

THE ANTAGONISTS

HAL RENKO & SAM EDWARDS
HERMIE HERMENS



A MICROWORLD ADVENTURE FOR YOUR
COMMODORE 64

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Addison-Wesley Publishing Company

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Introduction

You are about to enter a new world, the world of adventure gaming. But this is no ordinary adventure game. This is the world of **The Antagonists**.

The Antagonists is an exciting new approach to adventure gaming: you are not alone! Instead of being left in the dark, not knowing whether LEFT or RIGHT will lead to treasure or trouble, you have at your side a collection of documents and details, pictures and practical guides. The program, complete with error-detecting check digits, instructions on loading the game and notes on the commands available are given at the end of this book. So, with the information given at the beginning of the book, you have a complete adventure game in one volume.

The information in this book starts with entries taken from the diary of Albert Renshaw, the last survivor of Mother Earth.

In a world dominated by insects and ruled by the ants, he knew there must be a way of escape, a particular "object" that would be his key to freedom. He never found that "object" but he knew it was guarded by the ants.

To complete this adventure successfully, you must find out what the "object" of the game is.

The entries in Albert Renshaw's diary are of the greatest importance in achieving this. By studying them carefully, you will be able, for example, to determine which part of the game you are in at any given moment.

Renshaw also collected together bits and pieces of information that he felt were essential in making his escape. The various documents he accumulated follow the diary entries.

They are not strictly related but by reading through them carefully, you will find all the information necessary to make a successful bid for freedom. However, it is advisable to keep this book with you at all times in your adventure.

Don't try to memorise the information like Albert Renshaw. Look what happened to him!

So, without further ado, it is time for you to meet **The Antagonists**.

From Albert Renshaw's Diary



31st December

TOMORROW is New Year's day ... 2356 AD ... or could it be the day after tomorrow? I don't know, and what's the difference anyway? Perhaps it would have been better if people had never learned to count at all. In that case we would not be familiar with the notion of passing time, and would only be able to distinguish the dawning of a new day. Only the rhythm of day and night (and, of course, the seasons) would show any variation in time.

Perhaps the animals that used to inhabit the earth were aware of the seasons. Of course migratory birds and hibernating animals must have been. Or they did rely on instinct as a faithful counsellor in situations where logic would have been useless. Animals must have had a sense of direction, because by scent trails, for example, they could let others know where food was to be found. But a sense of time ... ? Could an animal indicate, for instance: "Tomorrow, when the sun reaches its zenith, you must be at the waterfall in the forest"?

Strange, really, that I should think about animals at all, now that most species are extinct. Who would ever have thought that insects, especially ants, would conquer the world? True, many distinguished scientists had sounded a warning note. But on the other hand just as many simply laughed at the very idea, or claimed that man's ingenuity would always enable him to overcome any threat.

Science can indeed lead one this way or that. Every new theory seems destined to become the matrix for a totally different

one, and I can only conclude that something has gone completely wrong with science. I believe this is due to the different disciplines mixing too much. Until the Middle Ages, there were only a limited number of disciplines, which together seemed to form an orderly whole. After 1900 AD, however, things gradually became worse.

Physics, mathematics and chemistry seemed at first to be reasonably well defined, but what of vague disciplines like universal science, paedo-sociology and psycho-motorial behavioural sciences? Or disciplines introduced in about 2000 AD, such as chemical sociology, psychological physics, siliconology, mathematical art and the psychology of data networks?

But what does it matter anyway – all that has now ended. Our scientific knowledge has failed and the ants hold absolute power. They regard humanity as an enemy and are using their organizational talent as a weapon against the intelligence and so-called creative faculties of the human race. Perhaps it was not due to the ants' tremendous talent for organization that ultimately turned the tables, but rather our own constantly deteriorating organizational capabilities. Consider the enormous increase in the number of meetings, for example. The vogue words were "policy" and "efficiency", but how right my father was when he jested: "meetings are the greatest invention of the 21st century – they are the only processes that cannot be automated!"

And then, of course, there was the discovery of the beta2-growth hormone, which was expected to solve the world's malnutrition problems. Certainly, plants and animals became larger. But so did insects, and this fatally disturbed the balance of natural proportions. Looking back, I believe one of the most remarkable developments was the rise of movements against the killing of insects. It seems, ridiculously enough, that the increased pity for insects was directly proportional to their increased size.

1st January 2356

TODAY I devised a plan of escape. As far as I know, I am the only human survivor. I feel I shall go mad. My only friend is this diary. It is just as though the words I put on paper are being read aloud by an invisible companion and besides, the very act of writing forces me to collect my thoughts.

My plan is this. First, I must try to reach the caves. I know it's absolutely dark there, and that many dangers lie in wait.

Perhaps I can make use of the glow-worms out in the fields to light my way. I must remember to collect enough nectar from the flowers in the open fields to keep my little friends alive during my journey through the caves. It will be a good idea to take the "Book of Flowers" with me too, so that I can determine exactly which flowers produce nectar in reasonable quantities, and whether they are dangerous or not.

After passing through the fields and the caves, I will arrive in the country of the Tenins and the Lepries ... at least if all goes well! It will be important then to study James Arwell's writings thoroughly, and perhaps even to learn the main points by heart.

Finally I should arrive at the insect garden. Hardly anyone has ever succeeded in passing beyond that, so I will have to be very careful – this must be the last post before the enemy's stronghold, the place where "the object" is guarded. The only person who has managed to pass the garden was George Baldwin. I must read his treatise on insects. The brochure about the garden, written in the time when the garden was still under human management, will also be worthwhile reading.

I could take all this literature with me, but the chances are I will lose at least some of it on the way. So I must memorise it all. Strange, that the ants should have left a number of insects and, as far as I know, even a number of animals alive. True, we humans had our zoological gardens, but wasn't that explained by a general interest in life? Would ants feel that way about it too?

2nd January

FROM CHILDHOOD I remember that the 2nd of January was the first “normal” day of the year. January 1st always fell on a Sunday, and each time there was something special about that day. There were the usual New Year’s programmes on television, such as concerts, shows, and a circus programme for the children. The second day of the year was the real start, meaning that the resolutions of the first day of January had to be carried out, or at least initiated, on the second day. In that way January 2nd was also a test case for the rest of the year.

Should I, then, start today with the plans I described yesterday? I really don’t know. Doubt has got the better of me. I spent hours and hours brooding on it today. Of course I could hide myself as long as possible, in the hope that the ants won’t find me. Perhaps fate is just a matter of making decisions and simply accepting the consequences. Hiding myself will mean hiding again and again, because once the ants catch my scent, they will keep searching until they find me. I must think of something to put them off the track!

3rd January

TODAY I took an old notebook. The pages were not numbered, and one by one I tore them out, saying to myself at each page: “I will carry out the plan, I won’t carry it out, I will, I won’t”.

It was quite a thick notebook, but I had plenty of time and so it didn’t really matter. All the time I was hoping the result of my test would be that I didn’t have to go. It was a forlorn hope: the last page indicated I would have to carry out my plan. Why do I believe in such stupid oracle games?

My father once told me that walking under a ladder would bring bad luck. I remember doing it anyway, just to defy fate. I spent the rest of the day fearing an accident, but nothing

happened. At the end of the day it was perfectly clear to me that superstition is just pure nonsense. But all the same, I've never walked under a ladder since ...

4 t h J a n u a r y

I MUST NOT forget to study Donald Beamon's drawings. They undoubtedly have something to do with the caves. Beamon probably drew cross-sections of them, but how could he have had access to all that information? And how could he have drawn them so beautifully? Perhaps he actually explored the caves himself... or did he get the information from the builders. The drawings probably show different layers, but I doubt that they are in the right order since everything was lying in confusion when they were found.

5 t h J a n u a r y

TODAY I have definitely decided to go. I know it doesn't sound very convincing, but in exactly one week's time I shall really leave. During the coming week I will prepare myself by studying everything that could possibly be of help on my journey to freedom. I have allowed myself exactly one week for these preparations because I know that if I don't impose a time limit, my uncertainty will cause me to put it off altogether.

There is not much to study. The most important things are:

- the Book of Flowers,
- the James Arwell Society's publication, which among other things describes the Tenins and the Lepries,
- Donald Beamon's drawings,
- everything I can lay hands on concerning the insect garden and the ants.

Tomorrow I will start collecting material on insects, especially ants.

6th January

FEAR AND CERTAINTY are usually each other's opposites. Lack of certainty about the future gives one a feeling of insecurity, which in turn results in fear. Today, however, I experienced how utter fear can turn into absolute certainty.

I was in the garden when suddenly I heard a rustling noise coming from behind a hedge. Instinctively I ducked behind some bushes.

Only then did I dare to look. My fears proved to be correct. Two fighter ants were coming along the path, zig-zagging as though they were drunk, and tearing off any twigs hanging in the way with their sharp jaws. One ant followed the other, probably following the scent trail of the first. I felt as though my heart were in my mouth. I hoped that the distance between me and those rapacious cannibals (they devour their own kind without any scruples at all) was great enough, otherwise they would certainly catch my scent.

Fortunately they moved on. I sat there for at least an hour. Then the fear turned into certainty. I knew I couldn't keep this up indefinitely. If they didn't find me today, they would tomorrow. I had to leave. As soon as possible. I can't allow myself to think about anything but my departure. From now on I must use every spare moment in preparation. For that reason I have also decided to break the habit of "talking" to my diary, which will remind me daily that there is no way back. My dear diary and faithful friend, you have been my only companion for many hours...

Today I'm saying good-bye. I hope that if I were to hold my ear to your worn cover, I would hear you wishing me good luck. Au revoir ...



The Book of Flowers

by Prof. Dr. K.J.Th.M. Lanuski, Jr.

**FLORA
PUBLISHING**

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WITCHES'TONGUE

Preface

Is there anyone who doesn't appreciate the gifts of nature? Mother Nature with her infinite variety of plants, animals and minerals compels a deep respect from us all. The bright red colours of the lion's claw or Japanese cherry, the remarkable leaf pattern of Galileo's gooseberry, the sharp thorns of the needle laurel in contrast with the soft leaves of the Pascal lily. This is just a random selection from the never-ending panorama that is mankind's inheritance.

But it is not just the visual beauty of all these things that fascinates us, the possibility of identifying and cataloguing each type of plant also forms part of the pleasure for the real lover of nature.

This book is meant to be a simple but exact guide. It contains the results of years of research by Professor Lanuski Sr., who with endless patience and understanding, created order out of chaos.

Since 1911, Professor Lanuski's work has been carried on by his son, Professor Lanuski Jr., also my father. It was he who discovered that the mildewbill often undergoes a short metamorphosis at Whitsuntide. He also noted the cross-grain (cruxus-granium), of which the lower leaves are typified by a curious right-handed curvature, undergoes a kind of thermodeflection process, giving the impression of a left-handed curvature.

This book is in fact an abstract of the complete work which is at present part of the collection in the Department of Rare Books of the Royal Russian Library of Berlin, and remains to this day one of the most widely-read books on popular science. Certain modifications and changes have been made in this edition, under the supervision of Professor Lanuski Jr. For instance, undulating curvature now has priority over spiral curvature and not vice-versa, as was previously the case.

This notable revision is necessary after new considerations concerning the number of vesicles on the root-hairs.

Finally, the drawing of the Circea (Witches' tongue) has been corrected to incorporate the brushlike bracts at the foot of the flower stem. These were probably omitted due to an oversight on the part of the original editors.

It is my hope that the readers will benefit from these important revisions.

Professor Dr. K.J.Th. M. Lanuski

Preface to the Eighth Edition

When the first edition of the Book of Flowers was published in my grandfather's day, I doubt he could have foreseen the need for an eighth edition

in such a short period of time. Success, however, always brings with it a certain amount of reserved criticism. I am, of course, referring here to the comments of Professor Rosebush, of the University of Munich. His assertion that the modification of the sequence of undulating and spiral curvature is incorrect appears to have divided the botanical world.

His action can only be seen as an attempt to gain recognition for his own studies, a practice unworthy of so eminent a scholar.

Professor Rosebush's criticism amounts to a modification of the definition of the concept of "root-hair" which, he alleges, can appear above ground as early as February. I regard this as completely false. It is, of course, possible that the root-hair can appear early in February, but this may be regarded as a rare exception.

Professor Dr. K.J.Th. M. Lanuski

Preface to the Ninth Edition

It was with great sadness that I received the announcement of the death of Professor Dr. K.J.Th. M. Lanuski. It is beyond doubt that his publications belong to the most important botanical literature of all time. Particularly his research on the undulating and spiral curvature forms one of the most important studies of the century.

The discovery of the oblique leaf formation of the *Herniaria Ciliata* (Broken Weed) has rocked the botanical world. Despite the suggestion of Professor Messerstingel of the University of Washington, that this is probably due to a virus disease, similar to that found in the *Carylus Tubulosa* (Page's Lung), Lanuski's discovery is proof of his remarkable powers of observation. May he rest in peace.

I regard it not only as a great honour, but also as a positive pleasure, that the publisher has requested me to edit Professor Lanuski's work. Several minor revisions have been included in this edition. Most importantly, the sequence of spiral and undulating curvature has been reversed.

Professor Dr. B. Rosebush

BROKEN WEED



The identification of plants

The identification of plants is one of the most fascinating pursuits of the botanist. Fascinating but certainly not simple. Care must be taken, because a cursory study can lead to a wrong identification.

Only the botanist who devotes sufficient time to the subject will be able to classify plants from the abib (abnaki) to the zymstic zamia.

The following tools are essential for proper identification.

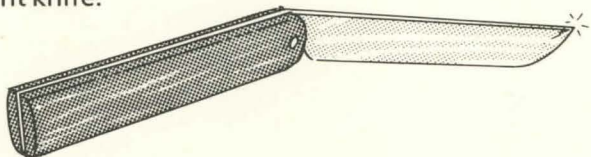


1. The magnifying glass

A good magnifying glass is part of the botanist's standard equipment. A stout handle is recommended because vibrations can distort observations. A number of manufacturers supply magnifying glasses complete with support.

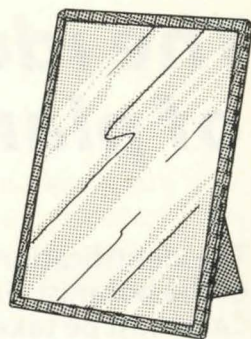
2. The knife

"A botanists life is determined by his knife." This well-known statement by the famous botanist Dr. Trullenwaller underlines the importance of the knife in this profession. A sharp knife is absolutely essential. Blunt knives not only damage the plant but also hamper identification. On one occasion I heard a botanist ecstatically remark "It's a dandelion!", while he had in fact mistaken the specimen for a marguerite. The cause of this embarrassing botanical error was..... a blunt knife.



3. The mirror

Many botanists tend to forget the humble mirror, thinking, perhaps, that they can view the underside of a leaf without first cutting it loose from the plant. Obviously impossible! It is also important to realise that sometimes objects can be more readily identified when seen in reverse.



4. Notebooks



Although a notebook can hardly be described as a tool, it would be wrong to omit it from this category. The true botanist would not be without his notebook. Dr. W.W.H. Smith once remarked: "*Every biologist is deeply impressed by the capacity of that organ we simply call 'the brain'. However, when some vital detail must be remembered, it sometimes lets us down.*" This serves to emphasize the importance of the notebook.

The principal groups

The main divisions in the botanical world are determined by environment. For example, an oak tree will not be seen growing in the middle of a lake, because the oak requires solid ground in which to anchor its roots.

That is why the most beautiful oaks are found growing near churches and castles, where for centuries the ground has not been disturbed. The beech tree is similarly adapted. The mightiest beeches are usually found in Scotland where the soil in which they grow has been penetrated by the blood of the Gaelic clansmen as they fought and died for possession of the neighbouring castle.

The mushrooms that grow in the vicinity of these castles are, in contrast, to be found on watery ground.

The term "watery" is, perhaps, a little misleading, since it refers to the damp, misty, almost poisonous bogs of the areas where one might expect to meet witches rather than elves.

In order to arrive at a correct identification of plants, the following environmental divisions can be made:

marine types

fresh-water types

swamp types

wet soil types

dry soil types

These divisions are discussed and illustrated with a number of examples.



Marine types

These types thrive in estuaries. The most remarkable characteristic of these plants is their flexibility, which allows them to move to and fro with the ebb and flow of the water, as if the laws of gravity had been suspended.

The marine types are primarily distinguished from each other by their stems and leaf:

1. one or more stems;
2. with or without leaves; and
3. with or without vesicles.



WATER TULIP

1. One or more stems

An example of this type of plant is the **water tulip**. It is in fact an imported plant, most likely brought to Europe by the Normans during their expeditions through Europe – they even reached as far as Sicily.

The bulbs were probably blown overboard during a storm and adapted themselves to our northern waters. Further examples of multi-stem plants are the **salt thistle**, the **beach anemone** and the **sea porcupine herb**. Care must be taken not to confuse the sea porcupine herb with the **sandbank barley**.

The latter belongs to a transitional type currently classified as a swamp plant.

2. With or without leaves

The **wag-tailed oat** is without doubt the archetypal marine plant without leaves. There are small dents on the stem of this conspicuous plant out of which small white hairs, the so-called citracheae, originate. The true function of these citracheae is still not clear, despite the remarkable phenomenon that they point upwards in fresh water but downwards in salt water.



In contrast to the leafless wag-tailed oat, the **water bat fern** is a typical example of a marine plant with leaves. This is evident when the plant is found in low clear water, where its red leaves are quite conspicuous.

Along with the water bat fern the small **get-lost daisy** and the **herring celery** should also be mentioned. The name of the latter has no connection with the shape of the herring but derives from the fact that it is an abnormally large carnivorous plant in which the remains of partly devoured herrings have been found.

At present we know that the herring celery is also a danger to other kinds of fish such as plaice, turbot and flounder.

WAG-TAILED OAT

3. With or without vesicles

One of the main characteristics of marine types is the presence of vesicles, i.e. bubbles. A well-known example of vesicular plants is **thunder weed**. Squeezing the vesicles gently results in a popping sound. Fishermen used to put the plant under the bed of their beloved, and even now delightful stories are told about it.

Another example of the marine vesicular type is **mermaid weed**. This plant is also covered with a great number of vesicles. Squeezing them, however, does not cause a popping sound. Mermaid weed has a relatively high phosphor content, and is considered to have great potential for solving the world's malnutrition problem. Its name is derived from the story of an old sea captain who mistook the plant floating alongside his ship for the curly locks of a mermaid.

The **briny gooseberry** also belongs to this category. Its name is actually quite misleading, because it suggests that the vesicles are berries. Although this is not correct, the vesicles do, however, have a remarkable flavour and their healing properties, especially with regard to rheumatism, are well-known.

Fresh-water types

The fresh-water types have a firmer structure than the marine types. It is generally accepted that the reason for this lies in the different specific gravities, which cause significant variations in the gravitational forces exerted on the plant. Of course the strongest plants are found in running water.

Just as the marine types, fresh-water plants fall into one of the following categories:

1. **one or more stems;**
2. **with or without leaves; and**
3. **with or without vesicles.**

Schrumpelblatt, of the University of Bern (Switzerland), suggests a further classification based on the specific gravity of the water in which the plant grows. We agree that this has its theoretical merits, but do not consider his classification principles to be sufficiently practical. This is supported by the fact that, using Schrumpelblatt's system, many plants can be placed in more than one category. It is clear that such ambiguity can be extremely confusing, and we therefore favour the conventional system.

1. One or more stems

The best example of the multi-stem fresh-water type is **waterdiver weed**. It is a very graceful plant, usually found in shallow fens, and its dried leaves make a delightful cup of tea. Around 1800 AD the plant was used for this purpose on a large scale, and it is quite evident that the historical drop in tea prices in Cambridge at this time can be explained by these developments.

Witch-stone, however, although also a multi-stem type, is extremely poisonous. It can be identified by the fact that its various stems are often found entwined. There are even different variations in which the stems interleave, e.g. the 2:1 type, where two stems, mutually



WATERDIVER WEED

entwined, are entwined by a third.

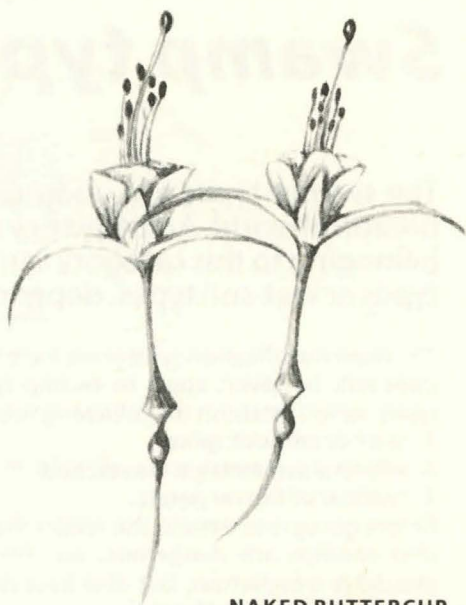
Other variations are 3:1, 3:2, 5:4, 4:1 and, in some parts of Brazil, 4:2 and 5:2.

A third representative of the multi-stem variety is the **yellow spine**, which can be identified by six regularly arranged spines directly under the flower. The spines are not poisonous, but may cause irritation on skin contact.

2. With or without leaves

If one takes a walk through a forest at the end of spring, and the sun is high enough, the brilliant green leaves of the **shelter-moss**, often confused with **green croaker spawn**, may be observed. The most beautiful variety is undoubtedly the **white lily**, a plant that can be quickly identified by its completely white leaf. Besides the white lily, there are also **red**, **yellow** and **green** lilies, although the latter is extremely rare. The **green lily** is unique in the botanical world. There is no general consensus as to whether the conspicuous green flower should be considered as a flower, or rather as a leaf. The last member of this category we will discuss is the **naked buttercup**, also unique in the botanical world because at first glance it has no leaves at all. In 1930, however, it was shown that the stem and the leaves had coalesced, i.e. grown together forming a whole. Actually the leaves form the outer ring of the stem which, as a result, is remarkably strong.

There are several anecdotes about the naked buttercup. According to one it was customary for the young men of ancient Russia to offer the girl they wanted to marry a naked buttercup. If the buttercup was accepted and put in a vase of water, this would signify that the girl was willing. One can only imagine the symbolic meaning if, instead, the stem was broken ...



NAKED BUTTERCUP

3. With or without vesicles

The number of fresh-water vesicular species is considerably smaller than in the corresponding marine category. Two plants are typical representatives of this class – the **crisparis**, which makes a strange crackling sound when trodden on, and the **bubble flower**.

Maroskuwski also classifies the **marine mermaid weed** as a member of this group, which is sometimes found in estuaries. This classification is not followed here.

The **crisparis** has small yellow vesicles at random places on the stem. They contain a yellowish, bitter sap whose alleged healing properties, described in many books, have never been adequately investigated.

The **bubble flower** grows abundantly in lakes and ditches. You may have stood at the water-side once, wondering at the small bubbles rising to the surface. It is this phenomenon that betrays the hiding place of the bubble flower, and to which the plant owes its name (unlike most species, the name was not determined by the small vesicles just under the leaves). The bubbles are caused by a pungent gas escaping from the vesicles, and it is therefore not surprising that in some parts of Canada the plant is referred to as **dung-weed**.



BUBBLE FLOWER

Swamp types

The swamp types are undoubtedly an important group in the botanical world. Actually they are a transitory group, since plants belonging to this category can be classified as either fresh water types or wet-soil types, depending on the water level.

The main classification system we have followed so far does not, however, apply to swamp types. For these types we will establish the following sub-categories:

1. **with or without spines;**
2. **bilateral symmetrical leaves; and**
3. **number of flower petals.**

Before going into details, the reader should remember that swamps are dangerous, not only because the ground is treacherous, but also because of the plants that can be found in the area.

We would remind the reader of the terrible fate that overtook the famous botanist William Daisy, of the University of Texas, during research in the Everglades. His remains were at long last found in the flower of the man-eating **mist lily**. Only by the heap of clothes found under the plant (apparently discarded by the lily as though it found textile unpleasant to eat) could the victim be identified.

1. With or without spines

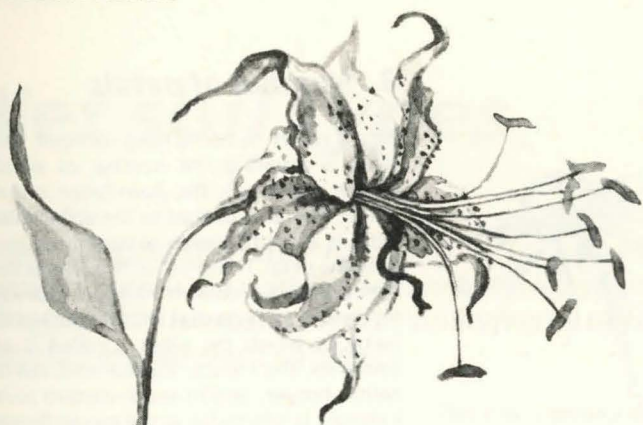
The first plant in this category we will deal with is the **spiny fern**. It is often associated with the **cheeky yellow thorn finch**, perched on the plant and singing its familiar song – ti ti tu tu ti ti tu tu etc. The leaves of the plant have a number of long, sharp offshoots, giving the plant its name.

The **mist lily** (mentioned above) is rapidly becoming extinct. It is one of the plants that give our swamps their characteristically sinister atmosphere. The leaves are curled, reflecting as it were – despite its beauty – the menacing unpredictability of the plant. The centre of the plant is formed by a strangely curled pistil. We have already warned the reader of this dangerous plant, and would add that it is easily confused with the **common lily**, which is completely harmless. One of the most notable

characteristics of the mist lily is that the end of the stem always bends sideways.

Sometimes the brown-beaked cross-head finch may be seen on the mist lily, its red tail wagging impatiently and giving the impression that even the slightest sound would be sufficient to frighten it away.

The last plant discussed here is the **tentacled polyp**. It has small tubercles on its sharp thorns, making the plant readily identifiable. The flowers of this beautiful plant are deep blue in colour, and have been a source of inspiration for many an artist. It was the tentacled polyp with which King Ludwig XI was poisoned. Never handle this plant without gloves!



MIST LILY

2. *Bilateral symmetrical leaf*

Hardly a soul is not familiar with the famous lines of Arthur's epic:

*Look, Arthur, great and brave
His shining sword blinds the eye
His eyes look to the East
His heart with resolution burns
A mind like discord ferns.*

Arthur's epic dates from 1033 AD and shows clearly that the **discord fern** was even then considered impressive. As the name suggests, the plant is a member of the fern family. It consists of a single stem that divides into two large graceful leaves. The plant appears on the coat-of-arms of many noble families, an indication of the esteem in which it was held in the past.

Another plant belonging to the bilateral symmetrical category is **prayer grass**. At first sight this looks like an ordinary clump of grass. Careful inspection will reveal, however, that the leaves are grouped two by two. It was Prof. Lanuski Sr. who first discovered that the leaf facing east was significantly larger than the other. Experiments with ultra-violet rays later confirmed his findings. The name of the plant originates from certain monasteries where, in the Middle Ages, the plant was attributed with sacred powers. Even today one may see prayer grass in glass pots on the window sills of some houses.

3. Number of petals

A last resort in identifying difficult swamp types is counting the number of petals. A simple example is the **poor-louse carnation** which, in sharp contrast to the **dribble flower** with its eight to eleven drooping petals, has only one petal. The petals of the dribble flower are usually covered with a sticky substance. It is interesting to note that this is reflected in the name by which the plant is called in other countries. The French, for example, call it the **spittle flower**, and in south-eastern parts of Ireland it is referred to as the **mucus flower**.

DRIBBLE FLOWER



Wet soil types

When considering this category it is tempting to think of transitory types, in particular those in between swamp and dry soil types. This is incorrect. Wet soil types must be regarded as an entirely independent category.

This is not surprising, since wet soil types are first and foremost those plants that adapt themselves easily to wet and dry periods. It is probably this unique ability that lead to John Wassermutter's famous statement: *"If I were a plant, I would wish my home in wet land!"*

Two simple sub-categories may be distinguished:

1. with or without spines; and
2. a hairy stem.

1. With or without spines

Of the many plants in this group, the **small pin palm** deserves a great deal of attention. The plant indeed resembles a small palm, but its stem is covered with a great number of small spines.

These spines should never be touched! If they are, nausea and violent fits of vomiting may result after about half an hour.

It is an interesting fact that all animals and insects, except the cross-wasp and the purple louse, shun the pin palm. The cross wasp populates the plant in large numbers, although this is not evident at first glance. A strong magnifying glass, however, will reveal that this insect usually hangs under the leaves of the plant, pressing its sucking organ on a purple louse.

The latter apparently secretes a very sweet substance on which the cross-wasp feeds. Maroskuwski speaks in this regard of the wasp "milking" the purple lice.

Secondly, attention should be drawn to the plant known as **nail green**. Its leaves are usually tightly rolled up, resembling small pins or nails. In its flowering period, nail greenspreads a soft carpet of pink flowers. It is a lovely plant and alone justifies a visit to a wet soil area.



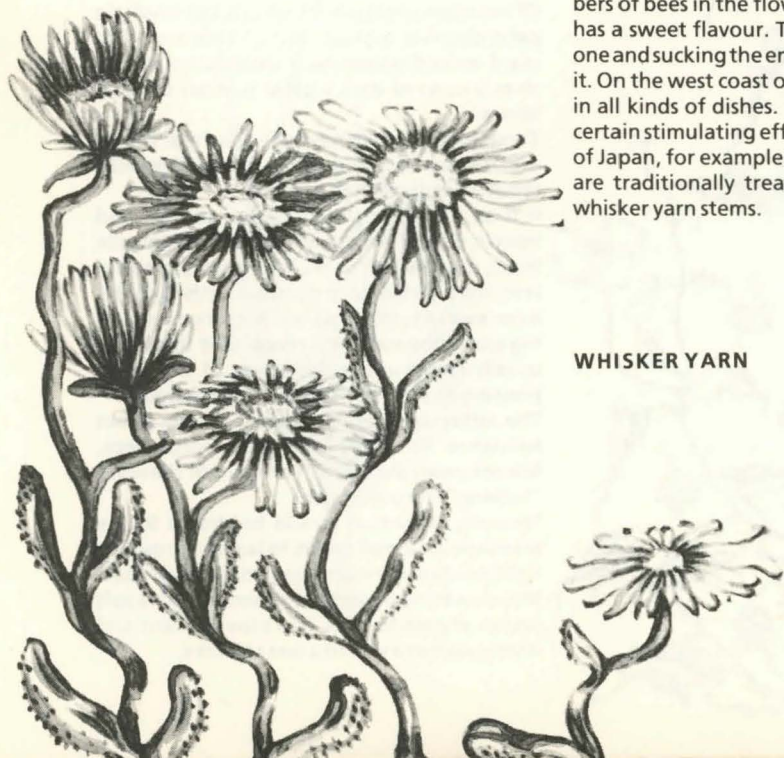
The last plant discussed in this sub-category is one that is readily identified by its numerous, twisted branches. It is the so-called **flesh-eating strangling plant**. The name refers to the way in which the plant strangles its victims before devouring them. As the flowering period is usually around Whitsuntide, this cruel joke of nature is sometimes called the **Whit-strangler**.

2. *Hairy stem*

Sometimes plants may be found of which the stem is covered with a blanket of white, furry hairs or threads (not to be confused with the covering of pins found, for example, on the pin palm). One of these is **beard moss**. On young plants the threads are relatively dark, but as the plant grows older they gradually turn white.

Beard moss can be easily identified by the regularly-spaced rings along the stem, caused by the absence of the tiny hairs. Never try finding these rings by running your finger along the stem, because the hairs cause a severe itch. Almost every botanist can tell amusing stories of accidentally sitting on beard moss. All these stories have one thing in common: the hairs penetrate all kinds of clothing! **Whisker yarn** also belongs to this sub-category. It has a remarkable "wavy" stem, and although the hairs covering the stem are hardly visible to the naked eye, small folds can be clearly distinguished on the leaves. The flowers of the whisker yarn are brightly coloured and bear a close resemblance to an extinct plant called the **daisy**. Whisker yarn has a large nectar production, and it is therefore not at all surprising that it is frequented by large numbers of bees in the flowering season. The stem has a sweet flavour. Try it yourself by picking one and sucking the end—you will certainly like it. On the west coast of Japan the plant is used in all kinds of dishes. It is also known to have certain stimulating effects. In the eastern parts of Japan, for example, newly-wedded couples are traditionally treated to a meal of dried whisker yarn stems.

