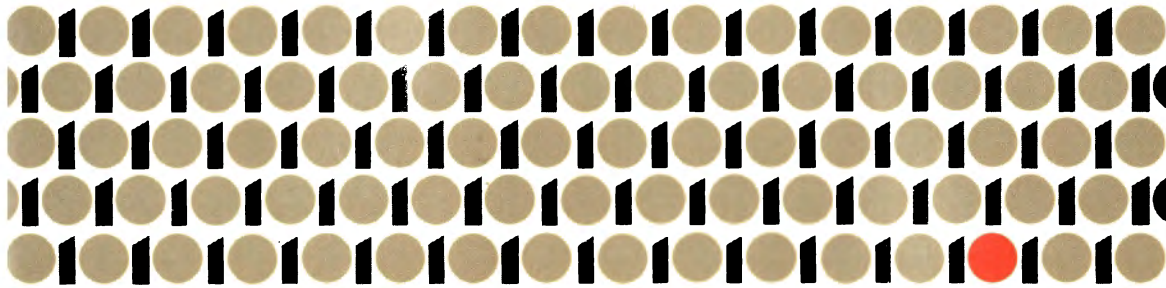




VOLCÂNOES



BRITISH BROADCASTING CORPORATION



ADVANCED INTERACTIVE VIDEO

USER GUIDE

3 MAY 1969
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VOLCÂNOS

**Rex Beddis
and
Andrew Finney**

BBC Enterprises
Oxford University Press
1988

Background to the development of *Volcanoes*

A BBC programme in the *Risk Business* series broadcast in 1981, first introduced Michael Smith and Anthony Dale, of the Educational Division at Oxford University Press, to interactive videodiscs. They identified IV as a very exciting educational publishing medium, although there were no Laservision players available in schools at that time. IV brought together many of the best elements of educational book publishing and the medium of television, the Philips LV player offering extraordinary clarity of picture and rapid access to the potential 108,000 images available on one disc. It was not until they saw the Philips LV player working in combination with a BBC microcomputer at a seminar in Cambridge, 1983, that its full potential became apparent. The system was being driven by a program devised by Michael Grove and it was this demonstration that provided the catalyst for Dale and Smith to plan an IV project and apply for one of the grants being offered by Oxford University Press for experimental publishing projects using new technology. Their application was successful and the first draft of *Volcanoes* was prepared together with a team of consultants, following guidelines set by author Rex Beddis on the subject of physical geography. The theme of *Volcanoes* was chosen as the most visually spectacular. The research team comprised Andy Finney, co-producer, with several BBC videodisc productions to his credit; animator Rod Lord; picture researcher Ann Osborne; and Michael Grove, responsible for the software functionality.

The Laservision disc and related floppy discs were finally completed in 1985 and subsequently demonstrated to teachers and other publishers around the UK. Meanwhile, the BBC's AIV *Domesday* project has been published as well as its *Ecodisc* companion, and the eight-disc *IVIS* project has reached completion, ready for school-trialling. In 1987 Oxford University Press and BBC Enterprises agreed to co-publish *Volcanoes* as part of the BBC's innovative series of AIV discs.

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What the disc is about . . .

This videodisc, providing immediate access to a large range of images and information, attempts to satisfy a number of distinct but overlapping aims:

- a) To provide some 'feel' or vicarious experience of several contrasting types of eruption through the use of moving images and natural sound.
- b) To provide comprehensive and up-to-date descriptions and explanations of volcanic forms and processes.
- c) To stress the enormous impact volcanic activity has on both people and environment.
- d) To describe the evolution of knowledge and understanding of the nature of vulcanicity over time, including contemporary research into the nature of extra-terrestrial volcanic activity.

and who might use it

Much of the imagery on the videodisc is appropriate for a range of users from young children to advanced students. On the other hand much of the textual material (the book and the Oxford English Dictionary definitions) and the glossary are designed for the general adult reader and the older student.

Primary age pupils, for example, should find much of interest and value in the moving sequences with natural sound, the animated diagrams and many of the still pictures. In addition to these resources, the older student or the general adult viewer will be able to use more fully the text and commentary. The text of the book and the glossary of OED definitions provide yet more information to make the disc very suitable for candidates following 16+ syllabuses in Geography, Geology, Science and the Environment.

The images, then, are suitable for many levels of ability and interest, while the commentary, text and glossary have been provided for the older student and the general adult viewer. Used selectively the disc is suitable not only for the 14–18 year old student, but also for primary age pupils, specialist research students and the general adult viewer.

