

## Bibliography

- Bird, Chris. "Medicines from the rainforest." New Scientist 17 Aug 1991: 34-39.
- Carroll, Terry, Cheryl Knight, and Ed Hutchinson. "Carmen Sandiego: Crime Can Pay When It Comes to Learning." <u>Social Education</u> February 1995: 165-9.
- Chagnon, Napoleon A. <u>Yanomamo: The Fierce People</u>. New York: Holt, Rinehart, and Winston, 1983.
- Conniff, Richard. "RAP: on the fast track in Ecuador's tropical forests." <u>Smithsonian</u> Jun 1991: 36-48.
- Ellis, David. "The Little Virus That Could." People 24 Oct 1994: 105-109.
- Feldhausen, John F. "Learning and Cognition of Talented Youth." <u>Comprehensive</u> <u>Curriculum for Gifted Learners</u>. Ed. Joyce VanTassel-Baska. Boston: Allyn and Bacon, 1988.
- Fellows, Linda. "What are the forests worth?" The Lancet 30 May 1992: 1330-1332.
- Goodman, Frederick L. "An introduction to the virtues of gaming." <u>Educational Aspects</u> of <u>Simulation</u>. Ed. P. J. Tansey. London: McGraw-Hill, 1971.
- Gorman, Peter. "Making Magic" Omni Jul 1993: 64+.
- Hahn, Joel, ed. "Frequently Asked Questions rec.games.frp.dnd" [online] Available WWW: http://sac.uky.edu/~mlmorr0/rgfdfaq.html.
- Hughes, Carol, and David Hughes. "Teeming Life of a Rain Forest." <u>National</u> <u>Geographic</u> Jan 1983: 49-65.
- Jellen, Hans G., and John R. Verduin, Jr. <u>Handbook for Differential Education of the</u> <u>Gifted</u>. Carbondale: Southern Illinois University Press, 1986.
- Kluger, Jeffrey. "Pretty Poison." Discover Jul 1991: 68-71.
- "Local 'prospectors' seek the fruits of the rainforest." New Scientist 23 Feb 1991: 22.
- Martin, Glen. "Froggy Bottom." Discover May 1990: 36-37.
- McNeil, R. Edward. "Armed and Amphibious." Omni Apr 1988: 24+.
- Myers, Frederick, ed. "DikuMud FAQ" [online] Available WWW: http://www.smartpages.com/faqs/games/mud/diku/faq/faq.html.
- Phillips, Kathryn. "Sun-Blasted Frogs." Discover Jan 1995: 76.
- Pope, Clifford H. "Fer-de-lance." The World Book Encyclopedia. 1967 ed.

Preston, Richard. The Hot Zone. New York: Random House, 1994.

Rodgers, Katie. "Back to Our Roots." Drug Topics 9 Jan 1995: 57-64.

- Shaftel, Fannie R. and George Shaftel. <u>Role Playing in the Curriculum</u>. Englewood Cliffs, New Jersey: Prentice Hall, 1982.
- Sisk, Dorothy. Creative Teaching of the Gifted. New York: McGraw-Hill, 1987.
- Smith, Jennifer, ed. "Frequently Asked Questions: Basic Information About MUDs and MUDding." [online] Available WWW: http://www.math.okstate.edu/~jds/mudfaq-p1.html.
- "Spix's Macaw Reintroduced in Brazil." Focus Jul/Aug 1995: 5.
- Taylor, John L., and Rex Walford. <u>Learning and the Simulation Game</u>. Beverly Hills: Sage Publication, 1978.
- Thernstrom, Sam. "Jungle Fever." The New Republic 14 April 1993: 12-14.
- Tsuruoka, Doug. "Nature's Laboratory." <u>Far Eastern Economic Review</u> 24 Mar 1994: 43-44.
- Tuttle, Frederick B., Jr., Laurence A. Becker, and Joan A. Sousa. <u>Program Design and</u> <u>Development for Gifted and Talented Students</u>. Washington: National Education Association, 1988.
- VanTassel-Baska, Joyce. <u>Comprehensive Curriculum for Gifted Learners</u>. Boston: Allyn and Bacon, 1988.

Wallace, Joseph. "Rainforest Rx." Sierra Jul/Aug 1991: 37-41.

## Appendix A

This is the library, as it is written for the program -- players will say "look (keyword)" and the information contained about "keyword" will be presented to them.

## frog frogs

The rain forests of Central and South America harbor a great number of species of frogs, most of which are small and brightly colored, and many of which are poisonous. In recent years, frog populations have declined, for reasons not yet fully understood. Probable causes include acid rain, destruction of habitats (particularly large-scale logging), and increased amounts of exposure to ultraviolet light due to thinning of the ozone layer. Some species have apparently vanished completely, and more are in danger.

See also: endangered species poisonous

For more detailed information, see:

Martin, Glen. "Froggy Bottom." Discover May 1990: 36-37.

Phillips, Kathryn. "Sun-Blasted Frogs." Discover Jan 1995: 76.

endangered species

Many frog species are becoming scarce for various reasons. Here are descriptions of a few of those which are vanishing:

*Bufo periglenes*, the golden toad; males are a striking golden orange, while females are green and black with bright spots. The golden toad may already be extinct; it has not been seen since 1989.

*Hyla vasta*, a medium-sized frog with green skin crossed by bands of darker green. *H. vasta* is native to the island of Haiti.

Cascade frog, a medium-sized frog which is a golden brown with dark brown stripes on its legs. Native to the northwestern US, it is believed that increased levels of ultraviolet radiation are causing damage to Cascade frog eggs.

For more detailed information, see:

Hughes, David and Carol. "Teeming Life of a Rain Forest." <u>National Geographic</u> Jan 1983: 49-65.

Martin, Glen. "Froggy Bottom." Discover May 1990: 36-37.

Phillips, Kathryn. "Sun-Blasted Frogs." Discover Jan 1995: 76.

#### poison poisonous

Some of the most common frogs of the tropical Americas are the dart poison frogs. More than fifty species are known, and more are being discovered. All of them share certain characteristics, such as small size (the largest dart frogs are just over two inches long) and bright coloration. These frogs carry a toxin so strong that one frog contains enough to kill several adult humans.

Some specific species of dart poison frogs:

*Dendrobates pumilio*, a bright red frog with blue feet and a black underside. Though the name *dendrobates* means "tree walker", this species tends to live on the ground.

*Dendrobates imitator*, a small frog whose body is yellowish with dark spots, while its legs are green with smaller dark spots.

*Dendrobates granuliferus*, a small frog, often found on mushrooms, with a red head and back and green and black mottled legs and underside.

*Dendrobates* ?, a species not yet fully described, which is a medium green with lines of a dark color all over.

*Phyllobates bicolor*, a light green frog with a dark underside and very large black eyes. *P. bicolor* is used by some native tribes as a source of medicines.

For more information:

Gorman, Peter. "Making Magic." Omni July 1993: 64+.

Kluger, Jeffrey. "Pretty Poison." Discover July 1991: 69-71.

#### plant plants

The number of different species of plants in the tropical rain forest is staggering. Described here will be just a few plants which have been found to have medical value, in the hope that perhaps similar species will be found.

Rauvolfia (*Rauvolfia serpentina*), a shrub with long leaves and small thin flowers, some of which are white and others a pinkinsh-red. Native to Southeast Asia, it is used as a tranquilizer and has been shown effective against high blood pressure.

Foxglove (*Digitalis purpurea*), a tall herb which has many light purple bell-shaped flowers around the top of its stem. Native to Europe, it is widely used to treat heart failure.

Cinchona, a South American tree with small, rounded pale pink blooms in clusters. It is the source of quinine, used to treat malaria.

Rosy Periwinkle (*Catharanthus roseus*), a plant from Madagascar with large pale pink blossoms; it is the source of vincristine and vinblastine, used to treat Hodgkin's disease and acute lymphocytic leukemia.

Chonorodendron, a South American vine with large, fairly round leaves, small white flowers, and red berries. It is the source of the muscle relaxant curare.

For more information:

Wallace, Joseph. "Rainforest Rx." Sierra July/August 1991: 37-41.

#### ebola

Ebola is a virus which seems to have originated somewhere in Africa. It is extremely contagious, though not airborne, and there is currently no cure or treatment. Three strains are known, Zaire, Sudan, and Reston. Zaire is the most virulent form, killing 90% of its victims. Reston is apparently not contractable by humans, but is highly contagious (perhaps even transmitted through the air) in monkeys. It is not known what the normal host for the virus is; there is some suspicion that it could be bats or insects.

Victims of ebola bleed profusely, and appear as if their tissues are actually dissolving; eventually they simply become little more than bags of blood. The eventual collapse of the body provides an excellent means for the virus to spread, as bodily fluids are released everywhere.

#### snake snakes

Many snakes live in the rain forests of Latin America, from anacondas to various boa constrictors. However, one species is particularly hazardous and warrants a particular caution:

The fer-de-lance (*Bothrops atrox*) lives throughout Central and northern South America. It has dark brown and gray marks and a yellow throat, and lives in almost any habitat. The fer-de-lance can grow up to 8 feet long, and usually feeds on small animals; however, it kills more people than almost any other snake.

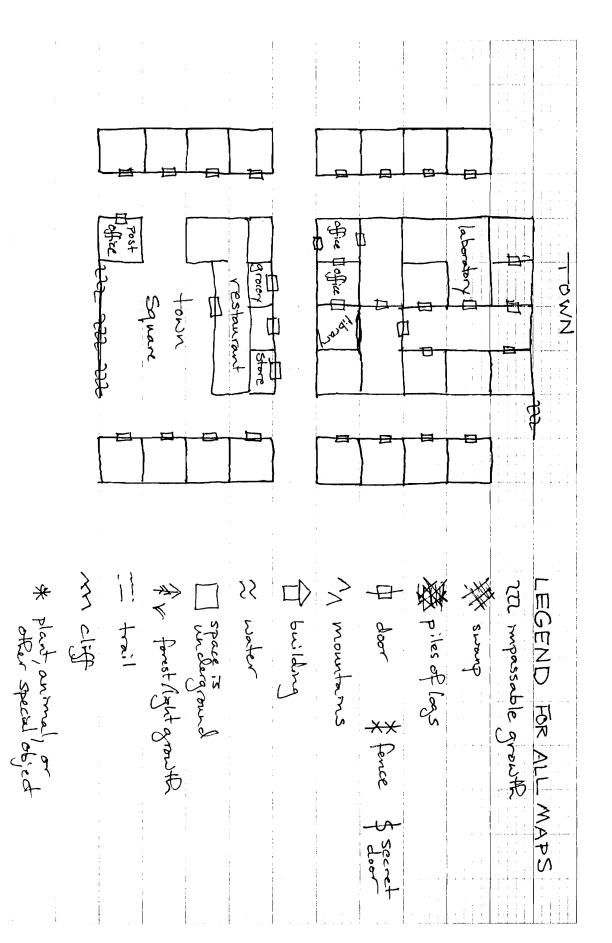
For further information:

Pope, Clifford H. "Fer-de-lance." The World Book Encyclopedia. 1967 ed.

#### bird birds Spix Spix's macaw

The great variety of birds in the rain forest makes it impossible to describe even a small percentage of them, so we'll simply mention one of the more interesting ones, Spix's Macaw. This bird is so rare that only two are known to exist in the wild. As for a description, suffice it to say you'll know it when you see it.

"Spix's Macaw Reintroduced in Brazil." Focus Jul/Aug 1995: 5



APPENDIX B

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2-B

## Appendix C

This appendix consists of the code for the areas written for WANDERER, in the format read by Merc DikuMUD version 2.2. Diku Mud is copyright (C) 1990, 1991 by Sebastian Hammer, Michael Seifert, Hans Henrik St{rfeldt, Tom Madsen, and Katja Nyboe. Merc Diku Mud is a derivative of the original Diku Mud and is subject to their copyright and license agreement. Merc Diku Mud contains substantial enhancements to Diku Mud. These enhancements are copyright 1992, 1993 by Michael Chastain, Michael Quan, and Mitchell Tse. The license agreements for both the original DikuMUD and the Merc enhanced version are included with the Merc software, which is available via anonymous FTP: ftp://ftp.math.okstate.edu/pub/muds/servers/Merc\_22.tar.gz.

