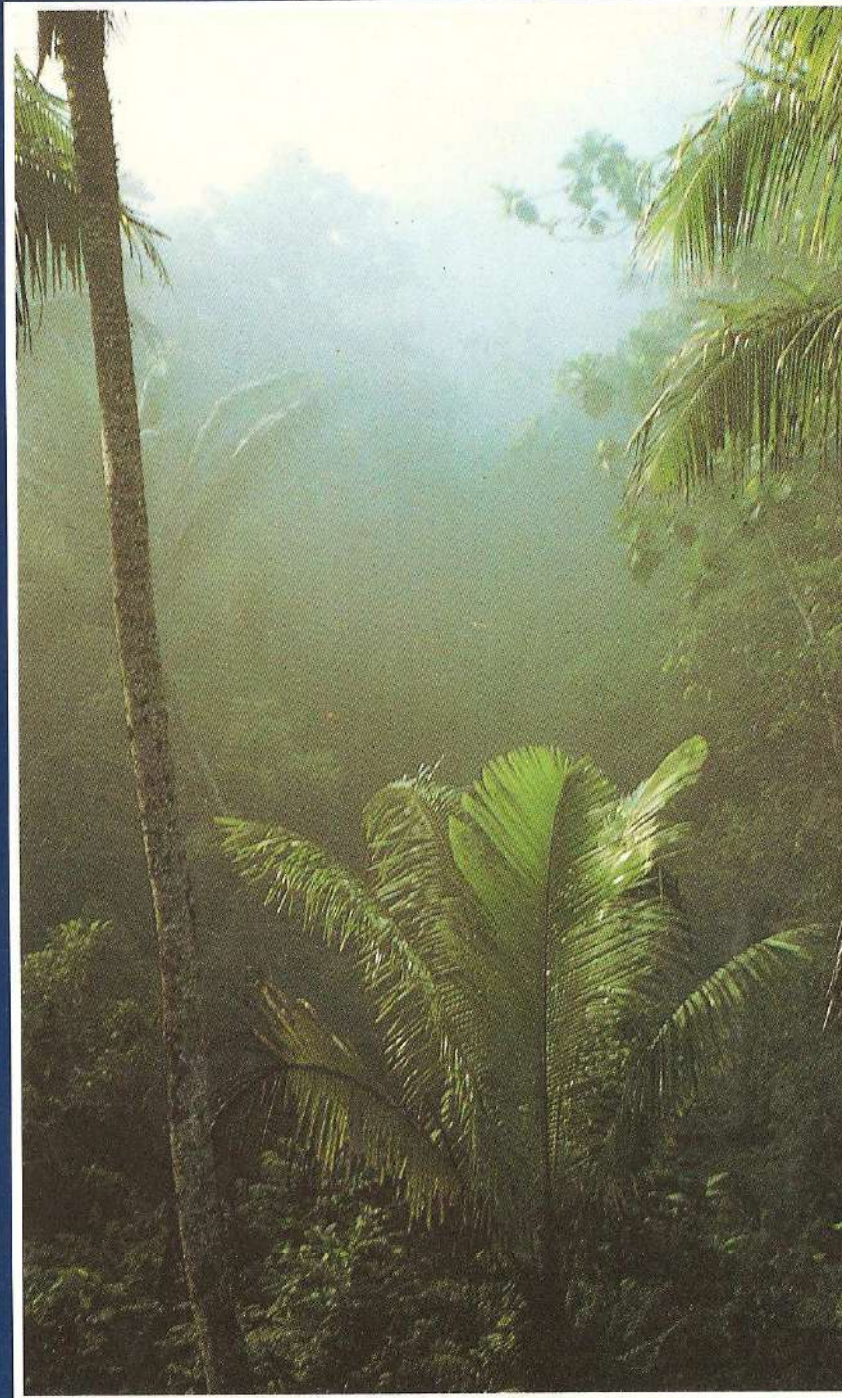


Factfiles

RAINFORRESTS

Rowena
Akinyemi



OXFORD BOOKWORMS 2

1 Rainforests

Rainforests are perhaps the most important places on Earth. And yet we destroy thousands of square kilometres every year.

In 1950, rainforests covered fifteen per cent of the Earth's land. Forty years later we have destroyed half of these. Will there be any rainforests in the year 2020? No one knows the answer to that question.

Rainforests are home to about fifty million people. But as important as the people, some scientists think, are the millions of species of animals, plants and insects which live there. In 10,000 square metres of rainforest there

can be more than 8,000 different species of plants. (In all of Great Britain there are only 1,443 different species of plants.)

