

On The Reef



ON THE REEF

By Jo Dorras

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Illustrations by **S. Below, M. King, Emma Dorras** and **Pierre Yaticca**.

ON THE REEF

1. Before you play this video, you should explain that this is a made up story about reef creatures, but it has a lot of real information in it.
2. Make your class sit in small groups of 6-8 people ask them to make a long list of all the things that they find on the reef.
 - i) They should divide their list into:-
 - a) What you can eat
 - b) What you can sell
 - c) What you use to make things.

One person writes all the 'a's, one all the 'b's and one all the 'c's.

3. All the small groups come back together.
 - i) Ask one of the 'a' people to read their list.
 - ii) The other groups can add any 'a's that have been left out.
 - iii) Do the same with b & c.

Can you see how much the reef gives you ?

4. NOW YOU CAN PLAY THE VIDEO

While you watch try to answer these questions.

- i) What are the creatures practising for ?
- ii) Who is the 'leader'?
- iii) Who is going to judge the competition ?
- iv) Why do they choose 'We Depend on Each Other' ?
- v) Why don't they win the competition ?



5. PERSONNAL RESPONSE

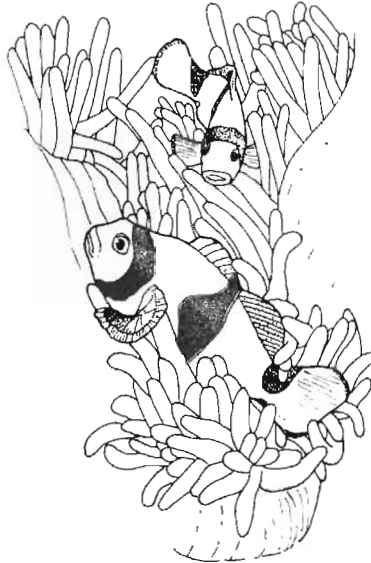
Write a paragraph in response to a or b.

- a) Did you like the video ? Is it a good story ?
- b) Write a summary saying what the story of the video was.

Illustrate your written work with a drawing.

You can show the video in sections now, and use each section as an introduction for more work about the reef. You can choose all or some of the activities suggested here and use them over a number of days or weeks. The video is divided into 5 parts.

All the activities are centered around the reef.



PART I

PLAY THE VIDEO UP TO THE END OF THE TRITON SONG

1. COMPREHENSION :

(Discuss your answers in small groups or write them down on your own).

- What news does the Triton have ?
- What are the Crab and the Octopus fighting about ?
- Why doesn't the Fish want the Shark to be the judge ?
- Why does the Triton want to leave the group and what makes her come back ?
- The Triton mentions some groups of creatures that will sing in the competition, can you remember who they are and where they come from ?

2. DRAWING AND MAKING

There are five creatures in the story:

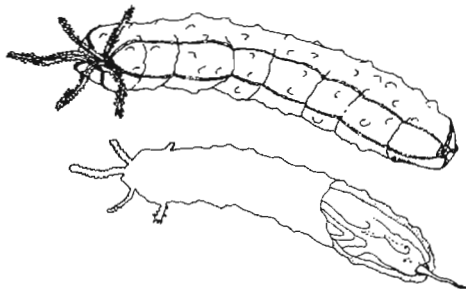
A crab

A fish

A triton

An octopus

A sea cucumber



Using either pencils and paints or leaves, sticks, stones & shells, draw or make a picture of the reef showing all these creatures.

3. SMALL GROUP WORK - in groups of five or six.

Find out about your reef. How has it changed?

Ask older people about the reef and what they found there. After you have talked to them, you may want to visit the reef and see what differences you find.

Here are some questions you can ask your mother & father or your grandparents or any older people in your area. Each group member should ask at least one person these questions.

- a) When you were young did you see things on the reef that you don't see now?
- b) Is the reef itself (the corals) the same as it was when you were young?
- c) What have people taken from the reef to sell during your lifetime?
- d) If all the trochus shells were taken from a reef, did they come back?
- e) Can you catch big fish on or near the reef?
- f) Could you 10 or 20 years ago?
- g) Are there reef creatures that you used to eat before, but you don't eat now or you don't eat very often?

Each person in the group can read out the answers to their survey to the other members.

4. Now they can make a drawing showing all the things that have changed. They could do this by showing all the creatures that were found on the reef on one side of the drawing and the reef as it is now on the other.

5. THE TRITON SONG

*I'm the great Triton
Hear the sound of the booboo shell
Protector of the reef
My story I'll tell....*

ALL : Listen to the story she's gonna tell.