#AREA (530) Silverleaf Entering the Forest #HELPS 0 \$~ **#MOBILES** #0 **#OBJECTS** #0 #ROOMS #11001 In a Small Cave~ This is a very small room of a cave, short enough that you have to crouch to walk through. To the north, the cave widens, and to the south the cave opens into what appears to be a thick forest. 110 8 0 D0 The cave continues to the north, growing wider. ~ 0 -1 2001 D2 The cave opens into a lush green forest. 0 -1 11002 S #11002 Outside a Cave~ You are standing next to a steep mountainside which is covered in light vegetation. A small opening in the rock reveals the beginning of a cave. Tropical forest covers all the land you can see. 1-C 11003 D0 The cave opening is small, but you could fit through. ~ õ -1 11001 D1 The mountain blocks your way. ~ -1 -1 -1 Ď2 The forest continues in that direction. 0 -1 11003 D3 The mountain blocks your way. -1 -1 -1 S #11003 In the Light Jungle~ This is a fairly thinly vegetated area, as jungles go. To the south, you can see some sort of clearing, while the jungle continues in the other directions. 11003 D0 The jungle continues. ~ 0 -1 11002 D1

The jungle continues. õ -1 11005 D2 There seems to be a clearing in that direction. ~ õ -1 11008 D3 The jungle continues. ~ ~ 0 -1 11004 S #11004 In the Light Jungle by the Mountain~ Here the jungle meets the mountainside, making it impossible to continue west or north. The jungle continues in the other directions. 11003 D0 The mountain blocks your way. ~ ~ -1 -1 -1 D1 The jungle continues. ~ 0 -1 11003 D2 The jungle continues. ~ ~

3-C

0 -1 11006 D3 The mountain blocks your way. ~ ~ -1 -1 -1 S #11005 In the light Jungle by the Mountain~ Here a steep mountain blocks your progress to the north and east. The jungle continues in the other directions. 11003 D0 The mountain blocks your way. ~ ~ -1 -1 -1 DI The mountain blocks your way. ~ ~ -1 -1 -1 D2 The jungle continues. ~ ~ 0 -1 11007 D3 The jungle continues. 0 -1 11003 S #11006 Beside the Mountain~

A large mountain rises from the ground here, blocking passage to the west. To the south and east, there seems to be a clearing, while the jungle thickens to the north. 11003 D0 The forest thickens. ~ ~ 0 -1 11004 DI There seems to be a clearing. 0 -1 11008 D2 There seems to be a clearing. 0 -1 11009 D3 The mountain blocks your way. ~ -1 -1 -1 S #11007 Beside a Mountain~ There is a large mountain to your east, preventing further travel in that direction. To the south and west, the jungle seems to grow thinner, but to the north it grows denser. 11003 D0 The forest deepens.

5-C

0 -1 11005 D1 The mountain blocks your way. ~ -1 -1 -1 D2 The jungle seems to lighten. ~ 0 -1 11010 D3 The jungle seems to lighten. ~ 0 -1 11008 S #11008 #11005 In a Clearing-The jungle opens onto a high grassy knoll here, revealing a small town just down to the south. From up here, you can see that the town is surrounded by a fairly large open area, most of which is planted in various crops. Small huts are scattered about amongst the fields, and you can see people out working. Far to the south, beyond the town, you can just barely see where the forest begins again. 11002 D0 The jungle thickens. 0 -1 11003 D1 The jungle thickens.

~ 0 -1 11007 D2 You see the entrance to the town. ~ 0 -1 12001 D3 The jungle thickens. 0 -1 11006 S #11009 A Clear Area-Here the jungle opens into a clear area next to a small town. To the south, the cleared area continues, opening onto what seem to be fields of grain. ñ110 0 2 D0 Jungle grows up in that direction. 0 -1 11006 D1 You see the entrance to a small town. 0 -1 12008 D2 You see a large open field. ~ ~ 0 -1 11012 D3

7-C

A steep mountainside blocks your way. ~ ~ -1 -1 -1 S #11010 In a Cleared Area~ This is an area of light grass next to the jungle. To the west, a small town lies, while to the south, the clearing continues, opening onto large fields. A rocky mountainside blocks the way to the east. 11002 D0 Jungle lies in that direction. 0 -1 11007 D1 The mountainside keeps you from continuing in that direction. ~ ~ -1 -1 -1 D2 You see a large area of open fields. ~~  $\tilde{0}$  -1 11011 D3 You see the entrance to a small town. 0 -1 12014 S #11011 In a field~

This area is a large field, which is planted in various crops. You can see small huts here and there, and not much else. Fences keep you from going any way but into the forest to the north. 110 0 2 D0 ~ 0 -1 11010 S #11012 In a field~ This area is a large field, which is planted in various crops. You can see small huts here and there, and not much else. Fences keep you from going any way but into the forest to the north. 110 0 2 D0 ~ 0 -1 11009 S #0 **#RESETS** S #\$ #AREA {5 30} Silverleaf The Town~ #MOBILES #12001 villager citizen person~ a villager~ A villager walks along. 9-C This is just your average citizen, doing his daily business in the town. 64 0 250 S 3 0 0 0d0+0 0d0+0 00 001 #12002 bookseller shopkeeper~ the bookseller-The bookseller is here, waiting to sell you something to read. The bookseller looks rather bored, because though the people in this small town read a surprising amount, there aren't nearly enough people to keep him busy. 2 0 250 S 20 0 0 0d0+0 0d0+0 00 001 #12003 grocer shopkeeper~ the grocer~ The grocer is here, waiting to sell you something. The grocer is obviously quite proud of her small business, which has quite a variety of foods, mostly grown by the people of the area.~ 2.0250 S 20 0 0 0d0+0 0d0+0 00 002 #12008 storekeeper~ the storekeeper~ The storekeeper is here, sitting casually. Though the storekeeper appears to be almost asleep, you get the

feeling his watchful gaze sees everything you do. 2 0 250 S 20 0 0 0d0+0 0d0+0 00 001 #12004 postmaster~ the postmaster-The postmaster sits here, waiting for you to mail something. The postmaster looks quite bored and quite grouchy. 2005 200000d0+00d0+0 00 001 #12005 bartender~ the bartender~ The bartender is here, joking with her customers. The bartender seems to enjoy her job, and chats happily with the patrons as she serves various drinks. 2 0 250 S 20 0 0 0d0+0 0d0+0 0 0 0 0 2 #12006 secretary~ the secretary~ The secretary is here, pounding her fingers on an odd machine.~ The secretary seems to be working very hard, as she is surrounded by stacks of papers.

11-C

2 0 0 S 20 0 0 0d0+0 0d0+0 õõ 002 #12007 scientist director man~ the scientist~ A man in a white coat sits here, looking at some charts. This man, according to a sign on his desk, is the director of this organization. The many framed certificates on the walls show that he is a very highly respected scientist. 2 0 300 S 20 0 0 0d0+0 0d0+0 0 0 0 0 1 #12009 driver~ the shuttle driver~ The shuttle driver is here, waiting to take you somewhere. The shuttle driver looks quite bored ... apparently people don't go places very often here. 2 0 250 S 15 0 0 0d0+0 0d0+0 00 001 #0 #MOBPROGS M 12009 shuttle.prg M 12007 scientist.prg S

**#OBJECTS** #12001 vial antidote~ a vial~ A small vial of something is lying here.~ 10 0 1116384 20 43 0 0 1 0 0 Е vial antidote~ This is a small vial of some liquid. It has a label which simply says "antidote". #12002 ticket~ a ticket~ A ticket is lying here.~ 8 0 1116384 0000 100 Ε ticket~ This is a ticket for the shuttle that runs between town and the forest. #12003 tortilla~ a tortilla~ A tortilla has been dropped here.~ 19 0 1116384 8000 100 E 13-C tortilla~ This is a very tasty-looking tortilla. #12004 newspaper~ a newspaper~ A newspaper has been carelessly left lying around here.~ 2 0 1|16384 0 0 0 0 100 E newspaper~ #12005 com~ an ear of com~ An ear of corn has been dropped here.~ 19 0 1116384 4000 100 E corn ear~ This is a delicious ear of fresh corn, just brought in from the field. #12006 orange~ an orange~ A juicy orange has been dropped here.~ 19 0 1|16384 4000 100 E orange~

This orange looks plump and juicy, fresh off the tree.~ #0 #ROOMS #ROOMS #12001 Edge of Town~ You are standing at the edge of a small town, where the dusty road through the town ends at the edge of the forest. There are various buildings around. 12001 D0 The dusty road disappears into the jungle. 0 -1 11008 D1 The road continues. ~ 0 -1 12002  $\tilde{D}2$ A small building blocks the way. ~ -1 -1 -1 D3 The jungle growth blocks your way. ~ -1 -1 -1 S #12002 On the Edge of Town~ You are on a dusty road, just inside a small town. To the north, the road ends at the jungle, while it continues through the town to

the south. To the east is a very large building which has no doors on this side. 120 0 1 D0 The road vanishes into the jungle. -1 -1 -1 DI The large building blocks your way. ~ -1 -1 -1 Ď2 The road continues into town. 0 -1 12003 D3 The road goes on a little, then vanishes into jungle. ~ 0 -1 12001 Ε This building~ This building is huge, extending several blocks down the street. Relative to the other buildings in town, it looks very well-built. You can see no doors or windows on this side. s #12003 On the Road~ To the west is a small building, and to the east the large building continues. The road goes on north and south.

120 0 1 D0 The road continues. 0 -1 12002 D1 The large building blocks your way. ~ -1 -1 -1 D2 The road continues. ~ 0 -1 12004 D3 You see a small building which is probably someone's house. ~ -1 -1 -1 E The small wilding is rather poorly constructed, but seems to have been decorated to look nice... you guess it's probably someone's house. ~ \$ #12004 The Small Road~ The small dusty road continues through the town. Another small building is to your west, and the large building lies to the east. 120 0 1 D0 The road continues.

17-C

õ -1 12003 D1 The large building blocks your way. ~ ~ -1 -1 -1 D2 The road continues. ~ ~ 0 -1 12005 D3 You see a small building, probably someone's house. ~ ~ -<u>1</u> -1 -1 Е building small~ The small building is rather poorly constructed, but seems to have been decorated to look nice ... you guess it's probably someone's house. S #12005 On the road-The road continues here, rather monotonously, with a small building on the west side and the large building to the east. 12001 D0 The road continues. ~ 0 -1 12004 D1

The large building blocks your way. ~ -1 -1 -1 Ď2 The road continues. 0 -1 12006 D3 You see a small building that's probably a house. ~ ~ -1 -1 -1 Ē small building~ The small building is rather poorly constructed, but seems to have been decorated to look nice ... you guess it's probably someone's house. S #12006 A Small Road~ This is a small north-south road running between a row of small buildings to the west and a large building to the east. 12001 D0 The road continues. 0 -1 12005 D1 The large building blocks your way. ~ -1 -1 -1

19-C

D2 The road intersects a larger road. ~ ~ 0 -1 12007 D3 You see a small building that's probably a house. ~ ~ -1 -1 -1 Ε Small building~ The small building is rather poorly constructed, but seems to have been decorated to look nice... you guess it's probably someone's house. S #12007 An Intersection~ Here the larger east-west road through town intersects a smaller north-south road. To the west, the road ends in jungle, while to the east there are quite a few buildings. 120 0 1 D0 A small dusty road leads between some smaller buildings and a large one. ~ 0 -1 12006 D1 The road goes on between some small buildings and a large one. 0 -1 12009 D2 The smaller road leads between some small buildings.

0 -1 12021 D3 The road leads off between some buildings into the jungle. ~ 0 -1 12008 S #12008 Inside a Town~ This is a dusty road through a small town. To the north and south are small buildings, while the road continues to the east. To the west lies the jungle. 120 0 1 D0 A building blocks your way. ~ -1 -1 -1 D1 The road continues. ~ ~ 0 -1 12007 D2 A building blocks your way. ~ -1 -1 -1 D3 The road tapers off into light jungle. ~ 0 -1 11009 S

21-C

#12009 Here, the large building and the north has a door, on which there is a sign. To the east and west, the road continues. 120 0 1 D0 You see the door to the large building. ~ 2 -1 12077 D1 The road continues. 0 -1 12010 D2 A building blocks your way. ~ -1 -1 -1 D3 The road continues. ~ ~ õ -1 12007 E sign~ The sign reads: Buscamos para personas que desean trabajar en la selva, porque necesitamos varios cosas que viven alli. Si desea ganar dinero y posiblemente obtener trabajo permanante, pregunta aqui. S #12010

The Main Street~ This is apparently the main road through town. To the north is the large building that seems to occupy a great portion of the town, while to the south is what appears to be a small grocery store. 120 0 1 D0 The large building blocks your way. ~ ~ -1 -1 -1 D1 The road continues. ~ 0 -1 12011 D2 You see a small grocery store. ~ ~ 0 -1 12056 D3 The road continues. 0 -1 12009 S #12011 On the Main Road~ This is another section of the road much like the others. To the north is the large building, while to the south is a small store that seems to sell books. 120 0 1 D0 The large building blocks your way.

#### 23-C

~ -1 -1 -1 Dl The road continues. ~ ~ 0 -1 12012 D2 You see a small building, with displays of various books and papers. ~ ~ 0 -1 12057 D3 The road continues. 0 -1 12010 S S #12012 The Main Road~ This seems to be the main road through town. To the north is a very large building, while to the south is a small store. 12001 D0 The large building blocks your way. ~ -1 -1 -1 D1 The road comes to an intersection. ~ 0 -1 12013 D2

You see what seems to be a small general store. ~ ~ 0 -1 12058 D3 The road continues. ~ 0 -1 12011 S #12013 An Intersection~ A small north-south road and a larger east-west road intersect here. The smaller road seems mostly to be lined with houses, while the other, apparently the main road of this tiny town, has several buildings that looks like stores. A large building to the northwest takes up several blocks in each direction. 120 0 1 DO The small road continues in that direction. ~ 0 -1 12015 D1 The larger road tapers off, and you can see the jungle outside the town. 0 -1 12014 D2 The small road continues in that direction. ~ ~ 0 -1 12027 D3 The larger road continues in that direction.