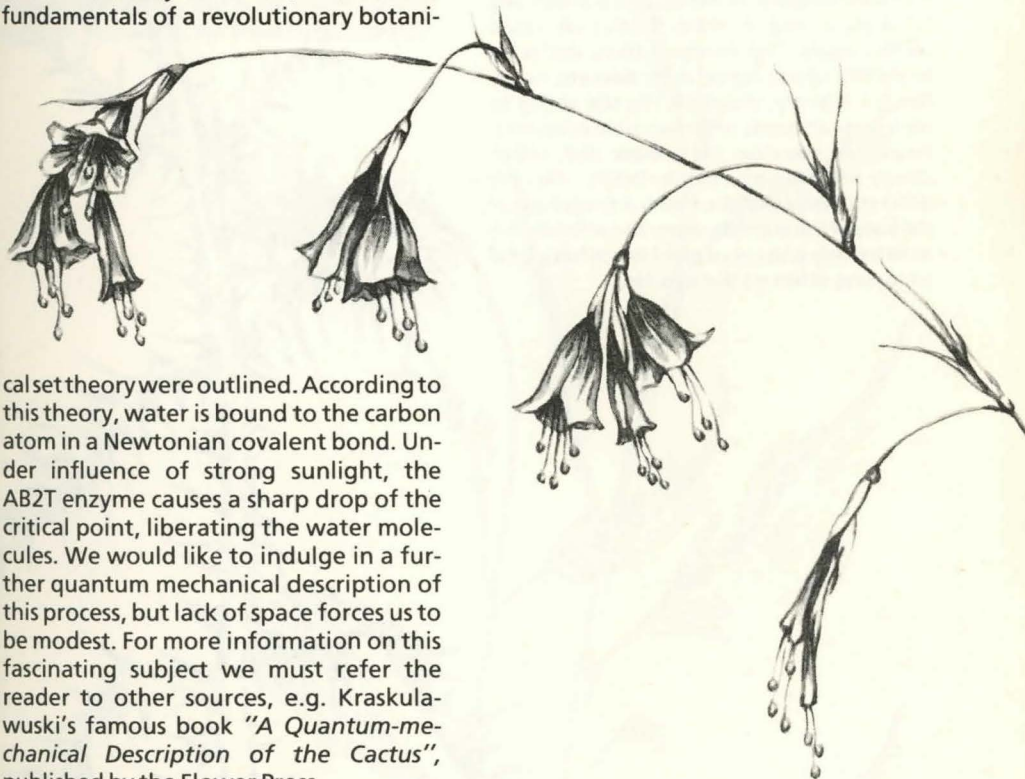
WHISKER YARN



Dry soil types

The last plants discussed here are the dry soil types – quite a remarkable category, since plants need water. That nature is able to show her beauty even in dry soil, can only be regarded as an extraordinary gift of adaption. Many biologists of note have spent years of research on the basic principles underlying this adaptive mechanism.

An excellent systems analytical treatise on the subject was written by Birkenliar of the University of Florida, in which the fundamentals of a revolutionary botani-



cal set theory were outlined. According to this theory, water is bound to the carbon atom in a Newtonian covalent bond. Under influence of strong sunlight, the AB2T enzyme causes a sharp drop of the critical point, liberating the water molecules. We would like to indulge in a further quantum mechanical description of this process, but lack of space forces us to be modest. For more information on this fascinating subject we must refer the reader to other sources, e.g. Kraskula-wuski's famous book "*A Quantum-mechanical Description of the Cactus*", published by the Flower Press.

In classifying dry soil types, the following distinctions are usually made:

1. presence of spines;
2. leaf shape; and
3. stem shape.

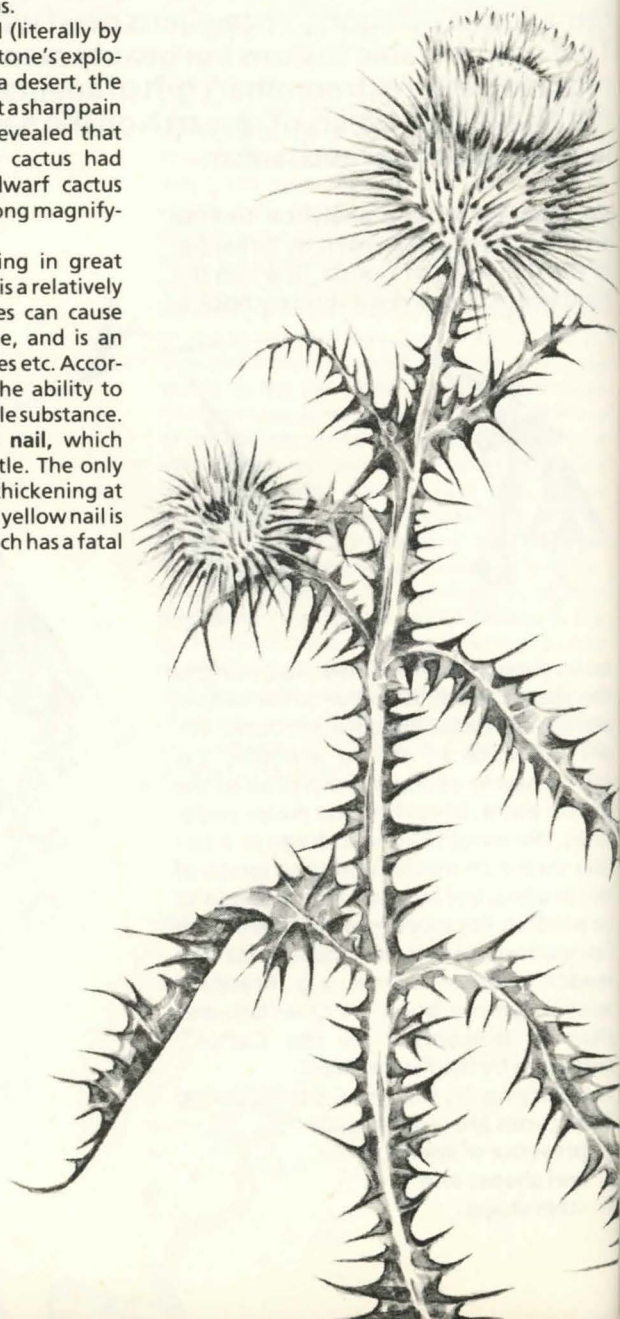
1. Presence of spines

The most obvious group in this category is, of course, **cacti**.

There are many different kinds, e.g. *Epiphyllum-Phyllocactus*, *Zygocactus*, *Rhipsalis*, *Opuntia*, *Cereus*, *Echinocereus*, *Echinopsis*, *Coryphantha* and the dwarf cactus.

The **dwarf cactus** was discovered (literally by accident) during one of Dr. Deadstone's explorations in Africa. While crossing a desert, the enterprising scientist suddenly felt a sharp pain between his toes. Examination revealed that an extremely small marble-like cactus had caused the discomfiture. The dwarf cactus rarely flowers, and if it does, a strong magnifying glass is needed to see it.

A plant in this category occurring in great numbers is the **startle thistle**. This is a relatively large plant, and its sharp thistles can cause serious injury. The flower is blue, and is an important source of nectar for bees etc. According to Miskery, the plant has the ability to store large amounts of this valuable substance. Finally we mention the **yellow nail**, which closely resembles the startle thistle. The only difference between the two is a thickening at the base of the plant. Beware: the yellow nail is an extremely poisonous plant which has a fatal paralysing effect on the muscles.



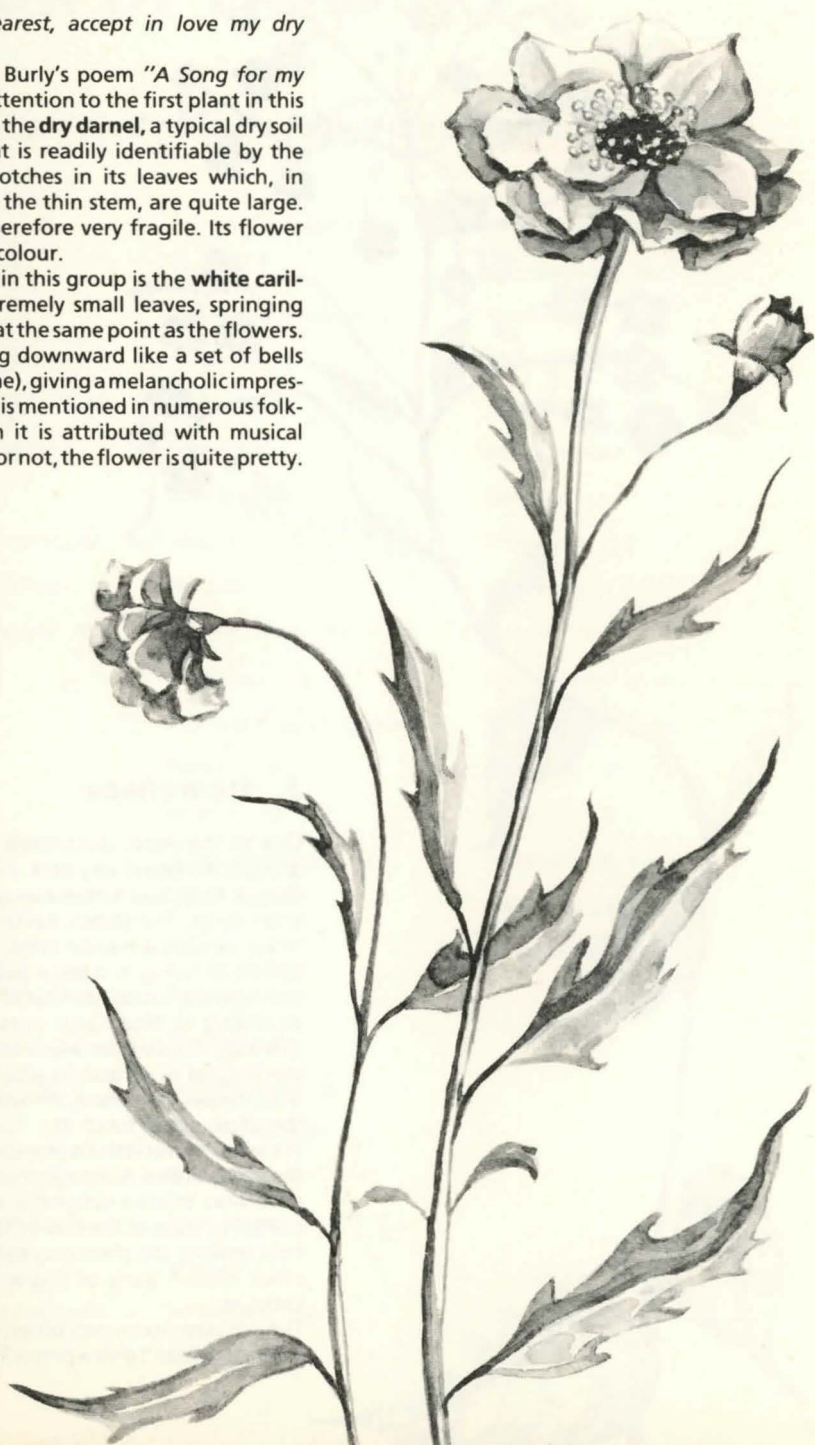
STARTLE THISTLE

2. Leafshape

"Truly, my dearest, accept in love my dry darnel."

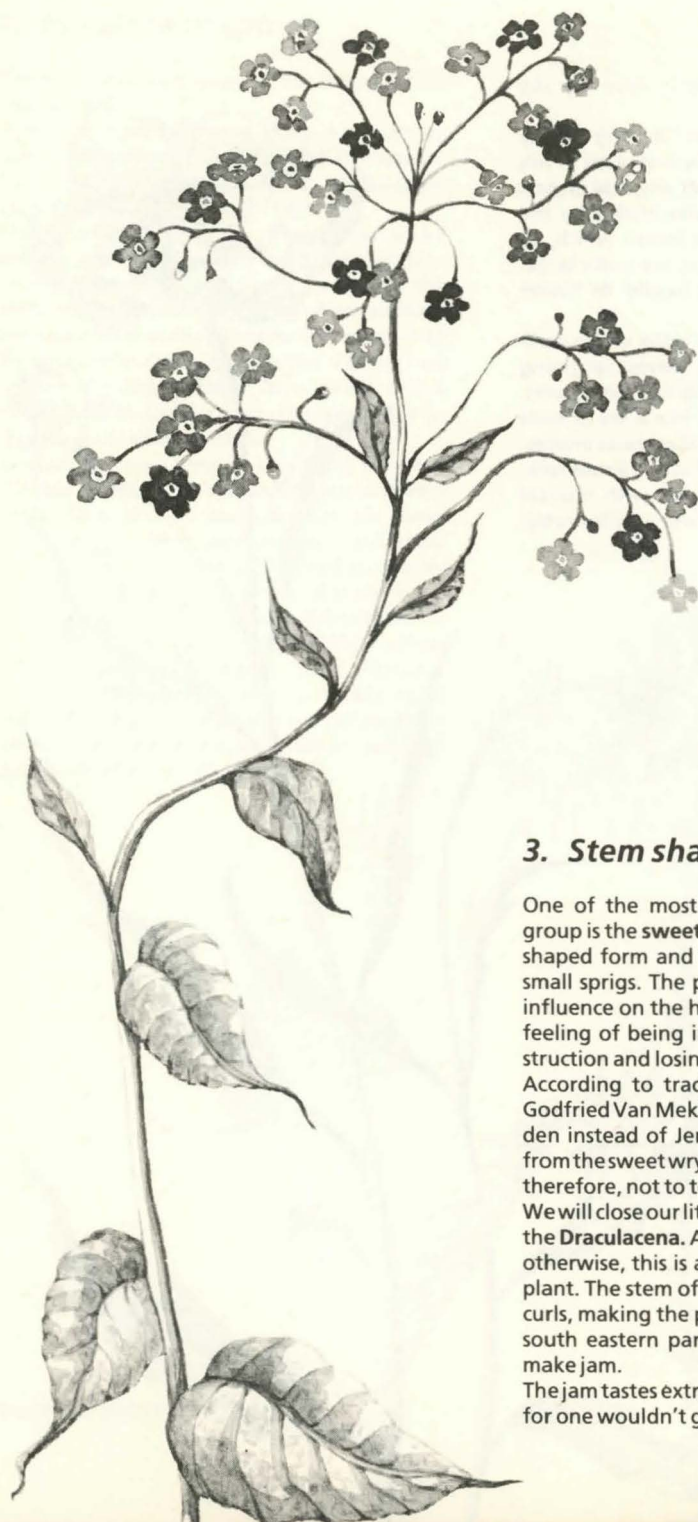
This line from Burly's poem *"A Song for my Love"* draws attention to the first plant in this sub-category – the **dry darnel**, a typical dry soil type. The plant is readily identifiable by the conspicuous notches in its leaves which, in comparison to the thin stem, are quite large. The plant is therefore very fragile. Its flower has a vivid red colour.

Another plant in this group is the **white carillon**. It has extremely small leaves, springing from the stem at the same point as the flowers. The latter hang downward like a set of bells (hence the name), giving a melancholic impression. The plant is mentioned in numerous folktales, in which it is attributed with musical qualities. True or not, the flower is quite pretty.



DRY DARNEL

SWEET WRY NECK



3. Stem shape

One of the most remarkable plants in this group is the **sweet wry neck**. Its stem has an S-shaped form and terminates in a number of small sprigs. The plant's nectar has a strange influence on the human mind, giving one the feeling of being in a large bulb-shaped construction and losing all sense of direction.

According to traditional tales, the crusader Godfried Van Meklenwiede ended up in Sweden instead of Jerusalem after eating honey from the sweet wry neck. We would advise you, therefore, not to touch it!

We will close our little book with a discussion of the **Draculacena**. Although the name suggests otherwise, this is a delightful, non-poisonous plant. The stem of the flower has conspicuous curls, making the plant easy to identify. In the south eastern parts of England it is used to make jam.

The jam tastes extremely bitter, however, and for one wouldn't give a penny for it.

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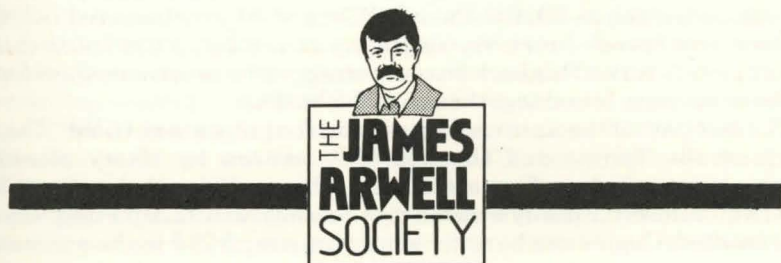
The Book of Flowers



JAMES ARWELL

(2060-2132)

A publication of the James Arwell society, commemorating the birth, one hundred years ago, of one of the most distinguished scientists the world has ever known.



New York
September 2160

Foreword

It is with great pleasure that we present this publication on James Arwell. Our society has been in existence for 28 years now, and it is flourishing as never before. In this regard we must pay tribute to the work of our first president, Professor Waterman.

From the day of its inception (28th November 2132) to the day of his departure (23rd December 2132) it was Waterman's dedicated effort that laid the basis for the Society as it is today. In his opening speech, Waterman stated: "Of all the scientists the world has ever known, not Newton, Leibnitz or Einstein, but James Arwell has made the greatest impact on civilization, and it will not be long before this fact is universally accepted."

Waterman was right. The hallmark of true genius is not in the degree of complexity of a theory, but rather in its simplicity, and, above all, the practical consequences it has for everyday life. Older people among us can, perhaps, remember the names of Bach, Mozart and Beethoven – composers who were regarded as great only a few centuries ago. We now know that Elvis Presley, the Beatles and Michael Jackson were the real geniuses. Their simplicity won the hearts of millions. In the same way the influence of James Arwell will eventually be recognised.

In this anniversary edition we have collected the most important works of James Arwell, including, of course, his diary, from which we have selected the references to his discovery of the Tenins. His inquiring mind and sincere concern for establishing the truth reflect his unique personality. The story of Patricia and Gwendila, which played such an important part in his studies, has also been included in this edition. Following this are the notes that Arwell almost certainly must have made after reading the story. They were discovered in an old suitcase in the attic of his farmhouse. In the same suitcase, antique literature on computer programming languages such as BASIC, Pascal, ADA and ALL (introduced in 2020 AD) were also found. From his biography it can be concluded that Arwell completely turned his back on computing, and it is curious, therefore, that the notes were found together with the books.

The last part of the anniversary edition contains a text titled "The way of life of the Tenins and the Lepries", written by Harry Moreover, a prominent member of our society. It is illustrated with drawings done by Arwell himself. Finally a number of classical prints depicting Arwell are presented. Copies can be ordered by remitting \$ 270 to the account of our treasurer.

From the diary of J. A.

2nd September 2084

Where is tranquillity, where concentration? I got up at 8 a.m. today. Much too early, of course, because I have nothing to do for the next five days. I still remember the fancy arguments in favour of the introduction of the two-day working week.

Automation, according to those blind fools, is a blessing for mankind, liberating him from the obligation to work. Work degrades a person to a slave, and thanks to the two-day working week the remaining five days can be used to enjoy another way of life. Work, apparently, has become a matter of secondary importance. Fine, but what is life all about?

3rd September

Looking out of the window, I can see boys playing with robot cars in the street. On old photographs you can see boys playing with cars too, but those cars were different. What is it that is pulling me back into the past? Is it the tranquillity...?

4th September

Today I took a long walk. I drove a long way past the mono-docks, where the noise is unbearable. I stopped at a sandy track in the forest, parked the car, and started walking. Forests always impress me deeply, and fortunately hardly anyone frequents them nowadays. Being one with nature gives a great feeling of freedom.

My parents did not like forests at all, which seems strange, considering that they spoke of them as of some kind of paradise. Their database was crammed with books on nature, and even the videobase was filled with a good number of productions on the subject.

After walking westward for about half an hour, something remarkable happened. While examining a fly-fungus, I heard a loud buzzing sound. I soon discovered that it was caused by a huge fly, hovering between the trees like a helicopter. Of course, I knew of the existence of giant insects. The daily papers have been packed with stories about them, and it was supposed that their enormous growth had been caused by a new kind of insecticide.

Terrified, I hid behind a large oak. Then, from behind a berrybush, a girl-like creature with flowers in its hair, appeared. It was a delightful creature, closely resembling a human being, although it was immediately clear that this could be no human being. "She" beckoned to the fly, which apparently wanted to land next to her. Something even more remarkable followed. The creature looked in my direction, penetrating me with her beautiful eyes and nailing me to the ground. I knew that I could hardly be visible, but it was almost as though this wonderful creature could see through trees! A moment later she simply disappeared. Not gradually, but in a twinkling of an eye, just as though somebody had turned off a switch.

5th September

I had a very uneasy night. Had I dreamt everything...? To make sure, I got up and looked through yesterday's notes. I am certain I did not dream it, because I had written it all down before going to bed! My notes seemed very short, however. I shall set down the details but only for those things of which I am absolutely certain.

Eyes: penetrating, kind and ... I don't seem to be able to find the right word ... a little calculating, perhaps.

Hair: long, curly and blond, decorated with flowers.

Clothing: simple, not very colourful, coarse.

For the rest I don't seem to remember any details, except that she was remarkably small.

8th September

I'm in two minds about telling the world of my discovery. People will certainly not believe me, but on the other hand it would be cowardly not to make the matter public. This morning I told Laura the story laughingly. It scarcely seemed to impress her. She thought I had been writing a novel.

11th September

For the fifth time now I have returned to the spot where I first saw that beautiful creature. I had great difficulty in finding it again, but at last I succeeded. Many small details, a broken twig, a tree with strangely formed branches, a brook, seemed to have left their marks on my memory during my first trip, and helped me to find the way back. I sat and waited for hours on end, but nothing happened. Had it, after all, been just a dream?

12th September

It is strange how a single incident can change one's life. I'm absolutely convinced that I've witnessed something of paramount importance, and that I will see it again. For the time being, however, I have resolved to keep the matter to myself. Had I told everybody, then I would have been only one of a whole crowd of people that know about it. Now, the secret is giving a remarkable new meaning to my life.

13th September

Today I retrieved all books and video series about fairy-like creatures from my database. There was a tremendous amount of information on the subject, so I was forced to make a selection.

In the first place, my selection criterium was based on the fact that I was absolutely certain that the creature I was interested in really existed. I therefore eliminated all books I knew without doubt to be based on fantasies. This left only a relatively small quantity of material. Next, I started reading the remaining books, rejecting them as soon as I encountered any nonsense about fairy castles, dragons, bewitched frogs, etc.

Ultimately there was only one book left – the one containing the story about Patricia and Gwendila. It was an anonymous story of Russian origin, so different from the usual stories that there could well be something in it!

18th September

I'm absolutely sure about it – the key to everything is to be found in the short tale about Patricia and Gwendila I discovered a few days ago. I'm convinced that the author experienced the same things that I did, and had written it down in this fashion so that nobody would realize it.

19th September

I have been reading the tale of Patricia and Gwendila. Nobody reading the story would get its real meaning unless they had witnessed a similar situation ... The author must have realised this. There is no doubt about it – I'm on the right track!

24th September

I'm starting to doubt myself. I have read the story at least a hundred times and know it almost by heart. As a test, I'll try writing it down myself.

The remarkable story of Patricia and Gwendila

A Modern Fairy Tale

Dear Readers,

All fairy tales are fantasies except the one I'm going to tell you now. For this is the charming story of Patricia and Gwendila.

Once upon a time (because all good fairy tales begin this way), perhaps not so long ago, two young sisters, Patricia and Gwendila, lived in a small village at the edge of a deep, dark forest.

Gwendila was fascinatingly beautiful. All the boys of the village adored her and it seemed that even the birds were charmed by her presence. However, Gwendila's character was not at all as pleasant as her appearance. She was very lazy and passed her time sitting in front of her looking-glass. She used a great many creams, lotions and perfumes as well as too much make-up, though she didn't need it at all because all the boys of the village loved her anyway.

Every Saturday she went to the discotheque in the village. She never carried a penny in her purse because there wasn't a boy who would not be prepared to offer Gwendila anything she desired.

Nothing would make him happier than to offer Gwendila something and for her to accept. This often resulted in arguments and even fights to decide who would be the lucky one to have the honour of taking Gwendila home, but this was almost always the boy who had the most expensive car, or, sometimes, during the summer, Gwendila would accept a ride on the fastest motorbike.

Compared to her sister, Patricia was not very beautiful.

Although she was not ugly, her forehead was too high and like many young girls she suffered from acne. Patricia never used make-up or similar "beauty aids". After a good wash with soap and water she would start her work and carry on for the whole day. It wasn't long before Patricia was known

as the most hard-working girl in the village. No two sisters could be so different.

Now the reader may ask whether this is not over-exaggerated, but that is not the case. Remember that Patricia and Gwendila's mother had been dead for some time and their widowed father, like so many others, had been unemployed for many months. The only source of income, after the Unemployment Benefit had run out, was National Assistance, and, like so many families in similar circumstances, the greater part of this money was used to pay the rental for the videorecorder.

If the reader has concluded that the family was living in poverty, he or she would be wrong, for Patricia had found a way of earning money by making jam and selling it to passers-by.

However, she had never reported these earnings to the Inspector of Taxes, because she, like so many others, saw the tax system as a bottomless pit into which you could pour money indefinitely but never receive anything in return. Therefore, thanks to Patricia's hard work and initiative, and despite Gwendila's extravagance, it was possible for the family to live in reasonable comfort, and even the two dogs, Chang the Pekinese and Murphy the Irish wolfhound, were always well fed and looked after.

Now, as I said, it was Gwendila who visited the disco every Saturday, where she was the belle of the ball and turned every boy's head. But then, one Saturday, an event took place about which the village still speaks in hushed voices.

As usual, Gwendila was at the disco. Suddenly, there was a startled cry of panic in the street, "The ants, the ants, the ants are coming!" Everybody in the disco was terrified and in panic they fled from the hall.

That is, all except Gwendila. She had led such a sheltered and happy life that she had never known fear. It wasn't long before Gwendila was alone on the dance floor and despite the cheerful music that still came from the stereo loudspeakers, it slowly dawned on her that something was wrong.

So she decided to leave the building and went out on to the street which was, by now, completely deserted. Without any money, she couldn't phone home, nor could she take a taxi, even if one had been available. With difficulty she found her way home, but on arriving there, she noticed something very strange. Patricia was nowhere in the house. Then she noticed her father, who was sitting in a corner, sobbing in an uncontrollable manner. All this had a most unusual effect on Gwendila. She suddenly burst out in a fit of anger and begun to hurl accusations and insults at all around her. This was too much for her father. He suddenly stood up and left the house without a word and was never seen again. After realising there was nobody present to hear her tirade, Gwendila's mood changed and she cried as she had never cried before.

Her wailing was so loud and intense that some of the neighbours even

dared to leave their houses and go out on to the street. They told Gwendila that they had seen a great army of ants moving in the direction of the house where the sisters lived. They had not seen any more because they had quickly shut all the doors and windows, being afraid the ants would invade their homes. When Gwendila heard this she became angry with her neighbours and started to curse them although their intentions were well meant. The neighbours, angered by her selfishness, soon dispersed and returned home and had anyone been listening they would have heard remarks such as "It's a result of her upbringing".

As soon as Gwendila was alone, she began crying again.

Without doubt she would have died from wretchedness, if our two doggy heroes Chang and Murphy hadn't shown up to comfort her and lick away the tears from her eyes. As Gwendila looked up at the dogs, they ran to the front door as if guided by some invisible hand. Gwendila understood that she should follow the dogs and went to the door and opened it. The dogs sprang through the open door and raced down the village street in the direction of the forest with Gwendila following, and for the first time she felt a vague sense of hope as she followed the trusty four-footers. Once they were in the forest the dogs dashed and darted in all directions until they came to an old oak tree that was in a very bad state due to all the names that had been carved in its trunk.

The dogs at once became still and sat quietly looking at the massive trunk and Gwendila realised that this was the place where she should wait. In the meantime it had become dark and only the light of the silvery moon illuminated Gwendila's platinum blonde hair.

After all she had recently been through, Gwendila was very tired and so it wasn't long before she lay down under the protecting arms of the old oak and fell into a deep sleep. On waking the next day she began to recount to herself all the events of the previous day and to wonder if the strange journey into the forest had some deeper meaning she was not yet aware of.

But all doubt was removed when she saw an enormous fly coming towards her. Gwendila realised this was no ordinary fly and it must be connected in some way with the huge ants that had so frightened the people of the village. Some strange power was at work because such exceptionally big flies only live in fairy tales, and as you already know, this is not a fairy tale.

The fly beckoned to Gwendila with its antennae that she should climb on its broad back. As soon as she had seated herself the fly flew off over rivers and dales, hills and plains until a very high mountain came in sight. This mountain looked just like a Swiss cheese for it seemed to be full of holes, but as they approached Gwendila could see that these were caves and tunnels. Stranger still, it was inhabited by the ants which had invaded the village just a short time ago (and had been completely built by these industrious creatures). Suddenly in a clearing Gwendila saw Patricia who had been taken



Gwendila and the fly.

JAMES ARWELL MEMORIAL EDITION





prisoner and was being forced to make jam for the ants, because as everyone knows, these insects are very fond of fruits and sweetness and what could be a better combination than Patricia's marvellous jam?

Quickly dismounting from the fly, Gwendila hurried in the direction of Patricia, and when Patricia saw Gwendila approaching her pent-up emotions caused her to burst out into tears and she cried out, "Oh my darling sister, please rescue me!"

"What must I do?", asked Gwendila. "You see the perfume bottles near the nest entrance? You must open the correct one and I shall be saved. But be careful; they are not all the same and if you choose the wrong one you might release an evil spirit". Gwendila looked at her sister through her tears and said: "But what if I do open a wrong bottle by mistake?" Patricia looked her sister in the face and said: "Gwendila, you must think very carefully".

This advice sounded strange to Gwendila because she never in her whole life thought of anything very seriously. She realised no matter how much she tried to reason which was the correct bottle, she would have to open one of them in the end.

She walked along the row of bottles and saw that there were five of them, all having a number on their stoppers. It was obvious to her that she should not open the first one she came to, so she opened number five first. However, when she removed the stopper she couldn't smell anything but instead she heard a voice say:

Five is more than four and what is more overshadows all that is less.

This was complete nonsense to Gwendila and because she couldn't think of anything better she opened bottle number four. Again, she heard another deep voice say:

Four is more than three and what is more overshadows all that is less.

"That is probably quite correct", thought Gwendila, "but I am not getting anywhere. No doubt if I open bottle number three I'll hear the same about three being more than two and then I can go on to the next pot and hear a similar riddle". However, as she didn't know what better to do, Gwendila opened bottle number three; again there was no aroma, but the words were different this time and were something like this:

Clouds cover the Earth's surface so that it is impossible to see the moon.

"Ah", thought Gwendila, "this time it's something different. There must be some connection here; it probably has something to do with overshadowing or covering". Feeling more hopeful she now opened the penultimate bottle and again she heard a voice:

One aroma smells better than another and what is more covers all that is less.

"At last something about an aroma", thought Gwendila, "but I'm still no wiser and there is only one bottle left". With trembling fingers she took hold of

the remaining stopper, but before she could remove it, the voices from the already opened bottles chanted in unison:

What is gone is gone, what is empty is empty;

An aroma disappears, chances vanish.

The sound of "chances vanish" didn't please Gwendila at all because she understood all too well that her chances were becoming less and less. The bottles were speaking plainly for the first time. "An aroma disappears" didn't give her too much hope either because it could mean that all the aromas of the bottles that had been opened had already disappeared.