When we destroy the rainforests, forest people lose their homes, and thousands of species of animals and plants disappear – and once they have disappeared we will never see them again.

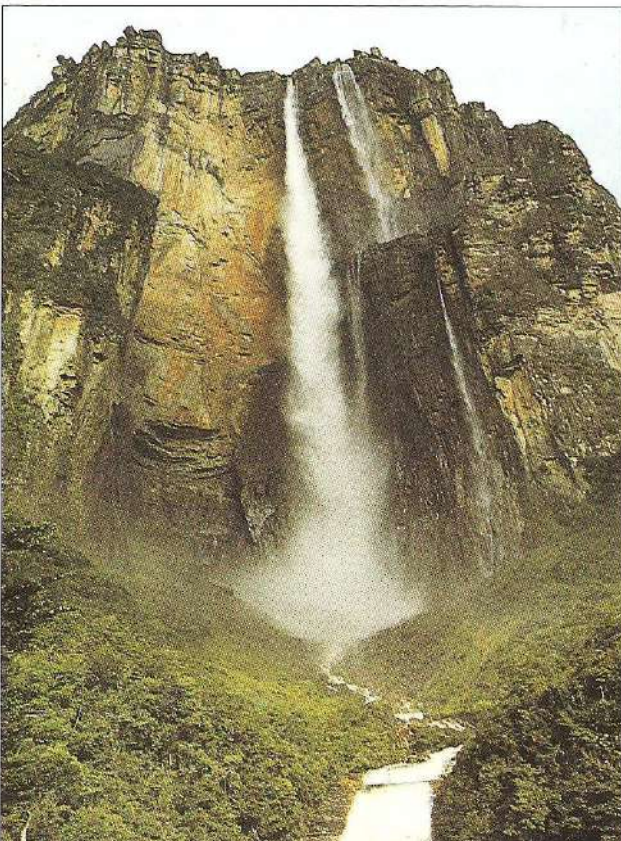
The leaves of rainforest trees make one-third of the Earth's oxygen. Can the Earth live without the oxygen of the rainforests? What will happen to us when there are no more rainforests? We don't know – and let's hope we never have to find out!



2 Rainforests of the world

The weather in a rainforest is hot all the year round – usually between 20 degrees Celsius and 28 degrees Celsius every day. The weather is always wet, too; most rainforests have more than 200 mm of rain in a month. In Belem, in Brazil, it rains on about 243 days each year. And the rain is heavy! On a rainy day in a rainforest 20 mm of rain can fall. (On a rainy day in London, about 5 mm of rain falls.)

Angel Falls, Venezuela



Rainforests today

The Amazon rainforest is about a hundred million years old, and has more species of animals and plants than any other place on Earth. People have now cut down much of this rainforest to plant coffee and sugar. *Angel Falls* in Venezuela, the highest waterfall in the world (979 metres), is in one part of this Latin American forest.

There are different kinds of rainforest. Some are high in the mountains and others are near the sea. Mangrove swamps grow by the sea, often at the mouths of great rivers.

Before 1950, Indonesia had twice as much rainforest as it has today. Indonesia sells most of the wood from its forests to Japan and other rich countries. The Rajah Brooke's birdwing butterfly lives in these forests. It is one of the world's largest butterflies.

Madagascar has been an island for millions of years, cut off from the rest of the world. Its animals and plants have changed very little in those years – most of them live in no other place. In Adohahela, there are twelve species of lemurs living in 760 square kilometres. The sifaka, a lemur with very long legs, can jump from one tree to another and travel a long way without touching the ground.

The kangaroo is Australia's most famous animal. In 1988, someone



Mangrove swamp – the roots of the trees grow out of the water

found a new species of kangaroo in the rainforest of Australia. Most kangaroos jump across the land, but the Bennett's tree kangaroo, which has strong arms and wide feet, lives in trees.

Australia's forests are disappearing fast. How many species of animals are disappearing, too? We shall never know.

*Rajah Brooke's
birdwing butterfly*



Sifaka



Bennett's tree kangaroo



3 Why rainforests are important

More than half the species of plants and animals of the Earth live in the rainforests. We know about only a small number of these species. We could learn more, but we must hurry.

The peoples of the rainforests have always used plants to make medicines. Today, all over the world, people use medicines made from rainforest plants. Quinine, the medicine for malaria, comes from the cinchona tree of Peru. The leaves of the rosy periwinkle from Madagascar are used as a medicine for the deadly blood disease, leukaemia.