### 25-C

õ -1 12012 S #12014 At the Edge of Town~ A dusty road reaches an abrupt end here as it meets the jungle to the east. To the west it goes on into a small town. 120 0 1 D0 A building blocks your way. ~ -1 -1 -1 D1 Light jungle grows up in that direction. ~ 0 -1 11010 D2 A building blocks your way. ~ ~ -1 -1 -1 D3 There is an intersection in that direction. 0 -1 12013 S #12015 The Small Road~ This small road runs north-south between a row of what appear to be houses to the east and a large building to the west.

120 0 1 D0 The small road continues. ~ 0 -1 12016 D1 You see a small house. ~ ~ -1 -1 -1 D2 The small road intersects a larger one. ~ õ -1 12013 D3 The large building blocks your way. ~ -1 -1 -1 S #12016 Along the Small Road~ The small road continues here, with houses to the east and the large building to the east. The large building has a door here. 120 0 1 D0 The small road continues. ~ ~ 0 -1 12017 D1 You see a small house.

~

27-C

~ -1 -1 -1 D2 The small road continues. ~ 0 -1 12015 D3 The large building has a door here. ~ ~ -1 -1 -1 E door~ This is a large and very solid looking metal door. It has no windows in it and appears to be locked. s #12017 The small road~ The small road continues on a north-south course here, with the large building to the west and houses to the east. -120 0 1 D0 The road continues. ~ õ -1 12018 D1 You see a small house. ~ ~ -1 -1 -1 D2 The road continues.

õ -1 12016 D3 The large building blocks your way. ~ ~ ~ -1 -1 -1 S #12018 The small road continues here, with houses to the east and the large building to the west. To the north, you can see where the road widens a little before it ends. 120 0 1 D0 The road widens. ~ 0 -1 12019 Dl You see a small house. ~ -1 -1 -1 Ď2 The road continues. ~ 0 -1 12017 D3 The large building blocks your way. ~ ~ -1 -1 -1

## 29-C

S #12019 Bend in the Small Road~ Here the small road turns, going east and south from this corner. To the south, the road runs between a row of houses and a large building, while to the east it seems to disappear into the jungle. 120 0 1 D0 Your way is blocked by thick jungle growth. ~ ~ -1 -1 -1 Dl You see the end of the road. ~ ~ 0 -1 12020 D2 The road continues. ~ ~ ~ 0 -1 12018 D3 The large building blocks your way. ~ -1 -1 -1 S #12020 End of the Small Road~ Here a small road through the tiny town meets the jungle. To the north, a thick growth blocks your way, while the jungle seems light and passable to the east. The road continues to the west. 12001

D0 Thick foliage blocks your way. ---1 -1 -1 D1 You see light jungle. ~ -1 -1 -1 D2 A building blocks your way. ~ -1 -1 -1 D3 The small road continues. ~ 0 -1 12019 Š #12027 Between Intersections~ Here the road passes between two small buildings. To the north it intersects a larger road, while to the south you can see that it widens into a sort of open area. 120 0 1 D0 The road intersects another road. ~ õ -1 12013 D1 You see a small house.

~

31-C

~ -1 -1 -1 D2 The road opens into a sort of market square. ~ õ -1 12028 D3 D3 A building blocks your way. ~ -1 -1 -1 S #12028 Edge of the Square~ Here a small road runs along beside the town square area, which lies to the west. To the east is a small house, and the road continues north and south. ~ 120 0 1 D0 The road continues. ~ ~ 0 -1 12027 D1 You see a small house. ~ ~ -1 -1 -1 D2 The road continues. ~ 0 -1 12029 D3

You see the town square. ~ ~ 0 -1 12039 S #12029 Beside the square~ This is a section of a small road that runs along beside the town square. To the east is a small house, and the road continues to the north and south. 120 0 1 D0 The road continues. ~ 0 -1 12028 D1 You see a small house. ~ -1 -1 -1 D2 The road continues. 0 -1 12030 D3 You see the town square. ~ 0 -1 12039 S **#**12030 The shuttle stop~ This is where the shuttle to the forest stops.

### 33-C

12001 D0 The road continues. ~ ~ 0 -1 12029 D1 You see a small house. ~ ~ -1 -1 -1 D2 Light forest and fields lie in that direction. ~ ~ -1 -1 -1 D3 You see the town square. 0 -1 12039 S #12039 #12039 The Town Square~ This is a large open area where people congregate. There are vendors of various things, and lots of people just sitting around on benches talking. To the north is a building with a sign that says "Comida y cervesa", while to the west and east are roads leading into the town. A row of thick plants marks the southern edge of the square. 120 0 1 D0 You see what seems to be a restaurant/bar.

0 -1 12022 Dl You see a small road. ~ 0 -1 12029 D2 A thick row of trees and bushes blocks your way. ~ -1 -1 -1 D3 You see a small road. ~ 0 -1 12024 S #12024 By the square~ Here the road passes by the town square to the east. To the north and south, the road continues, while to the west is a small house. ~ 120 0 1 D0 The road continues. 0 -1 12023 D1 You see the town square. ~ ~ 0 -1 12039 D2

35-C

The road continues. ~ ~ 0 -1 12026 D3 You see a small house. ~ ~ -1 -1 -1 S #12026 At the end of the dusty road~ Here a dusty road leads into town. To the south is light jungle and fields. To the west is a small house, and to the east is a building with a sign that says, "Correos". 120 0 1 D0 The road continues. ~ ~ 0 -1 12024 D1 You see a small office of some sort. ~ 0 -1 12060 D2 Light jungle and fields lie in that direction. ~ -1 -1 -1 D3 You see a small house. ~

-1 -1 -1 S #12023 The small dusty road~ The road continues. There's a small house to the west, but not much else of note here. ñ20 0 1 D0 The road continues. ~ ~ 0 -1 12021 **D**1 A building blocks your way. ~ -1 -1 -1 D2 The road continues. ~ õ -1 12024 D3 You see a small house. ~ -1 -1 -1 S #12021 The Dusty Road~ This is a small road, running between some houses to the west and the backs of some other buildings to the east. To the north, it intersects a larger road. 12001

## 37-C

D0 You see an intersection. ~ ~ 0 -1 12007 Ď1 A building blocks your way. ~ -1 -1 -1 D2 The road continues. ~ õ -1 12023 D3 You see a small house. ~ ~ -1 -1 -1 S #12056 The Grocery~ This is a small grocery store, with just the basics. There's a sign on the counter. 120 8 0 D0 You see the door out. ~ õ -1 12010 E sign~ This is a sign. ~

S #12057 The News Stand~ This tiny shop sells various books and papers, some of which seem to have been here for quite a while. There's a sign hanging on the wall. 120 8 0 D0 You see the door out. ~ 0 -1 12011 E sign~ This is a sign. ~ S #12058 The General Store~ This small shop sells all sorts of things, some of them useful, some not. There's little rhyme or reason to the arrangement of things, and you get the feeling the shopkeeper probably doesn't even know what all is here. There's a sign pinned to the counter. 12080 D0 You see the door out. 0 -1 12012 Ε sign~ This is a sign. S 39-C #12022 The Restaurant~ This rather smoky place seems to be the primary gathering point for the townsfolk. Along one wall is a bar, while the rest is filled with tables. One corner has a very unusual table, on which people seem to be pushing little balls around with sticks. 120 8 0 D2 You see the door out. ~ õ -1 12039 Е table~ This unusual table seems to be used for playing some game, the object of which is apparently to knock small colored balls into holes on the edges of the table by hitting them with a small white ball, which is pushed with a stick. Many of the bar's customers seem very interested in this game. #12060 The Post Office~ This is a very tiny post office, with only a small counter and a box to drop letters in. 120 8 0 D3 You see the door out. 0 -1 12026 S #12077 The Main Office~

This is obviously the front office for a business of some sort. There's a large desk in the middle of the room covered with various papers, and a smaller table next to it with a strange machine on it. The walls are covered with posters, most of which seem to show various plants and animals. 120 8 0 D0 There's a door there. 2 -1 12073 D1 There's a door there. 2 -1 12078 D2 You see the door out to the street. 2 -1 12009 Ē machine~ This odd machine seems to have a lot of buttons, each of which has a letter printed on it. A piece of paper is sticking out of the top of the machine. S #12078 Director's Office~ This is obviously the office of someone important. A large desk fills much of the room, and it is covered with books and papers. The entire room is rather cluttered, as if the person who works here is too busy to straighten things up. You notice some amazingly realistic paintings of a man and two children on the walls. 41-C 120 8 0 D0 There's a door there. ~ 2 -1 12074 D1 There's a door there. 2 -1 12079 D3 There's a door there. 2 -1 12077 Ε paintings painting~ These paintings are amazing... they're perfectly lifelike, as if you were looking at the people right there in the room with you, and you can't even see the brushstrokes... S #12079 The Library~ This is the library for the people who work here, it seems. All the walls are covered with shelves which are overflowing with books. 120 8 0 D0 There's a door there. 2 -1 12075 D3

There's a door there.
<ul> <li>2-1 12078</li> <li>Forg frogs~</li> <li>The rain forests of Central and South America harbor a great number of species of frogs, most of which are small and brightly colored, and many of which are poisonous. In recent years, frog populations have declined, for reasons not yet fully understood. Probable causes</li> </ul>
include acid rain, destruction of habitats (particularly large-scale logging), and increased amounts of exposure to ultraviolet light due to thinning of the ozone layer. Some species have apparently vanished completely, and more are in danger. See also:
endangered species poisonous
For more detailed information, see: Martin, Glen. "Froggy Bottom", _Discover May 1990, p. 36-37.
Phillips, Kathryn. "Sun-Blasted Frogs", _Discover Jan 1995, p. 76.
E endangered species~ Many frog species are becoming scarce for various reasons. Here are descriptions of a few of those which are vanishing:
Bufo periglenes, the golden toad; males are a striking golden orange, while females are green and black with bright spots. The golden toad mau already be extinct; it has not been seen since 1989.
Hyla vasta, a medium-sized frog with green skin crossed by bands of darker green. H. vasta is native to the island of Haiti.
43-C
Cascade frog, a medium-sized frog which is a golden brown with dark brown stripes on its legs. Native to the northwestern US, it is believed that increased levels of ultraviolet radiation are causing damage to Cascade frog eggs.
For more detailed information, see: Hughes, David and Carol. "Teeming Life of a Rain Forest", _National Geographic Jan 1983, p.49-65.
Martin, Glen. "Froggy Bottom", _Discover May 1990, p. 36-37.
Phillips, Kathryn. "Sun-Blasted Frogs", _Discover Jan 1995, p. 76.
poison poisonous~ Some of the most common frogs of the tropical Americas are the dart poison frogs. More than fifty species are known, and more are being discovered. All of them shares certain characteristics, such as small size (the largest dart frogs are just over two inches long) and bright coloration. These frogs carry a toxin strong enough that one frog contains enough to kill several adult humans.
Some specific species of dart poison frogs:
Dendrobates pumilio, a bright red frog with blue feet and a black underside. Though the name dendrobates means "tree walker", this species tends to live on the ground.
Dendrobates imitator, a small frog whose body is yellowish with dark spots, while its legs are green with smaller dark spots.
Dendrobates granuliferus, a small frog often found on mushrooms, with a red head and back and green and black mottled legs and underside.

Dendrobates ?, a species not yet fully described, which is a medium green with lines of a dark color all over. Phyllobates bicolor, a light green frog with a dark underside and very large black eyes. P. bicolor is used by some native tribes as a source of medicines. For more information: Gorman, Peter. "Making Magic", \_Omni\_. July 1993, p.64. Kluger, Jeffrey. "Pretty Poison", \_Discover\_. July 1991, p.69-71. Ε plant plants~ The number of different species of plants in the tropical rain forest is staggering. Described here will be just a few of those which have been found to have medical value, in the hope that perhaps similar species will be found. Rauvolfia (Rauvolfia serpentina), a shrub with long leaves and small thin flowers, some of which are white and others a pinkinsh-red. Native to Southeast Asia, it is used as a tranquilizer and has been shown effective against high blood pressure. Foxglove (Digitalis purpurea), a tall herb which has many light purple bell-shaped flowers around the top of its stem. Native to Europe, it is widely used to treat heart failure. Cinchona, a South American tree with small, rounded pale pink blooms in clusters. It is the source of quinine, used to treat malaria. Rosy Periwinkle (Catharanthus roseus), a plant from Madagascar with large pale pink blossoms; it is the source of vincristine and vinblastine, used to treat Hodgkin's disease and acute lymphocytic leukemia. 45-C Chonorodendron, a South American vine with large, fairly round leaves, small white flowers, and red berries. It is the source of the muscle relaxant curare. For more information: Wallace, Joseph. "Rainforest Rx", \_Sierra\_. July/August 1991, p. 37-41. Ε ebola~ Ebola is a virus which seems to have originated somewhere in Africa. It is extremely contagious, though not airborne, and there is currently Zaire is the most virulent form, killing 90% of its victims. Reston. Zaire is the most virulent form, killing 90% of its victims. Reston is apparently not contractable by humans, but is highly contagious (perhaps even transmitted by air) in monkeys. It is not known what the normal host for the virus is; there is some suspicion that it could be bats or insects. Victims of ebola bleed profusely, and appear as if their tissues are actually dissolving; eventually they simply become little more than a bag of blood. The eventual collapse of the body provides an excellent means for the virus to spread, as bodily fluids are released everywhere. S #12080 Storage Room~ This room is apparently used for general storage ... it has everything from paintbrushes to glass bottles. 12080 D0 There's a door there. 2 -1 12076 Ε

bottle bottles~ There are bottles in all shapes and sizes here, from tiny tubes less than an inch in diameter to huge flasks that could hold several gallons of water. ~ S #12073 The Lounge-This is a lounge area for the employees here, it seems. Along with lots of comfy chairs, there are two strange boxes, one of which seems to be made of wood and has a piece of glass in the front and another which seems to be a large metal closet-shaped box. 120 8 0 Dl The room continues in that direction. 0 -1 12074 D2 There's a door in that direction. ~ 2 -1 12077 E box wood glass~ This box is about two feet on each side, with wooden sides and a glass front. Sticking out of the top are two metal rods, and a rope of some strange material connects it to a nearby wall. Ε metal closet~ This box is about 6 feet tall, three feet wide, and three feet deep. It has a handle to open the door. 47-C S #12074 Conference Area~ This is half of a very large room, which has a large table with chairs all around as its only feature, apparently for holding meetings around. The other end of the room, to the west, seems to be a lounge area. 120 8 0 Dl There's a door in that direction. ~ 2 -1 12075 D2 There's a door in that direction. 2 -1 12078 D3 The room continues in that direction. ~ 0 -1 12073 S #12075 Hallway~ This is an unremarkable hallway. Doors lead north, south, and west, while the hall continues to the east. 12080 D0 There is a very strong-looking door in that direction. ~ -1 -1 -1 D1

The hall continues. ~ ~ 0 -1 12076 D2 There is a door in that direction. ~ 2 -1 12079 D3 There is a door in that direction. ~ ~ ~ 2 -1 12074 S #12076 A Hallway~ This is a large hallway, with very blank white walls, floors, and ceiling. To the south is a door, while to the east is a large door that probably leads outside. The hall continues to the west. ~ 120 8 0 DI You see a very large, strong door. ~ ~ -1 -1 -1 D2 There's a door in that direction. ~ ~ 2 -1 12080 D3 The hall continues.