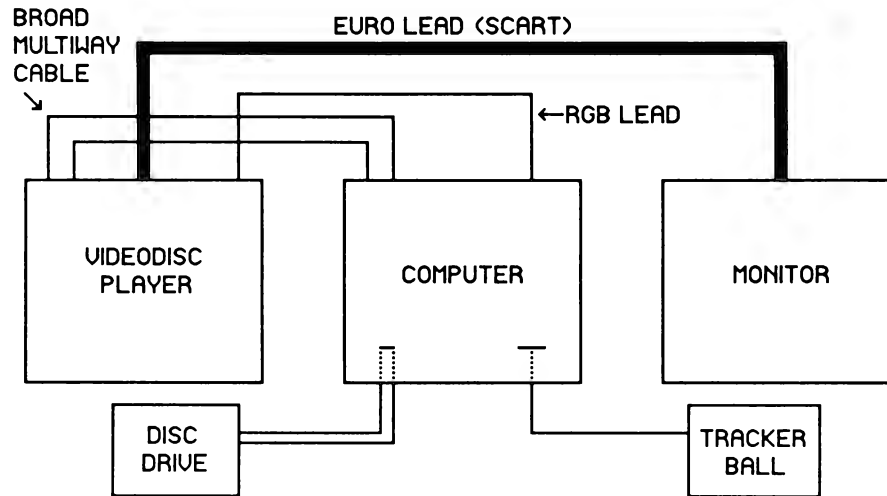
Above all, the disc has been designed to be both informative on the subject of volcanoes, and enjoyable to use.

Getting Started

Connecting the system

Full details of how to set up the equipment is given in the User Guide supplied with it. The following is intended only as a summary.

The various components of the system should be connected as shown below:



It is best to turn on the equipment in the following order: monitor first, then the computer, finally the videodisc player.

To use the interactive videodisc program load the disc into the player with the *Volcanoes* label upwards.

To start the program you should adopt the following procedure:

- First Press the two keys CTRL and Q together. Whilst still holding down these two keys also press the BREAK key. Then release the BREAK key and finally release the CTRL and Q keys.
- Second: Press the SHIFT key and whilst holding it down press the BREAK key. Then release the BREAK key and finally release the SHIFT key.

The software will begin to load. It will take about 45 seconds. The title sequence will then play automatically. If you do not wish to see all the sequence you can press the ESCAPE key and the program will move on to display the first menu. If you do watch to the end of the title sequence then this menu will be displayed automatically.

Adjusting the Picture Position

Although it is not exceptionally critical, the system will behave better if the computer overlay is positioned correctly over the video background. Your system may already be set up correctly after using *Domesday* or the

Ecodisc. If not, you can adjust the videodisc player in the following way:

Before you start the system running you send the player off to frame 47097 on which you will find a 'square' to help with horizontal line-up. You do this by entering the 'System' option in 'Help' (see page 21 of this guide).

First you enter 'VOSUPERIMPOSE' to make video visible with the computer overlay on top of it and then you enter 'FRAME 47097' to select the frame with the line-up box on it. Put the pointer over on the left of the screen by rolling the trackerball. Then adjust the 'Horizontal shift' screw on the rear of the player just above the wide ribbon cable. This is a multiturn adjustment so you can turn it many times and you will see a slow movement of the pointer across the screen. Set it so that the menu bar at the bottom of the page lies centrally across the box on the screen.

Checking configuration

The computer should have been set up by your dealer to work with an Advanced Interactive Videodisc system. However, if you are experiencing difficulties it may be because this so-called 'CONFIGURATION' has been accidentally changed. This can be checked as follows:

1. At the prompt (the flashing cursor) type:

```
*STATUS [RETURN]
```

This is the way of asking the machine to display its 'STATUS' and the result will be a list on the screen.

2. The list should read as follows:

```
Baud 7  
No boot  
Caps  
Data 5  
No Directory  
Internal Tube  
FDrive 1  
File 13  
Hard  
Ignore 10  
Lang 12  
Mode 0  
Tube  
Print 1  
Repeat 3  
Scroll  
TV 255,0  
VFS Dir  
Eject
```

3. If any of these are different they can be changed as follows. For instance if, say, the words 'No Tube' rather than 'Tube' appear in the list, then type:

```
*CONF. Tube [RETURN]
```

The abbreviation *CONF. stands for CONFIGURE and changes the STATUS of the machine.

If the display has, say, 'Lang 13' rather than 'Lang 12' then type:

```
*CONF. Lang 12 [RETURN]
```

You can continue in this way, making all the changes as required. You can check the revised STATUS by again typing:

```
*STATUS [RETURN]
```

The list should now be revised as required.

Closing the system down

When you have finished your session with *Volcanoes* it is a simple matter to stop the software and prepare the system to be closed down, or to take *Domesday*, *Ecodisc* or another AIV production.

It does not matter where in the software you are. You simply press the letter Q, CTRL and BREAK keys together and when the prompt (which is the symbol ›) reappears you can press the eject button on the front of the player to take out the disc. You can then switch off the computer, videodisc player and monitor either singly or together at the mains switch.

It is reasonably safe to leave the *Volcanoes* disc in the drive when it is switched off, as long as the player will not be bathed in direct sunlight, which will make it hot. In this case you will not need to press the eject key to remove the disc.

Incidentally, just in case you have never ejected a disc from your player before, the drawer comes out forwards from the front of the player, so don't put any cups of coffee in front of it where they might be knocked over!

Finding Information

The *Volcanoes* videodisc is one of a family of discs designed to play on the AIV (Advanced Interactive Video) equipment used for the BBC's *Domesday* Project.

If you have used *Domesday* much of this disc will be familiar to you since we have used some of the same software to handle the information.

Using the trackerball and pointer

You interact with the screen in front of you with the trackerball and with the keyboard. You move the pointer around on the screen to point at things and then press the left hand button on the trackerball to select the thing you are pointing at.