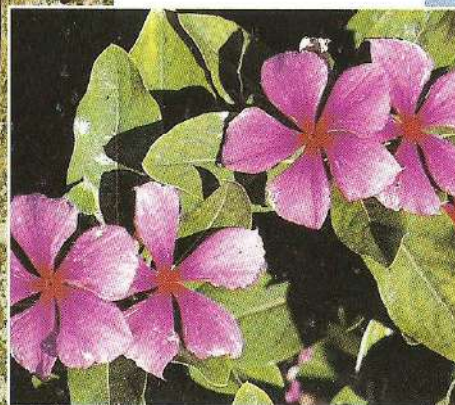
Many new medicines are waiting in the rainforests. If we destroy the forests, we shall never find them.

Rainforest trees are used to make things which we use every day. Rubber, for example, is used to make many things. The fruits of many forest trees are good to eat – forest people have eaten them for thousands of years. Today, all over the world, people eat rainforest food plants; for example, coffee, tea, oranges, and rice. Maize, which is an important food for many people of the world, is another rainforest plant.

Rubber trees



Rosy periwinkle



Cinchona tree



In 1970, a disease destroyed half the maize in the United States of America. Scientists began to look for new species of maize in the rainforests. In 1987, in the Mexican rainforest, they found a new species which is stronger than other species. But we nearly lost this new species of maize, because people were already cutting down that part of the Mexican rainforest.

Nobody knows how many useful plants are already lost because people have destroyed many of the rainforests of the world.

The trees of the rainforests help the Earth's air because their leaves use carbon dioxide and make oxygen, which we need to live.

They are also important because they control some of the Earth's weather. Through their large leaves, they give out water vapour which makes heavy clouds. The clouds then move to other parts of the Earth and give rain. The clouds also protect the Earth from the sun.



Maize plantation

Today, the Earth is slowly getting hotter, and in some places changes in the weather are making life much more difficult for millions of people. We need to learn more about the Earth's weather while we still have the rainforests.

Clouds and water vapour



4 People of the rainforests

More than fifty million people live in the rainforests of the world and most of them do not hurt the forest they live in. They eat the fruits that grow on the forest trees, but they do not cut them down. They kill some animals to eat, but they do not destroy the species.

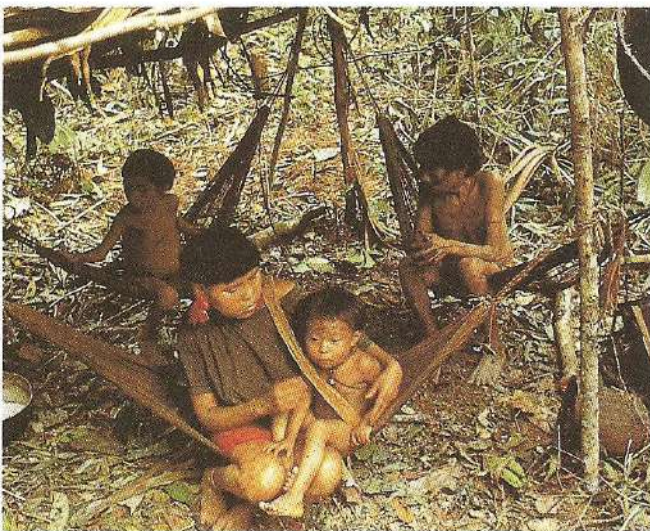
When we cut down the rainforests, we destroy these forest people, too. In 1900, there were one million forest people in the Amazon forest. In 1980, there were only 200,000.

The Yanomami live along the rivers of the rainforest in the north

of Brazil. They have lived in the rainforest for about 10,000 years and they use more than 2,000 different plants for food and for medicine. But in 1988, someone found gold in their forest, and suddenly 45,000 people came to the forest and began looking for gold. They cut down the forest to make roads. They made more than a hundred airports. The Yanomami people lost land and food. Many died because new diseases came to the forest with the strangers.

The Yanomami people tried to save their forest, because it was

Yanomami people



Gavioes people opening Brazil nuts with machetes





Penan people blockading a forest road in Sarawak, Borneo



Chico Mendes (right)

their home. But the people who wanted gold were stronger.

Many forest people try to save their forests. Chico Mendes was famous in Brazil because he wanted to keep the forest for his people. 'I want the Amazon forest to help all of us – forest people, Brazil, and all the Earth,' he said. A few months later, in December 1988, people who wanted to cut down the forest killed Chico Mendes.

In Borneo, people were cutting down the forest of the Penan people to sell the wood. The Penan

people tried to save their rainforest. They made blockades across the roads into the forest. In 1987, they closed fifteen roads for eight months. No one cut down any trees during that time.