~

49-C

0 -1 12075 S #12065 In a Hallway~ This is a very boring hallway, with totally blank walls. There are doors to the east, south, and west, while the hall continues to the north. 120 8 0 D0 The hall continues. 0 -1 12064 Dl There's a door in that direction. ~ 2 -1 12068 D2 There's a door in that direction. ~ -1 -1 -1 D3 There's a door in that direction. 2 -1 12069 S ¥12064 In a hallway~ This is right in the middle of the boring hallway. To the east there's a door, and the hall continues north and south. 120 8 0

D0 The hall continues. 0 -1 12063 D2 The hall continues. ~ 0 -1 12065 D3 There's a door in that direction. 2 -1 12071 S #12063 A Boring Hallway~ This hall seems very austere, with plain white walls and floors. There are doors to the east and west, and a large door that probably leads outside to the north. The hall goes on to the south. 120 8 0 D0 You see a very large door. ~ ~ -1 -1 -1 Dl There's a door in that direction. 2 -1 12066 D2 The hall continues.

### 51-C

0 -1 12064 D3 There's a door in that direction. ~ ~ -1 -1 -1 S #12069 The Work Room~ Here is where all the stuff that keeps the building running is kept. There are various tools, many of which you don't even recognize. There's also a large machine here making a loud noise. 120 8 0 Dl There's a door in that direction. 2 -1 12065 E machine~ This is a large red box which makes a loud noise. Cords of some sort lead away from it, and signs on it warn, "Danger". S #12071 The Lab~ This is a very large room full of tables with odd machines sitting on them. The room is rather cluttered, and has lots of things just lying around, especially leaves from various plants. There are also a lot of jars of something in the shelves on the wall, and lots of glass containers of various shapes and sizes all around the room. 12080

Dł There's a door there.

2 -1 12071 Ē

machine machines~

There are various sorts of strange apparatus all around the room; the most interesting-looking are the metal things that are on most of the tables. They seem to be meant to look through, though you don't have any idea why.

# Ε

plant plants leaves~ Scattered all over the room are leaves from various plants. Some have labels telling what they are, and some have been cut into small pieces and placed between pieces of glass.

### Ε

jar jars container container~ The shelves and tables are full of jars and glass containers of various shapes and sizes, most of which have labels, though you don't understand much of what they say. Some have plants in them, some have liquids and powders, and some of the small tubes seem to have blood in them, for some reason.

## S

#12068 Animal Room~

This room has many cages of various sorts. One or two have colorful birds living in them, and a couple have some lizards. Several tanks of frogs and fish line the walls, and a large snake is curled up in a big tank in one corner.

120 8 0 D3

53-C

There's a door there.

2 -1 12065

E

bird birds~ These birds have very bright feathers and large hooked beaks. They make an odd squawking noise... in fact, you'd swear one of them said 'hello' when you walked in.

E

lizard lizards~

Several cages have lizards in them. Most are small and, though cute, rather nondescript, but one of them is noteworthy. It is a large green one, about three feet long counting the tail.

## Ε

frog frogs~ Among the tanks on the wall are three that are full of frogs. They seem to come in all colors, from an ordinary dark green to a vivid orange.

Е snake~

This is a very interesting snake. It's about 10 feet long, and maybe 4 inches in diameter for most of its length. It's beautifully patterned, in green and a sort of dark red color. You get the feeling that this snake could squish you without having to try very hard.

S #12066

Plant Room~

This room is full of plants. All around are pots with various things growing in them, from ground plants to small trees. The back wall is taken up by a cabinet with a glass front full of

leaves and other pieces of plants. 120 8 0 D3 There's a door there. 2 -1 12063 S #12062 The Airlock~ This room is the most clean place you've ever been. The entire room is made of metal, and the doors on each side are thick metal sealed with some strange substance so that air can't come in or out. As you came in, you walked through a space filled with some kind of liquid, and there's a similar space by the other door. On both doors are many signs. 120 8 0 DI A large metal door covered with signs lies in that direction. -1 -1 -1 D3 A large metal door covered with signs lies in that direction. 2 -1 12061 E liquid space~ There are troughs on the floor immediately in front of each door, making it impossible to enter or exit the room without walking through them. They're filled with an odd-looking green liquid. Ε sign signs door doors~ 55-C On the west door, there's a strange symbol, and signs that say, "WARNING: BIOHAZARD LEVEL 4" "DO NOT ENTER WITHOUT FULL PROTECTION" On the east door, signs read, "DO NOT EXIT WITHOUT CHEM SHOWER" "DO NOT EXIT IN SUIT" S #12061 Biohazard Lab~ This room has nothing in it but a large table and some strange machinery, part of which appears to be little more than a large pane of glass. You get the feeling that this is a bad place to be. 120 8 0 D1 There is a large metal door in that direction. 2 -1 12062 ŝ **#**0 #RESETS M 0 12001 10 12004 villager on street M 0 12001 10 12010 villager on main street M 0 12001 10 12013 villager at intersection M 0 12001 10 12039 villager in town square M 0 12002 1 12057 bookseller in shop G 0 12004 1 newspaper for bookseller M 0 12008 1 12058 storekeeper in general store G 0 6013 1 water barrel for gen store G 0 3031 1 lantern Ğ0 3032 1 bag M 0 12005 1 12022 bartender in restaurant G 0 3000 1 G 0 3001 1 barrel of beer bottle of beer

57-C

#MOBILES #20001 crocodile croc~ a large crocodile~ A large crocodile with a big hungry grin is here. This is a crocodile, not an alligator, as you can tell by its pointy snout. You're glad it's quite obvious, as you think it would be unhealthy to get closer. 2|32 0 0 S 15 6 20 1d10+20 2d8+10 0 7500 681 #20002 snake boa~ a large snake~ A large snake is hugging a tree here.  $\tilde{r}$  This is a large snake which is a beautiful shade of red with variously colored markings. It looks like it could squeeze you into little bits if it wanted to, but it looks like it probably won't try unless you bother it. 200S 12 0 0 0d0+0 0d0+0 00 001 #20004 snake~ a very large snake~ An extremely large snake is slithering along here. This snake has dark brown and gray marks all over and a yellow throat. It looks extremely mean and nasty, not to mention hungry.

~ 34 0 0 S 20 0 0 0d0+0 0d0+0 0 0 001 #20003 mosquito bug~ a mosquito~ A mosquito buzzes around. This is a pretty ordinary-looking mosquito. 34 0 0 S 2 0 0 0d0+0 0d0+0 0 0 001 #20005 invisible amphibian~ the invisible amphibian~ The invisible amphibian is here, facilitating the game action. This cute little invisible amphibian is here because of the fact that mobs can't be picked up, but objects can't have mobprogs. He sits here to give the illusion that the frog works like it's supposed to. 2 2 500 S 30 0 0 0d0+0 0d0+0 00 001 #20010 driver~ the shuttle driver~ The shuttle driver is here, waiting to take you somewhere. The shuttle driver looks quite bored... apparently people 59-C don't go places very often here. 2 0 250 S 15 0 0 0d0+0 0d0+0 00 001 #0 #MOBPROGS M 20005 frog.prg M 20003 malaria.prg M 20010 shuttle.prg M 20001 testgreet.prg S #MOBPROGS **#OBJECTS** #20001 plant vine~ a plant~ A very pretty vine is growing here.~ 19 0 1116384 2000 100 Ε plant vine flower berry~ This vine has large round leaves and small white flowers, as well as tiny red berries. #20002 plant shrub~ a shrub~ A small shrub is growing here.~ 19 0 1116384 2000

100 Ē plant shrub~ This shrub has long, broad leaves and small thin flowers, each of which is partly white and partly pink. #20003 plant~ a plant~ A large-leafed plant is growing here.~ 19 0 1|16384 2 0 0 0 1 0 0 Е plant-This plant is about a foot high and has very large leaves. You notice that while much of the other foliage in the area has at least a few bug-eaten holes, this one seems untouched. #20004 plant flower~ a plant~ A flowering plant is growing here.~ 19 0 1116384 2000 100 E plant flower~ This plant has very large deep pink flowers, and is quite pretty. #20005 plant~ a plant~ A plant with broad, shiny leaves is growing here.~ 61-C 26 0 1116384 100 43 0 0 100 Ε plant~ This plant is a deep green and has very large leaves. You notice that it seems to be a popular food among the monkeys. #20006 bark bit~ a bit of bark~ A small bit of bark is lying here, apparently having fallen off a tree.~ 19 0 1116384 2000 100 #20010 frog~ a frog~ A brightly-colored frog sits here.~ 8 0 1116384 0 0 0 0 1 0 0 E frog~ This frog is an amazingly bright golden orange color. If you didn't know better, you'd think it was painted. #20011 frog~ a frog~ A brightly-colored frog sits here.~ 8 0 1116384

0000 100 E frog~ This frog is a bright red on top, but has bluish feet. It's small and REALLY cute. #20007 frog~ a frog~ A brightly-colored frog sits here.~ 8 0 1116384 0 0 0 0 1 0 0 Е frog~ This frog is a yellowish color, and has dark spots all over. #20008 #20000 frog~ a frog~ A brightly-colored frog sits here.~ 8 0 1116384 0000 Ε frog~ This frog is a medium green, and has strangely-shaped bands of a darker color all over. #20009 frog~ a frog~ A brightly-colored frog sits here.~ 63-C 8 0 1116384 0 0 0 0 100 E

frog~ This light green frog's most notable feature is its huge black eyes. #0

#ROOMS

#20001 Where the river meets the mountains~ The river flows into a cave in the mountainside here, disappearing from view. The forest continues to the south. ~ 200 0 3 D0 The mountains block your way. ~ ~ -1 -1 -1 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 ~ õ -1 20013 D3 The river runs into the mountain. ~ ~ -1 -1 -1

S #20003 Beside the mountains~ You are at the base of a mountain slope too steep to climb. To the east the forest continues, and to the south you notice some unusual trees. 200 0 3 D0 The mountains block your way. ~ -1 -1 -1 D1 The forest continues. ~ ~ 0 -1 20004 D2 You see an area with some unusual trees. õ -1 20015 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20004 A narrow path by the mountains~ You can just barely make your way here between some thick growth to the south and the mountains to the north. 200 0 3 D0 The mountains block your way.