For the first time in her life Gwendila realised that she really must think deeply. If she were to open the last bottle it could mean she could lose her last chance. "Obviously", thought Gwendila, "it has something to do with 'overshadow', but in connection with aromas". Further she realised that every aroma was always "overshadowed" or surpassed by another one that was always present. But what could this aroma be that was always stronger than the others?

Suddenly it became clear to Gwendila that the excessive amount of perfume that she used had prevented her perceiving the delicate aromas of the scent bottles. It was now crystal clear to her that to open the last bottle would achieve nothing. She first had to wash herself and her clothes so that she no longer smelled of perfume.

In the distance Gwendila saw a small waterfall and running to it she quickly undressed and washed herself thoroughly. She didn't even wait for her clothes to dry before putting them on and dashed back to the remaining bottle. She carefully took hold of the stopper and partly withdrew it. "Maybe I'll hear the voices again", she thought, "and then I'll close the bottle quickly". But no voices were to be heard anywhere.

For the first time Gwendila noticed a remarkably sweet aroma and when she looked around she saw that the ants had stopped noticing her. Gwendila understood that this was her chance and she hurried to her sister. She took her sister by the hand and without any hesitation went over to the fly that had seen everything that had just taken place. Without a trace of fear, Patricia climbed up onto the fly's back and took her place behind Gwendila, holding her lightly around the waist so as not to fall off. The fly flew off immediately, returning to the oak tree in the clearing in the forest. The most remarkable fact was that the sisters never returned to the village.

Patricia grew up to be a sincere and friendly woman.

Gwendila retained her youthful beauty but from time to time a look of uncertainty could be seen in her eyes.

And so ends this fairy tale which isn't a fairy tale at all.

I have seen strange things that are not possible in fairy tales which all end happily ever after.

Notes on the story of Patricia and Gwendila

- The first sentence: “All fairy tales are fantasies except the one I’m going to tell you now” is very unconventional, suggesting in itself that the story is indeed authentic and not a fairy tale at all.
- The passage about the fly is very interesting. The statement that: “such exceptionally big flies only live in fairy tales and as you already know this is not a fairy tale” emphasizes again the fact that we are not dealing with a fairy tale.
- The creature I saw in the forest resembles the description of Gwendila. At the end of the story the author remarks: “Gwendila retained her youthful beauty, but from time to time a look of uncertainty could be seen in her eyes”. I saw the same expression in the eyes of the creature in the forest. In ordinary fairy tales a statement like this would not really be necessary. The author is describing reality... it can NOT be a fairy tale!
- In the last sentence: “And so ends this fairy tale which isn’t a fairy tale at all. I have seen strange things” etc. the author states for the third time that his story is authentic.
- The author describes that Gwendila rode on the back of a fly. It can’t be coincidence that I too saw a girl-like creature and a fly about to carry her away.
- The pervading tone differs from all other stories in the book. Apparently the author collected a number of ordinary fairy tales as a disguise and simply added his story to the rest.
- Certain passages are indeed unrealistic. Could the author have wrapped up his real meaning in an otherwise concocted story?
- Could the creature I saw be Gwendila and, if so, could Patricia also exist?

The way of life of the Tenins and Lepries

The following account is based on the notes made by the well-known author James Arwell, who for years conducted a study into the way of life of the Tenins and the Lepries. Arwell chose the name Tenins because of the peculiar appearance of these creatures. Tenins are similar to Elves. But this similarity only runs skin-deep. Beneath their beautiful appearances they can be very different. Usually they are good and helpful, but their moods can change rapidly. Then they are dark and deceitful. This change is characterised by a glint in their eyes and a change in the use of their language. This change in speech is discussed later.

The reader will probably have wondered how the Tenins and Lepries have survived after all the other mammals became extinct (except for certain specialised breeds in zoological gardens). James Arwell also dwelt on this subject and reached a quite simple conclusion. It has always been the Tenins and Lepries who have looked after the insect farms, and it is probably as a result of this that they are now tolerated by the insect population.

In contrast with the Tenins, the Lepries are characterised by a total lack of physical beauty. It is unlikely that all of them are old because Lepries have often been seen with children.

However, Lepries that could be classified as adults do not seem to exist. Apparently they assume their typical good-natured Leprie appearance as soon as they reach puberty. They are fortunate in that, whether they are adults or children, the influence of old Father Time is hardly noticeable.

Another feature that distinguishes them from the Tenins is the friendly disposition of the Lepries. If there is anything that characterizes their appearance it is the friendly look on their faces. They take life as it comes ("c'est la vie" would seem to be their motto). There is no evidence whatsoever of a hierarchical structure, but if there is one, no Leprie has ever attempted to assume a position of leadership.

This does not imply that Lepries cannot accept responsibility. Arwell often observed how a Leprie in need was immediately helped by others even if they were complete strangers. This is a sense of responsibility that is inherent in every Leprie and is naturally accepted, resulting in a leaderless society.



Lepries in their habitat,
gathering herbs and taking a nap.

The Lepries follow their daily routines without the necessity of being controlled by any bureaucratic structure and their outward appearances certainly prove that they find this way of life pleasantly acceptable.

Tenins and Lepries live in natural surroundings. They can often be found in a tree, sitting on a branch with their eyes half-closed, enjoying the sun. Formerly it was assumed that both groups lived closely together, but this now seems to be wrong. In the homes of the Lepries, one seldom sees a Tenin. Perhaps the same is also true of the Tenins' homes. However, we are not sure of this, for the simple reason that the houses of the Tenins have hardly ever been seen. Apparently Tenins prefer to conceal their private lives while Lepries do not see any point to this.

If a short description on the Lepries' way of life were to be given, then it could be said that Lepries lead a life similar to that of the old Teutons. Like the Teutons, Lepries usually dress in clothes they make from old remnants. They usually wear an odd-looking cap which resembles a kind of night-cap fringed with tiny bells that ring with every turn of their heads.

Lepries, and possibly Tenins, have many artifacts in their possession which previously belonged to human beings who used to live in large numbers on this planet. For example, they know how to produce fire by simply using almost-empty cigarette lighters, which were discarded by members of the "disposable society". They have retrieved large numbers of these lighters which at one time formed a threat to the environment. The lighters have been invaluable because fire plays an exceedingly prominent role in their life, especially when the temperature begins to drop. Fire is, of course, also very important in the preparation of food.

This was observed by James Arwell, who noted that Lepries prepare a kind of blueberry soup secretly flavoured with additional herbs. Arwell also added a footnote that discarded tin cans were used as cooking utensils. He was once fortunate enough to see the effects on a Leprie after swallowing some of this concoction. The Leprie in question turned completely blue except for his hands, which took on a bright yellow hue. Strangely enough this apparent food poisoning did not alarm those around the unfortunate fellow; on the contrary, the other Lepries burst out in spontaneous laughter.

This behaviour became more confusing when the poor victim swelled and rolled all over the place like a giant beach ball. This raised the volume of laughter so much that it could be heard for miles around. It was in fact an extremely curious type of laughter that can best be described as follows:

WAU, WAU, WAU

The sound of this strange laughter brings us to a discussion of the language and speech of the Lepries and Tenins.

First, the Lepries. These "wee folk" seem to be incapable of fluent speech. This at first seems most odd, since Lepries are often seen with a book

in their hands, giving the impression that they are fervent readers. However, although we cannot be certain, it seems that they are only interested in books with many illustrations, obviously left behind by human beings. It is quite common for a Leprie to sit looking at a photograph for hours on end, and James Arwell has even reported that he personally observed a Leprie who, with a serene look on his face, spent at least five hours staring at the same picture. What was the subject of this picture? Nothing more or less than a Tenin sitting astride an enormous butterfly; most incredible but nevertheless true.

All that can be established from the above is that Lepries are capable of concentrating on certain subjects, but that they are interested only in illustrations (and not the written word). We may conclude from this that Lepries are illiterate. Their vocal sounds have much in common with the staccato barking of the sealion, except that their language, if it can be called that, includes a limited number of recognizable words that could have their origin in Celtic Welsh. A Leprie has been known to stand in front of a hollow tree and continually shout:

WR, WY, WY, WL, WY, WL, WR, WL.

In spite of seeming strange to our ears, these sounds most likely indicate something definite concerning the place in question. We must not forget that Lepries enjoy passing their time in hollow trees. A Leprie who obviously felt some impending danger was quite clearly heard to shout:

WR, WR, WR, WL, WL, WL, WR, WR, WR, WL, WL, WL

Obviously these sounds convey some sort of message. The famous linguist Dr L.J. Stutter has suggested after years of intense study that WL WL WL could refer to a member of the family. A single WL could, in Dr. Stutter's opinion mean "father", while WL WL represents "mother" and the family as a unit is heard in the triple sound. However, this supposition is strongly disputed in linguistic circles.

Now let us consider the language of the Tenins. Due to their remarkable similarity to human beings, they may possibly have lived for some time unrecognised among people and adopted some of their patterns of speech. This is a major achievement. Their speech makes use of verbs but only in the infinitive form. There are no personal pronouns or prepositions so that these must be determined from the context. Therefore a sentence such as

EAT TREE

could also mean: I EAT/ATE NEAR THE TREE or WE EAT/ATE NEAR THE TREE or EAT YOU (DO YOU EAT) NEAR THE TREE? or THERE IS SOMETHING TO EAT NEAR THE TREE.

The number of meanings are practically unlimited when the preposition NEAR is substituted by a number of other possibilities such as IN, ON, AT etc. Further, the Tenins understand various concepts such as left and right, but like many children (and some adults) they can confuse these. It is another remarkable fact that their personal feelings are highly developed, especially when expressing these in words. In this respect many words have been formed not only to permit these feelings to be made vocal but also to convey different shades of meaning by adding suffixes as in Ugric.

For example, a Tenin would never consider using a simple expression such as "I love you", because he expects to convey exactly what the original feelings were before he became happy (fell in love).

But, contrary to the language of Lepries, Tenins use complete vowel sounds, again showing the similarity of the language to human speech. Only the following suffixes are known at present:

- A: I was already happy and I am still experiencing this feeling.
- O: I was not happy, neither was I sad, but, on the contrary, I was indifferent; but now I am happy.
- U: I was sad but now I am happy.
- I: I was tired but now I am happy.

Therefore, assuming that the first person singular is intended, the expression

FIND FLOWER TREE HAPPYU DANCE

would mean: "I found a flower near the tree, I was sad but now I'm happy and I dance for joy".

It can be seen from this example that this way of expressing feelings is quite forceful, especially when changes of mental attitude are described.

- By Harry Moreover

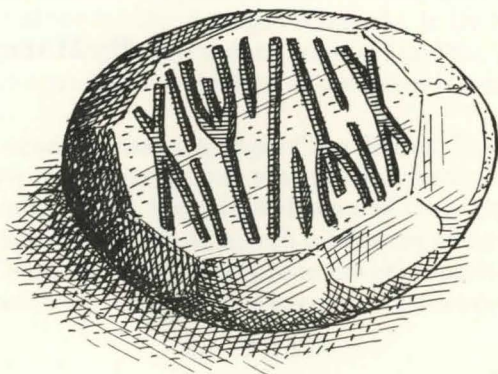
Drawings by James Arwell

The following drawings are by James Arwell and were found, together with a number of notes, in a wine bottle under an old oak. Apparently Arwell wanted to hide them. Could it have been because he did not want to share his secret with others? Did he fear the Tenins and the Lepries? Or was it simply a matter of putting his information in a safe place? We do not know.

Many of the drawings were done with a pencil and brush, and it is hard to imagine that this could have been done secretly from behind the bushes. Some of the drawings even suggest that the subject posed patiently while the artist was busy. In any case, the drawings are quite meticulous. Perhaps the most surprising fact of all is that no photographs seem to have been taken.

It is thought that James Arwell may have developed a close relationship with the Tenins and Lepries, which enabled him to do his work quietly. His research on the language of these creatures also suggests such a relationship. Assuming this is correct, it should be pointed out that Arwell was probably the only human being to have established such close contact with these elusive creatures.

In 2132 AD, Arwell was found dead in the vicinity of a farm in Ireland. In his clenched hand a number of strangely-cut stones were found, each bearing the inscription:



A Tenin



- A little smaller
than humans

- Blonde or Reddish Hair

- Rolled-up cloth over
the hair during
the winter

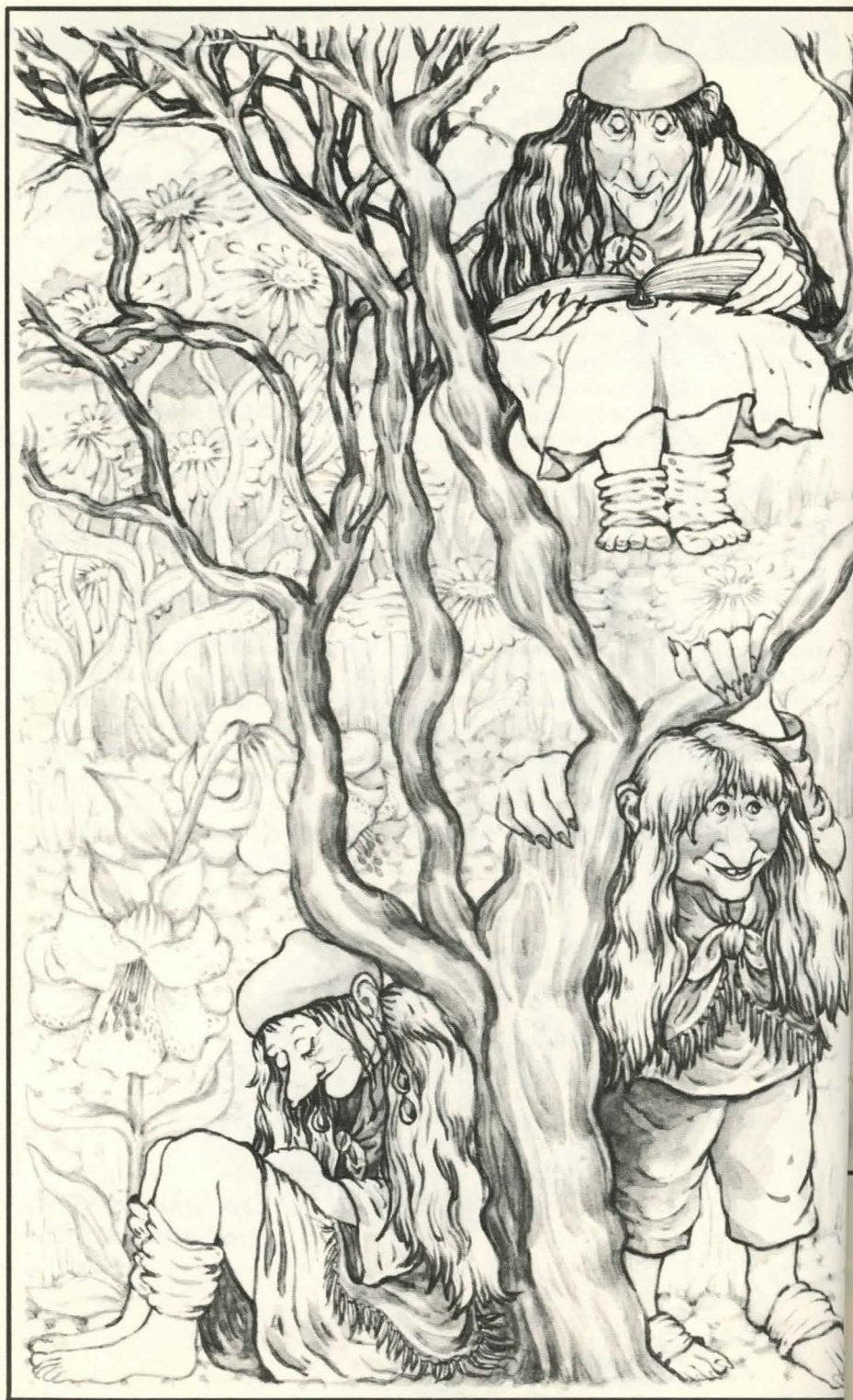
- Flowers in the hair
during Summer

- Dresses and blouses
made of coarse material,
held together with strings
and home-made but-
tons (on the shoulders)

- Always a small pocket
somewhere for (secret?)
things

Rope-like footwear,
tied around the
ankles

James Arwell '92



Lepries at leisure.



Two Leprie children.

Note the peculiar hair-style often worn by Leprie children, and the absence of shoes; the feet are often wound in rags. The ball is almost certainly a found object.

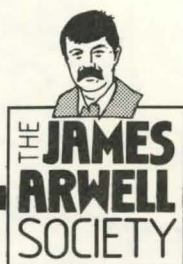


Lepries at home.



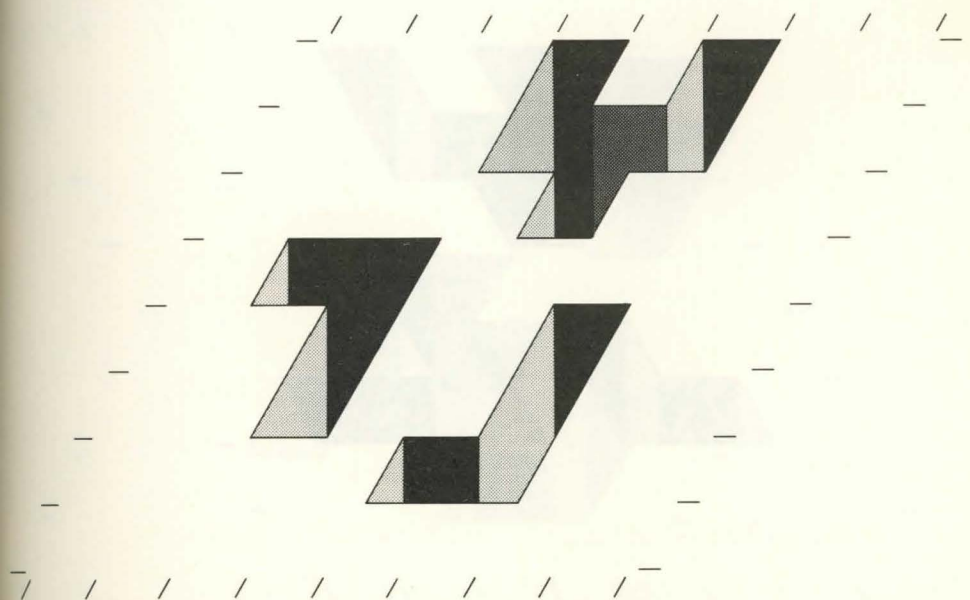
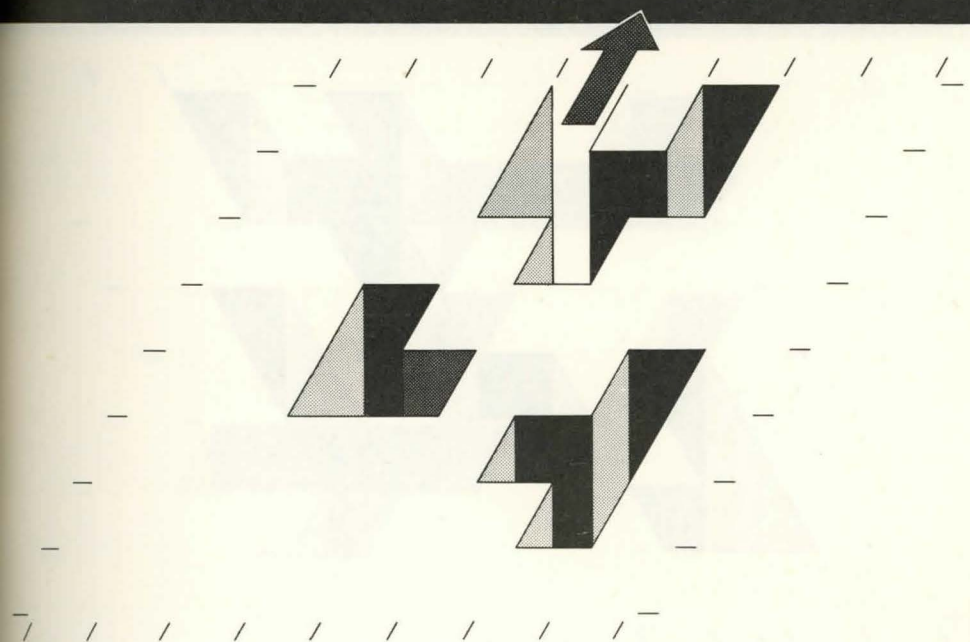
JAMES ARWELL MEMORIAL EDITION

**JAMES
ARWELL**
(2060-2132)



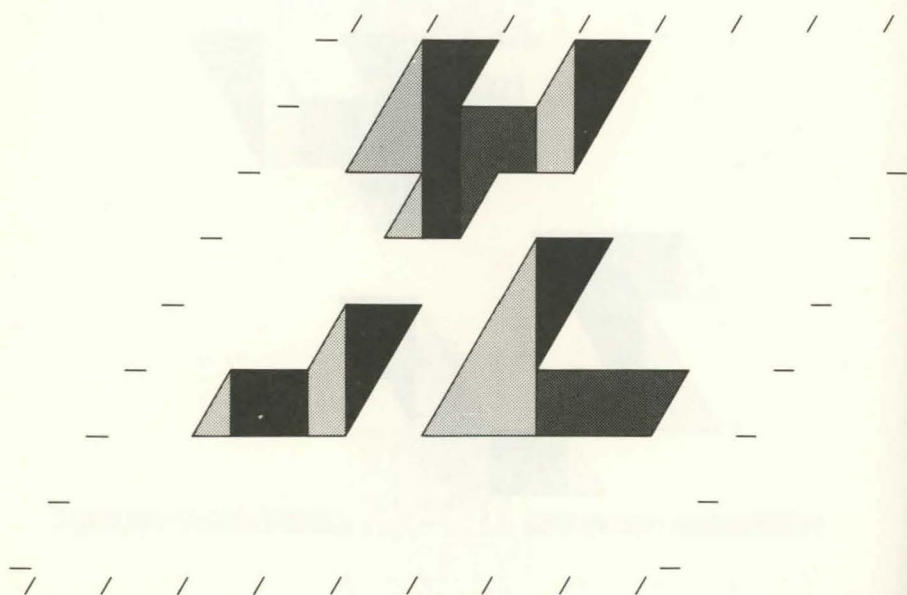
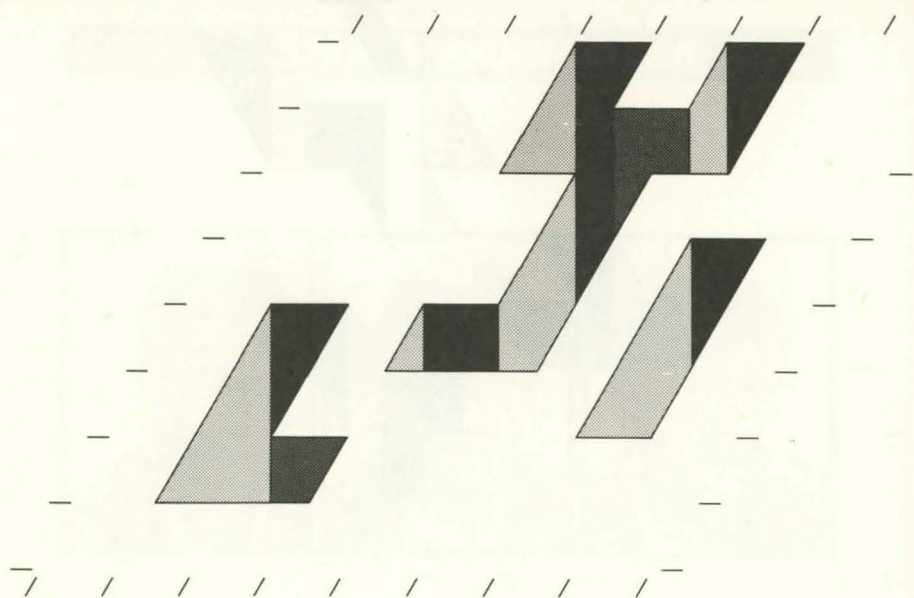
**The James Arwell Society. Address: Universe
Trade Centre, Suite 12012, New York, Earth.**

DRAWINGS BY DONALD BEAMON



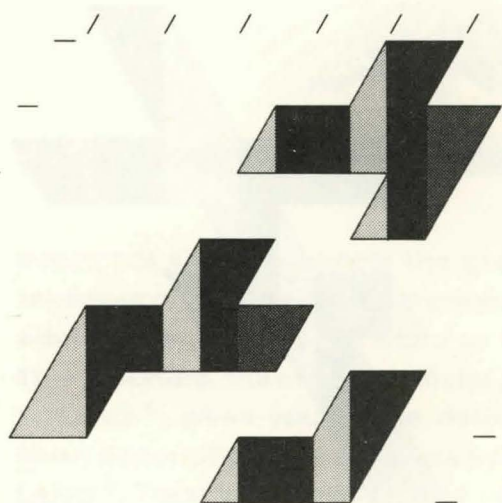
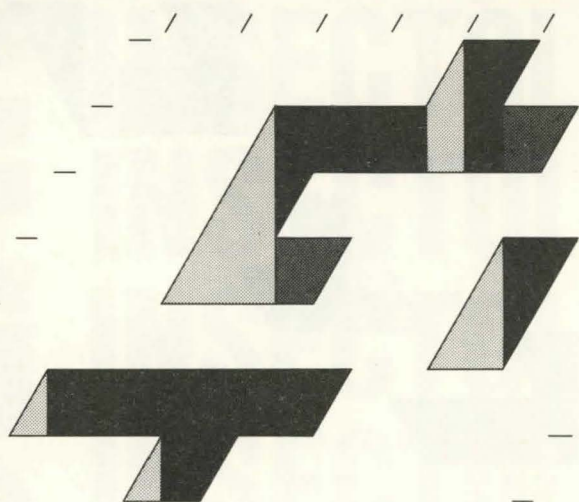
These drawings relate to the caves that lead to the land of the Tenins and Lepries. It seems that different levels of caves are shown. The arrows on

DRAWINGS BY DONALD BEAMO



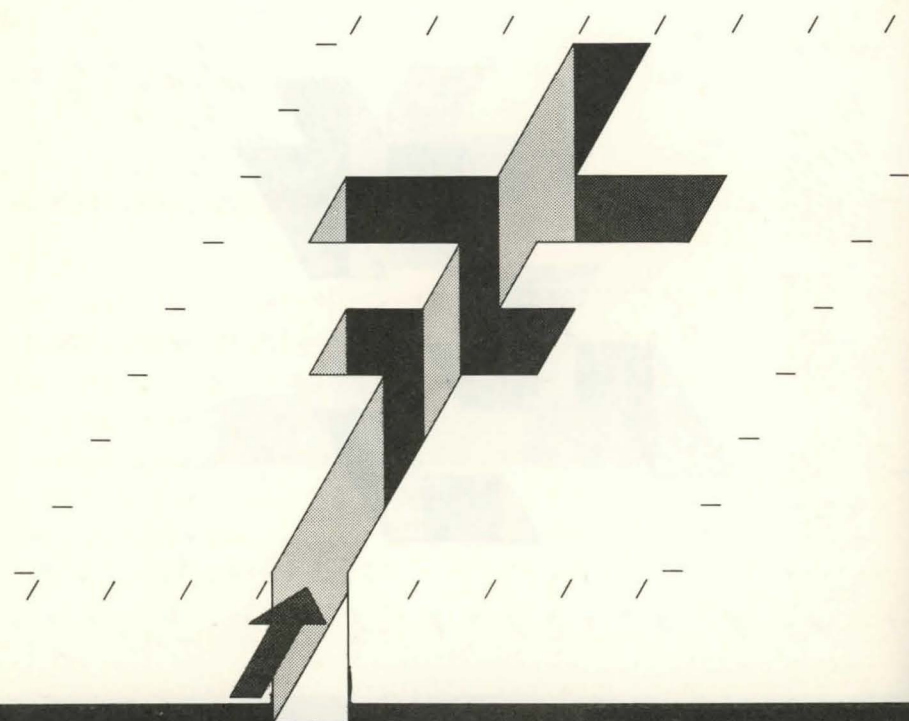
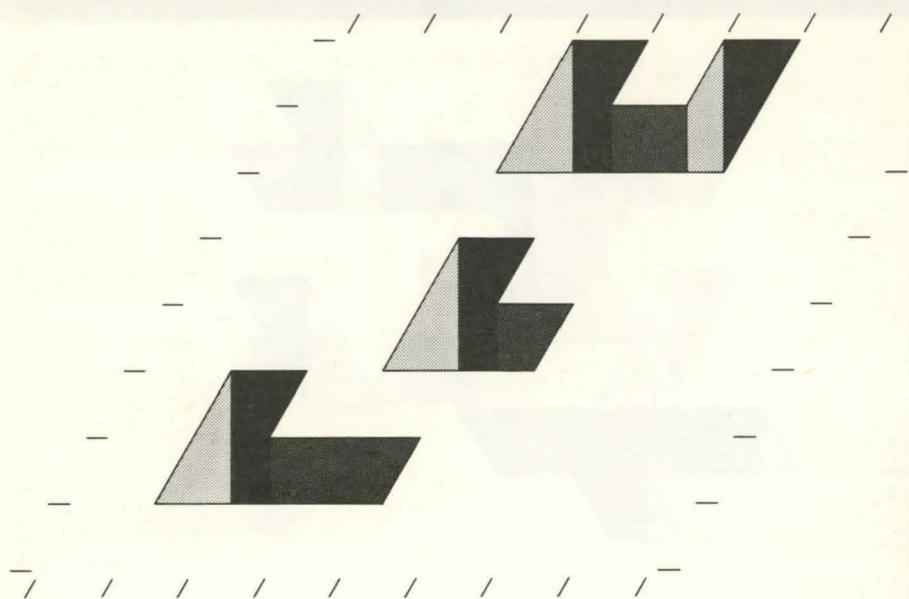
two of the drawings probably indicate an entrance and a way out. each level, strange rectangular holes can be seen. It is almost certain

DRAWINGS BY DONALD BEAMON



they are meant to indicate passages leading from one level to another. However, since the papers were found lying in a confused heap, it is

DRAWINGS BY DONALD BEAMO

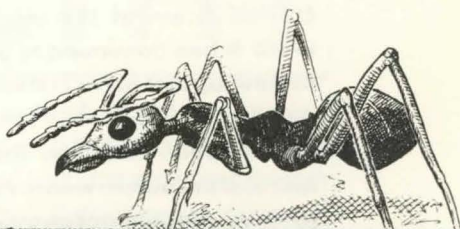


unlikely that the levels appear in the right order. The eight drawings suggest that the cave system consists of eight different levels.

INSECTOLAND[®]

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INSECTOLAND[®] is simply the greatest place to take your children, a place where you can relax and admire the wonders of nature at close quarters. This brochure, the original, official guide to **INSECTOLAND[®]**, gives you all the details, including a short description of the insects kept at **INSECTOLAND[®]**. Treat your children and yourself to a day out at **INSECTOLAND[®]**. It's an experience not to be missed!



WELCOME! IN INSECTOLAND®

- INSECTOLAND®! An exciting, educational and entertaining day out for all the family. With *over 120 different species of insect* on view, parks and playgrounds, restaurant and recreational hall, so much to see and do, more people visited INSECTOLAND® last year than any other recreational resort.
 - Surprised? Then come and see for yourself why, in a recent AVOMO opinion poll, INSECTOLAND® was voted *the best recreational resort in the country*. Yes, even *more popular* than DIGIFUN, the famous computer recreational park.
 - Founded in 2210, 150 years after the birth of *James Arwell*, the *greatest* scientist the world has ever known, INSECTOLAND® has continued to grow, adding *ever more exhibits* to its already extensive collection. Come and be *dazzled* by the dancing of the bees, *spell-bound* by the singing of the grasshopper, *tickled* by the tricks of the earwig. Visit the home of the button worm, one of our *rarest* and most *precious* exhibits. Actually not an insect at all, this creature used to be quite common until the great soil pollution crisis of 2010 and 2015.
 - *If you are feeling a little old and tired, then take a look at the tiger moth larvae in their own specially-constructed building.*
Thanks to a special radiation process, the larvae are held in a state of suspended animation – they never get any older! This absolutely unparalleled phenomenon has been the subject of much scientific debate and discussion.
 - Should you find yourself with a few moments to spare and are feeling strong, then take a walk round our *“chamber of horrors”* and see the *savage* wolf ants in their specially-strengthened cages.
-

TAKE YOUR **VIDEO**

- Don't forget to take your *video*. Unlike many other parks, everything at INSECTOLAND® can be recorded **FREE OF CHARGE!** Take home a *lasting souvenir* of a memorable day out. Impress your friends with your shots of the *enormous* and *terrifying* giant stag beetle in full flight. Film some footage of the crazy aerial antics of the fly. And be sure to take your *macro lens*. Without it you'll not be able to record the stunningly beautiful *compound eyes* of this remarkable insect.