As you move the ball on top of the tracker-ball the pointer on the screen will follow your movement. The pointer is usually an arrow, but if it is close to the bottom of the screen it will change into a cross. When the pointer changes shape you know that it is over the menu bar at the bottom of the screen. More about menu bars in a moment.

If you don't have a trackerball you can still use the disc. The pointer is moved by pressing the cursor keys. It moves in whatever direction you press. The longer you press the faster the pointer will move.

The RETURN key does the same things as the left hand button on the trackerball and the TAB key matches the middle button. When we get to menus you will see that the keyboard can be used to select from these too.

Choosing from menus

There are two types of menu on this disc. One is a list on the screen with numbers down the left hand side and from this list you select which item you want to see. The menus for the Themes, Case Studies, Films and the contents of the book are like this. When you use the 'Find' facility you will have a menu like this as well.

To choose from this type of menu you move the pointer up and down the screen and, as you will see, the numbers on the left of the menu change colour to highlight the line the pointer is currently over. When the pointer is over the one you want you push the left-hand button to select it.

At the bottom of the screen is the other type of menu—the menu bar.

When the pointer is positioned over the menu bar it will change from an arrow to a cross. This will tell you that you have the pointer positioned ready to select from the menu bar. You simply move the pointer over the

box which you want to select and press the left-hand button.

The function keys on the keyboard will also select the boxes on the menu bar. Key f0 matches the little arrow on the left and so on along the row. As you have already found, keys f7 and f8 help you to page backwards and forwards through text on the screen.

You may well find that, even if you have a trackerball, it may be easier and quicker to sometimes press function keys as well.

By pressing function key f9 you can remove all computer overlays and leave just the videodisc picture. Pressing the key again will bring the overlay back.

Selecting the little arrow in the left-most box on the menu bar will remove the menu bar. To get it back you select the little arrow (facing the opposite way) that will appear at the lower left of the screen.

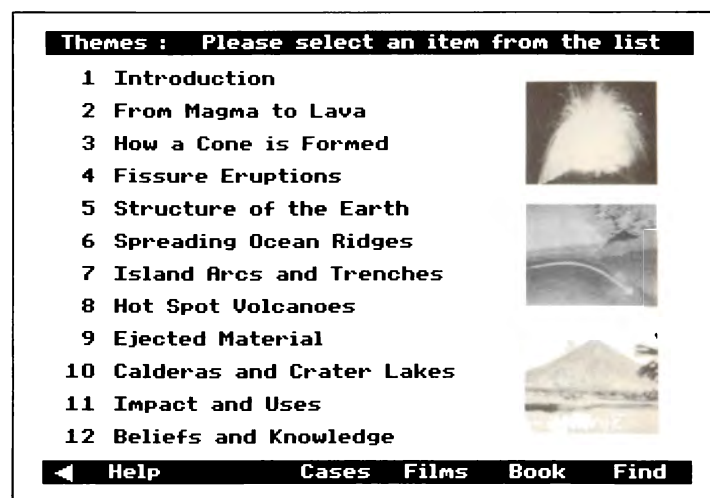
The 'Help' pages are available throughout the disc and will always refer to the type of information you are using. If you are at the menu for one of the main facilities you will find help with choosing from that menu.

If you are reading an essay or watching a film you will find help with how that software works so you know how to leave it or to turn the page etc. Almost every option you have at any time will be shown on the menu bar, so you should be able to pick up the operation of the disc quite easily.



This is the menu for what is called the 'Top Level' of the disc. From here you can choose between the main sections of the disc. When you are in a particular section you can turn to 'Help' to find out about that section and how to operate it.

As you work your way 'down' through the levels of information on the disc you can always go back 'up' by selecting 'Main' from the menu bar.



Themes

The twelve themes on this disc cover various aspects of volcanoes and their effect on people.

The material ranges from animation showing how the movement of

sections of the Earth's crust causes molten rock to bubble to the surface, to an explanation of how our knowledge of volcanoes has changed over the years.

To select from the Themes menu you move the pointer up or down the screen and you will see the numbers on the left of the menu change colour to highlight the one the pointer is currently over.

When the pointer is over the item you want you simply press the left-hand button to select that item.

The item you select could be a film, or an essay, and if you have any problems with looking at it then selecting 'Help' will provide you with assistance.

The twelve themes provided are:

1. **An introduction to the Themes (text)**
A short textual account of the contents of the themes, supported by still pictures.
2. **From magma to lava (text)**
A series of diagrams, still pictures and text to describe the mechanism of an eruption.
3. **How a cone is formed (film)**
Still pictures, animated diagrams and commentary describe how different types of cones and shield volcanoes are formed.
4. **Fissure eruptions (program)**
A short sequence of varied images describing and explaining this linear form of eruption.
5. **Structure of the Earth (film)**
This sequence starts with specially prepared animated diagrams describing the interior of the earth and the nature of the Earth's crust. World maps show the distribution of volcanic activity and relates this pattern to crustal plates and their movements.
6. **Spreading ocean ridges (film)**
This theme considers the processes operating at this particular type of plate margin, and the relationship with volcanic activity.
7. **Island arcs and trenches (film)**
A contrasting type of plate margin activity is described, and the way this helps explain the distribution of certain volcanoes is explored.
8. **Hot-spot volcanoes (film)**
An account of the existence of volcanic activity that seems quite unrelated to plate margin movements. The theme deals particularly with the Hawaiian island chain of volcanoes.
9. **Ejected materials (text)**
This theme describes the great variety of materials ejected from the vents of craters during an eruption. It includes the nature of the solid, liquid and gaseous emissions and the major landforms they may produce over long periods of time.