*Bad creature
Crown of thorns starfish
Eats the coral
It's his favourite dish...*

ALL : Bad creature crown of thorns starfish

*Black and thorny beast
He's eating our reef
Down I jump on his back
Suck him into my shell...*

ALL : Crown of thorns gone, a story to tell!

Oh the marvellous Triton

Protector of the reef

Hear my voice on land as well

Calling people for the chief...

Well I'm the great Triton

Hear the sound of the booboo shell

Protector of the reef

A gong for the chief...

ALL : She calls the people for the chief.

So now you've heard my story

I'm sure that you will know

The Triton's song is sure the best

She deserves your vote...

ALL : She deserves your vote!

Oh the Triton's song

Is sure the best

She deserves your vote

She deserves your vote!

Listening comprehension.

- a) Why is the triton marvellous? Make a list of reasons after listening to the song once.
- b) Listen to the song again, can you make the list bigger?
- c) Write the whole song on a sheet of paper, cut the song into separate lines. Put the lines into an envelope, all mixed up. Ask groups of 2 to 3 people to put the lines in the correct order. See who does it the fastest!
(You will need one envelope for each group).

6. SMALL GROUP WORK - Discussion and Poster Making

- a) Do you think people have taken too many triton shells?
- b) How would you try to persuade people to stop taking them?
- c) Make and send a poster to Fisheries about the importance of the Triton shell, or a jingle for the radio recorded onto a tape. You should listen to adverts on the radio to help you make your own radio message.

- 7.** The crown of thorns (picture) eats the corals. There was an outbreak of crown of thorns on the Great Barrier Reef in Australia. They ate very large numbers of corals. People tried to kill them by cutting them into pieces, but each piece grew into a new crown of thorns starfish.

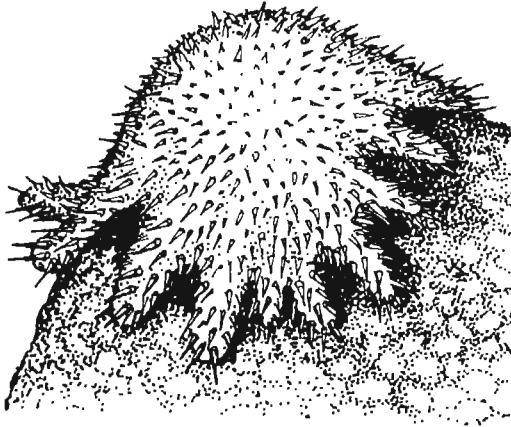
People do not understand why large numbers of crown of thorns suddenly appear, but we do know that the triton shell eats them. This is called biological control.

a)

Go for a walk on the reef, see if you can find a crown of thorns starfish.

b)

Draw a picture showing the crown of thorns and explaining what it does to the reef.



PART II

Now play the video to where the tide comes in and the fish, octopus and crab go off. Stop after the triton says: "I hope you're right, slug, or we'll never stand a chance."

1. COMPREHENSION

- The octopus says: 'Why should we vote for you?' What is the triton's answer to this?
- What makes the crab sad?
- Why does the octopus think the slug can't be a singer?

2. THE SLUG SONG

*I know you think I'm useless
An ugly lazy slug
Lying here
Day after day
Sucking up the sand
You think I'm doing nothing
Well think again my friend.*

*Yes I'm the cleaner
The cleaner of the reef
I suck the dirty sand up
Send it out clean.*

*Yes my friend if I go
The place would get dirty
And the corals
Wouldn't grow
Fish would swim away
There'd be nothing to eat
There'd be nothing to see.*

*Yes I am the cleaner
The cleaner of the reef
I suck the dirty sand up
Send it out clean.*

*No you wouldn't be here
Without slugs, excuse me
While I eat
Some sand (Gulp)
And spit it out clean (phwt)
Now you guys can all see
Exactly what I mean.*

*Yes the great reef cleaner
We all depend on slug
If our reef got dirty
We'd have to move away.
No more coral, no more fish
So you'd better understand.
You'd better vote, you'd better vote
For slug today.*

Listening Comprehension :

- Play the song twice. Can you sing the chorus?
- Why is the beche de mer called cleaner of the reef in the song?
- What does the song say would happen if there were no beche de mer?

3. RESEARCH

Library work

- a) Go to your library, science teacher or fisheries extension officer. Find out all you can about beche de mer and what they do in the sea.

Write a page about this.

- b) How many kinds of beche de mer are there? You may want to do some illustrations.

4. SURVEY WORK

More and more beche de mer are being taken. Find out if beche de mer are being farmed in your area. If they are, you could ask people questions and find out about beche de mer farming.