65-C

~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20005 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 The forest continues. ~ 0 -1 20003 S #20005 By the mountains~ This is a rather ordinary part of the forest next to the mountains. To the south, the forest grows thicker, but is still passable. 200 0 3 D0 The mountains block your way. ~ ~ -1 -1 -1 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2

~

The forest continues. ~ 0 -1 20016 D3 The forest continues. ~ 0 -1 20004 S #20006 The north side of the forest~ This part of the forest is much like any other. The mountains lie to the north, and the forest thickens to the south. 200 0 3 D0 The mountains block your way. -1 -1 -1 D1 The forest continues. ~ ~ 0 -1 20007 D2 The forest continues. ~ 0 -1 20018 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1

67-C

S #20007 Near the mountains~ This is a place in the forest with a rather thick carpet of fallen leaves. To the north lie the mountains, while to the south is a small pond. 200 0 3 D0 The mountains block your way. ~ ~ -1 -1 -1 D1 The forest continues. ~ ~ 0 -1 20008 D2 You see a small pond, which you could wade in if you wanted. ~ 0 -1 20019 D3 The forest continues. ~ ~ 0 -1 20006 S #20008 North of a pond~ This part of the forest is rather unexciting, except for the small pond that lies to the south. 200 0 3 D0

The mountains block your way. ~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20009 D2 You see a small pond, which you could wade in if you wanted. ~ õ -1 20020 D3 The forest continues. ~ 0 -1 20007 S #20009 A dead end~ The brush grows thick all around here. The only way you can go is to the west. 200 O 3 D0 The mountains block your way. ~ -1 -1 -1 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1

69-C

D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 The forest continues. ~ ~ 0 -1 20008 S #20011 Next to the mountains~ This is a very ordinary part of the forest. It continues to the east and south. 200 0 3 D0 The mountains block your way. ~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20012 D2 The forest continues. ~ ~ 0 -1 20022 D3 The brush is too thick for you to go that way. ~

-1 -1 -1 S #20012 Beside a fence~ There is a high fence here, topped with barbed wire. It blocks your way to the east, and the mountains lie to the north. 200 0 3 D0 The mountains block your way. ~ ~ -1 -1 -1 D1 The fence keeps you from going any farther. ~ ~ -1 -1 -1 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 The forest continues. 0 -1 20011 S #20013 Along the river~ This is a lush part of the forest, full of plants. The river flows along to your west, and the forest continues in the other directions. ~ 200 0 3 D0

71-C

õ -1 20001 Dl ~ ~ 0 -1 20014 D2 ~ ~ 0 -1 20023 D3 The rushing river blocks your way. ~ -1 -1 -1 S #20014 A narrow path~ This is a narrow path between some areas of thick plants that block your way to the north and south. From the west, you can hear the river, and you see some unusual trees to the east. 200 0 3 D1 The forest continues. õ -1 20015 D3 The forest continues. 0 -1 20013 S #20015

The light forest~ This is a fairly open area of the forest, where more light than in most parts makes it through the canopy above down the the forest floor. Some unusual trees grow here. ~ 200 0 3 D0 The forest continues. ~ õ -1 20003 D1 Thick brush blocks your way. ~ ~ -1 -1 -1 D2 The forest continues. ~ õ -1 20025 D3 The forest continues. ~ õ -1 20014 S #20016 A corner in the forest~ The thick plants all around make this a sort of corner in the forest. You can continue north or east. ~ 200 0 3 D0 ~

73-C

0 -1 20005 D1 0 -1 20017 D2 Thick brush blocks your way. ~ ~ -1 -1 -1 D3 Thick brush blocks your way. ~ -1 -1 -1 s #20017 Thick forest~ This is a rather dense area of the forest, with lots of plants growing on the ground. You can continue every direction but north, where the plants become to thick to travel. ~ 200 0 3 D1 ~ 0 -1 20018 D2 ~ õ -1 20027 D3 ~ ~ õ -1 20016 S

#20018 By a pond-This is a pleasant area of the forest next to a small pond to the east. The forest is too thick to pass through to the south, but you can continue north toward the mountains or east into some thicker forest. 200 0 3 D0 The forest continues. 0 -1 20006 DI You could wade in the small pond if you liked. ~ 0 -1 20019 D3 ~ ~ 0 -1 20017 S #20019 In the pond~ You're wading in a small, shallow pond, full of various water plants and animals. The pond continues to the east and south, or you can return to dry (well, as dry as it gets in a rain forest) land to the north and west. 200 0 3 D0 You can exit the pond in that direction. ~ ~ 0 -1 20007 D1

75-C

The pond continues. -0 -1 20020 D2 The pond continues. ~ 0 -1 20028 D3 You can exit the pond in that direction. 0 -1 20018 S #20020 The pond~ This is the northeast corner of the pond. It continues to the west and south, or you can exit to the north. 200 0 3 D0 You can exit the pond in that direction. ~ 0 -1 20008 Dl Thick plants on the edge of the pond block your way. ~ ~ -1 -1 -1 D2 The pond continues. õ -1 20029

D3 The pond continues. ~ 0 -1 20019 S #20021 #20021 In the thick woods~ This is a thickly grown-over area which you have difficulty walking through. You can go east or south, but the other directions are too thick with plants to continue. 200 0 3 D1 ~ 0 -1 20022 D2 ~ 0 -1 20031 S #20022 Yet another forest corner  $\sim$ The thick forest growth makes a corner out of this area, blocking your progress east and south. You can continue in the thick forest to the west or move into a lighter area near the mountains to the north. 200 0 3 D0 The forest continues. ~ õ -1 20011 D1

77-C

The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 The forest continues. 0 -1 20021 Š #20023 The shuttle stop~ This is where the shuttle from the forest to the town stops. 200 0 3 D0 The forest continues. ~ 0 -1 20013 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 You see the forest science station. ~ 0 -1 20035 D3

The river blocks your way. ~ -1 -1 -1 S #20025 Thicker forest~ The forest is quite grown up in this area, so much so to the west that you cannot walk in that direction. To the north, the forest thins out a bit, and you can see some unusual trees. 200 0 3 D0 The forest continues. 0 -1 20015 **D**1 The forest continues. ~ 0 -1 20026 D2 The forest continues. ~ 0 -1 20037 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20026 Above a marsh~ This is an area of thick forest hemmed in by dense growth to the north

#### 79-C

and east and a low marsh to the south, which you could climb down into. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D1 The brush is too thick for you to go that way. ~ ~ -<u>1</u> -1 -1 D2 You see the marsh, but you'll have to go down to get there. ~ ~ -1 -1 -1 D3 The forest continues. ~ 0 -1 20025 S #20027 A north-south path~ This is a narrow path between dense areas of forest. You can continue into thick forest to the north or into an area with unusual trees to the south. 200 0 3 D0 The forest continues. ~ 0 -1 20017

D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 The forest continues. -0 -1 20040 D3 The brush is too thick for you to go that way. ~-1 -1 -1 S #20028 Southwest corner of the pond-From here you can continue your wading to the north or east or exit the pond to the south. 200 0 3 D0 The pond continues. ~ ~ 0 -1 20019 D1 The pond continues. 0 -1 20029 D2 The forest continues. ~ ~

81-C

0 -1 20042 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 s #20029 Southeast corner of the pond~ This part of the pond has more water plants than the others, as well as clearer banks. You can splash on to the north or west or let your feet dry to the east or south. ~ 200 0 3 D0 The pond continues. ~ 0 -1 20020 ĎI The forest continues. ~ 0 -1 20030 D2 The forest continues. ~ ~ 0 -1 20043 D3 The pond continues. ~ 0 -1 20028 S #20030

East of a pond~ To your west lies a small pond in which you could wade. You can only go east on dry land, as the space you are in is little more than a hole in the bushes that line the bank of the pond. 200 0 3 DI The forest continues. ~ ~ 0 -1 20031 D3 You can enter the pond in that direction. 0 -1 20029 S #20031 Between the bushes~ This area forms a sort of pathway between overgrown areas. You can't even walk to the east, but there is a gap big enough to step through to the west. 200 0 3 D0 The forest continues. 0 -1 20021 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The forest continues.

83-C

~ ~ 0 -1 20044 D3 The forest continues. 0 -1 20030 S #20033 By a hole in the fence~ Apparently the owners of this fence haven't noticed that it has If you wanted to, you could squeeze through the hole and go east. 200 0 3 D0 The brush is too thick for you to go that way. ~ -1 -1 -1 D1 You can go through the hole in the fence. ~ 0 -1 18008 D2 The forest continues. ~ 0 -1 20045 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1

S #20036 Path into the forest~ This path leads into the forest from the science station to the west. Dense growth blocks the way north and south. 200 0 3 DI The forest continues. ~ 0 -1 20037 D3 You see the science station. ~ õ -1 20035 S #20037 West of a marsh~ You stand just west of a low marsh. From here you can't really tell how deep it is, and the bank looks steep and slippery, so it would probably be better to continue your journey to the north, south, or east. 200 0 3 D0 The forest continues. ~ õ -1 20025 Dl You can't make it down the slippery bank. ~ ~ -1 -1 -1 D2 85-C The forest continues. õ -1 20047 D3 The forest continues. ~ ~ 0 -1 20036 S #20038 Down in a marsh-You stand waist-deep in murky water, and the buzzing of insects is so loud you can barely hear yourself think. The banks are too slippery to climb up any way but to the north, but you could squish your way south in the marsh. 200 0 3 D0 You'll have to climb up. ~ ~ -1\_-1 -1 Ď2 The marsh continues. ~ 0 -1 20048 D4 You can climb out of this muck! ~ 0 -1 20026 S #20039 Beside a marsh~

This part of the forest is rather ordinary. Down to the west is a deep marsh, but the bank looks too slippery to try going down there. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ ~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20040 D2 The forest continues. ~ ~ 0 -1 20049 D3 The bank is too slippery for you to go that way. ~ ~ -1 -1 -1 S #20040 A light area~ This is a sort of T-crossing of forest paths, and you can actually see a bit of the sky through the normally almost solid tree canopy above. 200 0 3 D0 The forest continues.

0 -1 20027

87-C

Dl The forest continues. ~ \_ 0 -1 20041 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 The forest continues. 0 -1 20039 S #20041 AT in the forest-This is another one of those places where the aimless "paths" of the forest, which are really just places where it's not impossible to walk, meet. You can continue to the east, west, or south. 200 0 3 D0 The brush is too thick for you to go that way. ~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20042 D2 The forest continues.

0 -1 20051 D3 The forest continues. ~ ~ 0 -1 20040 S #20042 South of a pond~ You are standing on the south bank of a rather pretty small pond, which you could go for a wade in if you wanted to. If you'd rather stay dry, you can continue to the east and west. ~ 200 0 3 D0 You can enter the pond. ~ 0 -1 20028 D1 The forest continues. ~ 0-120043 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 The forest continues. ~ 0 -1 20041 S 89-C #20043 On the bank of a pond~ Just north of here is a lovely pond you might like to splash around in. If you'd rather not, you can follow a path to the west or south. ~ 200 0 3 D0 You can enter the pond. ~ 0 -1 20029 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 The forest continues. ~ ~ 0 -1 20052 D3 The forest continues. 0 -1 20042 S #20044 An open area~ As this forest goes, this small, fairly open area is a huge field. The general dense growth is absent from view to the south and east. 200 0 3 D0 The forest continues.

0 -1 20031 D1 You see an open area with some unusual trees. ~ 0 -1 20002 D2 The open area continues. ~ 0 -1 20054 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20002 Northeast corner of the open area~ This is the most open part of the open space, with the trees above letting in a fair amount of light. You can continue west or south, or among some brush toward a fence to the east. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 DI The forest continues. ~ ~ 0 -1 20045 D2 91-C The open area continues. ~ ~ 0 -1 20055 D3 The open area continues. ~ õ -1 20044 S #20045 West of a fence~ To your east is a high fence made of strong wire. There's no way you could get over or around it, especially since the top strand is made of barbed wire. You can go into a sort of open area to the west, or walk along the fence to the north. ~ 200 0 3 D0 The forest continues. ~ ~ 0 -1 20033 D1 The fence blocks your way. ~ ~ -1 -1 -1 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 The forest continues.

0 -1 20002 S #20047 Beside a marsh~ You are standing just west of a deep murky marsh. The bank looks dangerously slippery, so you'll probably want to go north or soutj instead. 200 0 3 D0 The forest continues. ~ 0 -1 20037 DI The bank of the marsh is too slippery for you to climb down. ~ ~ -1\_-1 -1 D2 The forest continues. ~ 0 -1 20059 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20048 In a deep marsh~ This is not the most comfortable place you've ever been. The water comes up to about the middle of your chest, and bugs swarm all around. You can climb up and get out of here to the south, or slosh your way on to

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the north. 200 0 3 D0 The marsh continues. 0 -1 20038 D1 The bank is too slippery for you to climb. ~ -1 -1 -1 D3 The bank is too slippery for you to climb. ~ ~ -1 -1 -1 D4 You can climb out of this muck! 0 -1 20060 S #20049 Near a marsh~ To your west lies a really deep dark marsh, which even if you wanted to go into you couldn't, since the bank is much too steep and slippery to go down without sliding headfirst into what looks to be fairly deep water. You can walk along the edge of the marsh to the north or into a less mucky part of the forest to the south. 200 0 3 D0 The forest continues.

 $\widetilde{0}$  -1 20039 Dl The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The forest continues. ~ ~ 0 -1 20061 D3 The bank is too slippery for you to go that way. ~ ~ -1 -1 -1 S #20051 North of an open area~ You are walking along one of the many paths among the thick forest plants, this one going from the north towards a rather large open are to the south. 200 0 3 D0 The forest continues. ~ õ -1 20041 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 You see a large open area.

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~ 0 -1 20063 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20052 Path to a pond~ This is a small north-south path that leads from an open area to the south towards a small pond to the north. 200 0 3 D0 The forest continues. ~ ~  $\widetilde{0}$  -1 20043 Dl The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The forest continues. ~ õ -1 20065 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S

#20054 This area seems almost deliberately created, it's so perfectly square. The bushes make a neat corner to the west and south, while the open area continues to the north and east. 200 0 3 D0 The forest continues. \_ 0 -1 20044 D1 The forest continues. ~ 0 -1 20055 Ŝ #20055 Southeast corner of an open area~ This is a rather ordinary bit of forest, but you see some unusual trees to the north and south. 200 0 3 D0 The forest continues. ~ ~ ~ 0 -1 20002 D1 The brush is too thick for you to go that way. ~ -1<sub>-</sub>-1 -1 Ď2 The forest continues.