In Panama, the Kuna people saved their forest. They made a forest park which tourists pay to visit.

The Gavioes people of Brazil use the forest, but they protect it as well. They find and sell the Brazil nuts which grow on the forest trees.

5 Rainforest animals



Mountain gorillas

We shall never know about some animals which live in the rainforests, because every year about a thousand different species disappear for ever.

The giant otter lives in the Amazon rainforest. It is about two metres long, and one group of otters eats more than 30,000 fish a year. There are not many giant otters now, because people will pay a lot of money for their thick fur.



Giant otters

In the 1960s, people killed more than 60,000 giant otters in Brazil.

Tapirs live in the forests of Latin America and in Malaysia. We don't know how many tapirs there are, but we do know that they were already living in the rainforests twenty million years ago. They live near rivers, and they eat leaves at night. During the day, they stay in the river to keep cool.

The mountain gorilla lives in Rwanda in Central Africa. Mountain gorillas live in family groups and are very big so they don't climb trees very often. They spend most of the time on the ground and they need to eat lots of leaves and fruit.

The golden bamboo lemur lives in Madagascar. Its favourite food is giant bamboo. Giant bamboo is a deadly plant but, strangely, the lemurs eat it every day and they don't die. No one knows why. The

golden bamboo lemur was unknown until 1986.

No one knows all the species of insects in the rainforests. Perhaps there are more than 40,000 species of insects in the Amazon rainforest. The leaf katydid is one of these. It looks like the leaf it is standing on. This is a very good way to protect itself from the insect-eating birds in the trees around it.

Golden bamboo lemur eating a bamboo shoot



Tapir



Katydid on a leaf

6 Animals in danger

Many animals are in danger of extinction because we are destroying the rainforests.

The Javan rhinoceros once lived in the rainforests of many countries: in the north of India, through Indo-China and south through Malaysia and the islands of Indonesia. But today there are only about one thousand of these animals in the world, some living in Vietnam and some living in the Ujung Kulon National Forest Park on the island of Java, where forest workers protect them.

Today, there are many forest parks in the rainforests of the world. Animals need large parks because some species have to travel many kilometres to find food. The Parc National des Volcans in Rwanda, for example, protects the mountain gorilla and saves it from extinction.

Some animals are in danger because people want them as pets.



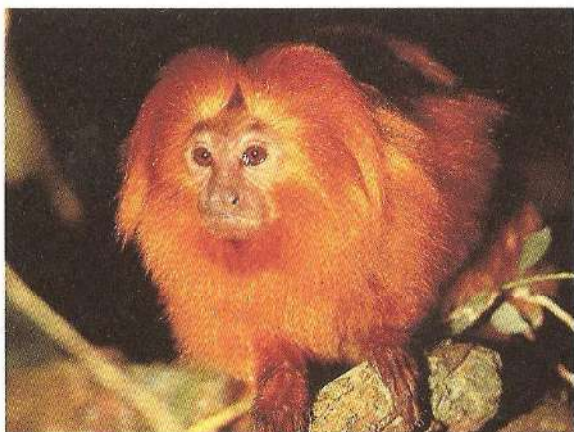
Hyacinth macaws

There are only 2,500 hyacinth macaws now living in the forests of Latin America. But in 1989, people caught 500 hyacinth macaws and sold them in pet shops.

When you visit a pet shop, ask about the animals there. Did somebody catch any of them in the rainforests, put them into boxes, and fly them to the pet shop?

Zoos in many countries of the world are helping to protect animals in danger. The golden lion tamarin comes from Brazil's forest near the sea. The forest there is disappearing fast and people caught hundreds of these tamarins and sold them in pet shops. There were only a few left in the rainforest. But many golden lion