Here are some questions. You can use these or make up some of your own.

- a) When you farm beche de mer, do they have to be a certain size?
- b) After they have been collected what do you do to them?
- c) How much do you get in cash for each kilo of beche de mer?
- d) How many beche de mer make a kilo?
- e) Do you take every beche de mer from the area or do you leave some?
- f) Do people dive for beche de mer? How far down?
- g) Do people see any difference in an area after the beche de mer have been taken?

What have you found out from this survey? Are there things other people should know? Find a way to tell them.

5. Contact your local Fisheries Department. Can they come and talk to your school or community about beche de mer?

6. POSTER MAKING AND CREATIVE WRITING

- a) Make a poster showing what beche de mer do on the reef
OR
- b) Write a story. Imagine you are a person collecting beche de mer. You pick up a big one and are about to put it in your bag when it says, "Hey! Wait! I'm the last beche de mer on this reef! You can't take me!"... continue the story.

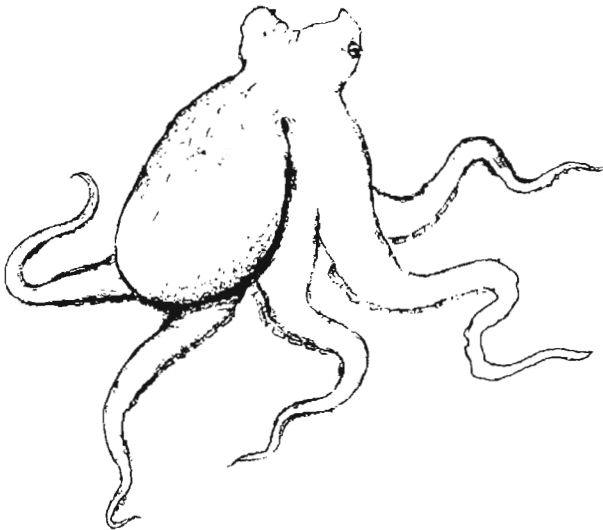
7. PLAY MAKING

In the video we see the difficulties the animals have practising.

Imagine you are a group either practising a song or a custom dance for a show. You have to go and perform but one member of your group doesn't want to. You can decide what their reason is; maybe they are too shy or maybe they think the group isn't good enough or maybe they have a very different reason. The rest of the group then has to try and find a way to convince them to perform. You must show the final performance and what happens.

The play could start with these five speeches:-

- 1/ Come on! People are waiting!
- 2/ Yes, let's get going.
- 3/ Get yourselves ready, quick!
- 4/ I've changed my mind. I don't want to do it.
- 5/ You can't let us down! You can't!



PART III

Now play the video again from where the triton says : "I hope you're right slug or we'll never stand a chance.", up to the end of the Octopus song.

1. SMALL GROUP WORK

Discussion

The group of sea creatures are ready to start practicing again, but fish hasn't arrived. Triton says : "... you can't even get back on time!".

Talk about what problems are caused by lateness. One person can ask a question round the group then the next person asks the next question.

- a) Why do schools punish people for being late? Is it fair?
- b) Are you late to school or lessons sometimes? What are your reasons?
- c) Are you the kind of person who is never late? What makes you like that?
- d) People talk about 'Pacific Time', what do they mean?
- e) Is 'Pacific Time' a good thing or a bad thing?
- f) How do you feel if a teacher is late for class, or a friend is late meeting you?

Ask the next two questions together and give people time to think of an answer.

- g) Talk about an occasion when either, someone was late or something happened very late.

OR

- h) When you were really cross with someone for being late but they had a good reason for their lateness.

2. COMPREHENSION

- a) Octopus says "It's alright for you!" to the Triton. Why does he think it's easier for the Triton to survive?

- b) What are the Triton's reasons for saying she is worse off than the Octopus? (Give at least 2 reasons).
- c) Why does the Triton think Fish does not come back at first?
- d) What do the group of animals decide to do when they realise that Fish isn't coming back?
- e) What do you think has happened to Fish?

3. THE OCTOPUS SONG

*You never know which way
It's gonna go
You never know
What tomorrow will bring.
Nothing in life is sure
Except that something's waiting
Just behind the door.*

*You never know which way
It's gonna go
You never know
What tomorrow will bring.
Just when you think all's well
You go out for a swim
To the edge of the reef
And you end up in hell
You end up in hell.*

*You never know which way
It's gonna go
You never know
What tomorrow will bring.
Nets are being lowered
Traps are being made
Must find a place to hide
Our lives must be saved
Must be saved!*

*You never know which way
It's gonna go
You never know
What tomorrow will bring.
You never, never know.*

- a) Try and sing the song as a group.
- b) What do you think is waiting behind the door? Draw what you imagine.
- c) Is this song about sea creatures or are some things true for people as well? Explain your answer.