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~ õ -1 20068 D3 The forest continues. ~ ~ 0 -1 20054 S #20057 At a bend in the river~ You are standing in a bend of the river, just south of the science station. The river, which turns from the east to the north here, is moving too fast for you to cross it. 200 0 3 D0 You see the science station. ~ ~ 0 -1 20046 D1 The forest continues. ~ ~ 0 -1 20058 D2 The river blocks your way. ~ ~ -1<sub>-</sub>-1 -1 D3 The river blocks your way. ~ ~ -1 -1 -1

S #20058 Near the river~ This area sort of corners on the river to the southwest. The ground is a bit more leaf-covered here than in most places, not that all the ground in a rain forest isn't thoroughly covered with leaves and more. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 DĪ The forest continues. 0 -1 20059 D2 The forest continues. ~ ~ 0 -1 20070 D3 The forest continues. ~ 0 -1 20057 S #20059 At the southern end of a path~ You stand at the southern end of a long north-south path where it crosses another one. 200 0 3 D0

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The forest continues. ~ ~ 0 -1 20047 Dl The forest continues. ~ õ -1 20060 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 The forest continues. ~ 0 -1 20058 S 5 #20060 On a muddy bank~ This slippery bank is the southern edge of a deep marsh, which you could climb down into. If you don't feel like getting all muddy, the forest continues in all other directions. 200 0 3 D0 You'll have to go down to enter the marsh. ~ ~ -1 -1 -1 Dl ~ 0 -1 20061

D2 ~ ~ 0 -1 20071 D3 ~ ~ 0 -1 20059 D5 ~ ~ 0 -1 20048 S #20061 A squishy place~ This part of the forest seems rather muckier than most, perhaps because of the marsh to the northwest. The path through the forest continues every direction but south. 200 0 3 D0 ~ ~ 0 -1 20049 D1 You see a very odd-looking bit of ground. ~ 0 -1 20062 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3

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0 -1 20060 S #20062 The squuush~ Yuck! This place is really darned nasty! ~ 200 0 3 D1 ~ ~ õ -1 20063 D2 ~ 0 -1 20072 D3 ~ õ -1 20061 S #20063 A squnchy place~ The ground is muddler here than in most parts of the forest, though you're not sure why. The open area of the forest continues in every direction. ~ 200 0 3 D0 ~ ~ 0 -1 20051 D1 ~ 0 -1 20064

D2 ~ 0 -1 20073 D3 You see a strange-looking area. 0 -1 20062 S #20064 The northern part of an open area~ This area has thick undergrowth and a lot of recently-fallen leaves. The open area continues to the south, where you see some unusual trees, and to the west, and a path leads off to the east. 200 0 3 D0 The brush is too thick for you to go that way. ~ -1 -1 -1 D1 You notice that the leaves get even thicker in that direction. ~ 0 -1 20065 D2 The forest continues. ~ 0 -1 20074 D3 The forest continues. ~ ~ 103-C 0 -1 20063 S #20065 A leafy place~ The leaves that cover the ground everywhere are particularly thick here at this sort of path junction. You can continue any direction but south. 200 0 3 D0 ~ 0 -1 20052 D1 ~ 0 -1 20066 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 ~

~

-1 -1 -1 D1 The brush is too thick for you to go that way. ~ ~ ~ -1 -1 -1 D2 The forest continues. ~ ~ 0 -1 20075 D3 You notice that the leaves get even thicker in that direction. ~ õ -1 20065 S #20068 A light area south of an open place~ This is another one of those places where the forest canopy thins a bit, letting in more light. You can walk into an open space to the north or towards the mountains to the east. 200 0 3 D0 The forest continues. ~ ~ 0 -1 20055 D1 The forest continues. ~ ~ 0 -1 20069 D2 The brush is too thick for you to continue.

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~ -1 -1 -1 D3 The brush is too thick for you to continue. ~ ~ -1 -1 -1 S #20069 West of the mountains~ Here the forest thins a bit as it reaches a steep, rocky mountainside. You can go back into the forest to the west or along the edge of the mountain to the south. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D1 The mountains block your way. ~ ~ -1 -1 -1 D2 The forest continues. ~ 0 -1 20078 D3 The forest continues. ~ 0 -1 20068

S #20070 Another bend in the river~ You are standing at a bend in the river, which turns from the north to the east here. You can continue into the forest to the north. 200 0 3 D0 The forest continues. ~ 0 -1 20058 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 The river is running too fast for you to enter it here. ~ -1 -1 -1 D3 The river is running too fast for you to enter it here. ~ -1 -1 -1 S #20071 On a north-south path~ This path leads between some areas of thick growth. You can continue towards a muddy area to the north or along the river to the south. 200 0 3 D0 The forest continues.

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~ 0 -1 20060 D1 The brush is too thick for you to continue. ~ ~ -1 -1 -1 D2 The forest continues. ~ 0 -1 20079 D3 The brush is too thick for you to continue. -1 -1 -1 S #20072 A squnchy place~ The ground here is muddy and squishy, but you're not sure why, as you are a fair distance from the river. The sort of open space you are in continues to the north and east, and a path leads south towards the river. 200 0 3 D0 The ground looks very odd in that direction. 0 -1 20062 D1 The forest continues. ~

0 -1 20073 D2 The forest continues. ~ 0 -1 20081 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20073 Middle of an open space~ This large open space continues every direction but south. 200 0 3 D0 ~ ~ 0 -1 20063 D1 ~ ~ 0 -1 20074 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 ~ õ -1 20072 S #20074 109-C A brighter area~ More light reaches the ground here than in most of the forest, due to the trees high above you being a little less thick. 200 0 3 D0 The forest continues. ~ ~ 0 -1 20064 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 The forest continues. ~ 0 -1 20082 D3 The forest continues. ~ ~ 0 -1 20073 S #20075 On a long path~ This is a long north-south path. You can follow it north into the middle of the forest or south toward the mountains. 200 0 3 D0 ~ 0 -1 20066

Dl The brush is too thick for you to go that way. ~ -1 -1 -1 D2 ~ ~ 0 -1 20084 D3 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 S #20078 A little space by the mountains~ This is just a little dead-end path next to the mountains. The only way you can go is north. 200 0 3 D0 The forest continues. ~ ~ 0 -1 20069 S #20079 East of the river~ This is a pleasant place by the river, with only light growth on the bank. You can go deeper into the forest to the north or east, or follow along beside the river to the south. ~ 200 0 3 D0 ~

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0 -1 20071 D1 ~ ~ 0 -1 20080 D2 ~ 0 -1 20087 S #20080 A dark place~ The canopy of trees high above your head is particularly thick here, making it rather dark. Mushrooms grow all over, undoubtedly because of the lack of light. You can return to better-lit areas to the east or west. 200 0 3 D0 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D1 The forest continues. ~ 0 -1 20081 D2 The brush is too thick for you to go that way. ~ -1 -1 -1 D3 The forest continues.

0 -1 20079 S #20081 On a path to the river~ This path leads from a muddy place in the middle of the forest to the north down to the river in the south. You can also go into a dark part of the forest to the west. 200 0 3 D0 The forest continues. ~ 0 -1 20072 Ď1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 The forest continues. 0 -1 20089 D3 A dark area lies in that direction. 0 -1 20080 S #20082 A path to the mountains~ This long north-south path leads between two rows of thick vegetation. You can go out into a more open area to the north, or continue down

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the path to the south. 200 0 3 D0 ~ ~ 0 -1 20074 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The forest continues. ~ ~ 0 -1 20091 D3 The brush is too thick for you to go that way. ~ -1 -1 -1 S #20084 A winding path~ This path winds among the bushes towards the mountains. Here it turns from north to east. 200 0 3 D0 The forest continues. ~ ~ 0 -1 20075 D1 The forest continues.

~ 0 -1 20085 D2 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D3 The brush is too thick for you to go that way. ~ -1 -1 -1 S #20085 Another bend in the path~ The path turns again, this time from west to south. The fallen leaves here are particularly thick, probably because this area is almost completely surrounded by thick bushes. 200 0 3 D0 The brush is too thick for you to go that way. -1 -1 -1 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 Ď2 The forest continues. ~ õ -1 20093 115-C D3 The forest continues. ~ ~

0 -1 20084 S #20087 A sandy riverbank~ The river flows more calmly here than most places, and the shore is a gentle slope, so you could actually go swim in the river. 200 0 3 D0 The forest continues. ~ ~ 0 -1 20079 D1 The brush is too thick for you to go that way. ~ -1 -1 -1 D2 You can enter the river in that direction. 0 -1 19027 D3 The riverbank is too steep for you to go that way. -1 -1 -1 S #20089 At the space among the bushes that grow alongside the river, you can see

across to the other side, where there are several huts and the some people wandering around. The rocky bank, however, makes it impossible for you to cross over. 200 0 3 D0 The forest continues. 0 -1 20081 D1 The brush is too thick for you to go that way. ~ ~ -1 -1 -1 D2 The river blocks your way. ~ ~ -1 -1 -1 D3 The brush is too thick for you to go that way. ~ -1 -1 -1 S #20091 A narrow path to the mountains~ This path is quite narrow, barely wide enough for you to get through. It widens to the north and continues towards the mountains to the south. 200 0 3 D0 ~ ~ 117-C 0 -1 20082 D2 ~ ~ 0 -1 20095 Ŝ #20093 A mountain corner~ The steep ridges that corne down off the mountain into the valley hem you in here, leaving no way to go but north. 200 0 3 D0 ~ 0 -1 20085 S #20095 The path ends here. Bushes on all sides leave you no way to go but back to the north. 200 0 3 D0 ~ ~ 0 -1 20091 D2 You notice a small hole in the bushes which you could squeeze though. hole space~ 2 -1 4001 S #20035 The station meeting ground~ This area is the general meeting area for the forest science station.

A fire is burning in the middle of the area, and there are benches and logs around for sitting on. 200 0 3 D0 The station continues. ~ 0 -1 20023 D1 You can enter the forest in that direction. 0 -1 20036 D2 The station continues. ~ 0 -1 20046 D3 The station continues. 0 -1 20034 S #20034 The camp~ This is the area where people working in the forest spend the night. It is well-protected, as it is surrounded on three sides by the river. 200 0 3 Dl The station continues. 0 -1 20035

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M 0 20003 100 20033 M 0 20003 100 20033 M 0 20003 100 20033 M 0 20003 100 20044 M 0 20003 100 20045 M 0 20003 100 20025 M 0 20002 3 20058 M 0 20004 1 20065 M 0 20005 5 20080	s mosquitos in pond	
		121-C
M 0 20005 5 20029 M 0 20005 5 20017 M 0 20005 5 20037 * O 20001 3 20031 O 20002 3 20022 O 20003 3 20049 O 20003 3 20049 O 20006 20 20043 O 20006 20 20043 O 20006 20 20043 O 20006 20 20044 O 20006 20 20074 O 20006 20 20074 O 20006 20 20074 O 20006 1 20080 O 20006 1 20080 O 0 20007 1 20029 O 0 20006 1 20080 O 0 20007 1 20029 O 0 20006 1 20037 S #SHOPS O #S #AREA [5 30] Silverl #MOBILES #0 *OBIECTS		;
bird Spix's Spix maca a bird~ A beautiful bird is sitti ~	w~ ing here. It has a sign hanging arc	ound its neck.~

801 0000 1000 Ε Isign bird Spix's Spix macaw~ The sign reads, "Hi, I'm Spix's Macaw. Please give money to the World Wildlife Fund, so that they can print their magazine in color and the creators of this mud can describe me." #4002 fountain~ the fountain~ A beautiful fountain with shimmering rainbow-colored water is here. 2500 0000 10000 0 0 #4003 plant~ a plant~ A plant with broad, shiny leaves is growing here. 26 0 1116384 100 43 0 0 100 E Plant-This plant is a deep green and has very large leaves. You notice that it seems to be a popular food among the monkeys. #0 #ROOMS 123-C #4001 At the base of the mountain trail~ You stand on a small, rough trail that leads up the side of a fairly large mountain. You may follow the trail to the south, or enter the forest to the north by a nearly invisible path through some brush. 40 0 5 D0 The brush is very thick, but you think you can squeeze through. ~ 0 -1 20095 D1 The rough mountainside blocks your way. ~ -1 -1 -1 D2 The trail continues up the mountain. ~ 0 -1 4002 D3 The rough mountainside blocks your way. ~ -1 -1 -1 S #4002 Starting up the mountain~ Here the steep slope of the mountain really begins. There is nothing around but bare rock and dirt. The trail curves from north to east. 4005 D0

The trail leads down to the base of the mountain. 0 -1 4001 Dl The trail continues up the mountain. ~ <u>0</u>-1 4003 D2 The rough mountainside blocks your way. ~ -1 -1 -1 D3 The rough mountainside blocks your way. ~ -1 -1 -1 S #4003 The winding mountain trail~ The trail curves its way up the mountain between steep rocks, leading from west to south. 40 **0** 5 D0 The rough mountainside blocks your way. ~ ~ -1 -1 -1 D1 The rough mountainside blocks your way. ~ -1 -1 -1

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D2 The trail continues up the mountain. ~ 0 -1 4004 D3 The trail leads down the mountain. ~ ~ 0 -1 4002 S #4004 The steep mountain trail~ The trail goes directly up a steep north-south slope here. You're glad there's nothing around worth looking at, because you feel you'd surely fall if you stopped. 40 0 5 D0 ~ ~ 0 -1 4003 D2 ~ 0 -1 4005 S #4005 An intersection in the trail-There's a fairly flat place here, where some light brush grows along the west side of the trail and the trail comes to a T. To the south, the level area continues, as does the trail. To the east, a narrow branch of the trail leads farther up the mountain. ~ 40 0 5 D0

The trail goes down a steep slope. ~ 0 -1 4004 D1 The trail narrows as it goes farther up the mountain. ~ 0 -1 4008 D2 The trail widens a bit as it follows the level area. ~ 0 -1 4006 D3 You seem to see a place where you could open a hole in the brush. hole brush hidden door~ 2 -1 4007 S #4006 Atop a cliff~ Here the trail ends in a wide flat place atop a cliff. Far below you can see a river that rises up from a cave -- apparently it was this river that carved this unexpected cliff. 40 0 5 D0 ~ ~ 0 -1 4005 D2 It looks like a really long way down, but at the bottom you can see something odd lying in the dirt. ~ 127-C -1 -1 -1 Ε You can't make out what it is from this level, but it seems to be something shiny that is stuck partly in the ground, as if it perhaps was only lately uncovered. S #4007 A grassy place on the mountain~ You are surprised to find this beautiful little clear area among the rocky mountain slopes. The grass grows thick and green and trees dot the landscape. If you didn't know better, you'd think this place was put here by magic.