10. **Calderas and crater lakes (film)**

A description and explanation of a particular type of landform sometimes associated with volcanic cones.

11. **Impact and use (text)**

This theme considers some of the devastation consequences of volcanic eruptions of the past. Reference is made to Vesuvius and Mt. Pelée. Consideration is then given to some of the uses made of volcanic activity and materials—building materials and geothermal power, for example.

12. **Beliefs and knowledge (text)**

This short theme describes changes in beliefs about and knowledge of vulcanicity over time. It begins with some early myths, goes on to consider the evolution of geological science, and mentions how modern techniques and technologies are adding to an understanding of volcanoes.

It must be emphasised that these themes can be elaborated by other parts of the disc such as the film sequences, the book and Oxford English Dictionary (OED) glossary.



Case Studies

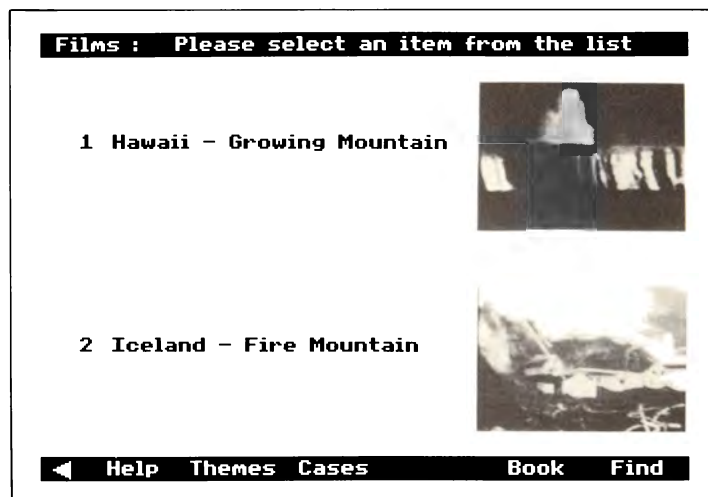
The six Case Studies on the *Volcanoes* disc provide you with some background to specific eruptions.

To select from the Cases menu you move the pointer up and down the screen and you will see the numbers on the left of the menu change colour to highlight the one the pointer is currently over. When the pointer is over the item you want you simply press the left-hand button to select that item.

The item you select could be a film, or an illustrated essay, and if you have any problems with looking at it then select 'Help'.

The six case studies are:

1. Mauna Ulu, Hawaii, USA (film)
2. Eldfjoll, Iceland (film)
3. Mount St. Helens, Washington State, USA (film)
4. Nevado del Ruiz, Colombia (film)
5. Mount Etna, Sicily (text)
6. Io, a satellite of Jupiter (film)



Films

The two films on the *Volcanoes* disc are here to provide you with an 'experience'. No hot feet, no ash in your sandwiches, just a chance to watch the power of an eruption.

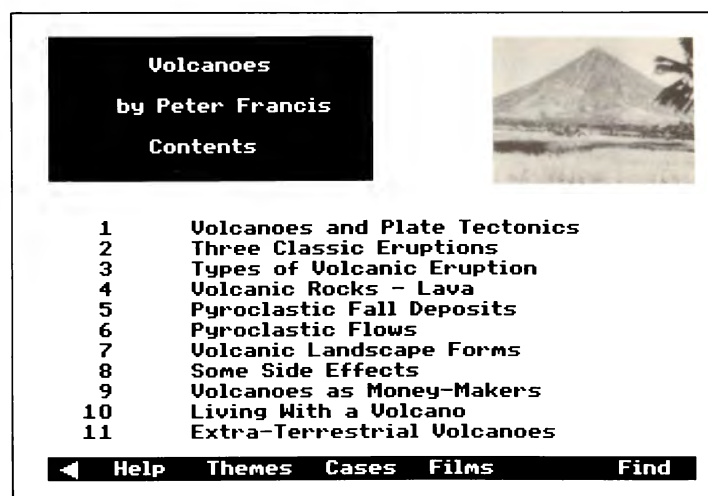
The two films have been chosen to represent two different kinds of eruption: the Hawaiian one has spectacular falls of molten lava but does little damage to human life and livelihood.

The Icelandic one generates more ash than lava and shows how a volcano can affect the lives, and homes, of people living near it.

As shown here, the films have no commentary . . . no distractions from the raw images. If you wish to find out more about these eruptions you can find the same films, but with commentary, in the Themes; or you can ask for them through 'Find'.

To select from the Films menu you move the pointer up and down the screen and you will see the numbers on the left of the menu change colour to highlight the one the pointer is currently over.

When the pointer is over the item you want you simply press the left-hand button to select that item.