4. RESEARCH

The song says :

Nets are being lowered
Traps are being made.

Nowadays there are more people and more efficient ways of fishing. Compare old fishing methods with new ones.

Use the library and ask members of your community.

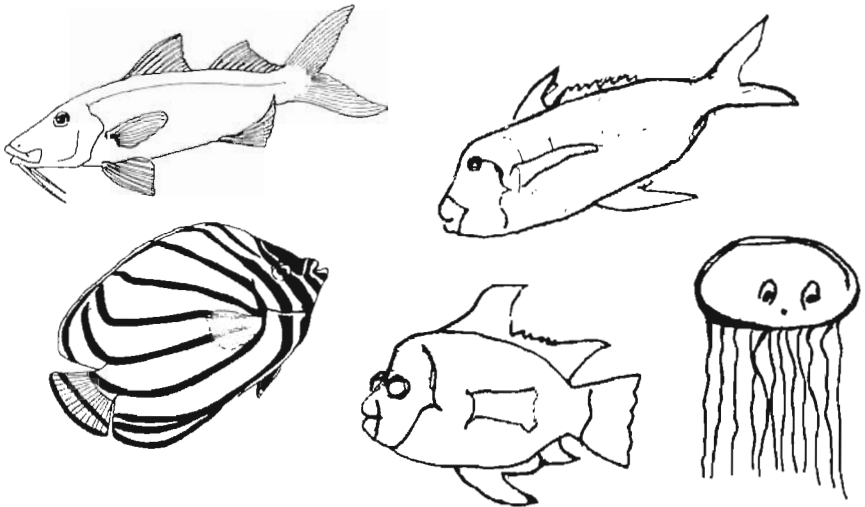
- a) Make a list (with illustrations) of traditional fishing methods, describing how they were used.
- b) Make a list of modern methods, including commercial fishing. Illustrate your list.
- c) Look at the different methods and try to work out which catches more fish. Do some kinds of fishing catch too many fish? Why?

5. SMALL GROUP DISCUSSION

Overfishing

- a) What does overfishing mean?
 - b) What happens if a chief thinks too much is being taken from a reef?
 - c) If a chief puts a tabu on a reef, is that good or bad?
 - d) Do people take too much from the sea in your area?
 - e) If you think too much is being taken from the sea, is there anything you can do about it?
6. The word 'Fish' covers a lot of different looking creatures. Make drawings of as many kinds of fish as you can think of and try to identify them.

You could put all the fish in a reef picture on the wall.



PART IV

Now play the video from the end of the Octopus song, to the part where they decide to sing a song together and the Triton says : "Why not? Let's give it a try?"

1. SMALL GROUP DISCUSSION

- The Triton says to the others 'We haven't got time to feel sorry for ourselves!'. What are they sorry about?
- According to the Triton their reef is dead. What reasons does she give for saying this?
- Do you think reefs in your country or area are threatened?
- Should we try to save animals or sea creatures from extinction? Why?
- What do you think about marine reserves as a way of protecting sea creatures? Marine reserves are areas where nothing can be taken and there is no fishing. Not even a shell should be taken from the beach.

2. RESEARCH

- Find out about marine reserves. Is there one in your country?
- Write about a marine reserve, why it was set up and what uses it has.

3. THE COCONUT CRAB SONG

<i>If you're gonna survive</i>	<i>A giant crab</i>	<i>Time to scuttle ooh ooh</i>
<i>On this reef</i>	<i>The biggest alive</i>	<i>ooh</i>
<i>This is what I've found</i>	<i>He ate the villagers</i>	<i>Time to scuttle</i>
<i>You can't laze around</i>	<i>Till they cried</i>	<i>So before you move</i>
<i>You mustn't walk</i>	<i>We gotta scuttle ooh ooh</i>	<i>Make sure it's all right</i>
<i>You mustn't jump</i>	<i>ooh</i>	
<i>You don't want to end up</i>	<i>We gotta scuttle</i>	<i>Look to the left</i>
<i>As somebody's lunch</i>	<i>Then along came</i>	<i>Look to the right</i>
<i>You gotta scuttle ooh ooh</i>	<i>A clever lad</i>	<i>Time to scuttle ooh ooh</i>
<i>ooh</i>	<i>with a trick</i>	<i>ooh</i>
<i>You gotta scuttle</i>	<i>That finished Crab</i>	<i>Time to scuttle.</i>
<i>Coconut Crab</i>	<i>He promised him</i>	
<i>He lived long ago</i>	<i>The colour red</i>	
<i>Feasted on humans</i>	<i>Dropped him in the pot</i>	
<i>Heads arms toes</i>	<i>Boiled him red hot</i>	

- a) Try and sing the song as a group!
- b) Using your library or asking your Science teacher or Fisheries Extension Officer, find out and write about the life cycle of the coconut crab.
- c) The song tells a custom story from the Banks Islands in Vanuatu. Ask people to tell you custom stories about the reef or reef creatures.