INSECTOLAND® IS HEALTHY

- ▶ *INSECTOLAND® has all the latest comforts and facilities you could wish for. Vibratory tubes are installed almost everywhere so that you can **refresh** those tired legs after a long trek through one of our simulated nature trails. Refreshments points are numerous and relaxation rooms **abound**. Visit our **vibro-sauna** and swimming spa where you can soak away all the tensions and traumas of life outside INSECTOLAND®. If you feel like a work-out, there is a fully-equipped gymn and sports hall where you will be specially supervised by trained instructors on the best exercise for you.*
- ▶ *If, after all this **exertion**, you feel in need of **sustenance**, then visit our **marvellous restaurant**. Open daily, and serving a wide variety of delicious snacks and meals, hot and cold drinks, there is something here for **every** taste. All food is prepared under the **strictest** hygiene controls and guaranteed free of all unnatural chemicals. Every meal contains a carefully **balanced** formula of fiber, proteins, vitamins, anti-depressants, muscle stimulants and mental relaxants. You won't find a **healthier diet** anywhere.*

HOW TO GET THERE

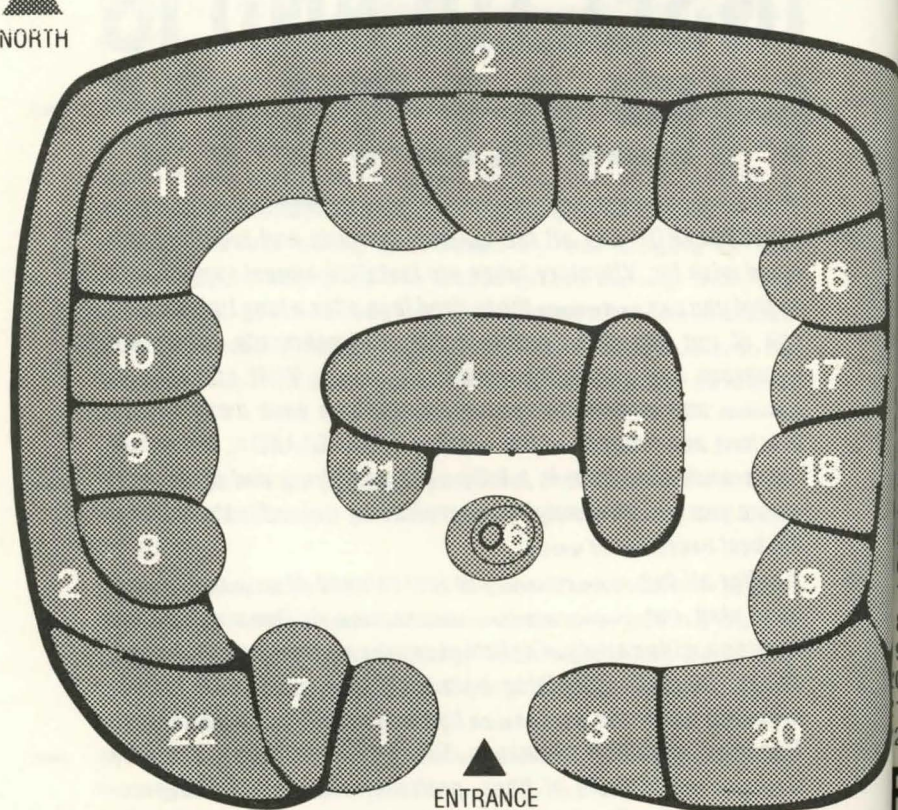
No problems! An extensive public transport network will take you right to the centre of INSECTOLAND® from wherever you live.
Special services are operated by:

- Local Transservice
- Inter-Connection
- Aero-Trans

For more information, contact your local travel agent.



Map of INSECTOLAND



By a happy accident, the **former gate-keeper's office** was left **undisturbed** during the renovation in 2254 AD. On discovering this, it was decided to leave the room undisturbed, because it was expected that a small room of **curios from the past** would be of **interest** to the public. The large number of visitors has proved this expectation right. The gate-keeper's office is one of the **rarest** non-artificial antique collections in the world. Everything has been left **exactly** as it was found.

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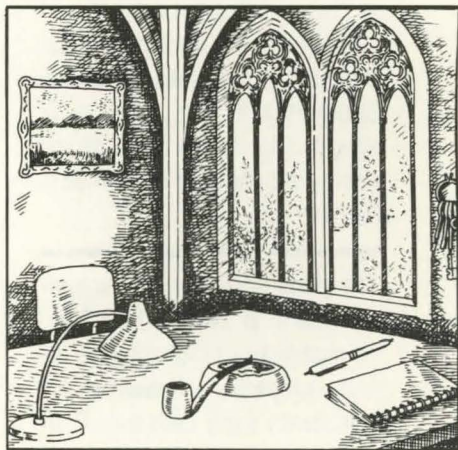
- 1: Former gate-keeper's office. During the renovation this room was left intact. Through the windows valuable antique objects may be seen.
- 2: Service areas. No trespassing!
- 3: Electronic ticket office.
- 4: Restaurant.
- 5: Relaxation area with the latest vid-games.
- 6: Fountain.
- 7: Office. Employees only!
- 8: Stag-beetle.
- 9: Spider.
- 10: Fly.
- 11: Larva of a Moth.
- 12: Worm.
- 13: Butterfly.
- 14: Weevil.
- 15: Bee.
- 16: Beetle.
- 17: Locust.
- 18: Earwig.
- 19: Bloodsucker.
- 20: Ants.
- 21: Glowworm.
- 22: Storageroom.

BUY THE GUIDE!

The former gate-keeper's office

On one of the walls, a bunch of steel objects can be seen. These are so-called **keys**, instruments that can best be compared with magneto-lock cards.

The long object with the bulging extremity lying on the table is a so-called **pipe**. Like its tubular stem, the bulging part is hollow and can be filled with the dried leaves of the tobacco plant. These would be lit and smoke drawn into the lungs by sucking at the stem. After the new moral legislation in 2084 the pipe was forbidden. Our specimen is **extremely** well-preserved.



On the table a **notebook** with an object called "**ballpoint pen**" can be seen. After the invention of the speech transcrip-tor, the ballpoint pen (and similar writing utensils) went **out** of fashion.

It is now a little-known fact that only two hundred years ago children had to spend a **great** part of their childhood years **learn-ing** to read and write.

THE INSECTS



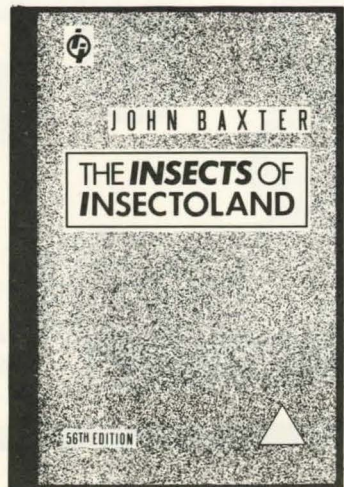
BUY THE GUIDE

■

A **practical guide** revealing many secrets about the **beautiful** insects of INSECTOLAND® can be bought or leased in the **ticket office**.

This guide was acclaimed in 2087 as “**Insect Guide of the Year**” – not surprising, considering that the author is none less than **John Baxter!** It is also available in speech (the article code of the micro-compact disc concerned is AA74XY54).

The guide describes **all** the species found at INSECTOLAND®. To enable you to identify the insects properly, a **drawing** accompanies each description. In most cases the drawings are based on insects actually in our possession. They were produced by **David Spiderfly**, the **famous** authority on insects. Full-size prints may be ordered in the restaurant.



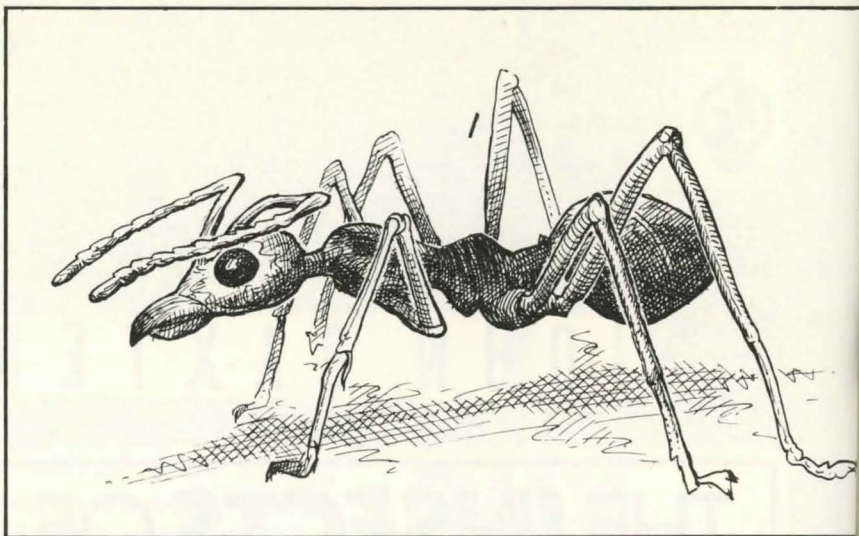


JOHN BAXTER

THE ***INSECTS*** OF
INSECTOLAND

56TH EDITION





THE ANTS

The *ant* shown in the illustration is one of the specimens kept by INSECTOLAND. Of all the insects known to mankind, the ant is undoubtedly considered to be the most industrious. It is impossible to imagine the ant ever relaxing. Indeed, unless it is hibernating, the ant works continuously.

Let us start by remarking that there are a number of different kinds of ants. Around the year 2000 there were some 6000 species.

In subsequent years, however, this number fell dramatically and we now have only about 20 or 30 different types. All types have become adapted, enabling them to exist in the cold climate of the northern latitudes as well as in the tropical areas. The species we now know show a remarkable diversity in size. After the growth explosion following the introduction of the *beta2hormone*, the smallest ant (the so-called dwarf ant) is now about two inches long. Elephant ants, on the other hand, are extraordinarily large. In south-east Africa specimens well over six feet in length have been observed.

The species at INSECTOLAND is the so-called *wolfant*. These can be very aggressive, especially the sentinels.

Four different levels or "castes" can

be distinguished in the ant hierarchy. Each caste has its own job. The *infant* *female ants*, for example, build the nest and take care of the larvae. Some have extremely well-developed jaws and are often seen to devote themselves to the special task of defending the nest against intruders. This category, called the *soldier* or *sentinel* caste, is extremely hardy. Experiments with heavy explosives have shown that most of the soldiers were blown away uninjured after which they were seen to take up their defensive positions again.

Ants are known to react to all kinds of odours and even communicate with each other through the different odours they spread. Some odours function as a family characteristic, serving to inform the ant whether it is dealing with a friend or an enemy. There are also odours which provoke aggression. Remarkably enough, sentinels have become more or less immune to these odours. They can only be seduced by the odour of *honey*. At INSECTOLAND the ants are fed with honey at noon, and it is while seeing how excited they get when they smell the attendant bringing this delicacy.

Ants are truly remarkable creatures. Their whole life is devoted to a single task. They will never stop until a sudden attack rallies them in the defense of their nest.

Finally, we should point out

ants are considered by some to be a hazard to mankind. It is claimed that in some areas ants have formed enormous armies. It is our opinion that human beings have nothing to fear from ants.

However, despite this, it must be pointed out that a mob of 30 ants attacked INSECTOLAND last year in an attempt to liberate the ants held there.

Fortunately, our attendant was able to disperse them with insecticide. However, after this incident, our ants have become particularly aggressive and we would therefore advise you, not to feed them by hand.

Care should also be taken that children are not allowed to approach the cages too closely.

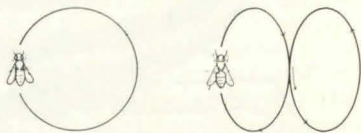
THE BEE

The *bee* has been the subject of intensive research in the past and we are proud to have a number of splendid specimens in our collection. They belong to the *Andrenidae* family, a furred race building their nest in the ground. To prevent escape, the bottom of their cage consists of a massive slab of concrete. The cage is roofed and strongly built for maximum security.

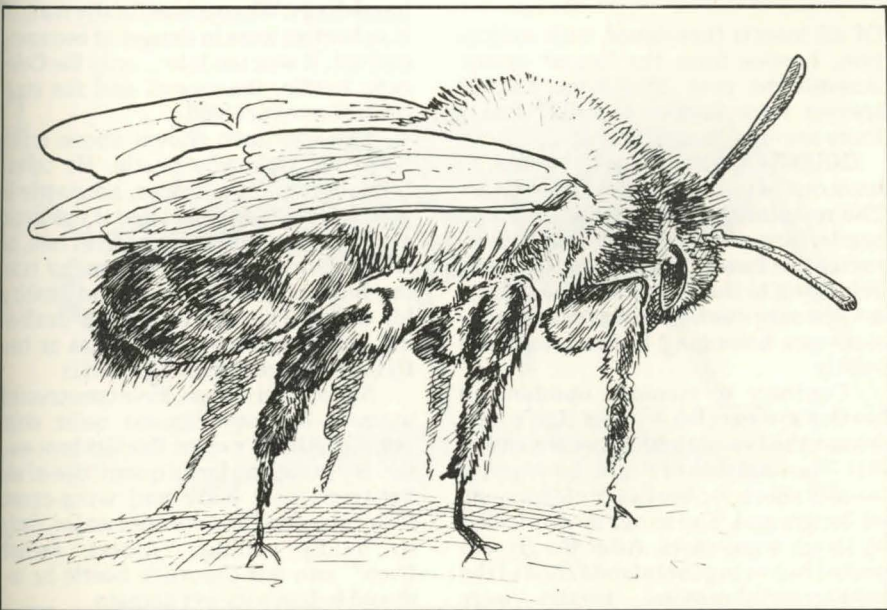
If you look carefully, you will see the powerful sucking organ. Bees have a good sense of smell, so don't be surprised to see this organ sweeping in your direction if you are carrying sweets.

One of the most interesting things

about bees is the way they communicate. A common way of conveying information is the dance, i.e. the *circle dance* and the *"figure of eight" dance*.

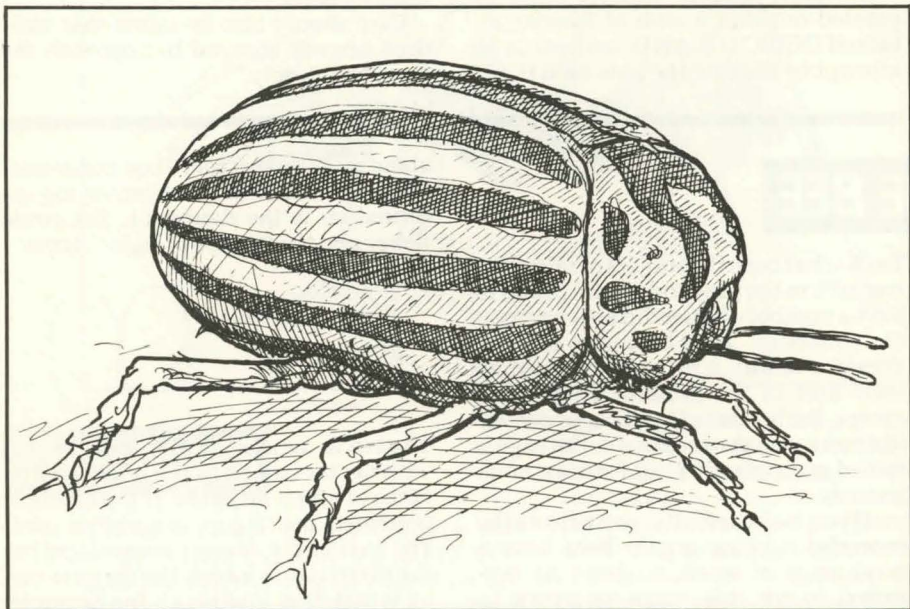


The circle dance signifies that flowers with nectar can be found within a distance of about 80 yards. If the distance is greater, the "figure of eight" is used. The axis of the dance pattern signifies the direction in which the flowers can be found. Our attendant, for example, once took a number of bees to the forest opposite INSECTOLAND. The dry thistles growing there explain the fact



that our bees incessantly do the "figure of eight" in the direction of the main entrance.

Although the bees are not normally aggressive, visitors should be aware of the sharp barb of the sting.



THE BEETLE

Of all insects threatened with extinction, beetles form the largest group. Around the year 2000 some 350,000 species were known to exist. Today there are only three kinds left.

INSECTOLAND is lucky enough to have one of each kind in its possession. The remaining kinds are the *Colorado beetle*, formerly belonging to the *Chrysomelidae* family, the *weevil*, formerly belonging to the *Curculionidae* family, and the *stag-beetle*, an impressive monster once belonging to the *Lucanidae* family.

Contrary to common opinion, all beetles are excellent flyers (for which reason the top of their cages are closed off). The duration of flight, however, is usually short, for beetles prefer staying on the ground. The wings are protected by tough wing-cases. After the growth period following the introduction of the beta2growthhormone, beetles were

hunted on quite a large scale for their valuable wing-cases, which were especially popular for making shoes and hand-bags. When it was finally realized that beetles were in danger of becoming extinct, it was too late ... only the Colorado beetle, the weevil and the stag beetle have survived.

The specimen shown above is Albert, our Colorado beetle. He is extremely fond of potatoes, no matter which form they come, and if you share some of your French fries with him, he will demonstrate his pleasure by raising his heavy wing-cases and beating his wings. This makes a really deafening noise, and may send a hat or two flying through INSECTOLAND.

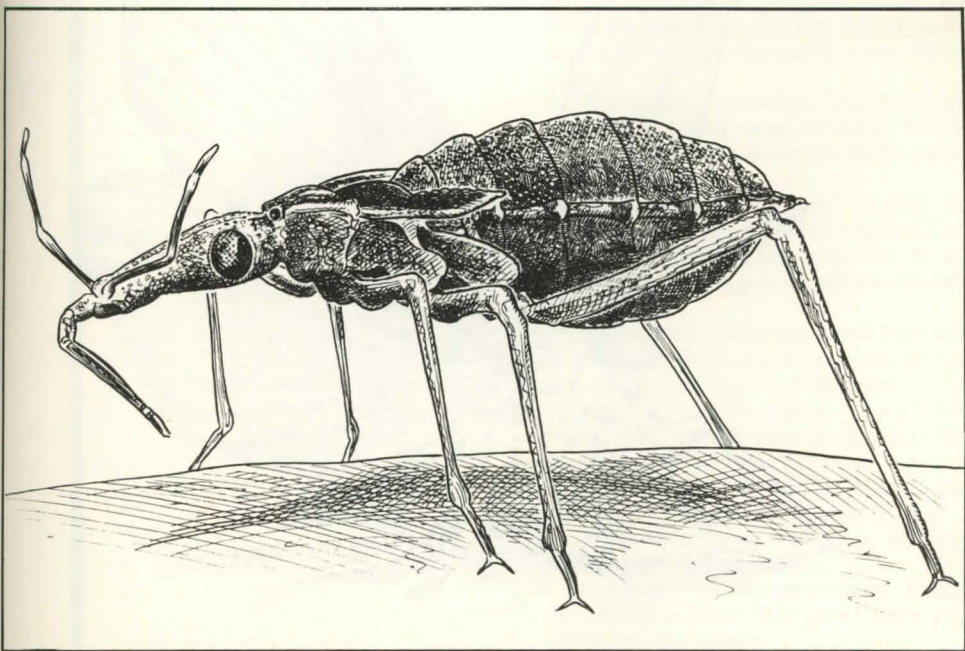
As you will see, we have constructed a small but nevertheless quite deep pond in Albert's cage. Beetles love water. By pumping large quantities of air between their body and wing-cases they can spend hours under water. Only by loudly calling: "Albert, French fries!" can our Colorado beetle be induced to leave its wet domain.



THE BLOOD-SUCKER

Of all the insects found in INSECTOLAND, the *blood-sucker* is probably the most dangerous. Although it can stare at you quite innocently with its large, round eyes, its whole nervous system is concentrated on only one thing – killing! Its strong hind legs enable it to pounce on its victim in a single leap. The insect has a strong intuitive feeling for finding the weak spots of its victim. Beetles, for example, are bitten in the areas between the belly-segments. Humans are attacked at the throat. Strangely enough, the blood-sucker rarely devours its prey. This leads to only one conclusion: the blood-sucker kills for the sake of killing. Fortunately they are now more or less extinct. Life would be very unpleasant if one had to live in constant fear of meeting such a diabolical creature.

Blood-suckers used to live in colonies, where a remarkable *sign language* was used for mutual communication. They would greet each other, for example, by raising their right fore-leg at a certain angle. According to some entomologists, the angle determined the kind of message. For instance, it was observed that at an upward angle of 45 degrees, the other party received the message like a soldier standing at attention. A horizontal level, however, was observed to result in the second party moving away in a certain direction. At a downward angle of 45 degrees, the second party would bow its head, probably for better listening.



THE BUTTERFLY

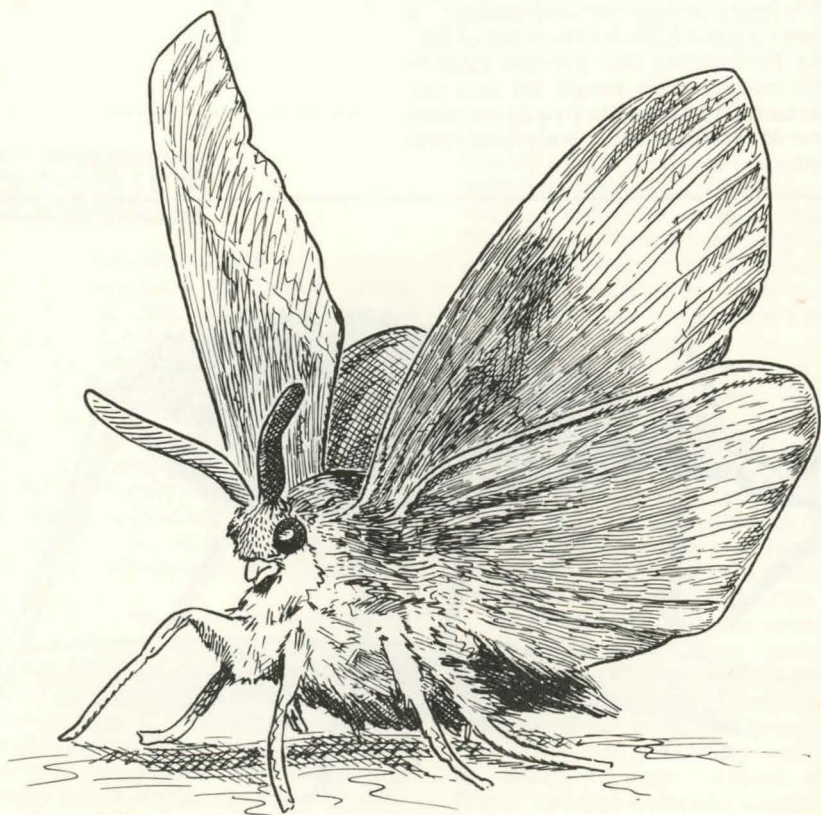
Of all the insects, butterflies are undoubtedly the most beautiful. It is not surprising, therefore, that they are often mentioned in fairy tales. The butterfly's life is very interesting. The many transformations it undergoes – from egg to caterpillar, from caterpillar to pupa, and from pupa to butterfly – are living proof of the miracles of nature.

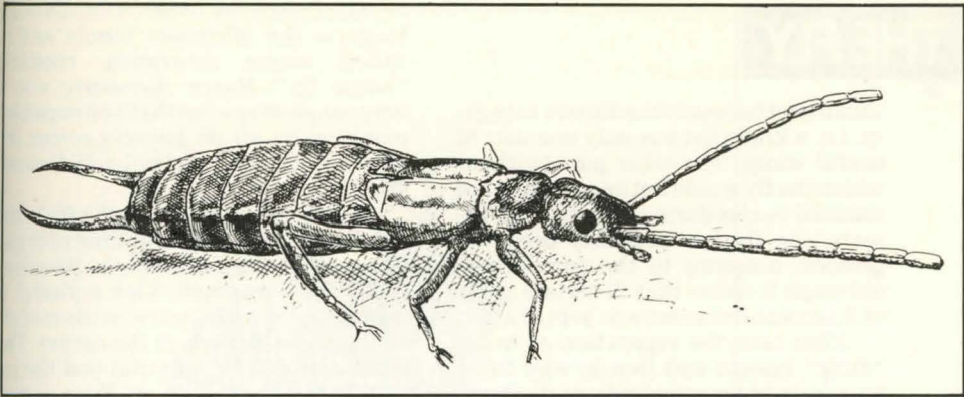
Although the wings, often of breathtaking beauty, are the most conspicuous feature of butterflies, the insect has other characteristics not often mentioned in textbooks – the rolling tongue, for example. The tongue can be used to suck up all kinds of fluids. When not in use, it is rolled up under the head of the insect like a fire-hose. This remarkable

organ actually consists of a main tube with smaller tubes on either side of it. The latter contain muscles which can roll and unroll the tongue with incredible speed.

The specimen kept at INSECTOLAND belongs to the *Lima-codidae* family, and is known more specifically by the name *Lepidoptera exhibitiona*. The *Lepidoptera exhibitiona* is remarkable in its ability to bring its wings completely together on the forward stroke.

Our butterfly on show is completely harmless. It is fed around noon, the attendant placing a bowl of milk and honey in a corner of the cage. The butterfly sucks up its meal from the opposite corner, the tongue being so long that it can only be completely unrolled from this point. This is well worth seeing, especially for children!





THE EARWIG

The *earwig* shown above is a specimen we of INSECTOLAND are especially proud of. Its most striking characteristic is the enormous claw at the end of its slender body. The claw is used during nightly raids on flies and caterpillars. By moving the claw containing the squirming victim forward, over its back towards the jaws, the earwig can devour its prey.

Although the earwig has wings, it only rarely flies. As you will see, the top of the cage is open, but the wings of the insect have been clipped to prevent escape.

Previously, earwigs lived underneath the bark of trees, or under stones. Nowadays its giant proportions make this impossible.

This, together with the fact that the poor creature is constantly hunted because of its terrifying aspects, is the reason that earwigs are now practically extinct.

The sex life of the earwig is interesting. During the summer, the insects are usually found together in colonies, in polygamous communities. The winter, however, is usually spent in a hole in the ground with only one partner.

The earwig at INSECTOLAND has learned a number of amusing tricks.

We advise you, therefore, to visit its cage at feeding time.

However: *never put your hands through the bars!* The great claw can cause serious injury.

THE FLY

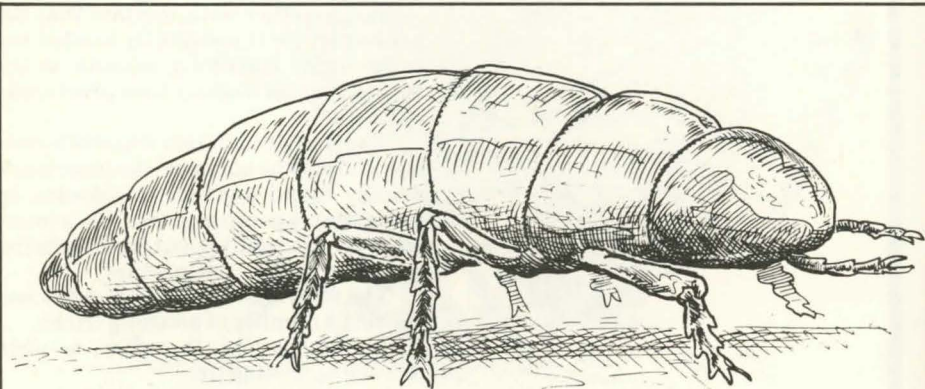
This insect belongs to the *diptera* category, i.e. a kind that has only one pair of useful wings. The other pair (without which the fly would not be an insect) are reduced to *claviform stumps*. Of all insects, the fly has probably been the greatest nuisance to the community, although it seems that in certain parts of Australia the insect was kept as a pet.

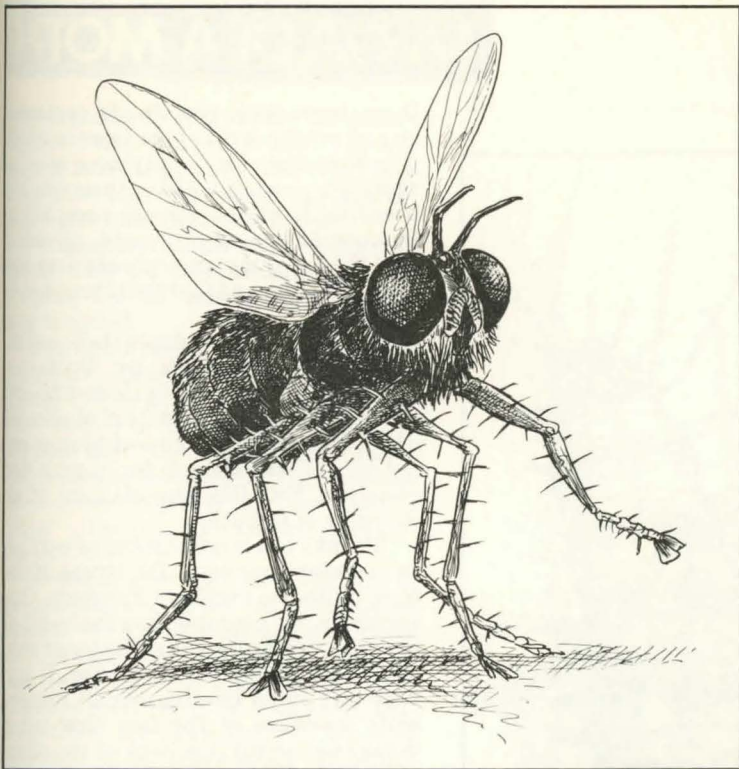
Flies bear the reputation of being "dirty" insects and that is why there have been so many inventions designed either to catch them or to kill them. A common instrument, for example, was the so-called *fly-swatter*. It was usually made of plastic and resembles a large spoon but with a flatter end. Another method of getting rid of flies was a roll of paper covered with a sticky substance. This sweet-smelling stuff would attract flies which would stick to it on contact and, unable to free themselves, eventually die. A very barbaric method was based on the use of thin high-voltage wires covering a lamp. Since most insects, including flies, are attracted by light, death by electrocution was almost unavoidable.

The fly kept by INSECTOLAND belongs to the *Muscinae* family and is called *musca domestica*, meaning "house fly". *Musca domestica* was a very common species that accompanied mankind on all its journeys across the world. It is quite innocent and does not sting.

It is worth a trip to see the fly being fed. It sticks out a tubular kind of organ (the sucker) and places this on the material to be consumed. This material is then covered with gastric acids excreted through channels in the sucker. The acids dissolve the material and the resulting fluid is sucked up. Even worms could be devoured in this way, the fly claspings its prey firmly with its strong legs. At INSECTOLAND the fly is fed with a specially baked cake because worms, of course, are too rare to be used as fly food.

Although the fly's dinner habits are rather unsavoury, we can assure you that the feeding of the fly is a fascinating spectacle. Don't forget your handkerchief, however, because the dampening gastric acids spread a rather penetrating odour. Finally we advise you to watch this spectacle on a full stomach only!





THE GLOW-WORM

The insect shown here is a *glow-worm*. More specifically, it is a *female* glow-worm. The male, with its two hard wing-cases, looks more like a beetle than a worm. During their whole life-span, these unique insects (and even their eggs) emit light. The light results from a chemical reaction with a substance called *luciferine*. The production of light decreases if the glow-worm is deprived of its favorite meal: *honey*.