The book

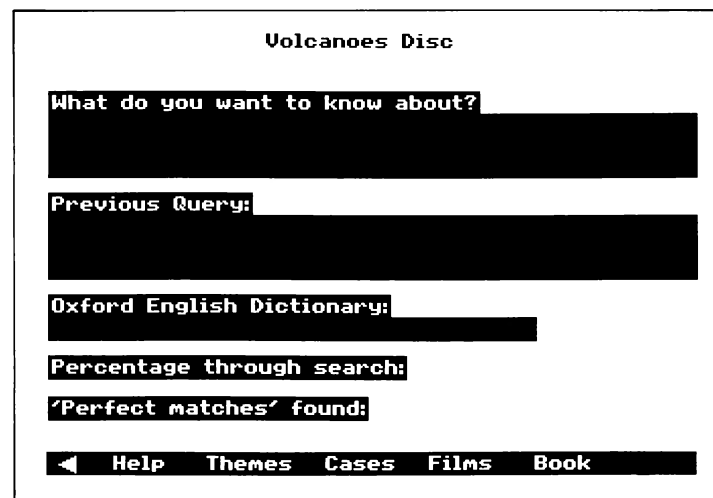
The text in this section of the videodisc is taken from the book *Volcanoes*

by Peter Francis, who is currently working for NASA. It was first published by Pelican in 1976. We have made every effort to reproduce faithfully the book but there are some limitations imposed by a computer screen.

The original chapters of the book have been subdivided to make access to the material a little easier and, because we have some limitations such as on the length of titles, we have had to modify some of the chapter titles a little from the original.

To select a chapter from the book you move the pointer up until the number of the chapter is highlighted (you will see the numbers on the left changing colour as the pointer moves up and down the screen). Then you press the left-hand button.

You will then be shown a menu of sections into which that chapter has been divided and you select a section in the same way as before. To move from the section menu back to the chapter menu simply select 'Main'.



'Find'

'Find' is the random access way of finding out about volcanoes on this disc. It is called random because you can ask about any subject and the disc will show you a list of whatever it has on that subject.

There are two distinct sections to the 'Find' function. One enables you to access the entire contents of the disc by producing lists that answer your query. The second method allows you to use the Oxford English Dictionary entries that are on the disc. You can look up the definition of a single word or browse through the dictionary word by word.

What Do You Want To Know About?

In answer to this question you can enter either a sentence, or a couple of key words. Just move the pointer up to the top box, the colour of the box will change from blue to cyan, and you can type in your query. Any mistakes can be corrected using the 'delete' key. The query will be processed once you have pressed 'Return' or the left-hand button.

The system will then see what items 'match' the key words in your entry and you will see the progress of the search on the screen.

In this way you could type 'What do you know about types of lava?' or

just 'lava types' and the result would be the same. This is because the software will decode the words you enter and pick out key words and see if they match the keywords (as they are called) by which the information on the disc is indexed.

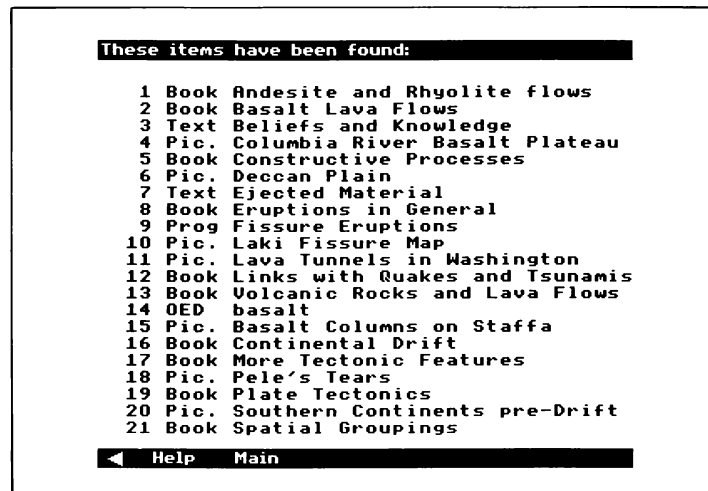
The two small boxes on screen follow the progress of the search and show 'Perfect Matches' and 'Percentage Through Search'. A perfect match is when an item is found that contains all the keywords that you typed in.

About the 'Find' lists

The query you typed in leads to a list of items being shown on the screen, matching the elements of your request in some way. You can now choose from this list.

The top section of the list shows those items which perfectly matched the keywords in your queries, in alphabetical order. That is followed, in alphabetical order again, by the 'imperfect matches'.

This means that if you entered 'basalt' and 'lava' as your query key words, the first few items will match both 'basalt' and 'lava' and the rest will match either 'basalt' or 'lava'.



To the left of the name of the items in the list will be a code to tell you what type of item it is. The codes are:

- Text—an essay
- OED—Dictionary definitions
- Book—section of the *Volcanoes* book
- Pic.—Photographs
- Prog—Program items
- Film—Films or animations

To select from the find list you move the pointer up and down the screen and you will see the numbers on the left of the list change colour to highlight the line the pointer is currently over.

When the pointer is over the item you want you simply press the left-hand button to select that item.

If there is more than a pageful of list you can page forwards in the usual way, by moving the pointer to the right of the screen and pressing the middle button or by pressing f8, to get to more of the list.

When any 'Find' query has been entered, the next time you use the 'Find' screen the previous query will be shown in the second box. You can call this up to the top box by pressing the 'Copy' key on the keyboard when the pointer is in the top box.

You may also see 'Old' in the right-most box on the menu bar. If this is the case then selecting 'Old' will return you to the last 'Find' list you used, so you can follow up on your last search.