Golden lion tamarin



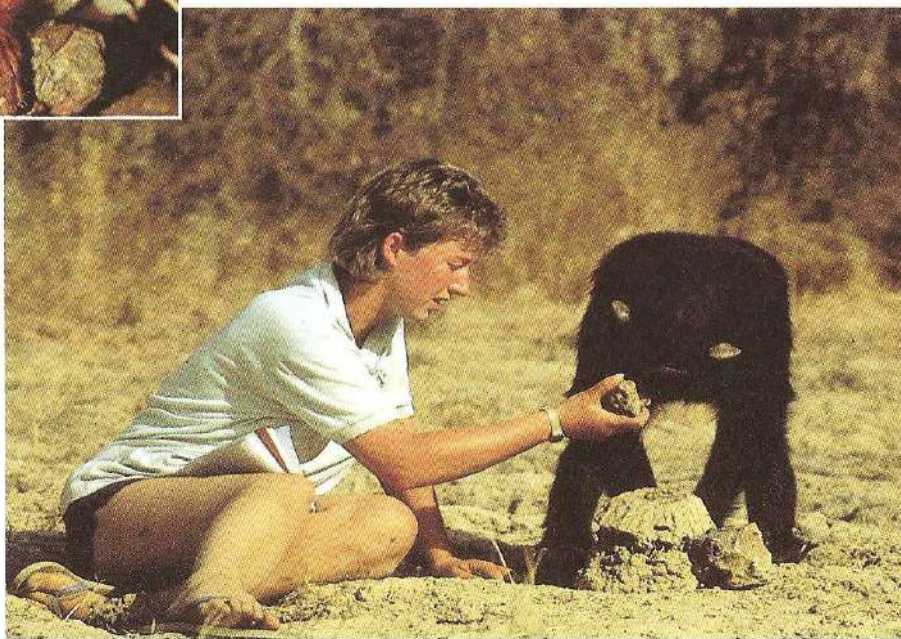
Javan rhinoceros



tamarins were born in zoos, and scientists have taken some of them back to the Poco das Antas Forest Park near Rio de Janeiro.

Animals born in zoos know nothing about life in the rainforests. Someone must teach them how to find food and keep away from danger. Janis Carter teaches chimpanzees about life in the rainforest of The Gambia because they were born in zoos far away from the forest. In Borneo, scientist Birute Galdikas teaches young orang-utans about life in the forest.

Teaching a chimpanzee in The Gambia



7 Rainforest plants

The rainforests are as rich in plants as they are in animals.

The biggest plants are of course the trees. The island of Madagascar has 2,000 species of trees. (In all of North America there are only 700 species of trees.)

Rainforest trees grow very slowly, and they live for hundreds of years. When a mahogany tree is fifteen years old it is about fifteen metres tall. After fifty years, it is about thirty metres. It goes on growing until it is 150 years old.

Some trees grow as tall as seventy metres – and some animals live all their lives in the tops of these trees!

The rafflesia grows in the forest on the island of Borneo. It is the largest flower in the world. It catches and eats insects.

The quetzal is a large bird, about one metre long, but it eats only fruit. In the mountain rainforests from Mexico to Costa Rica it can find fruit every day of the year.



Foot of a mahogany tree

Other rainforest birds eat only insects. And hummingbirds drink the nectar from flowers. While a hummingbird is drinking nectar from a flower, its wings move up and down about fifty-five times every second.

Many rainforest plants are in danger because people take them from the forest to sell in the shops of the rich countries of the north.

When you visit a flower shop near you, ask about the plants there. Did someone take any plants from the rainforest and bring them to sell in the shop?

The slipper orchid grows in Borneo. There are only a few of these orchids now, but in 1987, someone went into the rainforest to take one. He sold it for \$10,000.

Rafflesia flower



*Quetzal bird with fruit
in its beak*



Hummingbird



Slipper orchid



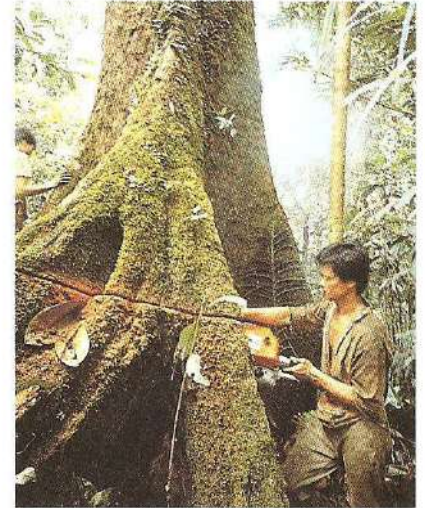
8 Money



Mining in Brazil

Why are we destroying the rainforests? There is a short answer to that question: money!

Countries with rainforests cut down about 50,000 square kilometres of trees every year, and sell the wood to the rich countries of the north. Most rainforest wood from Latin America goes to North America; wood from Africa goes to



Cutting down a rainforest tree



Coffee plantation in Brazil

Europe; and wood from the forests of Asia goes to Japan. Japan does not cut down the trees which grow in Japan – but forty per cent of all

the world's rainforest wood goes to Japan.

Switzerland stopped buying rainforest wood in 1982. Has your country stopped buying rainforest wood?

Remember: if you want to help the rainforests, you must never buy furniture made of rainforest wood!