Glow-worms have been studied intensively by the French entomologist Jean Henri Fabre. This charming Frenchman, who devoted his whole life to the study of these insects, describes how the last three abdominal segments of the female radiate. We quote: "... on the lower part of the first two segments, a broad luminous belt may be found. The luminous part of the third segment

is considerably smaller, and consists of two crescent-shaped spots radiating so strongly that the light rays, which pass straight through the body, are visible from above and below the insect ...". A little further on he writes: "... these beacons are clearly meant to attract males, and the females make the most of this by twisting their bodies wildly ...".

At twilight the attendant will demonstrate this interesting behaviour by dressing up as a male glow-worm and, with shaving soap flying from the corners of his mouth, storming into Eileen's cage with a roar (Eileen is the name of our female glow-worm).

This will give you a good opportunity to see how brightly a female can radiate, and to admire its beautiful belly-dances. We urgently request you not to use flashlight while taking your photographs and films. Eileen has been known to mistake these for female competitors and become quite upset.



LARVA OF A MOTH

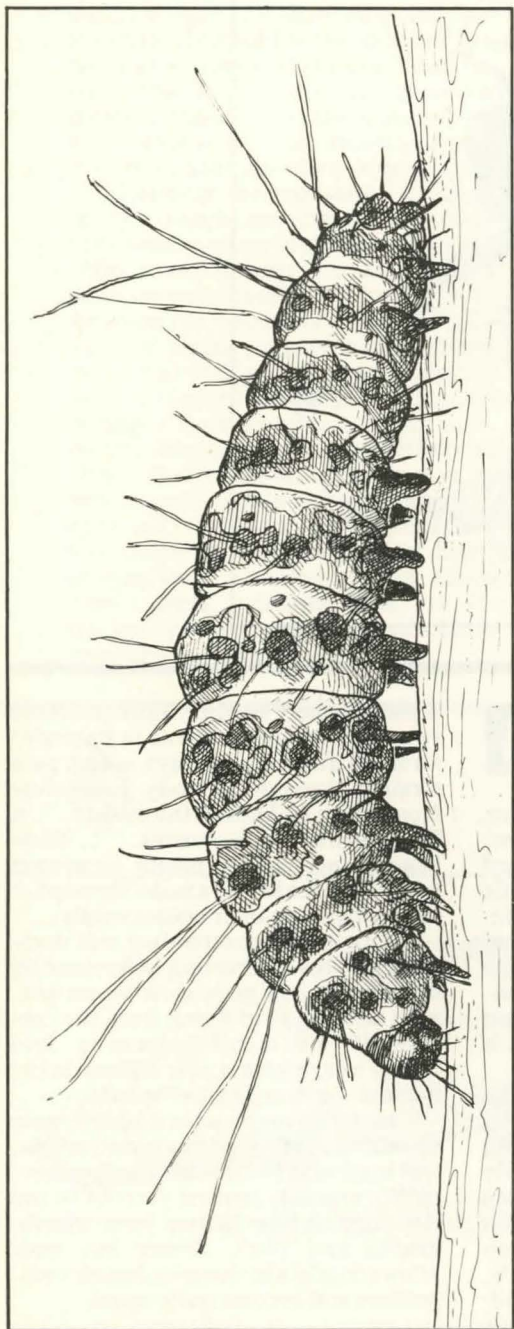
If you have time, you should certainly go and see the *larva of the tiger moth*. It is quite unique. By applying a special radiation process, we have succeeded in breeding larvae which are completely immune to ageing processes, meaning that the usual metamorphosis does not occur. That means that the larvae never pupate.

The radiation treatment is based on techniques developed by Professor Fröhling, a noted biophysicist who did years of research in the field of eternal life. Unfortunately, his techniques are not yet reliable enough for human application. Fröhling himself died of an overdose of radiation.

Thanks to a large number of suction pads under their body, the larvae of the tiger moth are excellent climbers. Our specimen, for example, has the habit of moving constantly along the inner side of a flat hoop placed in its cage. It can keep this up for months on end, apparently unaware of the fact that after doing one circuit it is back at the same spot again. It is not unlikely that the radiation processes have adversely affected the intellectual capacities of the insect, which does not even react to the presence of the attendant. The larva is fed by lining the inner part of the hoop with sticky food. Water is placed in a bowl under the hoop.

The back of the larva is covered with a number of antenna-like spines. Normally these are pulled in instinctively when touched. Our specimen does not show this behaviour anymore – probably because it has been bombarded with paper pellets too often.

The larvae of the tiger moth are completely harmless and do not seem to have any natural enemies. From this we may conclude that they have an unpleasant taste.



THE LOCUST

The magnificent creature on the sawn-off tree trunk is a real *locust*. Locusts have a firm, long body and relatively large hind legs. The wings are usually held tightly alongside the body.

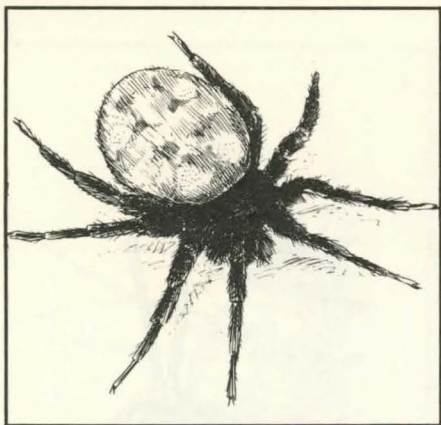
Although locusts are not very good at flying, they are exceptionally good at jumping. For this reason the top of the cage is sealed.

One of the remarkable things about the locust is its ability to produce sound. It does this by drawing part of its body (the "rasp") across another specially-adapted part (the "comb"). The latter forms part of the wings. There are two parts of the body that can function as a "rasp" – the legs, and the wings opposite the "comb".

Depending on the musical talents of the creature concerned (as with human beings), the sound produced by locusts may be referred to as singing. Our locust is particularly gifted in this area and has received years of musical training from its attendant. In its best moods, it often sings aria's from Mozart's Figaro. If kept waiting for its meal, it will resort to aria's from Puccini's Madame Butterfly, sometimes even lying prostrate on the floor of its cage. This is quite exceptional for insects, and makes the performance even more dramatic. If angry, it may perform the insanity scene of the Kings of the Night from Mozart's Magic Flute. Last year this was done with such artistic intensity that the insect broke one of its hind legs. Fortunately the leg has healed well, but you will understand that another performance could lead to even more serious injuries. We would ask you, therefore, not to tease this unique insect.



THE SPIDER



The *spider* we have at INSECTOLAND is a member of the *Epeira* family. Actually spiders are not insects at all. They belong to the class *Arachnida* which, although also *arthropods*, have two legs more than the usual six of an insect.

The most fascinating thing about the spider is, of course, its *web*. How is the material for the web produced? Examining the spider's belly, one can find four "bubbles" near the anal opening.

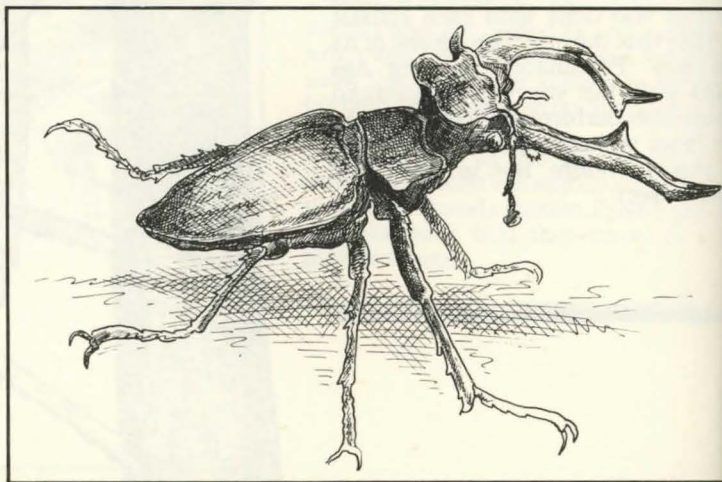
These are usually referred to as the "teats". Each teat forms a collective outlet for hundreds of small tubes through which the substance for making the web is released. This means that the single web we observe really consists of hundreds of smaller threads!

The speed with which a web is spun is remarkable, especially if we consider that the spider has only eight simple eyes with rather limited capabilities. To compensate for its bad eye-sight, nature has endowed the spider with extremely well-developed sensors for determining mechanical stress, making it possible for the web to be constructed in such a manner that the mechanical forces exerted on the web are always constant. For the rest the spider has only its natural intuition to rely on.

Our spider, called Rachel, arrived at INSECTOLAND four years ago. She had been found next to the corpse of her male partner, who she had apparently slain after mating. She seemed to be in a very repentant mood, and for this reason we thought it would be safe to let her share a cage with our male spiders - James, John and Gerald. Sad to say, the decision proved fatal to the males, and resulted in quite a blow for INSECTOLAND.

THE STAGBEETLE

Like other members of the beetle family, the *stag-beetle* has wing-cases protecting its wings. Not the wing-cases



however, but the enormous size of the insect and the beautiful antlers on its head are its most striking features. The stag-beetle is a very impressive beast, and can be regarded as the "elephant" among the insects, although the name of some prehistoric monster would perhaps be more appropriate. Most people are unaware of the fact that the stag-beetle is a protected species and this is probably the reason that it is now almost extinct.

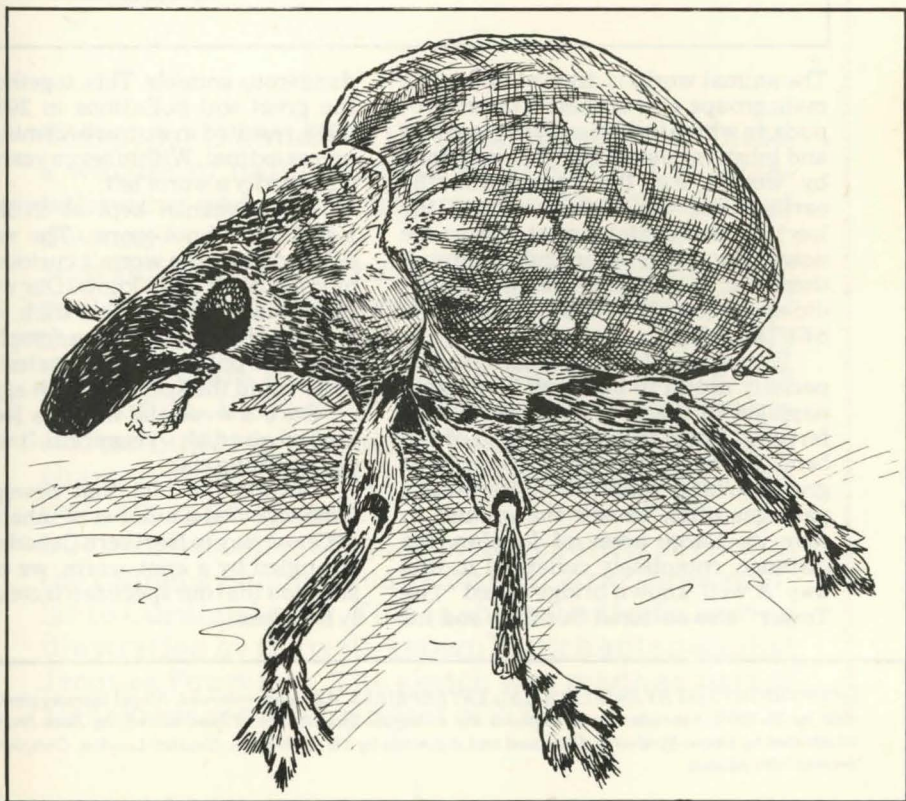
Despite their terrifying appearance, the jaws of the stag-beetle are quite weak and vulnerable. Our specimen, called *Goofy*, is not even capable of chewing its own food, and uses a straw to sip its watery meals through. He can be heard belching from quite a distance afterwards. *Goofy* is good-natured and completely harmless unless provoked. In that case he can inflict quite serious injuries with his antlers. He is also rather shy of strangers.

THE WEEVIL

Proudly we present *Bobby*, our *weevil*. This beetle can be readily identified by its long "nose". Actually the nose is not a nose at all, but part of the mouth, jutting out at the end of a rather long head.

Like other members of the beetle

family, the weevil has hard wing-cases. They are covered with vague white spots. Originally weevils were strictly vegetarian. *Bobby*, however, has developed a rather peculiar taste for the dung of the stag-beetle. When the attendant brings in a fresh load, *Bobby's* first reaction is to dive, nose first, into the heap and wallow. It will not surprise you that after this ritual the white spots are hardly visible.

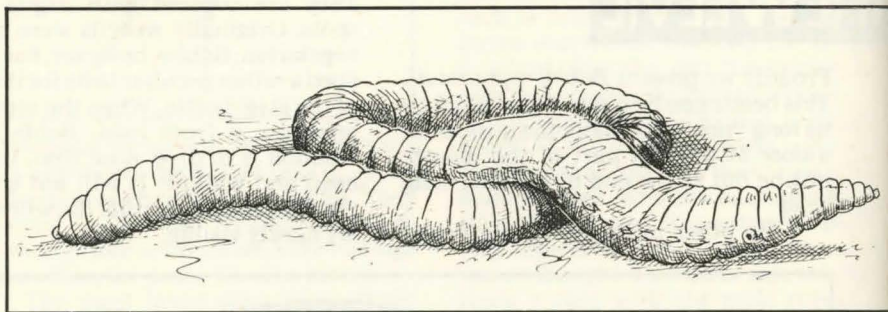


Although Bobby is undoubtedly the dirtiest inhabitant of INSECTOLAND, he is smarter than you think. Besides the spider, for example, he is the only insect that is able to *talk*, be it in a rather broken fashion. Unfortunately, Bobby uses his gift of speech in a rather dubious way – he tells dirty jokes. It would be wise, therefore, to mind your chil-

dren when visiting him! A number of committees have been formed recently to deprive the weevil of its natural right of expressing its opinion. Although we agree that there are offensive elements in the weevil's language, we would advise you not to join these movements. Like humans, insects have their natural (entomological) rights!

THE WORM

some strange reason ravens have been flying over it since. Inevitably, the worm quickly found itself on the list of



The animal world is divided into seven main groups. One of these is the *arthropods*, to which insects, spiders, crayfish and lobsters belong. Another is formed by worms, e.g. the knot-worm, the earth-worm, the tape-worm and the leech. Unfortunately, most worms are now extinct. We are particularly proud, therefore, to be able to present a splendid specimen of the *knot-worm* at INSECTOLAND.

Worms used to make themselves especially useful to mankind by digging passages in the soil, so improving the fertility. Since the introduction of the *beta 2 hormone*, however, worms have grown so large that their subterranean passages often caused the ground to cave in. Large areas of London, for instance, completely collapsed in this way. A well-known bridge called "The Tower" also suffered this fate, and for

dangerous animals. This, together with the great soil pollutions in 2010 and 2015, resulted in worms becoming more or less extinct. Within seven years there was hardly a worm left.

The specimen kept at INSECTOLAND is a knot-worm. The name is derived from the worm's curious habit of tying itself up in knots. Our worm is particularly fond of this trick, having once tied itself up in such a complicated knot that only with the greatest difficulty could the keeper untie it again.

Once a week the worm is fed with its favorite dish – vermicelli. It will not eat anything else.

Despite the fact that newspapers have reported a number of inhabitants of Goose Bay in Northern Canada being strangled by a knot-worm, we can assure you that our specimen is completely harmless.

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The Ant Nest

By George Baldwin

This paper is a study of the structure of the ant nest, a wonder of nature that pays tribute to the social behaviour and highly-organised collective effort of the ants.

Significant changes have been observed over the past 30 years in the way ants build their nest. One of the main characteristics of ant nests about two hundred years ago was that no clear structure was evident in the tunnel system. The ants simply started building without any definite plan. This is in sharp contrast to wild bees, which always built well-structured nests.

Due to the absence of a plan in these earlier ant nests, the tunnel systems usually formed structures similar to Gordian knots. This is shown in the following illustration by the well-known French ant specialist Jacques Fournière. The sketch was made as part of his famous research project of 2032.

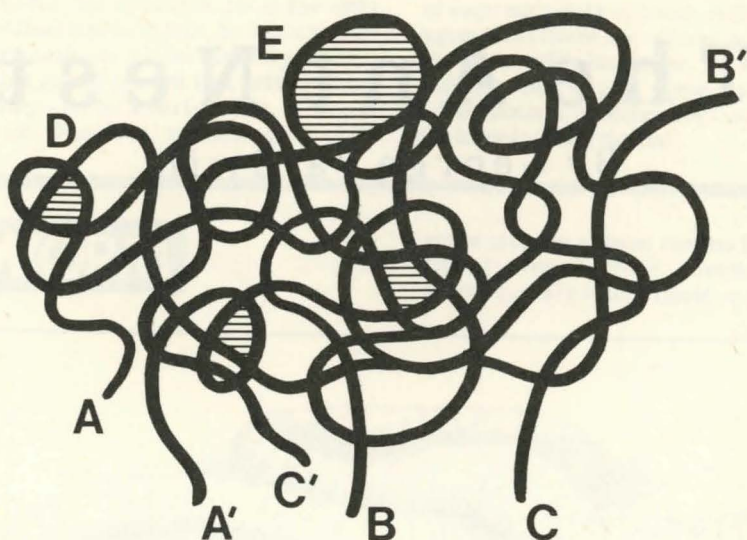


Fig. 1 Sketch of ant nest made by Fournière (2032)

The disorder is quite obvious. The nest depicted here was found south of Stockholm. The shaded areas represent special chambers or compartments. In compartment D the ant queen was found.

Compartment E contained an enormous supply of honey, the ants' favourite food.

Fournière explains very elegantly how such a nest is built.

Essentially, teams, or even single ants, start digging randomly.

To illustrate the effect of this approach, the paths of three separate tunnels with starting points A, B and C are traced in the figure below.

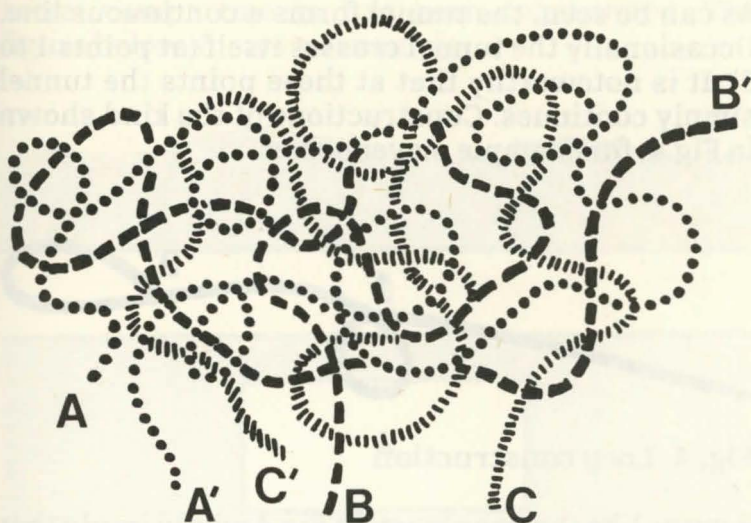


Fig. 2 Ant nest of Fig.1 with three distinct routes marked.

The figure shows that the entire nest comprises the three separate tunnels A - A' , B - B' , C - C' . A more detailed study of tunnel A - A' is shown in Fig. 3.

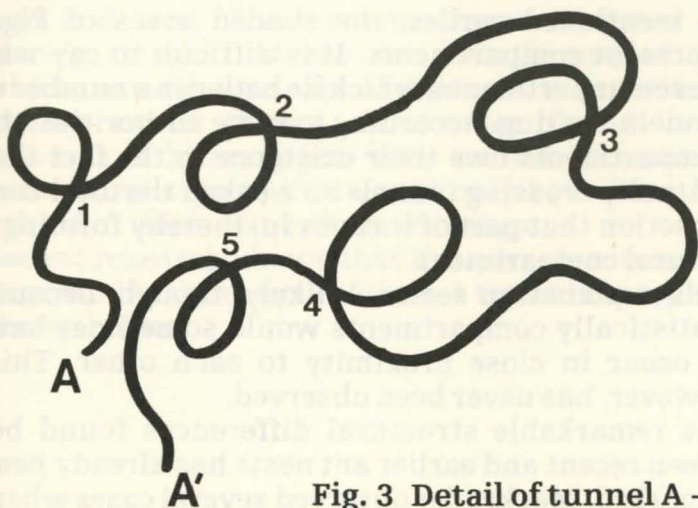


Fig. 3 Detail of tunnel A - A'

As can be seen, the tunnel forms a continuous line. Occasionally the tunnel crosses itself (at points 1 to 5). It is noteworthy that at these points the tunnel simply continues. Constructions of the kind shown in Fig.4, for example, never occur.

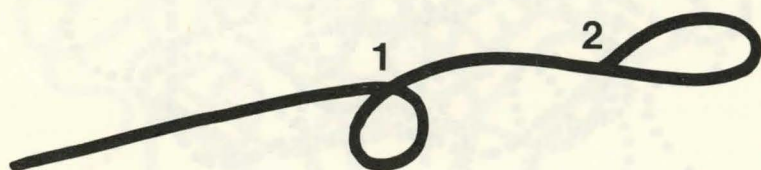


Fig. 4 Loop construction

A curve like the one shown in Fig.4 would imply that the ants had stopped digging at point 2. However, this is very unlikely. As Fournière points out, the tunnels are made by digger ants whose sole purpose in life is to dig, as the sentinel ant's is to guard.

For a digger ant to stop digging would be a completely unnatural act and therefore most unlikely to occur. In fact, no such constructions have ever been observed.

As mentioned earlier, the shaded areas of Fig.1 represent compartments. It is difficult to say why these compartments, which lie between a number of tunnels, are dug. According to some authorities, the compartments owe their existence to the fact that mutually crossing tunnels so weaken the total construction that part of it caves in, thereby forming a natural compartment.

This explanation seems unlikely, though, because statistically compartments would sometimes have to occur in close proximity to each other. This, however, has never been observed.

The remarkable structural differences found between recent and earlier ant nests has already been remarked. Mackruder observed several cases where

secret compartments had been constructed. The figure below shows an example:

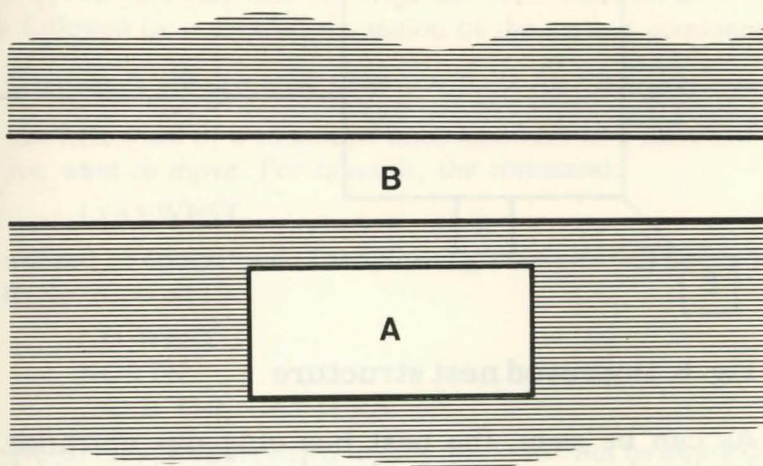


Fig. 5 Secret compartment construction

In this figure, B represents a tunnel. A represents a secret compartment that apparently was dug first and subsequently sealed with a mixture of formic acid and sand. These compartments are used for storing things that are not directly needed but which, nevertheless, are of great value to the ants. Among other things, Mackruder found large amounts of bilberry jam here. On one occasion he even found objects that could only have been left behind in the forest by human beings.

Recent research shows that the nest structure has improved in the course of time. A typical example is shown below.

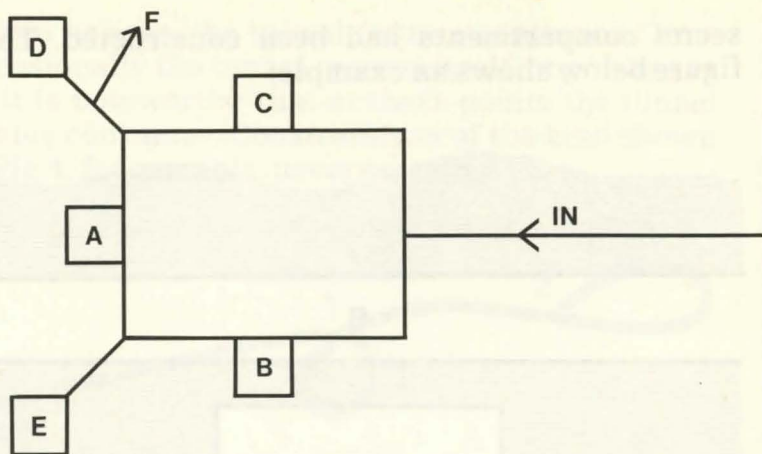


Fig. 6 Improved nest structure

As can be seen, the nest has only one entrance, leading to a more or less closed circuit, along which several secret routes are found (e.g. A, B and C). Often there are smaller circuits inside the main one, but for the sake of simplicity these have been omitted in the figure. At the far corners, open compartments or chambers may be found, where important supplies are kept or where soldier ants can rest. In the figure a branch is shown at F. These branches lead to important compartments. Notice that they can only be reached by a single path. Usually these paths are guarded by the strongest sentinels.

Last year a wolf ant nest was reported to have been found which contained doors that could be bolted at one side (Fidderley et al, 2255). Of course, incredible reports like this can hardly be taken seriously. If the report is true, it would mean that the ants now have tools at their disposal. Bruckenbach, of the University of Berlin, rejected this possibility after carefully investigating 4236 nests. Montaigne, of the University of Montreal, studied the feasibility of bolted doors using a simulation model, and arrived at the same conclusion.

Playing This Adventure-Game

In order to simplify the task of understanding the human language, a number of rules are built into the program. These rules are now described. This is followed by a detailed discussion of the various commands.

1. Commands are executed when you press the "carriage-return" key.
2. The first word of a command must be a verb or a direction in which you want to move. For example, the command:

I GO WEST

will not be understood. The following examples will be executed correctly (if possible):

GO WEST

NORTH

TAKE THE LANTERN

3. Words may be abbreviated to only one letter. But be aware that in doing so, you take the risk that the parser recognizes another word that has the same abbreviation. For example the parser knows the words WEST and WALK. If you use the abbreviation W as a command the parser will act upon this command by taking the first word with a W stored in memory; in this case WEST. It is clear that if you want to give the command WALK you must enter at least two letters.
4. If the parser requires more information it will ask for it. If you, on second thought, don't want a command to be executed you can skip it just by entering the carriage-return only. For example, if you have entered:

GO

the computer will answer:

GO..?

You may now enter a direction:

WEST

In this case the command GO WEST will be executed. If you enter only a carriage-return the command will not be executed.

5. You may repeat the last command you entered by typing in *. For example if you have entered:

KILL THE WORM WITH THE SWORD

and the creature did not die immediately, you can continue your attack simply by entering: *

6. The parser recognizes a maximum of three words within one string of commands. You are free to enter more. For example:

KILL THE VICIOUS BEE WITH THE OLD SWORD

has the same effect as:

KILL BEE SWORD

The Commands:

Details on the specific commands that can be used are here discussed.

Moves: GO, WALK, RUN

There are several ways of changing your position. You can choose between commands of one or two words. In the case of a one-word command this word must be a direction. This may be: EAST, WEST, NORTH, SOUTH, UP or DOWN. In the case of a two-word command, the first word may be one of the following verbs: GO, WALK, or RUN. The second word must be a direction. The command CLIMB is only useful for climbing an object or a creature and is a two-word command. Examples:

UP

RUN EAST

Objects: EAT, TAKE, GET, DROP, LIGHT ON, LIGHT OFF

In order to handle objects the parser recognizes four words: EAT, TAKE, GET and DROP. With all these verbs you have to specify an object. Otherwise the parser will prompt for more information.

In dark surroundings it is also important that you are able to make light. If you are carrying an appropriate tool for this purpose it is sufficient to give the command LIGHT ON for making light and LIGHT OFF to extinguish it.

Examples:

TAKE HONEY

EAT THE KNIFE

Doors: OPEN, CLOSE, LOCK, UNLOCK

To handle doors or gates you must use: OPEN, CLOSE, LOCK and UNLOCK. With LOCK and UNLOCK you have to indicate the tool to be used. For example:

UNLOCK DOOR WITH KEY
CLOSE GATE

Creatures: KILL, ATTACK, CLIMB

You may want to get rid of some creatures. In this case you can run away or try to kill the creature. You may use the commands **KILL** or **ATTACK**. If you have a tool for this purpose you must also enter the name of this tool. If not the parser will assume that you want to kill the creature with your bare hands which will make your attack less effective. For example:

ATTACK THE WORM WITH THE KNIFE
ATTACK WORM

Miscellaneous: SLEEP, WAIT, INVENTORY, LOOK

From time to time you may think that it is useful to **SLEEP** or **WAIT**. With these two commands it is sufficient to enter just the verb. However, you should realize that the world that surrounds you will not remain in the same condition. This can be to your advantage or disadvantage, depending on the situation. To get a description of your surroundings you may use the command **LOOK**. With the command **INVENTORY** or just **I** you will get a list of the things you are carrying, the amount of weight you can still carry and the number of wounds which you can still survive.

Game commands: LOAD, SAVE, RESTART

The command **SAVE** saves the entire situation of all persons, objects, etc. to be loaded again when you want to continue playing from a particular situation.

The command **LOAD** loads a previous situation. After loading, the play continues from exactly the point where you saved it. In both cases the parser will prompt for a name.

The command **RESTART** restarts the game from the beginning, so you can start all over. This is all you can do, if you are killed by a creature.

The Construction:

This adventure is rather a large one. Were it written in BASIC, it would probably not fit in your computer. Therefore it has been necessary to encode large chunks of the program.

Unfortunately this creates problems. The encoded parts must be typed in in some form. To help in doing this, we have devised a way of making the code check itself, so that although you do not know exactly what you are typing, you need not worry about making errors; the code is error-detecting.

We have divided the work into several sections. We suggest that you take only one section a day, which should take you an estimated 1.5 hours. In this way we hope to prevent strain. Of course you may do it all in one day, if you like.

Monday

The job consists of seven sections, called, not surprisingly, after the days of the week.

Every piece will be introduced with a short commentary, telling you what your homework is for that day.

Before you begin, however, we want you to remember:

- Do not be too afraid of making errors in the code. It is error detecting, and the chances of an error remaining undetected are very small - much smaller in fact than with BASIC programs. Only errors in one line will be detected, so be aware of duplicating lines. Duplicated lines will not be detected!
- *Always make a backup immediately after you have finished a piece of listing.* If you have a disc-drive, make a backup when you're half-way. Nothing is more frustrating than doing a job twice.

For Monday, you get three listings: one in BASIC and the other two in code. In fact, the BASIC listing is the decoder for all the following pieces of code.

First type in the BASIC listing. This is a very important job! Check the result thoroughly when you have done it. An error in this program will probably mean that you will never get your adventure to work.