Stemming and keywords

Words you type in on the 'Find' panel will be 'stemmed' which is to say that the word 'eruption' will stem to 'erupt', as will 'erupting' and 'erupted'. This is designed to extract the most important part of the words in your query and it will give you the broadest possible list as a result of your query and allows for plurals etc.

We have used a few keywords in a particular way. As you might imagine, it would be pointless keywording every item on this disc under geology since it is all to do with geology. So the only time you will find an item of information that is 'filed' under geology will be in the dictionary, where we have attempted to preserve the categorization of words used by the OED.

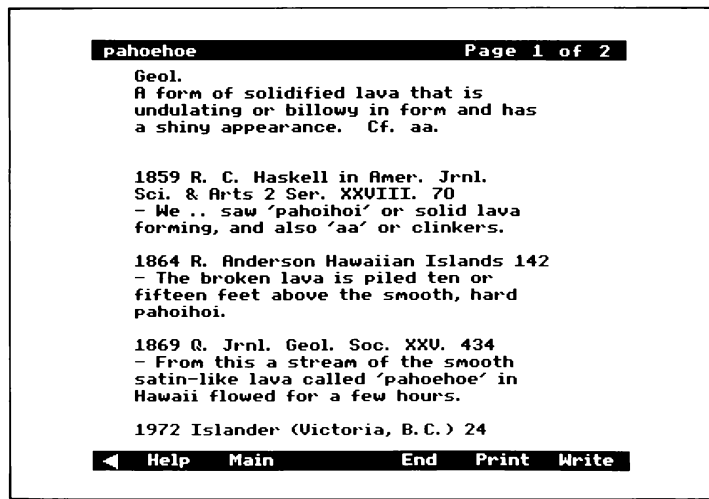
The keyword 'volcano' has been used where an item, usually a picture, shows a volcano. Pictures and photographs have been keyworded as such so that you can ask for 'Photos of volcanoes' if you wish, and similarly any night-time shots have been keyworded with 'night'.

There are two keywords that the 'Find' system will not recognise. They are 'aa' and 'Io'. They are not recognised because the software was designed to ignore words of one or two letters because they are ' . . . not important to a search. . . '. If you are now curious to find out about aa and Io then try entering 'lava types' and 'Jupiter' and see what you get.

If you know the item name. . . .

It is possible to go straight to an item of information on the *Volcanoes* disc if you already know its name. This item name is the name that appears in a 'Find' list and at the top of the first page when a piece of text is displayed.

In the 'What do you want to know about' box you enter the exact item name between double quotes (i.e. "). This must be exact, down to the spaces, commas, full-stops and so on. If you've got it right then when you execute your query the item will be called up.



The Oxford English Dictionary

We have included on this disc a selection of around 1500 word definitions from the Oxford English Dictionary. The words are those categorized in the dictionary (which is held on a computer in Oxford) as being related to such subjects as geology, and geomorphology. We have also asked for other words that we felt were relevant.

We obviously don't guarantee that every possible word is here, but we hope you will find the entries interesting and useful. They are in two parts, the definition and the quotations. The quotations, some dating back over 1000 years, demonstrate the development of the word, and are fascinating in their own right.

To use the dictionary you enter a word, or even just a letter, in the OED box. If the exact word is in our extract from the dictionary you will go straight to the definition of the word.

If the word appears more than once, with several definitions or combined with other words for example, or if you have misspelled it, or if you just entered a letter to browse, then you will be shown a list of words to choose from.

To select from the dictionary menu you move the pointer up and down the screen and you will see the numbers on the left of the menu change colour to highlight the one the pointer is currently over.

We have attempted to recreate the intricacies of the Oxford English Dictionary without benefit of multifarious type-faces or even colours so we hope you find it interesting and enjoyable. It may even send you off to find a Complete Oxford English Dictionary! Any mistakes, omissions and downright typographical errors are probably ours and not the OED's.

Selecting from the OED

If the word or phrase you entered was not exactly matched then your query from the Oxford English Dictionary box on the 'Find' page will possibly give you a list of words and phrases that closely approximate to what you typed in.

To select from the list you move the pointer up or down the screen and you will see the numbers on the left of the list change colour to highlight the one the pointer is currently over.

When the pointer is over the item you want you simply press the left-hand button to select that item.

You can page beyond the first page of the list shown, either backwards or forwards through the alphabet. You do this in the usual way, by moving the pointer to the left or right of the screen and pressing the middle button or by pressing f7 or f8, to get to more of the list.

When you have read the definition text, selecting 'Main' will take you back to the 'Find' screen.

Viewing the Information

Types of Item on the Disc

There are six different types on this disc of which three are varieties of text essay. This chapter will explain how each of those item types operates so that you will know how to get the most out of it. In general, if you are familiar with *Domesday* you will find it straightforward to use these items since they are based on the *Domesday* system.

The item types are:

Film	} These are the three types of essay
Picture	
Text	
OED	
Book	
Program item (on fissure eruptions)	

Watching a film

When a film is running you can pause it or switch off the soundtrack by selecting the appropriate box on the menu bar. In each case the box will change to show the opposite operation, 'Continue' or 'Sound On'.

When the film has finished you will return to the Films menu but by selecting 'Main' you can jump back to this menu while the film is running.