When people look for metals in the rainforest, they also destroy the forests. When people look for gold in the Amazon forest, they use deadly mercury to wash the gold. The mercury goes into the rivers where it kills fish and other animals.

International businesses buy rainforests in Latin America where land is very cheap. They cut down

the trees, sell the wood, and then use the land for cows.

Thousands of trees and animals have died, and forest people have lost their homes, so that today North Americans can eat cheap meat. Ninety per cent of Latin American meat goes to North America because it is so cheap.

All over the world, people eat 140 million tonnes of meat every year. And the rich countries of the north eat sixty per cent of this.

Many countries cut down rainforests and plant coffee and sugar which they can sell to rich countries. Not many insects and animals can live in coffee or sugar plantations because they damage the coffee and sugar.

Cattle in Amazonia



9 Disappearing forests



A new village in the forest

Planting young trees in the rainforest



In many rainforest countries, there are too many people in the cities, and many people move to the rainforests to grow food for themselves. For example, in 1960 there were about 10,000 people (most of them forest people) in Rondonia, Brazil. In 1985, there were one million people living there, and most of them were people from the cities.

The people of many rainforest countries use wood from forest trees to make fires to cook their food. We must help them to plant new trees, and perhaps to find other ways of cooking.

We also need to learn about the trees of the rainforests, before we destroy them. One famous tree is the petroleum nut tree, from the Philippines. This tree makes oil which we can use for fires for cooking or lighting. One of these trees can make fifty litres of oil every year.

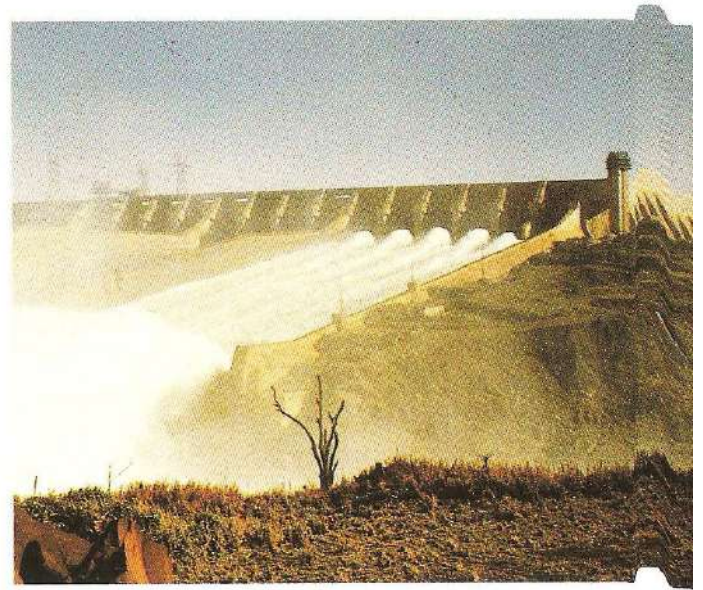


In Latin America, many countries want to build dams to make more electricity for their cities. In many places forest people and animals have lost their homes, and thousands of trees have died, because dams need a lot of water to make electricity.

For example, with money from North America and Europe, Brazil is building dams in the Amazon rainforest. These dams will make forty per cent of Brazil's electricity. Already, two dams have destroyed 4,500 square kilometres of forest.

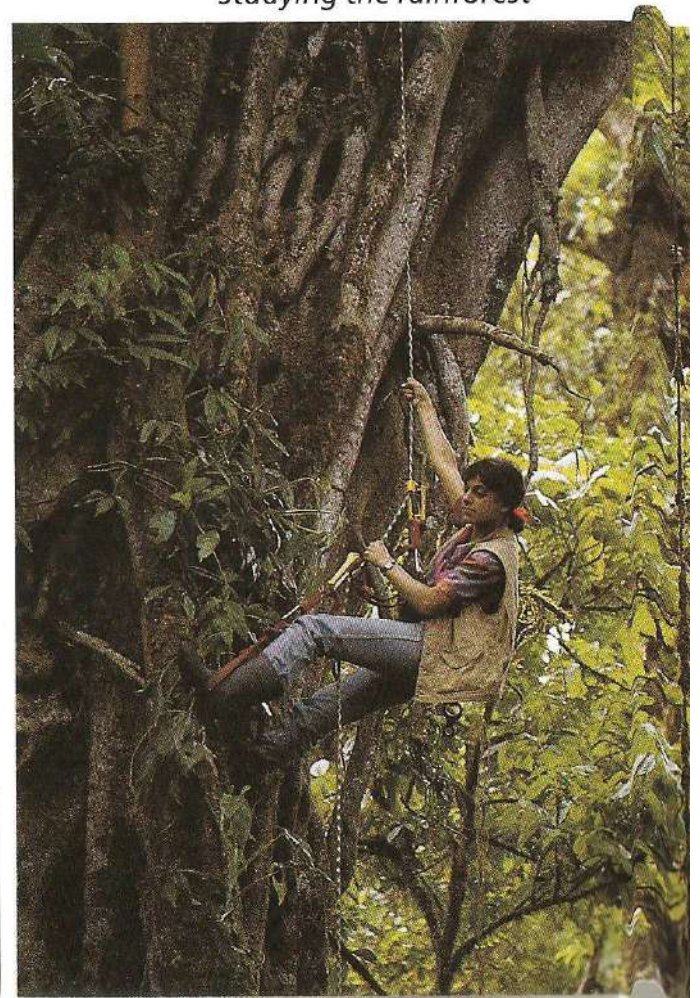
In Australia, too, the rainforest is in danger because people want cheap electricity. The rainforest in Northern Queensland is in danger because a dam on the Tully River will destroy many square kilometres of forest.