40 0 5

D1 You can see a trail on the other side of some brush.

0 -1 4005

S #4008 The narrow trail~ You are on a narrow trail leading from the west up the mountainside to the east. On either side of the trail are steep cliffs, making it impossible to leave the trail. 40 0 5 DI The trail continues up the mountain. ~ 0 -1 4009

D3 You see an intersection in the trail.

~ 0 -1 4005 S #4009 A bend in the trail~ Here the trail turns from west to north, winding its way between high cliffs and rough slopes. 40 0 5 D0 The trail leads farther up the mountain. 0 -1 4010 D3 The trail leads down the mountain. 0 -1 4008 S #4010 Another bend in the trail~ This trail seems unable to make up its mind. It curves again here, this time leading down to the south and farther up to the east. 40 0 5 Dl The trail continues to wind up the mountain. õ -1 4011 D2 The trail curves its way down the mountainside. ~ ~ 129-C 0 -1 4009 S #4011 High on the mountain. The trail emerges from between cliffs here, and you are surprised at how high up on the mountain you are now that you can see around. The trail leads up to a peak to the east and down amongst the reaches the upper rocks to the west. 4005 DI The trail widens in that direction. ~ 0 -1 4012 D3 The trail goes down the mountain between steep cliffs. ~ 0 -1 4010 S #4012 The end of the trail~ Here the trail widens out and ends in a large, fairly open area near the top of the mountain. Large rocks lie all around, apparently preventing you from going any direction but down the trail to the west. 40 0 5 D0 You notice a small space between the rocks -- it looks as if you could move one of the smaller ones and continue on up the mountain! rock rocks small smaller~ 2 -1 4013 S

#4013 The Hidden Trail~ This tiny trail among the rocks winds up to the top of the mountain. You can follow it to the east, or go among the rocks to the south. 40 0 5 DI The trail continues up the mountain. 0 -1 4014 D2 You can just squeeze between the rocks. ~ ~ 0 -1 4012 Ŝ #4014 Bend in the Hidden Trail~ The small trail continues its winding path up the hill here. 40 0 5 D0 The rocks block your way. ~ ~ -1 -1 -1 D1 The rocks block your way. ~ -1 -1 -1 D2 The trail continues. ~ 131-C 0 -1 4015 D3 The trail goes down the mountain. ~ ~ 0 -1 4013 S #4015 Near the top of the mountain~ The trail straightens out here, and makes a straight path up to the peak of the mountain to the south. 40 0 5 D0 ~ 0 -1 4014 D2 You can see the top of the mountain in that direction.

0 -1 4016

S #4016 The Mountaintop~

The Mountaintop~ From here you can see all around. The mountains continue in all directions but north, where there is a valley with thick jungle between the ridges. This part of the mountain is surprisingly a little less rocky than the rest of the mountain, with some grass and small trees growing, which with the few rocks close off all the directions but down the trail to the north.

40 0 5 D0

~

The trail leads down the mountain.

0 -1 4015 Dl Amongst the light brush, you notice what could be a space big enough to crawl through. brush space hole hidden~ 2 -1 4116 D2 The brush and rocks block your way. ~ ~ -1 -1 -1 D3 The brush and rocks block your way. ~ -1 -1 -1 S #4116 A space among the rocks~ This is a small area open enough that you can walk around. Rocks and brush block your way to the east and south, but you could walk to the north a little way. There appears to be a path through the brush to the west. 40 0 5 D0 The open space continues. ~ õ -1 4017 D3 There is a space in the brush big enough for you to walk through. ~ ~ 133-C 0 -1 4016 S #4017 Among the rocks~ The brush and rocks make it difficult to walk here, but you pick your way along. The only directions you could possibly continue are east and south. 4005 Dl You could weave your away among the rocks that way.  $\tilde{0}$  -1 4018 D2 The way becomes a little clearer in that direction. ~ 0 -1 4116 S #4018 In the mountain brush~ Though this area is not as rocky as much of the mountain, the tough scrub that covers the ground is quite thick, making it difficult to move -- in fact, it seems impossible to continue any direction but west. 40 0 5 DO  $\bar{You}$  notice a place in the brush that you could perhaps make your way through. brush place scrub hole hidden door~ 2 -1 4019 D3 A rockier area lies in that direction.

0 -1 4017 S #4019 The thick mountain brush~ The ground here is incredibly thick with tough plants and small trees, and what isn't covered in waist-high vegetation is mostly large rocks. You could probably squeeze through the brush to the south or west. 40 0 5 D2 ~ ~ 0 -1 4018 D3 ~ 0 -1 4020 S #4020 The light mountain brush~ This is a rather nondescript area, covered with light brush and small rocks, but nothing that would make it difficult to travel through. The brush thickens in every direction but north, though you think you could perhaps make your way through it to the east. 40 0 5 D0 You see a grassy area. 0 -1 4021 D1 You could with some difficulty make it through the brush. 135-C 0 -1 4019 S #4021 A grassy area~ This is a surprisingly pleasant place, almost like a mountain top meadow, with light grass and little else. This clear area continues to the north, but thickening brush and rocks make it difficult to go in the other directions. 40 0 5 D0 The meadow continues.

A grassy area-This is a surprisingly pleasant place, almost like a mountain top meadow, with light grass and little else. This clear area continues to the north, but thickening brush and rocks make it difficult to go in the other directions. ~ 40 0 5 D0 The meadow continues. ~ ~ 0 -1 4022 D1 Thick brush blocks your way. ~ ~ -1 -1 -1 D2 Though the terrain gets a little rougher in that direction, you could go. ~ ~ 0 -1 4020 D3 Large rocks block your way. ~ ~ -1 -1 -1 S #4022 On a small cliff-

Here the grassy meadow abruptly ends at a small cliff. Below the cliff,

farther to the north, you can see a lightly forested area on the mountainside. It looks like perhaps you could slide down the cliff safely, but you certainly couldn't get back up if you did. 40 0 5 D0 You could slide down the cliff in that direction. ~ 0 -1 4023 D1 Thick brush blocks your way. ~ -1\_-1 -1 D2 The meadow continues. ~ 0 -1 4021 D3 Large rocks block your way. -1 -1 -1 D5 You could slide down the cliff. 0 -1 4023 S #4023 At the bottom of the cliff~ This is the bottom of a small cliff on the mountain. Rocks block the way north and west, and the cliff is too steep to go up to the south. To the east, a small area of forest grows up. 137-C 4005 DI You see a small forest. ~ ~ 0 -1 4024 D2 The cliff is too steep to climb. ~ ~ -1 -1 -1 S #4024 This is a small forested area on one of the lower slopes of the mountain. It is a very pleasant place, cool and peaceful. There are quite a few animals around, and you notice something unusual about them -- several of the monkeys you see hanging from the trees have large wounds, as if their skin were melting away. However, they all seem well, and many of their swin do seem to scheduling a wite notice. their wounds seem to be healing quite nicely. 40 0 5 D0 The forest continues in that direction. 0 -1 4025 D3 You see a cliff. 0 -1 4023 S #4025 The mountainside forest-

This is more of the small mountain forest. It continues to the south, but rocks block your way in the other directions. 40 0 5 D0 You see a small path hidden behind some bushes. hidden path bushes hole door~ 2 -1 4026 D2 The forest continues. ~ 0 -1 4024 S #4026 Mountain path~ This is a small path near the northern edge of the mountain. A small forest lies to the south. 40 0 5 D0 The path ends in that direction. ~ 0 -1 4027 D2 A small forest lies in that direction. 0 -1 4025 S #4027 At the edge of the mountain~ You are atop a high slope that forms the northern edge of the mountain. To the south a path leads toward a forested area.

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4005 D0 Looking down the hillside, you see a way that you could slide/jump/fall down to the valley below. ~ 40 0 18011 D2 You see a small path. ~ 0 -1 4026 S #0 #RESETS O 0 4001 2 4016 O 0 4003 3 4025 Spix's Macaw ebola-curing plant close the brush opening to the neat place close the rocks at the end of the main trail D 0 4005 3 1 D 0 4012 0 1 D 0 4016 1 1 close the hole in the brush from the mt-top D 0 4018 0 1 D 0 4025 0 1 close another hole in the brush close the hidden path S #SHOPS 0 #SPECIALS S #\$ #AREA {5 30} Silverleaf The Cave~ #HELPS 0\$~ #MOBILES

#15001 bat~ a bat~ A bat hangs from the ceiling. This is a cute fuzzy little bat, with rather sharp-looking teeth. 2 0 0 S 3 0 0 0d0+0 0d0+0 00 001 #0 #MOBPROGS M 15001 ebola.prg M 15001 ebola2.prg S **#OBJECTS** #15001 helmet~ the helmet~ An old but finely-made helmet is lying here.~ 901116 0000 1000 Е helmet~ The helmet is obviously very old, probably several hundred years old in fact. It is still very serviceable, though, being very well-made. It is bronze, and has intricate designs on it. A 17 10 Â 141-C 11 #15002 crystal stone gem~ the crystal~ A sparkling crystal is lying here.~

8 0 1116384 0000 100 Ε crystal stone gem~ This is a beautiful gem. It has broken off of the cave in a perfect shape. Ã 4 1 #15003 a jawbone~ a jawbone~ The jawbone of some animal is lying here.~ 8 0 1/16384 0000 Ε bone jaw jawbone~ This bone has been here quite a long time, perhaps thousands of years. It seems to have been left behind from the animal being eaten by some ancient people. #0 #ROOMS

#15001 The cave entrance~ This is the entrance to a fairly large natural cave. The walls are It's quite cool inside the cave, and a bit damp. The large open room in which you stand continues every direction but north, where the opening of the cave lies. 15000 D0 You see the mouth of the cave. ~ 0 -1 19010 D1 ~ ~ 0 -1 15002 D2 ~ õ -1 15003 D3 0 -1 15004 S #15002 Northeast corner of the cave~ This corner of the cave is rather nondescript. The room continues to the west and south. 15000 D2 ~ ~ 143-C 0 -1 15005 D3 ~ ~ 0 -1 15001 Ŝ #15003 #15003
Middle of the large room~
You stand in the middle of the large room of the cave. In this central place, you can barely see the roof of the cave, which must be at least 30 feet above your head. Strangely enough, the cave is not silent... the acoustics of this room seem to amplify even the quietest sounds, and you can hear an odd squeaking noise and a distant gurgle. -150 0 0 D0 ~ ~ 0 -1 15001 D1 ~ 0 -1 15005 D2 0 -1 15007 D3 0 -1 15006 S #15004 Northwest corner of the cave~ This corner is rather nondescript. The large room continues to the east and south.

~ 150 0 0 DI ~ 0 -1 15001 D2 ~ 0 -1 15006 S #15005 You stand along the edge of the large room of the cave. An opening leads to another room to the east, while the large room continues in the other directions. 15000 D0 ~ 0 -1 15002 Dl You see a smaller room in that direction. ~ ~ 0 -1 15009 D2 ~ ~ ~ 0 -1 15008 D3 ~ ~ 0 -1 15003 Ŝ 145-C #15006 Corner of the big room~ This is a corner of the large room of the cave, which continues to the north and east. 15000 D0

~ õ -1 15004 Dl ~ õ -1 15003 S #15007 South side of the big room~ You are along the southern wall of the big room of the cave, in a sort of a corner. The center of the room is to the north, and you can also go farther to the east. 150 0 0 D0 ~ 0 -1 15003 D1 ~ ----0 -1 15008 S #15008 Southeast corner of the big room~ This corner of the big room has two passages leading out of it, one two the south and one to the east. From the one to the east, you hear an odd squeaking sound.