Next, make a backup.


```

10 REM **COMMODORE-64 DECODER**
20 PRINT "J"
30 REM HIMEM=64#256
40 POKE 51,0: POKE 52,64:POKE 55,0: POKE 56,64
50 READ LINE,IBAS%,LL,NOB
60 READ OUTBAS%,ADR,LSTADD
70 READ WD$: COUNT = COUNT + 1
80 PRINT CHR$(13);LINE + COUNT * 10;
90 CODE% = 0: GOSUB 400
100 SUM% = NBYTE%: CS% = 0
110 FOR I = 1 TO LL
120 GOSUB 400
130 CS% = CS% + NBYTE%
140 IF ADR >= LSTADD THEN 230
150 IF NOB = 1 THEN 210
160 HB = INT(NBYTE% / 128)
170 NBYTE% = NBYTE% - HB * 128
180 IF NBYTE% = 13 THEN HB = -48
190 POKE ADR,HB + 48
200 ADR = ADR + 1
210 POKE ADR,NBYTE%
220 ADR = ADR + 1
230 IF CS% >= OUTBAS% THEN CS% = CS% - OUTBAS%
240 NEXT I
250 IF CODE% <> 1 THEN 270
260 IF CS% = SUM% THEN 290
270 PRINT
280 PRINT "ERROR IN LINE ";LINE + COUNT * 10
290 IF ADR >= LSTADD THEN END
300 GOTO 70
400 REM *****
401 REM *NEXT BYTE*
402 REM *****
410 IF CODE% >= OUTBAS% THEN 500
420 IF LEN(WD%) = 0 THEN 480
430 VL% = ASC(WD%) - 55
440 PRINT LEFT$(WD%,1);
450 WD% = MID$(WD%,2)
460 IF VL% = -23 THEN 420
470 IF VL% < 10 THEN VL% = VL% + 7
480 CODE% = CODE% * IBAS% + VL%
490 GOTO 410
500 R1% = INT(CODE% / OUTBAS%)
510 NBYTE% = CODE% - R1% * OUTBAS%
520 CODE% = R1%
530 RETURN

```

The program you have now, named decoder, will be a base for most of the other programs. This is illustrated by the code sections for today. The correct procedure is:

1. Load the decoder into your computer.
2. Add the lines of code to this program.
3. Save the resulting program and code.
4. Run the program. You will probably have made some errors in the code which will now be detected. The line number of any line where an error occurs appears on the screen.

5. Correct any error by comparing the faulty program with the original listing and changing the listing accordingly.
6. Repeat steps 4 and 5 until no errors are detected. The code is now error-free. Save the result, taking care that any previous backup (made in step 3) of this part of the code is deleted, to prevent confusion with the correct version.

Both the code listings of today must be processed in this way; that is, they must be typed in as separate sections. Follow the procedure described above once for each section.

For the enthusiast: One code section for Monday contains all the data arrays used in the adventure: an array of all the rooms with their exits, an array of the objects with their locations, etc. The other section is the only part that actually contains machine code. This machine code uses all of the remaining code as input.

990 REM COMMODORE-64 MONDAY1

```

1000 DATA 1000,36,29,1,257,40033,40516
1010 DATA 00IR CQIK D287 AA4W B6IC 9IDG IDKI DRID YPI8 PICI D5DZ 5D25
1020 DATA 04CD FKIQ D02S 3ADU WB0C LYSS M4ZP RS5Q PKRS P5AJ W3TS VQ5T
1030 DATA 0APV 7T45 5OCY M0H0 2KYT 9Y71 T9M9 3868 LFP9 R7JO 2MWE BWV4
1040 DATA 0539 CEPJ H026 OL1Z G2SN RZ6L 22JU AQZY TN6Q Z667 I1IF 6M0S
1050 DATA 0DK4 26IV OVQ6 J66Q OLPD YWAM EA3H IF8M 0442 OCLL 3230 6BZ1
1060 DATA 09ZJ K5CM JT9D 9BLZ 01IP 410L ODYW AMEA WHIF 70L0 4SHA 29SL
1070 DATA 092L 8100 2UC0 6JWE BWV4 W622 YOLQ DYWA MYWV 43M1 WRX7 7DI2
1080 DATA 0QX9 ZHIF 54MY 0PDI BMTN 3BN4 18AC RH79 YHJJ 2SJV 9VOU QD02
1090 DATA 117Y 0PDY BMTN 3BM4 1FF0 YSY7 1Y13 1Q4Y 030T E3EC 07NY MWV6
1100 DATA 0PPH AQAV Y34H 30YS 26NY AA9N 8M9H 8AC8 LTBZ 75TV 9Y0U 16TT
1110 DATA 09SB Z6PT 9MBJ 8A13 1Q4Y P39Y HM90 QP0J RBBN 7MTS 08KE ZDKU
1120 DATA 0BHS J4Y6 NLHI 7Q10 R5XC R7KN QD02 ZAT7 IH93 V08K EZDK US9Y
1130 DATA 10U5 J4YP W8NU 420C KAU9 T3P6 TT4U 16RH ANI0 P4U1 6RHA OAVY
1140 DATA 17GF XWUC SVZZ A1H3 P7SB TOZA 1H3P LV3T K6FG UHH2 780I 2F9U
1150 DATA 00ZA 1H5H LF30 HJA1 H6DE 370A JA1H QWAR S5BN FYWF Q3GE SI01
1160 DATA 05UT DF0Z JYSA V508 8A80 0MMD Q362 TF6H Y0NN WLTZ RNWL T105
1170 DATA 0004 97UZ CTSX YKY1 KJAI AUVA VN5G N5DZ 5D25 D25D 25DZ 5D25

```

990 REM COMMODORE-64 MONDAY2

```

1000 DATA 1000,36,29,1,257,30000,32033
1010 DATA 07VD Z51P 1Q5U W69S DAAH R0XT YEAR A3HE U872 XYS5 OTRL QB7L
1020 DATA 009E DZFE 8EE7 7DZJ EC9E D5ER 5D25 D256 UXVP JWK5 XFRN G3U2
1030 DATA 148A 2KPZ WBGL 6DAK BPAK C1LA JOMF 40DA ZL6R 2XFW 3EAZ LQ5D
1040 DATA 00DL E19F D7L8 SE19 FB6L 8GE1 70DJ XK65 GKJB RZCW CC6K RE18
1050 DATA 003L OYRZ AXSC DSJE 08JH BE17 DZCD Z5DZ 5E08 E0DD 25DZ 5E15

```


1060	DATA	001G	Y7E8	5D25	D28E	45E9	5EU5	D29E	59EA	5D25	DZAD	ZAEB	5D25
1070	DATA	001G	Q5E5	5D21	E05D	Z5E6	5D25	E15D	Z5E7	FD2K	E25D	Z5E8	5E8L
1080	DATA	001I	R9D5	5D2F	E85E	GADZ	5D2G	D2GE	HBEV	5D2H	ED5D	ZCDZ	5D2I
1090	DATA	001G	3KEC	PL43	D25E	D5ED	QLD4	D25E	EMDZ	RE95	D25E	FNEF	5LF2
1100	DATA	001E	W5D2	MDZM	ENHD	Z5D2	NEJ5	E05F	95DZ	OD2O	EPJD	Z5D2	PEL5
1110	DATA	001G	CWEE	5D25	EKSE	KXEF	5D25	ELTE	LYDZ	5D25	EM5E	MZEH	5D25
1120	DATA	001K	3TEP	5D2O	D25D	ZUEQ	UD2P	D25D	ZVER	VD2Q	E25D	ZWDZ	W6PR
1130	DATA	001I	S5DZ	5ERZ	D25E	M5DZ	5E55	E55L	S7DZ	5LVL	MPOD	Z5E3	5EU5
1140	DATA	001I	T5DZ	5FEH	L41D	Z5D2	5FDM	L42D	Z5MA	CFBJ	L43F	35DZ	5DZK
1150	DATA	001I	S5EY	5D25	L4DE	Q5E2	5L4A	D25E	15F0	5D25	M7FE	T5F1	5L4Z
1160	DATA	001H	E5DZ	5L48	L44D	Z5FC	5L49	D25L	46FA	5L4A	D25L	43DZ	5LKB
1170	DATA	001G	X5L4	3D25	D2LF	65DZ	5D25	E25M	CFDZ	5L4N	D25F	85F8	5D25
1180	DATA	001O	U7L4	FDZ5	D25L	4AMG	GDZ5	D25L	43L4	HDZ5	D25L	49L4	1DZ5
1190	DATA	001L	15DZ	5EW5	FD5F	G5DZ	5EV5	FE5E	U5L4	TL4Y	MKKD	Z5DZ	5L4Z
1200	DATA	001O	7MDZ	5D25	L4EL	4NDZ	5L4O	FJ5M	XODZ	5D25	L4OM	YPEU	5L4R
1210	DATA	001G	RSL4	YFK5	L4QD	Z5L4	YFL5	D25D	Z5FK	5FM5	D25D	Z5MK	ZMSV
1220	DATA	001I	E5DZ	5FZ5	LCKL	4UFQ	5D25	LCZD	Z5MM	VDZ5	SH2D	Z5MX	WDZ5
1230	DATA	001H	TDU6	1FT5	FR5D	ZDMX	YS9O	D25D	ZDFT	5D25	FT55	9LFU	5U2Z
1240	DATA	001F	65G4	5LCX	DZ5S	91DZ	SUP0	DZ5S	94DZ	5SH1	FZ5F	X5G8	5LCX
1250	DATA	002W	SATX	ARYA	TN1T	QA6J	1G15	DZDU	78S9	6DZ5	DZDU	3AG1	5G35
1260	DATA	001F	M5LC	YDZ5	G25D	Z5SH	1S98	G555	91LC	XDZ5	S9AD	Z5UP	1G75
1270	DATA	001E	15DZ	5DZD	FV5U	GES9	LDZD	FR5D	Z5G7	5FYD	FR5D	Z5GA	559L
1280	DATA	001X	01G8	5G95	DZ5L	CZUH	GS91	DZ5L	CYDZ	3GB5	DZ5S	H1S9	HG5H
1290	DATA	001Y	DQDZ	DFR5	DZ5D	D589	LFU5	S9MD	Z5G7	DU1N	DZ5G	F5DZ	DU3P
1300	DATA	001U	UMGI	5DZ5	LCYD	Z589	NDZ5	SH1S	9NDZ	5GUS	LCXG	L5DZ	559J
1310	DATA	001E	ADU1	TUUS	DZ5D	ZDF5	5DZ5	GL55	9LFU	5GL5	G05D	ZDFT	559T
1320	DATA	001H	Z5H0	5LCX	DZ5G	QXDZ	5LCU	DZ5V	1VDZ	5LCV	DZ5V	ZWDZ	5LCV
1330	DATA	003J	95Z8	1GR5	DZDU	0YDZ	5ZEB	DZDF	R5G8	5DZ5	GJDF	R5ZE	4G85
1340	DATA	01K4	5LCV	9SXV	PJWK	5XNF	99UV	ARYA	RY11	4595	8D05	XF60	1Z44
1350	DATA	001J	Z5ZE	GDZD	FR5G	Z5DZ	5G0D	FR5Z	E80Y	5DZD	FP5D	Z5H1	559L
1360	DATA	001V	19AD	Z5DZ	5DZD	FV59	Y5BQ	9CF6	G2RY	A2JC	S9ZL	CKDZ	5H55
1370	DATA	008Q	DZ5S	H1DZ	5ZEE	6U5B	0T7P	DDIR	YARY	118H	H85H	ASDZ	DF55
1380	DATA	001K	M5H9	5ZE5	LCKZ	EFHC	5HJ5	LCKD	Z5ZE	HDZ5	UP0Z	EKDZ	5HN5
1390	DATA	008Q	LCXH	D5HF	5ZEA	LCXD	Z536	NBK5	XNFA	SRYA	VEAR	YI18	OHG5
1400	DATA	005Q	FK9N	F6GZ	ZYNH	K5DZ	5LCY	ZEOD	Z5ZE	HLCX	DZ5Z	EODZ	5UP0
1410	DATA	002Y	CAVL	ARYA	RY11	9RZE	TDZ5	DZDF	Z5DZ	5HM5	HDZF	R5DZ	5HP5
1420	DATA	007Y	S9LF	U1MP	NLKR	CK6G	Z36V	DZ5D	Z5SH	ZZEW	HS5D	Z5LC	ZDZ5
1430	DATA	007S	ZEXD	Z5UP	ODZ5	DZ5D	Z5DZ	56UX	VPJW	K5XF	K17A	M3G0	5DZ5
1440	DATA	0GUT	X23L	JWK5	XF68	CAJ1	30NY	K5XF	M1AA	H83P	JWKK	7F0K	9A13
1450	DATA	01FK	5DZ5	FZ5D	Z1XP	JWKK	7G01	CAH6	6UXV	POHB	ONER	YARY	ARM8
1460	DATA	03Q5	J6JA	6UXV	P0M1	KIER	YARY	ABN4	3X09	K5XF	68KW	9AAR	FDZ5
1470	DATA	071P	P0P0	OPGW	9ARY	AB59	B5G0	U5XF	68GA	SC4O	JWK5	XFMP	JAQD
1480	DATA	008L	1951	B5GA	56UX	VP07	KK7R	YS2A	YBDZ	5591	K05D	Z5DZ	559J
1490	DATA	050R	W0YT	WBAR	YABY	K4JO	EK5X	F68Q	6JK4	9P0K	5XFM	ZT6J	Q1F5
1500	DATA	00D5	DZ5G	H51H	51E5	DZ5G	156U	YL15	XF68	URYA	6JND	Z589	ODZ5
1510	DATA	002A	ZDZD	5DZ5	GL5K	P5DZ	5DZ5	GM5K	Q5DZ	5DZ5	GN5K	R5DZ	5DZ5
1520	DATA	001U	WUDZ	5KV5	DZ5S	9VKU	5DZ5	DZ5S	9AKT	5DZ5	DZ5S	9XKS	5DZ5
1530	DATA	025Q	ARYA	9CL6	UQ66	5XFD	D4Y0	ABFZ	6UXV	PMR6	RN7H	TARY	AN0X
1540	DATA	01J6	54NO	SK5X	FUT9	RYAM	VARY	AGJ5	IX56	LJWK	RCBR	N9D0	6DZ5
1550	DATA	025M	AUVA	KJ5J	15DZ	5GUS	DOOM	N5XF	DD7K	Y74R	P0K5	XFUK	D6JM
1560	DATA	015E	JWK5	XFUL	QYVA	RYAR	YAGH	CBZC	VPJW	KRCF	X7G1	WIDZ	5Z6E
1570	DATA	001S	RYAI	XG6U	XVP8	ORWX	LX6A	RYAG	REDZ	5DZ5	ZEAH	35DZ	5J85
1580	DATA	048K	FGKE	DOED	Z56U	5889	19J7	CJES	DZ5H	456G	JWK5	XFDD	ODOM
1590	DATA	00HY	XB5D	Z5ZE	ADZ5	KZ56	UXVP	8SUY	LTRY	ARYA	V33D	Z5DZ	5DZ5
1600	DATA	023Q	BC7X	VPPD	K5XF	USVX	5ARY	ARYA	QGXJ	J3HP	CR4D	DBRY	AJBQ
1610	DATA	0252	ARYA	QGT6	UQ66	5XFD	DHDO	SDZ5	DZ53	9N4K	5XFX	EVRY	AGQW
1620	DATA	041N	0JEV	6U5B	8211	FJVJ	05DZ	5H85	CFWJ	FBRF	DDKR	YADO	XDZ5
1630	DATA	05ML	K98F	YS4X	SAKQ	A051	CPWI	F5XF	DDNQ	Q1JW	3RPJ	WKZ5	70R1
1640	DATA	0118	3SPJ	WKZ5	7RYA	KT4D	Z58H	WSN5	TAKT	3ZEK	DZ5J	Y5DZ	5ZEL
1650	DATA	012J	JWK5	XBRY	AGEM	DZ5K	43UP	JWK9	FFYS	FXXA	RYAV	HARY	7DZ5
1660	DATA	00JR	RYAO	D7K2	5L15	DZ5H	KKE1	50YR	B09Y	GKYL	SIQW	3F6Z	TEB5
1670	DATA	03XF	050A	WRG6	VUE3	55JR	B0B5	ZZ89	SIQX	BC6J	I436	JAQ3	8BFT
1680	DATA	0JYE	62BJ	KJNH	VDWP	ZEM6	BLKJ	JHSD	VKFE	NMCC	KLXI	GFXZ	QLT4
1690	DATA	0045	EBLT	AK3P	E06E	06E0	6E06	E06E	06E1	6E17	E18E	09E0	AE16
1700	DATA	001I	77E0	7EC7	E16E	58E6	8E66	E76E	87E9	7EA7	EB7E	B8EB	8EB6
1710	DATA	001E	TJE0	KDZ5	DZ5D	Z5DZ	5DZ5	DZ5D	Z5DZ	5DZ5	DZ5D	Z5DZ	5DZ5

Tuesday

In the next five days you will be typing code listings only. This must be done following the procedure described on Monday.

Take care that you do not save new sections of code over previous ones, and keep track of where you save all these sections. It may be a good idea to save everything on two cassettes, to prevent disaster.

For those interested: The code for today is the start of the actual program, written not in BASIC, but in a specially constructed language which we have christened *ALADIN*. The code defines all the commands. Of course you cannot use any of the program yet.

990 REM COMMODORE-64 TUESDAY

2000 DATA 2000,36,29,1,257,32033,34500

```

2010 DATA 03E7 V1E0 10LU L5YF RYQW 0AAZ LDX0 WD38 YWYA RYAS 6BT0 AA36
2020 DATA 003W SMS7 ARYA DOLE 35FX NE06 SA3E I6E1 6FXP E08Z FQUC 3E06
2030 DATA 001E I5S9 3E16 DZ5F X8E0 5593 EN6D Z5JB 6DZ5 DZ5E 26E0 5590
2040 DATA 002X WAA3 7QKM DZ8E 06DZ YH65 FX6E 0NSA 3E16 E16F X8E0 PL53
2050 DATA 003N UQRZ A6K7 DZ8E 16DZ 5115 E1TE 05SA LZEQ UD3E N6DZ 6XP8
2060 DATA 002U RAUC U6KM SA3E A6DZ BE1P E05E 0DE0 7EJ6 DZ7I V6E1 PE05
2070 DATA 001G F8EB 7E1P E05S D1E1 7EJ6 DZAH D7E1 PE05 E5ME 27EJ 6DZ0
2080 DATA 0031 A3S1 CS1B RYIX EDS0 URZA DXQE 27EJ 6DZF JP8E 1PE0 5SK9
2090 DATA 0073 STR3 45VF KUDS 2CSI BRYN WRFS 0URZ AL7W E47E J6DZ KKZA
2100 DATA 002I YLED BDZ5 E56E 0SSA 3EA6 E06Q KCE0 5DZB E16F 16FX GE07
2110 DATA 00QS ROQT 5BA3 8JFJ SF5E A6DZ 6L71 E45D Z01Q JWK5 ZQ69 GDPH
2120 DATA 00C3 E35E 35S9 3EA6 EL6F Z0E0 56V6 9766 FKIF RZQK TTGM EGT6
2130 DATA 013J MATR DZDM UHSL HD7G D0E0 01YT 135Y F5R6 VKTR YQVF BA3A
2140 DATA 03YF QSCG 0CP7 DY4Q NRL8 B0DE UE7L HZ6Z 3K5L 91Y0 2G4U J5B3
2150 DATA 002W QLRZ AZ9B TWJR Y1WK BA3C JFJZ KPWH 5E76 DZ6J FJ5F 3E36
2160 DATA 00DQ E16F Z9E0 ME05 EB6E 3666 76UX ZQJW L64H 016S 2ARY 1L54
2170 DATA 009S EV9E 86L0 67AY 20KT 05ZB 0ZJS 1ERZ AL60 SA3E 96DZ ANY1
2180 DATA 01EH 9DZ5 GFC6 VYST PCYR IZVX QSCG A3GJ FJ70 00WB DTDJ UI1L
2190 DATA 001I QJ3F 3E36 E16F Z9E0 ME05 E36D 26FQ 7DZH E09L 5WL6 4EV9
2200 DATA 00FO RYAT KCA3 JNY1 E3ES AKE6 6EW9 JFJ7 000Z BDTD JUI4 LEDB
2210 DATA 00AL 1NKG L5XF 02RT WYRZ AZ49 SUYR YAUU CA3Y FXPE 05SA 4EN6
2220 DATA 00C7 DZ6E 0TE0 HSAD E18E J6DZ 5A1C 14VU ZHWU 18LE DBT9 3E85
2230 DATA 00HN 6R96 W5EA 5YFK IES0 CSLB RYBW 2CA3 QJFJ ZKQU B3EN 6EA6
2240 DATA 008N FXDE 05L4 3GME DZ5K A7EF 56DM JTAH H0ZW 09GZ 0PWW JE16
2250 DATA 00CA GMEF Z0E0 5YXJ EJ6H L001 PE05 KN5D Z509 C5CD FUIC LKA7
2260 DATA 000Q RYAS EUKU EZGP BJW6 VREZ AY9S 9BRV BRZL RZA6 0LSB 3EA6
2270 DATA 000J SMTB WYRZ AZ49 SUYS 7BS0 DA3W FYTE 05E0 60DJ XW5Y 7DQJ
2280 DATA 0049 LTRT MS7A RYAD 0LE3 5JFJ SF3E 46E1 6FZA E0MS A5E4 6EB6
2290 DATA 003C C8S2 8S1B TYER ZRRZ AS3B RYBK 9DRY NRZF DPGL 73GN AE86
2300 DATA 00JY U6DH 81JF JE5L 6U5B 9KCZ DGUI LLED BDZ9 E05Z FRE2 5EB6
2310 DATA 00A0 E36H L8M3 1E35 ZERL 74EX 9DZ5 HL81 NKGL 5XHV 794U YZHP
2320 DATA 007I X73E J6DZ 6JB9 DZ9D Z5FZ RE05 E060 BR24 Y1VD GUIO LEDB
2330 DATA 03JU U4F1 00AE J67A XVQM LP6B L74Z S3AD PB6X N5MB DTDJ UIRL
2340 DATA 00KP SCGH 80JF J70N 50BD TDJU ITLE DBFX 9E07 SA5E 36EG 6DZ9
2350 DATA 001H 96DZ 6EX9 FXPE 0HSA 4EJ6 EC6D ZPE0 9L53 E35E B6E3 6F29
2360 DATA 00A9 M31E 35L4 DL81 7SXZ PR31 RG2I J45U ERYE GECL 52L8 3EX9
2370 DATA 01JX 5L6Z L830 NK0K D6SR RQSC GH8C JFJ7 0N5S BDTD JUIX LEDB
2380 DATA 0000 H8FD Z5E7 DE0J SF4E 766U Q006 BLV7 LTYI RZAD TLED BFX9
2390 DATA 00CH 6VXX 0LW0 5YW6 9AS2 BSAB TYER ZNRZ CSUH RYAU YEHS HJFJ
2400 DATA 0072 PVJY 05YF DETS 2CS2 BRYC VREH 81JF JZKP XN3E M6DZ 6JFJ

```


2410	DATA	004B	PLV7	PTWX	RZAD	OLED	BFX9	E07S	A5E3	6E66	FZ9E	0HSA	5E36
2420	DATA	00HE	SBB8	0ERZ	ADRB	E376	YXWP	5QLD	HUJ4	LEDB	FX0E	05S9	3EN6
2430	DATA	0082	EA61	NK7L	5XF7	4XS7	ARH7	SDJE	I6GM	EFZ0	E05Y	X4EA	6DZ6
2440	DATA	002V	1BS9	BRYD	XJET	WLRZ	YRZA	RYAS	HBYT	EH8M	JFJS	FJEJ	6HLO
2450	DATA	008T	G1PE	056D	JMK6	LG69	9S3D	SIBZ	36SI	FH8N	JFJE	58E0	6DZS
2460	DATA	00DM	FCRE	2PE0	5L48	6ZUA	3B0T	DJU4	Y1HL	0DZL	JFJE	58EJ	6DZL
2470	DATA	00FZ	TNFH	0QCA	Y9VG	B1G8	WSHA	E4LE	DBFX	9E08	SA5E	36EG	6DZ9
2480	DATA	00DA	E05E	70PU	JMK6	7JDE	4Z88	SUER	YAUX	FH8S	JFJE	58EJ	6DZ5
2490	DATA	004R	TQDI	UJDL	EDBF	Z9E0	5SGJ	EJ6H	LOG1	PE05	EE7E	J6E3	611A
2500	DATA	000J	V7YX	E0S4	DRZB	RYZW	HF29	REIS	7AUA	ABDT	DJ6V	KTRY	0H8W
2510	DATA	002K	4LED	BFXA	E07S	A5E4	6E66	FZAE	0HE0	5E46	DZ6K	GADZ	1E0A
2520	DATA	00S8	YTRZ	89UM	FS7B	YKFS	1FRZ	AL2H	E459	KY4P	D4RD	IUJJ	LEDB
2530	DATA	00JW	H8ZJ	FJZK	P5HP	CYRI	ZXGQ	SCGX	AHRY	ARYA	XEEP	OHE7	5DZ5
2540	DATA	00FU	D0LE	3555	KQKB	DFRN	F4US	E1SE	05L4	SE57	E56D	Z5EW	BFZB
2550	DATA	002W	5BRV	BRYA	S0GZ	4XS4	CS4B	RYAT	E00D	10KS	ZKPY	63EM	6DZ5
2560	DATA	001W	UJEI	6FXE	G10E	05KN	7E16	DZ5G	5DGD	PSA3	SI7E	J6DZ	CE10
2570	DATA	008P	E05E	F20V	R335	YFSJ	D84C	SHBZ	3MYJ	G80T	RZAM	LVE5	7E16
2580	DATA	00CX	S9D0	2K3M	60G6	8YT7	HS0T	RZAG	SBE6	7E16	ZEPJ	MCE1	0E05
2590	DATA	00CI	HZ4N	WJWK	64M6	9G56	BS5B	RYFW	M00D	3XPB	ZMPY	85E7	6DZ8
2600	DATA	012W	LUT5	YFS1	QU4I	S0UR	ZADQ	WE57	7EXW	PCUQ	DJU5	E0FX	EDZ6
2610	DATA	00D0	XPBZ	MPYA	ZFRE	DZ5F	ZDE0	56W1	1I66	FROQ	U4IO	D7FZ	DE05
2620	DATA	005K	8NPN	LDLU	JRLG	5DT7	3E85	FT8Z	LPW1	5E76	DZ6X	PBZM	PW25
2630	DATA	0169	K4L5	XPB0	0S6C	S1BR	YCSX	H0DA	1PK4	L5XG	938S	7ADP	LQ5D
2640	DATA	0024	6PYF	5E76	DZAX	PBE7	7EJ6	DZ5G	5DU7	3JP5	UX3E	N6EA	6FXG
2650	DATA	00ZE	5YF6	88GB	V6U3	W11F	1D0W	FYGE	05E0	6EA6	DZ8F	UCJB	9DZ9
2660	DATA	00DQ	DZ5F	XG0E	RS45	EA6D	Z61H	FE5Y	S1XA	ERYE	RYAT	WLRZ	WDPH
2670	DATA	001K	P9DZ	9DZ5	E1GE	0RZ7	7S65	EA6D	Z6U7	SJQ5	XZ3E	A6EL	6FZ0
2680	DATA	0170	XWPY	711F	1D0U	FXGE	0TE0	87QY	7PY6	QRKZ	CF8S	UMD0	ZFYC
2690	DATA	00ZN	5YFR	PQU4	1ODD	E0PE	0FE0	01XL	UU5Y	ZROQ	U4IO	DEL6	1EC5
2700	DATA	001H	U5K0	CFXF	E05Z	E0FX	EDZ6	T53E	85VW	BZMP	YJ5E	76DZ	6V33
2710	DATA	00F7	S7AH	8LG5	DE1G	E057	0Y0X	2118	68XZ	AHOL	G5DD	Z5DZ	PL5U
2720	DATA	00CF	E77A	GY8P	YA4R	KZVA	MS8A	RYAR	YDSU	OKT9	F9DZ	HRED	5LOF
2730	DATA	00WD	RKZV	BQT3	I2YU	U83K	056V	3MQR	KZVD	QU4I	2YVZ	HREC	5SD8
2740	DATA	004A	AN86	8XZA	HOLG	5DE1	ESAT	SAPE	77GP	6DZ5	KNDF	XAE0	5E0L
2750	DATA	007S	DZ5G	0AH7	D8CT	6VY4	Q0KS	2CLQ	9TE7	7GP6	DZ5I	EDU9	VE05
2760	DATA	00FX	RZBR	YCU0	BVRI	ODHD	Z06V	XVVO	1S2C	NQ9T	ZMPY	N3GN	6E86
2770	DATA	002G	0LKN	DFXT	E05L	53EV	TE86	K9DF	YTE0	5E06	EN6D	Z91J	DJB9
2780	DATA	001E	K5E7	5S95	EL6D	Z6FX	Q0ER	ZFPK	E5DZ	8EK6	KNDJ	BBDZ	5DZ5
2790	DATA	011G	7EK6	6UY1	8RKZ	Y3QY	M1OD	MNY1	0DJW	IFC0	RZAG	3PKH	6L4T
2800	DATA	00AX	E861	0FFX	AE05	E15D	Z5G0	7EEE	SC76	WY4Q	OLU2	CTBZ	UE98
2810	DATA	0084	E86L	4FF0	EU7V	E158	6798	5ZFE	MUK8	L1OF	GDP8	AVSE	7EJ6
2820	DATA	002W	ARYM	CSIB	Z36X	WJS0	URZA	TAAZ	D9UM	FS7B	UK70	DQJB	9L41
2830	DATA	0097	DZ5F	YRE0	50KT	365Y	FK14	UQFS	KBBZ	USJ3	EK6D	Z9JB	BDZ5
2840	DATA	008E	DZ5E	2QEO	5ZKT	ZN0G	PADZ	6EV0	LUR1	9AMP	G70S	3AEK	L1OF
2850	DATA	009P	8SYE	QJWL	EGB6	RY60	TS14	E16D	Z6E0	0E05	Z1YE	80E8	60NA
2860	DATA	002B	IUE9	5DZ5	DZ5D	Z5DZ	5DZ5	DZ5D	Z5DZ	5DZ5	DZ5D	Z5DZ	5DZ5

Wednesday

The code section for today contains the last of the ALADIN-listing. This part deals largely with the movements of the creatures in this adventure. It is therefore a very important part: it brings action to the scene. Generally the more "intelligent" your opponents are, the more interesting the adventure. If intelligence can be measured by program size, you'll have to agree this adventure is interesting! Also, there are some finishing touches, such as the death routine -up to now you couldn't die! Unfortunately (for you), you can't just leave out that piece.