Scientists are learning other ways of making electricity, for example, by using the sun. We must begin to use these new ways to make our electricity, or perhaps we must try to stop using so much electricity.



A dam in Latin America

Studying the rainforest



10 The end?

About one per cent of all the rainforest in the world is lost every year. We know this because satellites give us a true picture of the rainforests. Satellite pictures tell us, for example, that between 1978 and 1988, 170,000 square kilometres of rainforest in the Amazon were lost.

When roads are made through the rainforests, people start to destroy the forests very quickly. Look at the satellite picture taken

in 1976. You can see the new road going through the rainforest. The second picture shows the same forest in 1981. The rainforest in this part of Brazil was destroyed very quickly.

Without the trees to protect the ground, the heavy rain quickly washes away the soil beside the roads.

The rainforests are rich in trees and animals, but the soil is not rich; it is very poor because it is very old

Erosion in Madagascar





1976 – a new road is built through the rainforest in Brazil

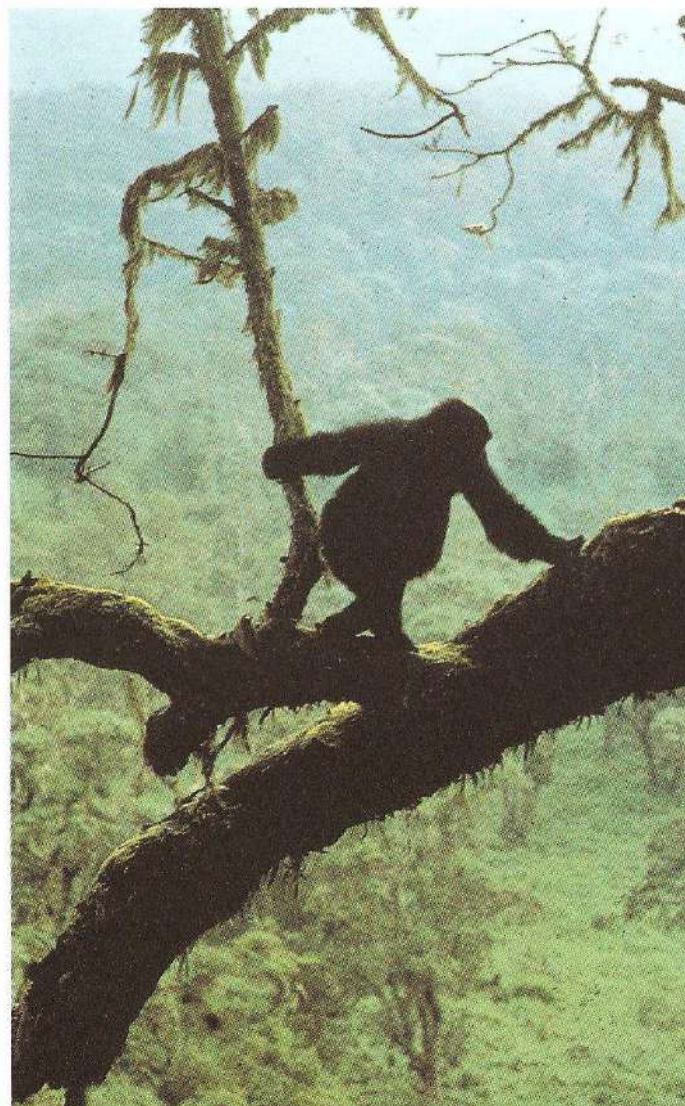


1981 – erosion has destroyed the rainforest near the road

and because the trees and plants contain all the good things that were once in the soil. Without the trees, the rain washes away the soil and nothing can grow there again.