~ 150 0 0 D0 ~ 0 -1 15005 D1 You see the entrance to a smaller room. ~ 0 -1 15010 D2 You see the entrance to a smaller room. ~ ~ 0 -1 15014 D3 ~ 0 -1 15007 S #15009 A small corner~ This is a small corner room of the cave. An opening leads west into the large room, and this small room continues to the south. This room doesn't smell very good, and there is green stuff spattered about on the floor and walls. The smell seems to worsen to the south. 150 0 0 D2 The passage is small and dark, and you hear squeaking noises and smell a nasty odor. ~ 0 -1 15010 D3 147-C There is an opening into a large room. ~ \_ 0 -1 15005 S #15010 The bat room~ As you walk into this room, you are hit in the face by a bat. You look up, and realize that your first impression that the ceiling was rough and covered with a dark moss was mistaken -- it's covered in bats! While all these bats are quite cute, this is not a very pleasant place to be, as you are standing knee deep in guano. -150 0 0 D0 ~ 0 -1 15009 D1 ~ ~ 0 -1 15011 D2

~ ~ 0 -1 15012 D3

~ ~

0 -1 15008 S

#15011

A small corner room~ This is a small corner room of the cave. It continues to the west,

and from that direction you hear a lot of squeaking. To the south, the cave floor seems change from being all mud to being somewhat sandy.

~ 15000 D2 An opening leads into a passage way with a sandy floor. 0 -1 15013 D3 You hear loud squeaking from that direction, and smell an odd odor. ~ õ -1 15010 S #15012 In a cave passage~ You are standing near the west end of a long tunnel in the cave. An opening to the north leads into a room from which a bad odor and strange squeaking sounds emanate. 15000 D0 You hear a lot of noise and smell something unpleasant. ~ 0 -1 15010 D1 The long passage continues. 0 -1 15013 S #15013 In the long passage~ This is a long passageway in the cave. An opening to the north leads into a small room, and this tunnel continues east and west.

## 149-C

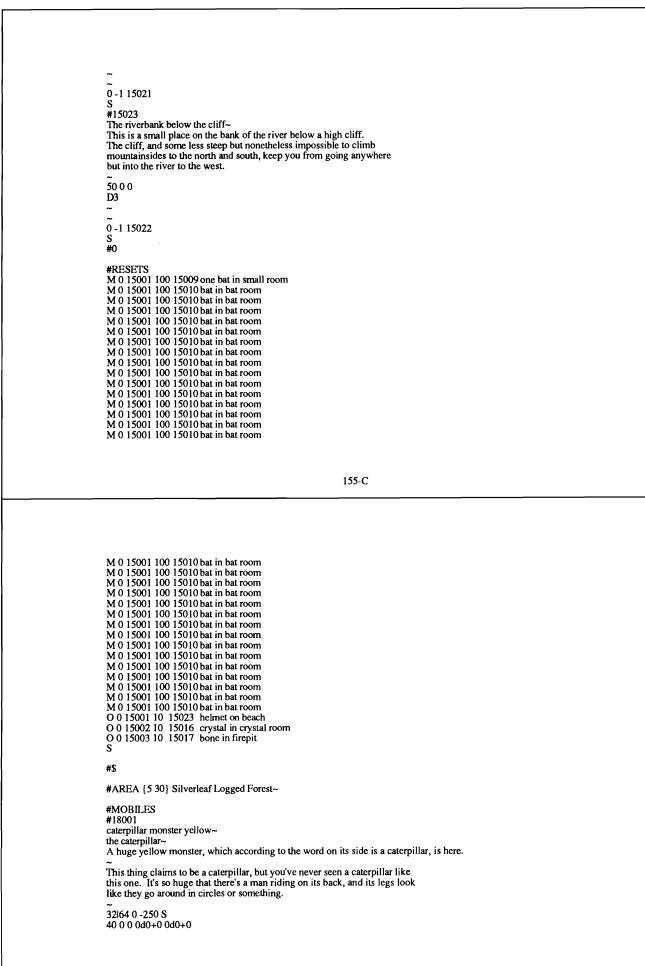
150 0 0 D0 ~ ~ 0 -1 15011 ĎI ~ õ -1 15018 D3 ~ 15000 D1 The long passage continues. 0 -1 15012 D3 You notice a small crevice in the wall -- it looks big enough for you to slip through! crevice crack wall hole~ 2-1 15015 S #15015 A tiny cave room~ This is a very small room. To the west it grows wider, and you see some sort of light coming from that direction. To the east

you could just fit through a small hole in the cave wall. 15000 D1 You see a hole just big enough to fit through. 0 -1 15014 D3 You see a faint flickering light from that direction. 0 -1 15016 S #15016 The crystal room~ This room is absolutely breathtaking. The walls are covered with mineral deposits that reflect every tiny bit of your light, making a beautiful glimmering. 15000 D0 Among the glitter of the crystals, you notice a small opening. opening hole~ 2 -1 15017 D1 A passage leads off in that direction. 0 -1 15015 S #15017 The firepit~ This room seems to have at some point been used as a fireplace, as an area marked off with stones in the floor is full of ashes. As you 151-C look around the room, you notice drawings on the walls that look very old, as well as the fact that the ashes on the floor look to have been there quite a long time. 15000 D2 You can just squeeze through a narrow passage that way. 0 -1 15016 S #15018 Beside the underground lake~ You stand on the sandy shore of an underground lake, which continues off to the east as far as you can see. In the distance you can hear the rushing of water, implying that this calm lake is formed by a river somewhere. 15000 DI You could probably swim in the lake. 0 -1 15019 D3 A long passage leads off in that direction. 0 -1 15013 S #15019 In the underground lake~ You are swimming in the western end of an underground lake. From the flow of the water and the noises you hear, you think it probably joins with a river somewhere to the east.

15000 D1 You can keep swimming in that direction. ~ 0 -1 15020 D3 You see the sandy shore of the lake. 0 -1 15018 S #15020 Swimming in the lake~ This is the middle of the underground lake. The water is moving a bit faster here, and the river channel seems to be just to the east. 50 0 0 D1 The water seems to move faster in that direction. ~ 0 -1 15021 D3 You can swim back toward calmer waters. ~ 0 -1 15019 S #15021 In the underground river~ You are at a bend in the main channel of a fast-flowing underground river. The river flows from the north to the east, and to the east you can see where it exits the cave. 5000

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D0 The speed of the current keeps you from going that way. ~ -1 -1 -1 DI You see where the river exits the cave. ~ ~ 0 -1 15022 D3 You can swim back into the lake in that direction. ~ õ -1 15020 S #15022 A bend in the river~ The river bends from the west to the south here, and the bend slows the current down a bit, so that you could actually swim upstream into a cave to the west. Sharp rocks keep you from going farther downstream, but you could return to shore to the cast. <del>.</del> 50 0 0 Dl You see the riverbank. ~ \_ 0 -1 15023 D2 Those rocks look really pointy, so it's probably a bad idea to go there. ~ ~ -1 -1 -1 D3 You see the opening of a cave from which the river flows.



0 0 0 0 1 #18002 logger man~ the logger~ A logger is here, wielding some odd weapon that makes a loud noise. The logger is holding a large weapon with a wide blade. It makes a loud noise, and looks rather dangerous. 32164 0 -250 S 10 0 0 0d0+0 0d0+0 00 001 #0 **#OBJECTS** #18001 chainsaw saw~ the chainsaw~ An odd weapon with a wide blade and huge handle is sitting here.~ 5 2 1 8 1 9 2 00001 1500 E weapon chainsaw saw~ You suppose this odd weapon must be called a chainsaw, as that's what it says on the side. It has a switch on it, and when you push it, it makes a strange noise and a chain that goes around the blade begins to spin very fast, making it quite a vicious weapon. ~ Ã 18 20 A 19 20 157-C #18002 plant flower~ a plant~ A flowering plant is growing here.~ 19 0 1|16384 2000 Е plant flower~ This plant has very large deep pink flowers, and is quite pretty. #0 #ROOMS #ROOMS #18001 Where the fence meets the mountain~ This is yet another bland place where the forest has been logged. Nothing much is left, of course. The fence that separates the forest to the west runs into the mountainside to the north here. 180 0 2 D0 The mountains block your way. ~ ~ -1 -1 -1 DI The bare land continues. ~ 0 -1 18002 D2 The bare land continues.

~ 0 -1 18005 D3 The fence blocks your way. The fence blocks your way.
-1-1-1
S
#18002
In the logged area~
This is more of the destroyed forest. To the south a large pile of logs
blocks your way, while to the north the mountainside marks the edge of the clear-cut land. clear-cut land. 180 0 2 D0 The mountains block your way. ~ ~ -1 -1 -1 D1 The bare land continues. ~ õ -1 18003 D2 The pile of logs blocks your way. ~ ~ -1 -1 -1 D3 The bare land continues. ~ 0 -1 18001

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The bare land continues. ~ 0 -1 18007 D3 The bare land continues. ~ 0 -1 18003 S #18005 Between the fence and the log pile~ This is more of the logged forest. To the west is the fence separating it from the remaining forest, and to the east is a huge pile of logs. ~ 180 0 2 D0 The bare land continues. ~ ~ 0 -1 18001 D1 The log pile blocks your way. ~ -1 -1 -1 D2 The bare land continues. 0 -1 18008 D3 The fence blocks your way. ~ -1 -1 -1 161-C S #18006 Next to the log pile~ The pile of logs gathered from this former forest is quite large, and it blocks your way to the west and south. The bared forest continues to the north 180 0 2 D0

-1 -1 -1 D3 The fence blocks your way. ~ -1 -1 -1 S #18011 By the log pile-The huge log pile runs up against the mountain here, blocking your way to the east and north. ~ 180 0 2 D0 The log pile blocks your way. ~ -1 -1 -1 D1 The log pile blocks your way. ~ -1 -1 -1 D2 The mountains block your way. ~ -1 -1 -1 D3 The bare land continues. ~ 0 -1 18010 S #0

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 #RESETS
 bulldozer

 M 0 18001 3 18003
 bulldozer

 M 0 18002 4 18011
 logger

 G 0 18001 1
 give chainsaw to logger

 G 0 18001 1
 give chainsaw to logger

 G 0 18001 1
 give chainsaw to logger

 G 0 18002 3 18007
 periwinkle-like plant by east fence

#\$

D0 The bare land continues. ~ õ -1 18004 D1 The fence blocks your way. -1-1-1 D2 The log pile blocks your way. ~ -1 -1 -1 D3 The bare land continues. ~ 0 -1 18006 S #18008 By a hole in the fence~ This is the ugliest place you've ever been. Formerly part of the lush forest to the west, it has been indiscriminately cleared of everything. A pile of logs to the east is all that's left of the forest. This blankness continues to the north and south, or you could slip back into the forest through a hole in the fence to the west. 180 0 2 D0 The bare land continues. ~ ~ 0 -1 18005 D1 163-C

The log pile blocks your way. ~ ~ -1 -1 -1 D2 The bare land continues. ~ 0 -1 18010 D3 You see a hole in the fence. 0 -1 20033 S #18010 A fence corner~ Here the fence makes a corner with the mountains to the south. The bare land continues along the fence to the north or along the mountains to the east. 180 0 2 D0 The bare land continues. ~ ~ 0 -1 18008 D1 The bare land continues. ~ ~ 0 -1 18011 D2 The mountains block your way. ~ ~

**MOBProgs:** 

>fight\_prog 100~ MPECHO You have died of ebola. MPECHO You should know better than to get so close to an infected creature. MPKILL \$n L

>fight\_prog 40~ kill \$n ĩ

>fight\_prog 25~ cast 'curse' \$n mpecho You feel weak ... you think you have contracted malaria.

I >greet\_prog 100--say Hi. I'm happy to welcome you to our group, and I hope you'll enjoy working for us. I'd like to give you a few pointers before you head out into the forest. What we want you to do is to gather samples of any plants or animals which could possibly have medical value. In our library, you will find more detailed information on many species which we already know about. One hint we have for you is that species related to those we know are useful may be useful themselves. Another good searching hint is look for plants that are reacted to by the forest in unusual ways -- if bugs locus a final alone, it might contain a metable compound that reaches them for example. One thing you should expecially leave a plant alone, it might contain a useful compound that repels them, for example. One thing you should expecially look for is frogs -- we have found that many of the frogs here produce very useful compounds. say I won't tell you this job is going to be easy. There are many hazards out there, and you need to be very careful. In particular, there are dangerous animals such as snakes and crocodiles, and many diseases -- we have heard rumors that the ebola virus may have found its way to this continent. Also, some areas of the forest are being logged, and the people working for the timber companies tend to be very hostile towards our workers. So, be careful. say I think that's all I have to tell you... I recommend strongly that you spend some time in our library, and look up some of the things I've told you about for more specific information. When you're ready to begin, just go to the shuttle stop on the south side of town, and you can get a ride out to our station in the forest. Once you collect things, there will be someone at the station to take them. Good luck!

say Here's a ticket for the shuttle.



give ticket \$n >greet\_prog 100~ say Hola. Welcome to our village, friend. I will give you now some wisdom for your forest journey. Look in the high high place to the south, look carefully, for there you will find something few have seen. On your journey, you have seen many frogs... but look most carefully for the dark-eyed dow-kiet, for it has the sapo which makes men strong. Beware the snake that speaks with forked tongue. Beware the deep dark, there is nothing there but trouble. Go now, and take this with my blessing. give talisman \$n Т >give\_prog ticket~ mptransfer \$n 20023 L