Volcanoes pictures

If any picture has a caption you can remove it by selecting the 'Clear' box on the menu bar. The word 'Caption' will replace it and you can select this to get the caption back. The caption information can be printed out (if you have a printer attached) by selecting the 'Print' box. The caption can also be written to a floppy or hard disc by selecting 'Write' (see page 19).

Not all pictures have captions generated by the computer. The illustrations for the book *Volcanoes* have their text 'built-in' to the video image and this cannot be removed, printed or written to disc.

It is not possible to print out or record the video pictures from this disc using the software on the *Volcanoes* disc itself. Any copying of material from this disc could infringe copyright.

To return to the menu or essay from which you chose this picture you select 'Main' from the menu bar.

Reading the text

To read the text you turn the pages by either putting the pointer at the edge of the screen and pushing the middle button, or pushing a function

key. To page forwards the pointer goes on the right of the screen or to page back the pointer goes on the left of the screen. Alternatively function key f8 pages forwards and f7 pages back.

Sometimes the text will be arranged over or around a picture. If it is arranged around a small picture set at the top right of the screen you can enlarge that picture to fill the screen if you want to see it in more detail.

To see this, you position the pointer over the small picture and press the left-hand button. When the big picture is on the screen you can return to the essay by pressing any button on the trackerball/mouse or on the keyboard.

Where you see words in square brackets, looking like [see Fig. 3] in the text, that means there is a picture available. To select the picture put the pointer between the square brackets and push the left-hand button. To return to the text select 'Main' from the picture's menu bar.

Words that are highlighted in yellow are words in the *Volcanoes* glossary. If you want to find out more about a word that is highlighted you point at it and select it by pressing the left-hand button, and you will be shown some further information. To return to the main text afterwards you select 'Main' from the menu bar.

When you are reading the text you have the option to print the page or to write the page onto a floppy disc (or Winchester). You do this by selecting **PRINT** or **WRITE** from the menu bar. You must have a printer or disc drive connected to your system before doing this or the program may cease to work correctly, or indeed stop altogether while it tries to find your non-existent printer or disc drive.

You will not be able to print or write out the video images in this way.

Watching a program item

There is a module on the videodisc which we have called a 'program item'; the theme on fissure eruptions. It is called a 'program item' because it uses some software of its own to control the videodisc. Because of this the way in which it works will be a little idiosyncratic, but here is a general guide to using this kind of item.

The item will run, like a film, for you to watch. Occasionally it may stop and you will have to select the 'Continue' box to proceed. The material in the item could be made up from any of the components of the disc. . . . pictures, film, sound and text.

To return to the menu from which you chose this item you select 'Main' from the menu bar at any time. When the item has finished the system will then wait for you to select 'Main'.

Help with 'Help'

While you are in the 'Help' facility on the *Volcanoes* disc there are several facilities open to you. Basic information on how to use the disc is given in the 'Help' text. You read this exactly like any other essay. The software knows where you are and will give you advice accordingly. The two other 'Help' options are 'Bookmark' and 'System'.

Using the Bookmark

The *Volcanoes* disc, like *Domesday*, has the ability to store a bookmark. This is the electronic equivalent of a piece of paper slipped into a book to mark your place.

To set a bookmark you enter 'Help' and select 'Bookmark' from the menu bar. The menu bar will change with the options 'Set Mark', 'Go Mark', 'Save Mark' and 'Load Mark' being the possible options. Until you have set a Mark you cannot go to it or save it.

When you set a Mark the system will remember where you were when you entered 'Help'. Once the Mark is set, going to it will take you straight there and the software will remember exactly how you got there. If you set the bookmark while you were reading an OED essay, for instance, this means that if you found that essay through the OED box, selecting 'Exit' will take you to the 'Find' screen whereas if you found the OED entry in a 'Find' list you will go back to that list.

You can save a bookmark to disc. You will need a floppy disc formatted for ADFS to do this and, of course, you will need to have a floppy disc drive connected to your computer. When you select the 'Save Mark' box on the menu bar you will be prompted to put your floppy disc into Drive 0 (usually the top or left-hand one). If you do not really want to save a Mark you can stop this operation when the message at the top of the screen asks you to press a key to say you are ready or else you want to quit. When you save your first bookmark it will be saved with the filename 'VOL0001' and it will be increased by one for each new bookmark.

Loading a bookmark from disc works in a similar way. When you select the 'Load Mark' box you will be asked to provide a filename. This will probably be one of those 'VOL0001' type numbers but you might have changed it using the 'System' option of which more later.

Storing a series of bookmarks on a disc is one way of building up a presentation, or of preparing research in advance.

The System option

Selecting 'System' from 'Help' gives you access to the Operating system of the micro. This could possibly be uncharted waters for you so we advise caution. Mind you, nothing you can do will damage the disc or the computer but it could stop the software from working.

When you enter the 'System' option you will find a prompt (which is an asterisk *) on the top line of the screen. If you are already familiar with the way the BBC Micro Operating System (OS) works you will recognise the asterisk as the start of an OS command. You don't need to type in the asterisk again. If you are not familiar with the BBC OS then using this option may not be a good idea.

There will be a warning on the screen about being careful which commands you use. Some commands, such as those which use memory or start another program (such as 'BASIC') are known as 'fatal' since the *Volcanoes* software will not recover without being restarted. So please don't do anything like that. Dangerous commands include 'Copy'.