990 REM COMMODORE-64 WEDNESDAY

```

3000 DATA 3000,36,29,1,257,34500,37000
3010 DATA 00V7 2CWB ZUSJ ZEVO L4NG T0LU R1G6 F0G9 YDIT ZNPY WZGN AL4N
3020 DATA 000P 77YS 3J6K UZOP DIP1 9RMZ K24U MFZ3 SBZU E90E 86GN AK6E
3030 DATA 014W NG5G 70S3 AE4H E35E J5S9 4EL6 DZ22 JMKP 6JG7 7YS3 J6KU
3040 DATA 005L VU9H 1BZU LE3G NAE8 6F4F E1GE 05L8 3200 GPAD Z6T5 VE45
3050 DATA 0061 81AM PG70 S3AE KLIO FV3T E4EZ FPZ1 3EJ6 DZ6F XTE0 5L54
3060 DATA 001N S1EN 5L4W SJ4E J6DZ 6FYT E05E 06EN 6DZ9 FEFJ B9DZ 9DZ5
3070 DATA 00D8 E0R6 VYFQ MHU9 H3BZ UZOP KT8E VBDZ 5HDF JB9S 9XDZ 5DZ8
3080 DATA 00K8 RZAI RJZ0 PZ43 EYBD ZZJB 9DZ0 NPJW K6JG 68XV ZKVI 1FZD
3090 DATA 00VN 5YFR SQWN KRYW RZAI NNZO P6ML W55Y FRPQ WNKV 13FZ DE05
3100 DATA 006Y MQJY TRDJ RQDS 8AU0 DZ3M TNL1 WFRZ AS1Q RYAU NFXI KV14
3110 DATA 008Y QKUS KJEJ 6ZFY BM6H GYSY S0UR ZATA US9C SIBZ 36YT KV15
3120 DATA 007B JB9D ZFDZ 5E0R E05L 9U75 85A6 2FSJ QTNL V16V 3VE4 5TL2
3130 DATA 00IU UMFR Y8L7 1E75 P5U0 0NGH 116S 6AKR LF0G E1EE 05P5 UZP0
3140 DATA 009K GPAD Z6T5 VE45 MKU7 585A 6ZFD T4UM F6J6 L71E 75S7 USK3
3150 DATA 00GN SU16 J65W Y4QM K080 QDE0 S2AZ J2SA CS7B 6JGH FGE1 EE05
3160 DATA 002D 0HHF GUSV E35S A3EJ 6GP9 G1FE 05EE 5EJ6 DZAE RHU7 TE35
3170 DATA 009A WK3G P9DZ LJFX EB8E A6DZ A3KY H18N J682 BZCE AB8A 6DZ9
3180 DATA 0080 16GU 7VE3 5TL3 EJ62 FYAM 6HGY SYS0 URZA N11E A7EJ 6L4X
3190 DATA 003Z 6DS9 CSIB Z3MX WLS0 URZA EK0Z PPZC 3GP9 L41J FXZQ 0S93
3200 DATA 0151 MMOD 2R86 YS2A KRLE RHKK 6JFX Z0Q6 W79A 61FT VQSQ M7HM
3210 DATA 01AL XWPK 54D0 VDRL ERHS BUE2 5DZL 76XV XJXK 66JD PVDS LERH
3220 DATA 001Z 0QSE 3E76 DZEH KBJF XZQ0 SG3E 76DZ 5HKD JFXE B8GN AE86
3230 DATA 004Y DZDP VDXH E35E 45DZ 7EL6 DZAG IHE1 RE05 SDJE B7EL 6DZ8
3240 DATA 01X8 EEB7 0BJX KK9J DPVD ZLKG HHKH XP00 1NHX W50D FVE2 LOKH
3250 DATA 009W HKKJ B9DZ BDZ5 FYRE 0512 70BJ XTRD 06K8 UMFS KBVJ K4UP
3260 DATA 0050 MW8D ZRNQ RYAW EBS7 B6JH HRIE 05J4 EZFX EC7G NBE8 6GA1
3270 DATA 003A K8S3 BRYA TWYR ZARZ TUMG UMYW WMS0 YRZA DU3S L3E4 6EN6
3280 DATA 00HK TXYR ZARZ BSM3 SBBW DMS0 FRZA KT07 6699 6ZFY SVE0 HE35
3290 DATA 00A0 E25S 95EL 6DZ6 E1RE 05ZE XZRO 7A7B 963F DE6U NFSK B4UX
3300 DATA 00CH SM3E 46DZ B51K 0K61 F68A SKJB YBTW YRZW DPHE 55DZ 5DZ7
3310 DATA 00DE EK6D ZBF2 1T8T 6ZCG 060S 9ZYS 3AHD D57B UMGV QNVJ RAUX
3320 DATA 00GT SBDU MG6J THRI U8VE 55E0 5GPB DZPA MCT5 KPDM AY6J QN2Y
3330 DATA 0080 IK5W XZGP ADZ5 GT0J U5M0 PY2S BDUN GRVA ULNV JT4U XZRO
3340 DATA 0011 UPJB 9DZ8 DZ5H K0E1 RE05 ZFXE C7EL 6DZ8 HKIH KRFZ DE05
3350 DATA 00KE DPLH RIHK SFZD 6VXV RJ2T RD3Y Z8SB DUNH RYAW 9NVJ YQ93
3360 DATA 002Y WNVJ ZTWE RZAR ZSUM HSUY X2NT XERZ ARZB S2BS QWVG NJ4J
3370 DATA 01K7 IHKV NY16 YXVN 488E 1HE3 5E95 DZ67 GXWP CWBD QWVF LJX1
3380 DATA 0025 RQER 7GND E86K B1SB VE75 591E D800 DDZ5 KUIE 2ESA TSH1
3390 DATA 0010 5JHK YXP1 ED7G PDDZ 5F4J JB9D Z7DZ 5FZR E05S A3GP DEL6
3400 DATA 00C0 SEVE 75L4 5ZSQ T35F 76DZ 6FX0 JXK5 LPNB DRVE JLFV JOP1
3410 DATA 002F XHE3 5E95 DZ6E L6DZ 8FVJ OP2F ZDE0 55A3 GPDD Z6SB TE8E
3420 DATA 009I SAFE D7GP EDZ5 K9JS CUE8 589Y ED89 IY4Y CSPD RVEM LK9J
3430 DATA 00DW U9VE 85E0 7GNE E86H EJ1N MKT6 6GZ0 9Q9F FD8E VFGN E10J
3440 DATA 02ZJ 07U7 9A66 F6K8 SUKR Y855 06YR F36H Y60S SN3G PEDZ PU7T
3450 DATA 02UH HRY8 OP65 5Q6Y 5YFD P0DX 403U MM48 KSCA RYMU OJX9 OR3X

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3460	DATA	00HT	Q95Z	SQF2	86VX	WPD5	PDRV	01QT	E5HL	EDZL	OPBF	XEE0	5XF3
3470	DATA	00OC	UMJR	Y8U7	VE85	S93E	46DZ	F7QY	4QMK	PC0T	EA0S	3A6Z	7LJ4
3480	DATA	01HJ	0KUJ	WK5Y	U20H	BZ7S	OJEJ	62FY	2MEH	GYSY	S0UR	ZA16	EEE7
3490	DATA	0011	WPE0	5TLQ	EE7E	J6L4	100K	OPDE	2F60	5L5H	EE8E	VHDZ	5FLK
3500	DATA	00VZ	GN0G	70S3	AEKL	I1K0	PF1N	K3W5	XF07	0S3A	F0LI	1K0P	0FXE
3510	DATA	0090	E05C	K041	BHFG	24U0	FRYQ	BZ7E	E8E0	6DZ0	G0K0	PHN2	1E5S
3520	DATA	02GA	ZAF6	0E8N	K68Z	BZ7E	ENE8	6GHA	HNKY	3VE4	5053	XHDS	V0S0
3530	DATA	0076	GPA0	Z6EF	5U3V	SE6S	036Z	XWPK	7M66	GYS5	WYPS	0JRZ	AJK5
3540	DATA	002T	RPS0	JRZA	JL5S	OZGP	ADZL	XPCL	K4G0	ADZ5	JBK0	PKXP	CSPZ
3550	DATA	001T	WTE4	EL54	I6G0	ZCJS	KV3V	E45T	5JEJ	60PA	01PE	05KN	7EJ6
3560	DATA	001K	05U1	0EF7	EJ6L	4HF6	LE1P	E05E	V1ZU	QFF7	E96D	Z6E2	L0PM
3570	DATA	00QB	G70S	3AEK	L66L	OPNG	T0LU	R1WP	NMDT	VF7H	E35E	15S9	5E76
3580	DATA	008D	EL6E	1RE0	5L67	7A1R	4PNM	DTVF	9L6G	L0PR	V4VE	45L5	10PA
3590	DATA	008T	L40P	6L0P	SV3V	E458	13MR	YK07	W8S7	B0OP	V3VE	45EF	7E86
3600	DATA	001Y	XTSL	QEF6	GPHD	ZL68	MFXA	E05L	G400	ADZ5	H0LE	IESA	TSEE
3610	DATA	0010	JNOP	UXPE	LL4I	G6DZ	CHKL	V3VE	45T5	JEJ6	GPA0	1PE0	5KN7
3620	DATA	0084	EJ6S	9D1A	KDM6	H068	Z5GR	S0UR	ZAM5	AEF7	EJ6L	41JF	L0PV
3630	DATA	00H8	Z56S	AA0D	BZUQ	U0ZG	PAL4	155T	A1NS	7070	S3AF	0L68	M0PY
3640	DATA	018W	05A6	2FDT	4UMF	KT40	SY4Q	CR58	68X0	AGDL	G8ME	IESA	TSEE
3650	DATA	00AU	EG70	LK8K	BWJD	UW15	00PA	DZ6T	5VE4	5TPE	ZVQ0	4ZGP	AL41
3660	DATA	00CU	XPEZ	V08Q	05A6	2FF5	4UMF	KT5X	PEEG	0E86	GNAG	0ML6	1E5S
3670	DATA	00TH	JZGD	UVFL	L68M	VU3V	3TE4	5CT8	5A6Z	F808	SUMR	Y8XP	EEG0
3680	DATA	01DB	Y4QM	KP86	W9T9	1ERE	C57A	85A6	2FDD	4UMF	RY8D	ZEE0	5J4P
3690	DATA	0060	S93E	F6DZ	5FXA	E057	76A9	6ZFD	DJSF	TS7B	UMFS	IAA3	5JFP
3700	DATA	001L	15E1	ESAT	ZJ5Z	VPW8	3EF6	DZ6J	B9DZ	9DZ5	FZRE	05SA	3EK6
3710	DATA	01J0	RE03	7VJW	K5XF	77YS	3ABQ	T7B8	506Z	FX0Q	VLR5	0VRZ	AKZD
3720	DATA	00AL	EG77	AXWP	5MJD	UUVV	TS7B	UMFX	BRA3	2E10	E05D	ZPS9	ZHLO
3730	DATA	00F0	Z3A8	00RZ	AKU8	EG07	35C8	6ZDZ	DUHK	LEJ5	E10E	05DZ	PS9Z
3740	DATA	002Z	ZREI	5SD3	EK6E	L6JB	BDZ5	DZ5E	1LE0	5DZ5	ZWPH	U0E8	6GHA
3750	DATA	00EH	SIAZ	YZCA	YFPF	CK5X	F6E6	SGCS	EBRY	ASQS	A33E	IESA	TL96
3760	DATA	00ZU	MSA3	2E10	E05D	ZPS9	ZHLO	V45E	1LE0	5L5W	EH0E	86GN	AEJ7
3770	DATA	0066	A31J	FPDZ	708J	KX5X	ZDD4	VKTR	YETW	VRZW	DPHE	55DZ	5DZ5
3780	DATA	001H	Z7ET	6DZ7	K9NF	X0E0	559J	EH60	NAFX	TE0Q	SABE	A6EK	6T7S
3790	DATA	00KD	SGAD	OZEH	L6UB	NZYZ	KDVK	UMFU	LSTW	LRZY	DPHE	45DZ	559J
3800	DATA	001I	E0SA	SSR3	E45E	N6FZ	E0E5	YXJE	J6HL	001P	E05K	N8EJ	6DZ5
3810	DATA	00K0	XSS0	CP7D	YDQW	K2UM	3DIU	E7HE	45DZ	5ZEF			

Thursday

Does the code for today look very different? It probably doesn't; but actually, it is quite different from what you have been typing the last three days.

The procedure for typing it in, however, remains the same. This was described Monday. Today's code contains half of the vocabulary of the adventure. Since this is a text-only adventure, your work for today is of the first importance.

990 REM COMMODORE-64 THURSDAY

1000 DATA 1000,36,36,1,91,27000,30500

1010 DATA 03SV 8MH2 DK6Y YV50 H0NQ 44X4 TKNW 3AJF W3AJ FW3B JGW3 AJJW
1020 DATA 0363 CJFW 3FJI W3AJ LW3E JFW3 IJKW NI44 YCE8 YW4T JFW3 HJFW
1030 DATA 03YV 30H4 CE2Y W00L YVCE 2YWG 1LYW CE2Y W02L YXCE 2YWG 3LYV
1040 DATA 0IBY W4TJ MW0R 3F05 6H44 TJJW FXLZ V4TJ KW3A J006 6H2C E2YX
1050 DATA 09JY 4TJM W3AJ 0096 H4U3 NH2F XL2V CE2Y X04L ZWCE 2YXG 5LZX
1060 DATA 05LW NI40 V4TK HWNI 40W4 TKIW NI40 Y4TK JW3A JH09 6I1C E2YV
1070 DATA 0HJK W0S6 F056 J24T KMW3 AJH0 C614 CE3Y YN04 0VCE 3YZN H40W
1080 DATA 060W NJ41 W4TL GWNJ 41X4 TLHW NJ42 Z4TM IW3B JI09 6J0C E3Y2
1090 DATA 0FFK WD07 YX4T MLW0 T6F0 66K3 4TLM W3BJ I0D6 J4U3 0H0N H41V
1100 DATA 03FU 30H0 NI41 WU30 H0NJ 41XU 30H0 NK41 YCE3 YZNK 40ZU 30H0
1110 DATA 0FPJ WDH6 YX4T NKWD H7YX 4TNL W0U6 F066 L44T MMW3 BJK0 46K4
1120 DATA 03NU 30H1 NI42 VU30 H1NJ 42WU 30H1 NK42 XU30 H1NL 42YU 30H1
1130 DATA 000J WD15 YX4T OKWD 16YX 4TOL W0V5 F066 M34T NLW3 BJK0 06L3
1140 DATA 0J6Y X4TP EW0V 8F58 P1CY KMHY GH0E WD7K E3LX DEZY 6AF9 6H8W
1150 DATA 29CI BT10 NF87 JHVB I2F1 06AD DUK5 651X EVNG HFGR 48WP UVJP
1160 DATA 244P GC1H KFAS MBRZ 52ZT A023 B2Q1 PEDW C6BP 8QY0 DHTY MGHY
1170 DATA 3EDU T599 78KY E4H1 1BZF B69F VDUZ E6Q1 EKE0 PE9S 5ET9 6L8W
1180 DATA 29MF 5N41 JV66 5XE4 0J8A ROEN 88M8 WEG1 3146 AETJ 1PSC 0VVP
1190 DATA 3FT4 2GP7 C3V6 6P8K E0PE W96E Z0Y6 ZN96 HZ6Q IFR8 S125 0P60
1200 DATA 4GID SYP6 T29B 85GK 96C0 99PA NE8K 5W93 DV5Q PFC1 SKFB 104J
1210 DATA B9QE 7MJW E612 AWJA 0BZ2 7BDC 4Q1K K0CE 09AW CBP3 U4FA SDFJ
1220 DATA 3F96 C219 6YGB FYDB 8DA1 4TCX B3H9 CA02 6API 6GYJ GHMY 6RHM
1230 DATA 3PGH 6DWD W153 RPFV E2K5 WGV2 AATM 4QE7 MJ10 SXT9 37X9 9AHO
1240 DATA 683F NXC0 E063 3RJQ YJFH D1BK FB09 CT1F KFB0 9CTE 2MD9 9Q1P
1250 DATA 4LE2 VYPD MW61 01TF B7K5 F1BX FAZI BVEG WC0X 6VN9 6D06 56ZM
1260 DATA 2RY6 KHHY DRHS 9C3Z 0Y6X P1QY FB79 AV90 CZ5Y PECE 6186 6PBP
1270 DATA 4VCE W05S P0QY GKHI 8S1Z 99N8 G1BV F50P 30CE W099 6HPY 4AHE
1280 DATA 28W0 BXB F 2J61 67TB F231 NR6F ARJE PY6K HVV9 7HF4 74F3 JXXK
1290 DATA 5T60 P2TE 8VEW 96AY 997B VEDI 15RP L0BV 2313 6XPC E07B 49A0
1300 DATA 2AND EC8T A299 C1FY 87HR E518 66P3 TGR4 DWE1 MC5R PJKY LAHN
1310 DATA 2N0R 1DWG W43B 705P 3WJW B65A EE1M DW9A LVIM 3000 R2C9 9A10
1320 DATA 5B66 PFKY FDHK Q019 99DA U902 Z99B E09C CY47 3XVE 1MC9 9HBK
1330 DATA 1GW0 EWDY L15R P3KD UVE9 9A8Q EGMC W9B6 Z3LQ 7UCE V9WY GKHU
1340 DATA 2RE2 0266 P4WY 87HV E108 99NG 0BN2 I663 XPY8 7HJD UQC6 BPOT
1350 DATA 3PDU Q6WD UT9B 2BFK 1AKF 3JQZ W937 V64P 00Y6 1HDD Y1FB 8D2W
1360 DATA 02IR FAUG BYDY ZDW9 9DX0 V6YC 99GZ 0Y6A P9CA 8WY2 LHHD UZYP
1370 DATA 1DZK E3LX DEZY 6AF9 6H8W DW18 W9A3 Z995 AF25 ZYCD WSD3 JM2G
1380 DATA 1W20 HNE0 W5DQ 8TFB 25FY B2ZE AW9E G252 ZTZY 6XTB F2CB 377U
1390 DATA 6799 C518 I2DB 85EM CEU9 B91G CF2V I99R 4KY4 AHJ1 7YFA 2M5I
1400 DATA 1EDP E9S5 ET96 L8W0 H5EB 6990 YDRH UE6I 60W6 AETJ 1PSW 60HN
1410 DATA 2280 XX1B YFA2 7GTV UJ3P 4TCZ G9QT FAS5 EMCE M866 3KPY 47HE
1420 DATA 408S KZW1 8KFA 2NCC 8U38 99N1 643J 8B5P BV0D 1310 1TFR 05E1
1430 DATA 6P5R P2TE 202B 89AK YF9H UE1I C62P 0JEB 2813 6XVC ERFB 27OK
1440 DATA 3X1L TFAW 58HE G1JW 0W49 9965 I252 Z094 BV50 PFRE BW6F 6PBW
1450 DATA 6366 PGWE BVWD DUV9 B0C1 TCLE 33LQ ZVE2 W899 M1U8 WBNB 0DAI
1460 DATA 5J99 61NY DLHJ 8WQZ 026X KBS2 DB19 8NBT ZDBB 91VC EJC3 42ZJ
1470 DATA 5F99 NCT0 R2ED 08TF AUMB OCEJ CB3F 1PEX 1CAP 71UE X0EB 6P3I

1480 DATA 4F1I K FAR PENB T20B 9M0J Y6KH X0YZ J99B EOY6 GHND Y109 9A1G
1490 DATA 1YME HN90 9ZW9 8JVB 7D9Q Y5HH CYDE HVE1 WD0P 6XTG R285 QPCT
1500 DATA 225U ZM41 4FB8 CBTY FRHV YG1H VE1Q D100 XNYQ QHT1 BJF3 9XXV
1510 DATA 7K99 JANB Z2A5 R5XN CEJ9 B80B 0EX0 EAP1 0K1K MFAQ 9GVD YM8W
1520 DATA AH01 7T07 CLVB ADAI CE0C APNC KYF9 HVE0 Q113 6ZWE BTJ9 9K5U
1530 DATA 2YED 06ND VTF0 P6X0 E8V1 99NH TEBW FB28 1FCE JJWG V2CB 6JHP
1540 DATA 7000 6YCD XTJW DXI7 APB1 F7CA VAQT EK0Q 1210 OXX1 BYFA RJET
1550 DATA 30E2 L964 PJKY 57HF E8MD 991B VEX1 2B3P 3JCE QEW6 G060 W6ZQ
1560 DATA 613F XKR1 PKFA RMBU EC08 0R6Z QEBZ 3ASJ EUCE XCAX H5V9 0KZW
1570 DATA 319A IV5V 3ZCY K7HE 1RZF B7K8 KYLL HF90 GZAR 05Q1 KYFA Q9AF
1580 DATA 40BT 2DAW 5ERY DRHG E7LD WGV2 AB4J EV1B JF37 QXFC EM85 QPAC
1590 DATA 2REM EQ9E HCWG M2D6 6P2K 49JY APT8 KE0P E99K 1GYH LHFE 2UYP
1600 DATA 42EX 49B3 8CCE DPD9 57EQ 1PYF CL8T FB5P 5049 JX3F QXTE 2V1W
1610 DATA 63BB JBF4 8J89 9ABT 1YF5 50PG QCEL 9B15 5PU3 GHY9 6DYB 45GJ
1620 DATA 70W9 B6V6 6PGC 1IRF B8M1 GBT2 8APM EQ4C JZB1 9E1I BYFB BD0G
1630 DATA 4047 J899 JAGC EKCB 3NFQ 3TJ8 990J KGV1 JW33 J8WE 9IE5 UP9G
1640 DATA 20DU L969 P9CE 4MD9 90HT 43J8 99MB WE7L YPCE K6AT 5EK9 55CW
1650 DATA 22WR X0QR 2DWE 2VDA T7GQ E5I8 50P2 KTH2 XS8S 7YWE BW90 X6ZC
1660 DATA 10X0 2WE9 W3IN 701Y GHWW 9A3Y W33J VB20 5SYM 7HNE 8L10 P6Z0
1670 DATA 5ZB2 OECB M2D6 36XT VHKH R6KZ X5RP 1ZGF 2CB7 DBPB T2DB 85EV
1680 DATA 7499 N1T9 D7X0 P6ZC Y87H UED1 1A09 1V1I KFAU JHPE DJ30 Y6YG
1690 DATA 51Y6 GHEE 8UAB 09Q0 006Y P7C2 ZB70 EQ9G 3Y10 QXTE G015 4PEQ
1700 DATA 3U17 JFAR GBUY 66HU 977Y IE5X FAQM 1GDX 085T P2QB S26A PMIC
1710 DATA 4MBF 2DAX H5NY 2KHM 90CY 65P2 QY66 HD6K ZX5X PJQE 8T66 BPJQ
1720 DATA 3T10 SF86 JBHY 66HI E8ID B7CB RE9M C10Q XTEG Q1WE GMD8 89EP
1730 DATA 2JCE Y986 04G1 0TFA 75FV DY28 WEGW 65SP AGYK MHGD UK29 9JGJ
1740 DATA 10MM CW3Y DZ65 P4C9 3ACW DY0E 99HB WYD6 HJDU T6WG V19B 653G
1750 DATA 5099 7BTE 7MC5 4P40 17XF B7JH PBE2 0AP9 8KYF 9HY8 SIZ6 4P4G
1760 DATA 4D17 JFBB 5FJY 6LHQ EFMC 996B FBZ2 AB6D KQVW KHYD UT66 5PCC
1770 DATA 5CAK IGKE 70D9 904G BN2D B0JC GBT2 F628 XT1A YFB6 9FVE 2V1W
1780 DATA 4VEC M888 DAGY DLHF DYK9 B65G KE8V D99H HRE9 WD5R P9WY KMHS
1790 DATA 293P 1GYF LH08 90Z9 95AV W1DH PT42 XTEX 0EAP 18UC EU9A 89EP
1800 DATA 7999 0LRB F2CB 377G BU2A 640Y CDVT JWE6 WD14 6XWE DN7A P01F
1810 DATA 57WD WW8B 8MBN EBW9 52PL QBVS G5RP 1X1B XFAU P1NE BW95 ZPHR
1820 DATA 3R1L TFAT IGT4 EJX5 V3ZW GL1D 99N1 G42J 8WDU KE5V 7XVY 66HE
1830 DATA 6EB3 PAYD XWHD L8TF 50PF VDUZ E65P AQBK 26AT 5IK1 KMF5 0P1C
1840 DATA 0VRE VBIZ YP7C BVFU S0ZW A020 AX15 U8Z3 YWGE 2EWE 7WEA WDAI
1850 DATA 7E10 TXRE 9M86 5PFG DYUD 99M1 C3T4 F37Q XEED QGAP 01FU 3GHG
1860 DATA 231Y YT8S 1ZW9 53XD 18TF APOG GE6X EW33 J899 NGTD UV1G 2S00
1870 DATA 4E96 JC10 0XP0 HZFA QM1C EDPY PCEI 8BDH BT3U J899 9AVD YZDW
1880 DATA 2RED PCB3 P3JC EL9I 05XF ASJ1 UB0S EWDU VJ99 IBV9 01Z9 9JCG
1890 DATA 8SPB T2AA PNFO 48JX B0JF G48J 899G BE1H YF87 K1EE 2I6W 1T00
1900 DATA 4L4T 5JWE 1105 RPFW 6U1Z AT81 FCES 3B00 5PBH 2JB3 PEUD YT0W
1910 DATA 443Y JY3I Z7VE X29A 59EU EDI8 50P9 GY2G HYDY VEW3 3J15 7PCC
1920 DATA JPD6 5PCC 9AHZ 50P4 W10Z FBB5 8ME2 V199 53CE 2VD6 6PEQ 1900
1930 DATA 254P JCYD EHVE 8W5W 0D1F APGE GDUL JWED W999 C1C4 B4FA R5ET
1940 DATA 3A4E JYB6 JCRY 66HH E8T6 B3R5 PBH2 DB8D 8N4T 5F5A PINE 8LDW
1950 DATA 2P0V 2CBA DIGZ 5SH0 CE08 AYPE KY6L HKBU SD99 KEGG W1J9 9GBE
1960 DATA 3K92 3YUW PQHH 937Z 136X Y304 F5R9 X090 CZ10 NHTB F22A P10U
1970 DATA 24KP JGDU X960 PHPD ZWCB 8PAR EDM6 6BP9 KYKL HJYA MHJ8 SGYW
1980 DATA 07K3 PUZY 1FSF 5UCN 23UC N23U CN23 UCN2 3UCN 23UC N23U CN2J

Friday

For today there are two code listings. Each code listing must be processed in the usual way; that is, they must be typed in as separate sections.

The first code section contains the rest of the vocabulary. The second code section contains the sequence of the words that constitute each sentence.

990 REM COMMODORE-64 FRIDAY1

2000 DATA 2000,36,36,1,91,30500,32435

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2010 DATA 52AT 5IK4 14FB BJHP 8V3Y 99F5 N933 Y99R 4KYD 7HEE 8VDA X81T
2020 DATA 3PY6 6HM9 0CYW DW18 3HUY CE5Q D52P 5UB0 SE99 58N9 6LZ5 0P2K
2030 DATA 4ZGU 0E99 61H9 6GZW EGID WDVZ 3B0G 5C1K ZFAX 81CA S2EA PNGG
2040 DATA 5J65 P3Q1 LJFB 7CBT EDTJ 9952 VY6K HNGD 0E99 65VB F2EA TMEK
2050 DATA 1DXJ 66BP FKY4 DHP8 W3YW Y5HH FYA6 HYDU VE99 04KE 7OD1 OTXR
2060 DATA 51E9 M899 JCG9 53Y9 9R5V E1WF 146X RE9Z 9B4M 5CYL 7HVE 8W6W
2070 DATA 4SA0 2FB2 GBE9 23Y9 9RBP FN1Y PU3G HN1B ZFB7 DQVE 2V19 9850
2080 DATA 71DQ 8TFA VDIG 48J8 10TX T1AR 0E80 2APM CNBZ ZYPE X1C3 8YYN
2090 DATA 331B YFB0 DGV1 IKFB 7P0F Y6GH 096K Z99D GUQL VJT7 C1VB 9B4V
2100 DATA 5699 R5VE 1Q9W 33JW ATG5 G18K FAT5 GK1K MF50 P0K4 F509 VVYP
2110 DATA 1ZD6 ZQ93 AVB4 N5PV PKHR 903X 5RP4 KYLL HGE7 WCB1 JHUU 3GHR
2120 DATA 5GB6 DFQ4 3J84 75XM Y6LH V96J X5UP 9Q9C AY13 6XE8 U7YA T1GN
2130 DATA D90A S2EA W95T 7CEV B605 E9CA V64P FODY T699 NGKD WSD9 978Q
2140 DATA 469B 6ZDQ 8TF6 50XM Y66H UE4Q 8997 BNB6 26AX B4VD AM7A X0GK
2150 DATA AOPB H2HA PDQU CEN9 B0GB Y1BJ FAT5 GUCE U33L MZNB F22A PKCG
2160 DATA 6ZB2 DA13 7JZB 1DGU EX02 AXH9 GEBQ 80R6 XPE0 ZJ10 MYQE FMYP
2170 DATA 240P 2NEI Q85T PFQY E7HJ 96CZ 6BP8 CE7L DWE1 QD99 8EQY HLHJ
2180 DATA 291J AGW7 KHC9 7EVB 69AV YDRH JBF2 080J JGM0 KHVE 1Q80 R6XV
2190 DATA 2635 XEYC LHXE 2W6A T1GN BZ25 600Z MY66 HCY0 32TC EL3B 75E0
2200 DATA 2XY6 6HU6 SZW6 5P5V BT2D B8DA I37J W809 1FE2 V110 XXUE 1MDW
2210 DATA 4QGV 1CAX F1U7 C6ZF RRXF AS5M GBE2 789M 0G99 3Y99 H8GD YXDM
2220 DATA 2AGP AFY6 KHV9 93Z4 78XM 1BYF IU3X FB79 1K1K MFAU M51Y 9MHT
2230 DATA 2AHP FJY6 LHJY AFHR 11G0 E2V1 10YX ME2V 1W6I 2854 PJJY 6OHV
2240 DATA 3TE1 MJNG V196 2PFV 8SQZ 99NB QDYH 85RP AQ90 HZ99 1HTY K7HT
2250 DATA 4BEE VD99 9AV1 BKF6 55KT Y6LH E04Z X0V6 ZQ6E MDWE 1MC9 9C5F
2260 DATA 52AT 5JC4 EJZB C59K E7MD WDWI CATA HN41 4FAS M1CE 6085 TPJQ
2270 DATA 5AB2 81TG I269 98EG 17SF BBJH P1AY F3BQ XNE2 V1W8 VJZ1 0OKT
2280 DATA 3UBF 2EAT MEK8 TAZW E7Q1 AW09 C10K FB1P EF1B XF87 H5NY 6LHU
2290 DATA 3VY9 7HUG 6D99 9F5P DXTJ 99BE G6H1 D998 SUDU XAAT SEUU 3GH0
2300 DATA 3DDY ME15 6ZW9 93VW 33J8 99H1 G1QU FB3K 1PBP 2EAP F1QU 3GHU
2310 DATA 28W9 1CU3 GHH9 3NVW 8XGZ AT8B QU3G HME2 T60T 6ZW9 93Z9 9NBW
2320 DATA 3RE7 LD99 AHTE 2WF6 5P2K E0PE MECM 7AT6 BF4E JW3L QXME 2V1W
2330 DATA 1VX0 HCE0 OCAT NFKY N7HI GH0E B9M1 UU3G HNDY ODW3 3J89 9NHF
2340 DATA 2998 1PG0 6Y1B 02EB DDA1 CE0E B798 HU3G HME7 WETQ 8TFB 715H
2350 DATA 3TY7 LHHE 82E3 OZXY DYTJ 9901 E902 Z65P HMY6 LHRE 8W69 968Q
2360 DATA 4Q1L JF88 CEQY 2MHE 8EVE AXIH GBT2 DB97 7K1K MF50 P8QY KMHI
2370 DATA 1EHZ 362P 6WE6 XDWG W6A3 COXN YDRH FGL0 1B9N GKYF 9HY8 SNCH
2380 DATA 42ED Q70P 6YGE 2V1W DXQ7 AX15 U8Z3 Y99C HPE0 MCW8 WMXA XD1F
2390 DATA 6J54 P4GE CQEA P05P BH27 B31F VEBW FDQ8 TFAW PA14 74FB 8510
2400 DATA 6N65 PJKE 7ODW 6AZX 0V6Y GE5W H995 AVEX 285Y 0ZME 2V11 0SXV
2410 DATA AUGA S27B 3PAP DU08 9978 QECM C991 1CEB JJ99 N4CE 4MD9 91BV
2420 DATA 6OAX 71UE X08A XA2K YF9H GE7M 76BP FVDU UA65 PGJE 2V56 5P2T
2430 DATA 41E2 M85Q PCCG U13A RP8C YJRH K951 ZB0G 51DY VEWD XM6A X75Q
2440 DATA 3V1R YF3G QXNE X49B 6F1T CEYF AP1G KYLR HOY2 RH10 H1D9 9D9R
2450 DATA 5VAP 05G1 KZFB 15FU DUKC 5RP8 049J VB4K EQ9U K299 NAKY 78HU
2460 DATA 6E0Z 6XHD UZ79 904K YFDH EE8V EAKI HGEX 49B6 F5P3 UJV6 65XE
2470 DATA 5892 3VWD Z160 W6XN E6WD 66PG G17X FB4D 1EY6 LHD8 N6VB AD3W
2480 DATA 2K47 JYB6 5JUC EIEB 89AV E2W8 M6GZ Y999 AQEE 0299 04CY 6PHC
2490 DATA 3LE9 XC3I MZJY 6LHV 8GZ2 AP01 PE2V 199N 8QEG TJ99 BECY 3LHV
2500 DATA A8JE BWH6 5P5P EDMC ATNG GBE2 6B9B 3C1D KF5R 9ZK9 B3Y9 9N10

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2510 DATA 41BT 2DB9 KITE 1W8I ECKF 3M0Z QYF6 HVE1 M847 8XKE D085 TPFQ
 2520 DATA 5WB1 9GJE 2V1W 97AZ APN1 F37J W3L0 XMBT 2DB9 KCN8 WBZ6 05XT
 2530 DATA 13R4 FAQJ BMCE IQAP D8C8 TAZW D01Y PUNQ HC95 IVAV JAKG VIDW
 2540 DATA 08TP 4T5M W9E6 VDR8 TF50 PAQE GGYI G3LV T00E F3UC N23U CN2J

990 REM COMMODORE-64 FRIDAY2

1000 DATA 1000,36,23,2,777,32435,34001
 1010 DATA 0001 9Y6H 99US UNN9 FGM9 ESYU KR9I GE9C 9DNN Y77G EV3G MGH3
 1020 DATA 0001 DKQV T1G0 GK69 SGZV C08G PB7J ED95 V0UV U9XE PVG0 ZGUG
 1030 DATA 0001 Q20L 9U7D NEN9 8GLV 2EJG 5H9F GP9H 7DNE M98G LV2E JG9I
 1040 DATA 0001 G3GS A19Z NVY9 BG79 CVLU HU9X EPUV H7H2 69SG IUXG XED0
 1050 DATA 0001 JHHG 9NVQ VHRA CEPV VHDG K89D HKAC V6V1 G9FG M9ES YULU
 1060 DATA 0001 KXGM VLGD HA59 RGZ9 AAB0 IY9B G7UV H5HC Y9FH 3T1G DHE5
 1070 DATA 0001 L0GX VAGC G9C7 JH4V HH0H FG9F H3T1 G0HG 59TH 0UQH NGL7
 1080 DATA 0001 B4G7 9C9A 06Y9 BZZG B1Y2 Z391 GLAM UNSS Q77G E9AA JORY
 1090 DATA 0002 CY3I HV3C 20AW H300 G2Q3 C4V2 0AGI 223E 4AKI 79PS YSGN
 1100 DATA 0002 CA2C I53P 34K7 JEEN FEBG 20B2 IAAW AZLM QUT2 CI53 P3LM
 1110 DATA 0001 VW3Z EM20 250V C2JI D3X3 SUT4 02GB 261U XX41 ZGG4 50V0
 1120 DATA 0001 L01T 7GUQ SLNV 03ZG 4201 V49H EP98 URUR N9DI VWFI 0GK8
 1130 DATA 0002 6Y4I IV04 N889 DJ09 5VBS S0BV EJ9C VUUH U9QE P98X ASMU
 1140 DATA 0001 YL36 EM4H 4CUB ZJ69 5990 IYV0 36GB 20NQ GUX4 TJ60 420B
 1150 DATA 0001 OKHT C1XK SSUW 01ZG I2TQ 1L9F JDC5 X0SS SBXJ GXTJ D09U
 1160 DATA 0001 WM0A 0I4V NMTA XI8B 1XUU HSY1 0A0I 30QH X7DE P9CV UUUU
 1170 DATA 0002 7S2H J44R NFMC 8JPC 6SYU K69D J3CH Y0SS Q91G JBUC EQOY
 1180 DATA 0001 S4GR Y4JN JI8C PJWC 2CLN 0Y9F JYAC CBNV Y9FJ ZACK GUMT
 1190 DATA 0001 W10A G4R0 8TAV T26J A27P C07J GH99 UUY5 H9DK 3A5S YUKR
 1200 DATA 0001 E0GL BUCS 0ZY9 BG79 CYEY 9H9F HE7G URUR NV62 6K4N E90B
 1210 DATA 0001 ATI1 BIX2 SSQY N5UK 7RBA ILD7 EPUU JVJQ 19DK ED6S YUKR
 1220 DATA 0001 V226 JZNE 8YPV T0AG ER8C WJDS KD7G UQX2 UYF1 ZG10 ECXS
 1230 DATA 0002 2W5V K9RD 74KY S650 04EQ V9UT 2NEM RACQ MDE0 RT1G FJQ1
 1240 DATA 0001 VP66 KJLP CPLY S650 0PZC G9UT 26HB 04NB 89FI P95U UYON
 1250 DATA 0001 L0KO T1GF KD1Z 530K 0670 06DN KUDM Z5SS QXE2 6KUN EX27
 1260 DATA 0001 VN0A HCNJ YZ9D VH79 CMKS SUDJ L299 BQSO Y9FK PDVZ ESSU
 1270 DATA 0002 006A L3NI 8YUE 1IQ7 GYAU VSZN 6UEN NLYP J9LL BE39 VRRY
 1280 DATA 0002 6654 GILH ZDNA 1GLB HSY5 LNDL 0LE6 WYUH UZ33 MIO4 8LJB
 1290 DATA 0001 N1H1 E8E6 NVY9 BG19 AZUZ PR9F LN7G UQUL XUT2 6HGN AWFY
 1300 DATA 0002 V89C WYZU UEMG E9CU DSSU E00A NY60 D4LH 6ZHO 4079 6KB3
 1310 DATA 0003 5SLS NSCK SEQL XBY9 7NHY 9D0D T07H C4G4 9EWE PUXK KLI1
 1320 DATA 0002 AR70 KG1Y 77CE ZM87 GUQU LSF3 EI95 99SJ YV0T 07S9 4KBK
 1330 DATA 0001 SDMD 9CZV SSQS W1ZG 165T 98EB LI9P SYUK R9IG E9CW YZUU
 1340 DATA 0004 QMF4 TEY9 BG19 AYZZ PR9F 020A JYPQ AK29 D0XT P079 6MSU
 1350 DATA 0001 98GE 7370 L9L7 6EC7 370L 9L76 EC73 70L9 L76E C737 0L9L

Saturday

This section contains the last of the text. After today, you can rest with the thought that all of the code is done. Sleep well and have a pleasant dream about the great adventure you are going to play tomorrow.

990 REM COMMODORE-64 SATURDAY

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2000 DATA 2000,36,23,2,777,34001,38631
2010 DATA 0003 P523 F7M8 0BLG Y7GU QVBU FJMQ 7GUQ ULUF L17Q PR40 Z1R3
2020 DATA 0001 V088 0314 SSQU XNU1 W96I A09F MWDP SYUK R9IG EUX1 6UHU
2030 DATA 0002 GR8S SYUK R9IG EUX1 6UHU FSEP 98UR URN9 F1EP LPJ1 687C
2040 DATA 0001 IUEP 98UR URNV 0U31 W96M P0V0 LNNO 1B1Y F7JG H99U XUHU
2050 DATA 0008 E010 N9F1 MSX2 3SN1 RE9M 1L0A JY82 SL09 F1NT PUC1 G39K
2060 DATA 0001 S9NC UQ1M SSQV NNR8 FUK1 R77J GHVK GF10 N9FN EUBE J65H
2070 DATA 0001 F9GL FOUN U0B7 JGHV KGF1 0NV0 901S EJG5 HV0U N8FU K1RR
2080 DATA 0002 26LV 1ZVE 1R6U T261 VEJG 5H9F MX95 99MY Y9BI ZUX1 4UHU
2090 DATA 0001 7FMW D0SY UKR9 FNKF NYYS S09C GLGC FKRM YUW2 3GIU MFBY
2100 DATA 0001 C4EP UTH2 G9SF RGE9 C0BN 1Y9B GI9F UNU0 JELG LEES YUKR
2110 DATA 0003 0K26 UK1R XUT2 601L PX27 EC24 9BGV LP90 YGLG 770U QULS
2120 DATA 0002 3D44 NP20 07N9 DNTV VEJJ P19D NUFA SYUK RUY4 027E JJP1
2130 DATA 0006 JC94 NHST 4NR6 7XDN A69L 2DNR 9HUK URA7 J2GN Y9IU DNVB
2140 DATA 0004 4LP6 29GM D9Y2 KLV1 ZUON CFUM NR9P WGOJ HT4Q 86GZ 0BVZ
2150 DATA 0003 QCQF 08N5 IH40 B7GY AUVU H618 1ZG1 9SLJ SV0V KNU2 LQSP
2160 DATA 0001 MBIR 9CH3 TGY9 BGIU VLZ2 LNDS EPEI UUSH IJDJO AH2S YUKG
2170 DATA 0004 50S1 UKNC SHEE HUQ0 L20S CJ31 A8GB V074 A9M0 PUX0 60WN
2180 DATA 0001 DPLG UHEJ G5HV 0VWV UQJH 53BN EP98 SMUH UHIE PPG 8GF1
2190 DATA 0001 TK26 30EJ G5H9 FOV9 599V LY9B GI9F UNU0 IUT2 637E JOKI
2200 DATA 0003 JV39 JP1F NHSO ZEIB FVYY 9F3H WBAO SVNC XV7W DARH E3B3
2210 DATA 0001 U8AX EM20 ABPF UPEI 614W EYV0 VUWL LIB3 SG3E NUKE J2TN
2220 DATA 0004 5K23 HJOK 0BL3 ZLVR GPD9 GWUX 2E41 LLPG 07JG LYPP MPH0
2230 DATA 0007 R9B6 3S67 JGJ8 XIN1 X0Q9 9F4G S0X5 Z240 DUTN XLSG CUS3E
2240 DATA 0005 G920 1ICJ 04F6 FEM6 9BGC J3GL 9096 1V47 KT4N PN94 51R2
2250 DATA 0004 5B07 URMX 0J6E PVRG DFU7 7JHF UVL2 FU77 JGRJ 4J21 U4CP
2260 DATA 0004 9F7D BT4F S7J4 WC34 VI91 X0JE EP9I J9XK YV6X 0XR4 61PF
2270 DATA 0003 TLNC EGU0 Y9D0 9T1G L3XM UXT1 QC0G U0ZJ AKJJ IJG1 VQB3
2280 DATA 0008 FHED 0JPG LJN7 D234 UM9F 580A 0IXW US19 SEP9 V802 40G8
2290 DATA 0001 UPLV 29IF QL47 JGRJ S99X TY9L QIJ4 99XT Y9LP UT0L PED0
2300 DATA 0007 G4BP G3BT 4B1P 9042 0AJX 5FCP R204 20AK 05MC TEMC 0CJX
2310 DATA 0003 H6V9 0407 A975 20A4 Z860 F19D 097G Z39A FT46 FGPU 6SP3
2320 DATA 0002 SPV4 R5ED 0AWG JK3S YU0B K7EJ AUK2 01G1 L7JG RILK 3SSY
2330 DATA 0003 TG29 IFEK 4I6E PVRH AQK7 T4CU 59L2 ED07 TGLJ N9N2 GQYQ
2340 DATA 0004 OKSY 9989 FQW9 Q9SC UE7S V6Y0 079C 5L3K 4RM7 G9SC ZGAX
2350 DATA 0004 QYKD 0109 Z9YR N7G9 FLY1 M07J GR92 97Y0 Y9LF 4UXQ 0ED0
2360 DATA 0001 XDX0 0ME0 EA49 MRSW 9GD5 MNKO I3KM KKNV YV6Z 3BYE C0G4
2370 DATA 0005 KDD2 20A7 YKU7 0EJY W1M9 KVKU KTCD 20YK Y6K2 P616 G994
2380 DATA 0002 GMDX KXL7 1UJ9 DFLE IKZS SVLE GRJB 08VX HT4N RM0G J8JF
2390 DATA 0004 ELSY 93U9 M08H X7DN 0DEM A66T 7C6R EJH3 PU00 4LSG C8LR
2400 DATA 0001 R3LR X35K SSUU 02D5 9F0E D6LA GL90 SYU0 IV7Y 380S V1XF
2410 DATA 0002 XIUX 03ED 010S BEML 5NID LS7J GL8D IQS9 YV6B F6NL PGN2
2420 DATA 0002 KU7X 8X01 9GK9 F09T 1GL6 0U0U LV29 IFEF 4T42 658G MKG7
2430 DATA 0002 H97G 99XT DPY9 LEPU T6ZM F09F G2HX SY93 E98H 4TXS LEDD
2440 DATA 0002 1H16 7574 ILE7 JGLC IDSL IY9F JR2G EF62 QGUJ JZ6E JG9N
2450 DATA 0008 R171 9087 JGZU VSU7 4U88 Q708 1ZL0 743T 4C27 1GFH 210G
2460 DATA 0004 F9V0 SSUX U4Y0 MGLJ GJ0I 7JGJ T1GF IE10 L9DT DUQH QT20
2470 DATA 0008 SEED 200W 9NYV 3ZXH LSD0 7THX LSGA U289 FTHA UM71 XF8N
2480 DATA 0012 MCDG RT1G L7NU 0U0V 0W0X 0YMK LR0G TLED 07PT TEIU 08RY
2490 DATA 0002 8X2C ES28 0PSY A7GN YLPU JH8N GS9P SY93 E98G LU57 0SSU
2500 DATA 0001 I4TW U5TR MX0T 4268 8FNT M07J GL8K 9GNV YV0I E234 LSSU
2510 DATA 0001 P0FT M099 Y9Y9 DU0V 48AU 02MM GJMU TESS SE2F UV4G SED2
2520 DATA 0001 I3U4 U6R7 HD07 JGJV PF0G 677J GJVP F042 UA8E PW0T ZGF0
2530 DATA 000V CANG JU6U 1R20 1HKN GEN0 SYU0 31JU XFW2 0HX8 FU1M 1N10

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2540	DATA	0005	S53V	RM2V	6LVN	OH4T	R8V0	R61W	968G	30S9	F803	ORAY	EUZ3
2550	DATA	0005	H7DD	20AL	5GJN	8SYU	03K7	RE7G	USV6	31J9	COLA	5SYU	0317
2560	DATA	0002	W9I	SYUD	3AZJ	PMV9	NN0Y	9FFU	N9V0	16Y9	YRIV	4UE8	001V
2570	DATA	0005	NQMC	SP3N	HGRV	BUI8	5QNK	630A	KR66	Q089	L13N	JV0U	AU22
2580	DATA	000E	8EQ2	37JK	U1YW	W6IW	727J	GJZK	FP6G	7249	CUB9	2SYU	M425
2590	DATA	000E	X07N	RQJN	PSYU	0428	292A	9LUF	MANQ	3FUL	NT4G	07VG	FFA8
2600	DATA	000P	QHYE	P91W	BYD5	2EAX	9LGS	9KV3	PS02	I2JA	X900	5297	AUXJ
2610	DATA	0001	7RGJ	04UC	KYU8	QESK	5SYX	MUX3	78GI	MM25	8V60	AGG1	A74E
2620	DATA	0009	7AXW	S2N2	OK8V	8V39	PSS5	8P9W	4KGO	BF18	SOCG	19CW	KSSU
2630	DATA	000E	DQ42	8XVH	59XH	XVA0	2W7J	GHOE	0DZ8	YV6H	BLS2	JH0J	3132
2640	DATA	0003	0003	GF9X	NUYO	YMYE	GUOM	9D0V	3207	9CV8	4YP1	HVD2	032C
2650	DATA	0015	K369	LG19	VUKS	SSW7	11VG	QJUL	NAXA	D4K4	5A82	KY38	3A3B
2660	DATA	000E	Q00A	XW39	999S	KY3E	9LFW	OKOF	N8Y3	I9LF	2P1J	IN1Y	3K33
2670	DATA	0002	L1UQ	FTVT	07JW	IV3A	03DY	3R8P	FMPA	OFFN	Y9LN	YUXA	TUHS
2680	DATA	0003	E1AX	AVSS	SA7F	Z1Q9	9TQY	V69J	AWJN	WB13	XT02	40RL	FUJH
2690	DATA	000E	J5M8	TGSV	AEJG	7MUE	NY2G	7AKF	J324	08T9	30TI	87RA	N321
2700	DATA	000C	CL09	V9TM	2UQ8	K3QY	45D0	97HX	57K7	GKB9	8931	EEMO	FUJH
2710	DATA	0008	MON4	77JH	F9A8	ONVY	9FG0	M099	I9E7	IPSB	ELP2	041S	P34C
2720	DATA	0006	PUIQ	9304	DDOX	5EM9	5RFF	R298	ND7G	USZ8	AQ0G	YUUG	DBAH
2730	DATA	0004	WXBH	SSUJ	GFB1	Q2JI	1C4J	4KVJ	ITEM	201A	P07U	Q058	VNDY
2740	DATA	0001	E7HF	9A8P	NVYZ	9J0I	W2JI	ICHZ	X8V0	X2ED	09DL	88TV	7SSU
2750	DATA	002I	J9TM	MNDY	V01N	8BGF	16R1	X4P4	Q0C1	Q26X	G1Z6	3P4U	1K4V
2760	DATA	0004	MWSY	UQBW	KQVJ	5L2B	03HZ	T7UX	1F23	4Y29	8XHP	BSYV	IS4Y
2770	DATA	0005	S4N2	XC32	QXE2	CHU6	8Y3Y	QLEP	UXFW	X081	XQNE	P9C8	QYAS
2780	DATA	0004	BPV8	UUG1	X53T	43JC	7GLH	Q2QQ	KXUX	HDC1	R91G	EV3G	MG7M
2790	DATA	0005	KBJE	P9CG	QLRX	3GF1	RN8Y	V891	T04X	Y9FG	21GJ	J962	K35B
2800	DATA	0005	P226	1HCK	75T0	A15N	SUJH	8XKW	9PSY	U0C5	5V74	X9KV	TXR0
2810	DATA	0003	AGVW	W34Y	8V60	AAB8	EZY0	9NCK	30CI	G1G9	I7JG	LUFC	GUKS
2820	DATA	000N	F5HA	XAEZ	Z299	6FB0	TJ0A	0768	YV55	I5J0	AYY8	E8K0	79JU
2830	DATA	0004	K3FH	P0WV	67C7	TEJ6	8USK	5LN2	YD8V	04P0	X02Y	E95T	ZULX
2840	DATA	0002	YR95	V08S	UU1I	C07G	LCIM	I0EP	UXFX	CJ80	8RBE	PDLW	EXNS
2850	DATA	0003	CDYF	NZCA	5E20	47GW	HWDS	5SUT	NAQF	8EN5	IREG	RWFY	FIN0
2860	DATA	000C	N8Y2	11Y0	ANNR	V08N	SIRG	V9G0	UUSK	Y03D	322L	Z1T9	1C5Y
2870	DATA	000W	IS27	JGHR	IYSY	DD7J	90KD	J89J	20CK	FGRV	B7W3	QY2I	6263
2880	DATA	000A	S5GC	0647	JGLU	GCY5	NYVJ	KHD9	GFD1	NN2G	47G1	H0CU	1M68
2890	DATA	0006	Q0YR	UB22	16A9	LJ69	5MBU	LYA9	GJ02	8TNY	YEWG	EUXM	A011
2900	DATA	0005	SWNY	SP3C	8GRW	FDBU	LSRX	400A	KR4T	20C6	BRYE	PUXF	ZYT0
2910	DATA	0002	M2WF	Z0GF	GMBE	PUXF	ZB6R	UY5A	DJ05	INDS	2EPU	XFZC	JS08
2920	DATA	001R	6CW0	AGIN	55AY	612H	106J	9FDQ	8UG0	KRFO	EXEN	XP62	4160
2930	DATA	0001	DYEI	T18N	UQEV	7KZ1	LD0S	SUUK	FKG1	153C	ECJZ	GN6G	FLEY
2940	DATA	000X	Q9FQ	588U	UTCN	9FG9	AUNR	LAY6	R6S6	TT4L	6DXZ	FDPU	6W6V
2950	DATA	000U	56U6	U6U7	JZLS	QSY6	IKTK	V6DY	Q36K	6QY7	3SPE	P747	DLBY
2960	DATA	0001	QSEH	7G76	LMS7	JEL7	691L	MM7J	E07G	S277	07JE	Q5G8	2773
2970	DATA	0001	KPEP	7M7D	LTY7	SEP7	Q7DL	YY95	EP7V	7DM2	Y80E	P7Y7	DM6Y
2980	DATA	0001	QZFB	7GTL	77M7	JE09	582L	MX98	FF70	SX8W	P7JE	Q958	5LMX
2990	DATA	0001	RIGE	697D	MGV8	FEP8	DSYU	IN8H	EP8F	7DMM	Y7IG	E8HS	YUJN
3000	DATA	0001	8JFR	70U1	SS27	JFU7	GU4S	S57J	FX7G	U8SS	97JG	17GU	BSSC
3010	DATA	0001	N3EP	8V7D	N2Y9	0EP8	Y7DN	5Y93	EP91	7DL9	L76E	C737	0L9L

Sunday

The seventh day is traditionally a day for resting; however, we do not follow this tradition. On the contrary, some hard work yet awaits you.

First, there is a fairly large BASIC-program. This is the keystone of the adventure. Take care that you do not make mistakes! There is no error-detection!

After that, all that remains is to put the pieces together. This is a very rewarding job: the reward is the game on which you have spent so many hours.

The adventure consists of three sections. To create these sections, execute the following steps carefully:

1. Save the BASIC-program for today on a new cassette. This is the first section of the adventure. If you have a disc-drive some lines must be adapted. This is indicated in the REMark statements.
2. Load and run successively the programs for Monday to Wednesday. If all is well, there are four programs, each consisting of the decoder program (listed Monday) followed by a number of code lines. Since all error correction has already been done, running the programs should be no problem.
3. When you have run these four programs, enter the command NEW. Next, type in the following short BASIC program. Take care that you correct any mistakes before running it!
If you have a disc-drive, change the program as indicated in the REMark statements.