Look at the picture of Madagascar. Thousands of trees once covered these mountains, and thousands of animals lived there. Nothing can grow there now, and no animals can live there.

Are we going to destroy all the rainforests of the world? Perhaps one day you will travel to a rainforest country; but will you see the wonderful plants and animals of the rainforest?



Exercises

A Checking your understanding

Pages 1–3 *Write answers to these questions.*

- 1 Why are the leaves of rainforest trees important?
- 2 What is the weather like in a rainforest?
- 3 What does Indonesia do with most of the wood from its rainforests?

Pages 4–7 *Are these sentences true (T) or false (F)?*

- 1 Quinine, the medicine for malaria, comes from the cinchona tree.
- 2 In 1987 scientists found a new species of maize in the Mexican rainforest.
- 3 The leaves of rainforest trees use oxygen and make carbon dioxide.
- 4 The Yanomami people have lived in the rainforest for about 10,000 years.

Pages 8–11 *How much can you remember? Check your answers.*

- 1 Which animal was already living in rainforests twenty million years ago?
- 2 Which animal eats the deadly giant bamboo?
- 3 Why do animals need large parks in the rainforests?
- 4 Name two things that animals born in zoos need to learn before they go back to the rainforests.

Pages 12–15 *Write answers to these questions.*

- 1 Which is the largest flower in the world?
- 2 Where does the slipper orchid grow?
- 3 What happens when mercury goes into the rivers of the rainforest?

Pages 16–19 *Are these sentences true (T) or false (F)?*

- 1 Dams need a lot of water to make electricity.
- 2 Satellite pictures tell us that roads help the rainforests.
- 3 Rainforest soil is very rich.

B Working with language

- 1 *Complete these sentences with information from the book.*
 - 1 Most kangaroos jump across the land, but . . .
 - 2 Medicine for the deadly disease leukaemia is made from . . .
 - 3 The Kuna people made a forest park which . . .
- 2 *Put together these beginnings and endings of sentences. (pages 8–9)*
 - 1 one group of otters
 - 2 the Parc National des Volcans in Rwanda
 - 3 scientists have taken some golden lion tamarins
 - 4 eats more than 30,000 fish a year
 - 5 back to a forest park near Rio de Janeiro
 - 6 saves the mountain gorilla from extinction
- 3 *Use these words to join the sentences together.*
but because when
 - 1 There are not many giant otters now. People will buy their thick fur.
 - 2 The heavy rain quickly washes away the soil. The trees are cut down.
 - 3 Rainforest people kill animals to eat. They do not destroy the species.

Activities

- 1 'Rainforests are the richest places on Earth.' Do you agree? Write a short essay and say why you agree or don't agree.
- 2 Visit a pet shop and find out how many animals come from the rainforest. Were they born in the rainforest, or were they born in your country?

Project work

Write letters to two organizations asking for information about the rainforests. Use this information to write an essay about the rainforests, why they are disappearing, and what we can do to save them.

Glossary

carbon dioxide gas produced by animals and breathed out with the air

caught past tense of 'to catch'

cloud water vapour floating in the sky. Clouds are usually white or grey

cool slightly cold

destroy to damage something very badly

disease illness

Earth the world in which we live

extinction completely died out

found past tense of 'to find'

grow to get larger

insect small animal with six legs

lost past tense of 'to lose'

malaria illness passed on by mosquitoes

medicine something you take when you are ill to make you better

oxygen gas without colour, taste or smell, which is in the air and which we need to live

pet animal looked after by someone as a friend

plant (n) something with leaves and roots that grows in the ground

plant (v) to put a plant in the ground so that it will grow

protect to keep safe from danger

satellite man-made object which travels in space around the Earth

save to rescue something from danger

scientist person who studies the Earth and how things work

soil the ground in which plants grow

sold past tense of 'to sell'

species group of similar animals or plants

vapour gas-like form of a liquid, formed when the liquid is heated

zoo park where many kinds of wild animals are kept

CASSETTE  AVAILABLE**RAINFORESTS**

In the last forty years, half of the world's rainforests have disappeared. But these wild and exciting places are important to all life on Earth. This book looks at the peoples, animals and plants of the rainforests and at the dangers they face. Is it too late to save them?

OXFORD BOOKWORMS FACTFILES give important and interesting information to the reader, moving enjoyably towards real reading in English. Each book has been carefully graded to help the learner.

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