On the other hand, some Operating System commands are safe to use. Renaming files on a floppy disc (with 'Rename') or changing directories ('Dir') are OK, as is asking the time. Changing the filing system, by typing 'ADFS', is one command which might appear safe but could well cause you problems, not because it uses memory but because the *Volcanoes* disc uses another filing system, VFS, to manipulate its data.

The main reason that we include a 'System' option is to allow you to send what are called 'F-Code' commands to the player. You might want to do this to turn on the picture number facility and you do this by typing 'Fcode D1' at the system prompt. Further information about F-codes can be found in the VP415 and Master AIV handbooks.

Leaving 'Help'

When you are anywhere within 'Help', selecting 'Main' returns you to the 'Help' menu and selecting 'Exit' will take you out of 'Help' and back to the main part of the disc.

Alternative ways of using the disc

The most effective and enjoyable way of using the disc will depend partly on the level of understanding, existing knowledge and motivation of the user. It will also vary with the amount of time there is available to use the disc, and on whether there will be one or several sessions of use.

Another important determinant is whether the user is operating alone, or as one of a small group. In school context, much will depend on whether the user is undertaking personal research for an individual study, or whether a pupil or group of pupils have been given a very specific learning task of limited duration by their teacher.

The possible variations in use are great, but at least three broad approaches may be identified:

1. **Browse**—the user wants to satisfy a general curiosity, to be entertained and informed at the same time. There is unlikely to be any specific learning objective.
2. **Research**—an individual user with a clearly identified need for information and/or explanation uses the disc as a rich data base and collection of resources. Through the interactive facility the researcher can explore all available data on the disc at a depth appropriate to needs.
3. **Structured learning**—a user is guided through the data either by careful consideration of possible themes or case studies, or following the advice and instructions of a teacher or tutor. This is beginning to move towards a pre-determined or programmed activity, but the interactive facility is always available for further exploration—should there be sufficient time.

Volcanoes has therefore been designed to offer an extensive data and resource base on the theme, together with a choice of free exploration or guided and structured learning.

Bibliography

- Ollier.
Volcanoes,
Oxford, Basil Blackwell 1988
- Bramwell, Martyn.
Volcanoes and earthquakes
London, Watts 1986
- Jennings, Terry
Volcanoes and Earthquakes
Oxford, Oxford University Press 1988
- Scarth A.
Volcanoes
Dundee, Dept. of Geography, University of Dundee 1985
- Lambert, David.
Volcanoes
London, Watts 1985
- Knight, Hilary.
Volcanoes (text, Hilary Knight & David Wright; programs, David Burgess)
London, Macdonald 1985
- Bain, Iain.
Mountains and earth movements
Hove, Wayland 1984
- Forecasting volcanic events* (edited by Haroun Tazieff and Jean-Christophe Sabroux)
Amsterdam, Oxford, Elsevier 1983
- Taylor, Eric.
Volcanic New Zealand
Auckland, Oxford University Press 1983
- 'Arc volcanism physics and tectonics' proceedings of a 1981 IAVCEI Symposium
(edited by D. Shimozuru and I. Yokoyama) Tokyo, Terra Scientific Dordrecht,
London, 1983
- Carson, James.
Volcanoes
Hove, Wayland 1983
- Hancock, Gillian.
The great volcanoes
Kingswood, Kaye & Ward 1982
- Blong, R. J. and Russell, J.
The time of darkness: local legends and volcanic reality in Papua New Guinea
Seattle, University of Washington Press 1982
- Steel, Sara.
Earthquakes and volcanoes
London, Adam & Charles Black 1982
- Crystal, David.
Volcanoes
London, Edward Arnold 1982
- Rutland, Jonathan.
Volcanoes
London, F. Watts 1978

- Lambert, M. B.
Volcanoes
 Newton Abbot, David and Charles 1979
- Updegraff, Imedla.
Earthquakes and volcanoes
 London, Methuen 1980
- Bullard, Fred M.
Volcanoes of the earth
 Austin, University of Texas Press 1976
- Gribbin, John.
This shaking earth
 London, Sidgwick and Jackson 1978
- Crisp, Tony
Earthquakes, mountains and volcanoes
 Sunbury-on-Thames, Nelson 1979
- Volcanic activity and human ecology* (edited by Payson D. Sheets, and Donald K. Grayson)
 New York, London, Academic Press 1979
- Oakeshott, Gordon B.
Volcanoes & earthquakes: geologic violence
 New York, London McGraw-Hill 1976
- Law, Felicia.
Volcanoes
 London, Collins 1976
- Arni Gunnarsson
 'Volcano ordeal by fire in Iceland's Westmann Islands'
 Reykjavik, *Iceland Review*, Gerrards Cross, Distributed by Smythe 1979
- Harris, Stephen L.
Fire and ice : the Cascade volcanoes
 Seattle, Distributed by Cordee, 249 Knighton Church Rd., Leicester 1977
- Volcanoes*, published by the Geological Museum, 1974

Sources for current information on volcanic research

New Scientist is probably the best popular magazine for articles on current work in vulcanology. The *Geographical Magazine*, *Nature*, and the *Scientific American* also carry excellent articles from time to time.



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