```
1000 REM *****
1001 REM *CREATE ALADATA*
1002 REM *****
1010 DATA 169,251,166,253,164,254,32,216,255,133,253,96
1030 FOR I = 679 TO 690
1040 READ A: POKE I, A
1050 NEXT
1080 REM *****
1081 REM *SAVE*
1082 REM *****
1110 POKE 251, 48
1120 POKE 252, 117
1130 POKE 253, 68
1140 POKE 254, 158
1150 OPEN 4,1,1,"ALADATA"
1151 REM DISK:1150 OPEN 4,8,1,"@0:ALADATA"
1160 SYS 679
1170 CLOSE 4
```


4. Run the program. It will save the second section of the adventure. Save this section on tape after the section you saved at 1. This is necessary, because this code is loaded from the BASIC program of 1, so this code must be found by this program.
5. Load and run successively the four programs of Thursday to Saturday. Next, type in the command NEW.
6. Type in the following short BASIC program. Change it if you have a disc-drive, according to the REMark statements.

```

1000 REM *****
1001 REM *CREATE DATAFILE*
1002 REM *****
1010 BEGIN = 27000
1020 LAST = 30631
1030 OPEN 2,1,1,"DATAFILE"
1031 REM DISK:1030 OPEN 2,8,4,"DATAFILE,SEQ,W"
1040 FOR I = BEGIN TO LAST
1050 CH = PEEK(I)
1060 IF CH = 0 THEN 1080
1070 PRINT#2,CHR$(CH);
1080 NEXT I
1090 CLOSE 2
1100 END

```

7. Run the program. This program will save the third section. Save it on tape after the section of step 4.

The three sections just saved constitute the final program. Perhaps it would be wise to repeat the process to make a backup.

To start playing, load today's BASIC program, and RUN! You'll have to wait some time while the other two sections are loaded, but then:

PLAY THE GAME !!!

```

10 REM **THE ANTAGONISTS**
20 GOSUB 4000:REM INITIALIZE
30 SYS ALADIN
40 BAS = PEEK(SA + 30)
50 ON BAS GOSUB 1000,3100,2000,3200,3000,3100,3400,3300,3500,3600
60 POKE 51,F1: POKE 52,F2
70 GOTO 30
1000 REM *PARSER*
1010 INPUT " ";C$
1020 IF C$ = "" THEN RETURN
1030 GOSUB 1110: REM NEXT WORD
1040 GOSUB 1190: REM FIND WORD
1050 IF ID = 0 THEN 1020
1060 ON MD$(ID,3) GOTO 1070,1080
1070 POKE SA + 1,MD$(ID,2): GOTO 1020
1080 IF PEEK(SA + 2) = 0 THEN POKE SA + 2, MD$(ID,2): GOTO 1020
1090 POKE SA + 3, MD$(ID,2)

```

```

1100 GOTO 1020
1110 REM GET NEXT WORD
1120 WD$ = ""
1130 CH$ = LEFT$(C$,1)
1140 C$ = MID$(C$,2)
1150 IF CH$ = " " AND WD$ = "" THEN 1130
1160 IF CH$ = " " OR CH$ = "" THEN RETURN
1170 WD$ = WD$ + CH$
1180 GOTO 1130
1190 REM FIND WORD
1200 ID = 0: L = LEN(WD$)
1210 FOR I = 1 TO NC
1220 IF LEFT$(TXT$(MDX(I,1)),L) = WD$ THEN ID = I: I = NC
1230 NEXT
1240 RETURN
2000 REM *DISPLAY TEXT*
2010 TXT = PEEK(30000) + PEEK(30001) * 256 + NW
2020 RW = 39
2030 T$ = TXT$(TXT)
2040 IF LEN(T$) = 0 THEN PRINT: RETURN
2050 CH$ = LEFT$(T$,2)
2060 WI = (ASC(CH$) - 48) * 128 + ASC(RIGHT$(CH$,1))
2070 T$ = MID$(T$,3)
2080 WD$ = TXT$(WI)
2090 IF LEFT$(WD$,1)="#" THEN 2150
2100 PS = POS(DUMMY)
2110 PS = PS + LEN(WD$) + 1
2120 IF PS > RW THEN PRINT
2130 PRINT WD$;" ";
2140 GOTO 2040
2150 JP = VAL(MID$(WD$,2))
2160 IF JP = 0 THEN PRINT: GOTO 2040
2170 IF JP = 8 THEN T$=TXT$(PEEK(SA+31+JP)+NW):GOTO 2040
2180 IF JP > 13 THEN WD$ = STR$(PEEK(SA + 31 + JP)): GOTO 2100
2190 T$ = TXT$(PEEK(SA + 31 + JP) + NW + NT) + T$
2200 GOTO 2040
3000 REM *RETURN*
3010 AP=SP:GOSUB 4330
3020 RETURN
3100 REM *ALADIN SUBROUTINE*
3110 SP = PEEK(252) * 256 + PEEK(251)
3120 INDEX = 7: GOSUB 4290: AP = BEGIN
3130 AP = AP + 4700
3140 GOSUB 4330
3150 RETURN
3200 REM *RANDOM GENERATOR*
3210 X = PEEK(SA + 28)
3220 X = INT(RND(1) * X) + 1
3230 POKE SA + 22,X
3240 RETURN
3300 REM *SAVE*
3310 INPUT"FILENAME (PRESS <RETURN> TO CANCEL)";F$
3320 IF F$ = "" THEN RETURN
3330 Z1 = PEEK(251): Z2 = PEEK(252): Z3 = PEEK(253): Z4 = PEEK(254)
3340 POKE 251, Z2: POKE 252,117: POKE 253,33: POKE 254,125
3350 OPEN 4,1,1,F$
3351 REM DISK:3350 OPEN 4,8,1,F$
3360 SYS 679
3370 CLOSE 4:F$=""
3380 POKE 251,Z1: POKE 252,Z2: POKE 253,Z3: POKE 254,Z4
3390 RETURN
3400 REM *LOAD*
3410 INPUT"FILENAME (PRESS <RETURN> TO CANCEL)";F$
3420 IF F$ = "" THEN RETURN
3430 OPEN 1,1,0,F$
3431 REM DISK:3430 OPEN 1,8,0,F$
3440 SYS 691

```



```

3450 CLOSE 1:F$=""
3460 RETURN
3500 REM *RESTART*
3510 PRINT "DO YOU WANT TO RESTART OR"
3520 INPUT "TO CONTINUE (R/C) ";C$
3530 IF C$<> "R" THEN RETURN
3540 PRINT "INITIALIZING..."
3550 FOR I = 0 TO SIZE
3560 POKE SA + I, PEEK(50000 + I)
3570 NEXT I
3580 GOSUB 4230
3590 RETURN
3600 REM *LOOP*
3610 POKE S+24,15
3620 FOR I=1 TO 10
3630 FOR J=1 TO 1000: NEXT J
3640 POKE S+4,33
3650 FOR K=1 TO 100:NEXT K
3660 POKE S+4,32
3670 NEXT I
3680 POKE S+24,0
3690 RETURN
4000 REM *INITIALIZE*
4010 ADR = 30002: S = 54272
4020 PRINT "LOADING...(6 MINUTES)"
4030 GOSUB 4700
4040 POKE 51,47: POKE 52,117: POKE 55,47: POKE 56,117
4050 OPEN 4,1,0,"DATAFILE"
4051 REM DISK:4050 OPEN 4,0,2,"DATAFILE,SEQ,R"
4060 INPUT#4,NC,NW,NT,ND
4070 DIM MD%(NC,3)
4080 FOR I= 1 TO NC
4090 INPUT#4,MD%(I,1),MD%(I,2),MD%(I,3)
4100 NEXT I
4110 NR = NW + NT + ND
4120 DIM TXT$(NR)
4130 FOR I = 1 TO NR
4140 INPUT#4,TXT$(I)
4150 NEXT I
4160 CLOSE 4
4170 PRINT "INITIALIZING...(2 MINUTES)"
4180 DUMMY = FRE(0): F1 = PEEK(51): F2 = PEEK (52)
4190 FOR I=S TO S+24
4200 POKE I,0:NEXT:REM CLEAR SOUND CHIP
4210 POKE S+1,25: POKE S,177
4220 POKE S+5,9: POKE S+6,0
4230 INDEX = 1: GOSUB 4280: SA = BEGIN
4240 INDEX = 7: GOSUB 4280: AP = BEGIN
4250 INDEX = 8: GOSUB 4280: ALADIN = BEGIN
4260 GOSUB 4500:GOSUB 4320: PRINT"J"
4270 RETURN
4280 REM *GET START ADDRESS*
4290 INDEX = (INDEX - 1) * 2 + ADR
4300 BEGIN = PEEK(INDEX + 1) * 256 + PEEK(INDEX)
4310 RETURN
4320 REM *POKE ALADIN POINTER*
4330 HB = INT(AP / 256): LB = AP - HB * 256
4340 POKE 252,HB: POKE 251,LB
4350 RETURN
4500 REM *STORE STATUS ARRAY*
4510 SIZE=AP-SA
4520 FOR I = 0 TO SIZE
4530 POKE 50000 + I, PEEK(SA + I)
4540 NEXT I
4550 RETURN
4700 REM *LOAD ALADATA*
4710 DATA 169,251,166,253,164,254,32,216,255,133,253,96

```



4720 DATA 169, 0, 166, 251, 164, 252, 32, 213, 255, 133, 253, 96
4730 FOR I = 679 TO 702
4740 READ A: POKE I, A
4750 NEXT I
4760 OPEN 1,1,0,"ALADATA"
4761 REM DISK:4760 OPEN 1,8,0,"ALADATA"
4770 SYS 691
4780 CLOSE 1
4790 RETURN

THE ANTAGONISTS

A MICROWORLD ADVENTURE

Is your life a little dull at the moment? Then look to the future, to surprises and excitement. But you need not wait! The adventure of tomorrow is brought to your micro today in the pages of *The Antagonists*.

The dinosaurs ruled the earth in their day. Then came the mammals, culminating in Man. Finally, the insects inherited the earth, led by the ants. Only Albert Renshaw survived to witness the new world. Living in constant fear of discovery, he determined to find a way of escape, preferring the dangers of the unknown to a life in hiding and misery. But how? It is for you to find out.

Helping you in your bid for freedom is the diary left by Albert Renshaw, his only companion in the final days. You are also fortunate enough to possess other bits and pieces of information that he collected and thought essential in his attempt at escape. These include detailed drawings and a modern fairytale. A copy of the Book of Flowers has been preserved along with a brochure for the fun-park INSECTOLAND and there are articles on the life of the mysterious Tenins and Lepries and on the life of the ants.

Full instructions on how to load and run the game are given. Keying in the program listing at the end of the book is made easy by the inclusion of error-detecting check digits. This simple task accomplished, it only remains for you to follow the trail of Albert Renshaw. Can you escape the world of *The Antagonists*?

If you enjoyed this adventure, you may be interested to know that further adventures are awaiting you in *The Secret of Arendarvon Castle* and *The Seventh Generation*, also published by Addison-Wesley.

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