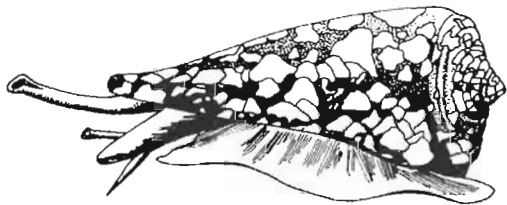
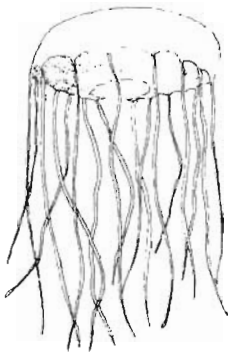
Write and illustrate the stories and put them on the walls of your local school or church.

You could send the best ones to : - **Wan Smolbag Theatre, PO Box 1024, Port Vila, Vanuatu.** We might make a book of them or use them in a play. You could make a play of your story too.

4. SMALL GROUP DISCUSSION

The crab has sung the last song. Now the group must choose whose song is the best.

- a) Why do you think they all vote for themselves?
- b) What makes them decide to sing together as one group? Is it a good decision?
- c) Do you think they were right to choose the song '**We Depend on each Other?**' Which song does your group like best and why?



PART V

Now play the video from the start of the song 'We Depend on Each Other' to the end of the video.

1. RESEARCH

In the song the word 'ecosystem' is used, can you explain what an ecosystem is?

Use your library to help you make a diagram showing how an ecosystem works.

Find out what a symbiotic relationship is.

2. DRAWING IT ALL TOGETHER

In the video there are five songs about reef creatures.

Using information from these songs, can you show how different creatures work together to keep the reef healthy? You can do this through a drawing or a written description.

3. You can sing the song 'We Depend In Each Other' together as a group.

*You think baby you can
Make it without me. Oh no. Oh no.
Go off on your own
Don't want to stop you
But just remember
It ain't easy when you're alone.*

(Chorus)

*Yes we depend depend
On each other till the end
Can't do without you
Without me
Take away just one
And you destroy, destroy
The family.*

*Take away one, just one
And everything goes
It goes, it goes
Baby they call it
An ecosystem, ecosystem
'Cos we depend
On each other till the end.*

(Repeat chorus)

Yes we depend ...

4. COMPREHENSION

- a) Why is Octopus cross when Slug says they would win if the judge came and they were the only reef band there?
- b) Why do Crab and Octopus leave?
- c) Why does the Triton continue to believe the other bands are coming?

5. SMALL GROUP DISCUSSION

- a) What is the point of the story 'On the Reef'?
- b) Do you think it is useful to have a Year of the Reef Campaign?
- c) Is your school or community doing anything for the Year of the Reef Campaign? If not, is there anything it could do?

6. The last part of the video is a song with pictures over it.

Oh only me
Oh only me
What a sad reef
It is so empty
So much has gone
That was here
We had the clams
And big crabs
So many shells
And big fishes
Now it's empty
And so quiet.
Now it's empty
And so quiet.

- a) How does this song and the pictures over it in the film make you feel?
- b) What are they telling us?
- c) Write a poem about your reef.

INFORMATION

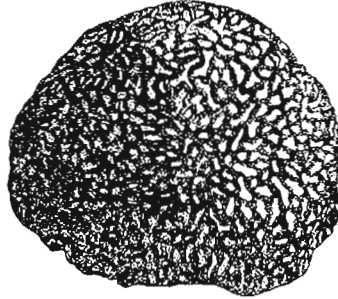
WHAT ARE CORALS?

Corals are all made up of small animals called 'Polyps'. Some polyps are big like mushroom corals (up to 20 cms) and some are smaller than a centimetre. Many many polyps live together to form big corals like brain coral.

Mushroom
Coral



Brain
Coral



Although corals look like plants, they are really animals. They are related to jelly fish and sea anemones. They are in a group of animals called CNI-DARIA.

HOW DO CORALS FEED AND GROW?

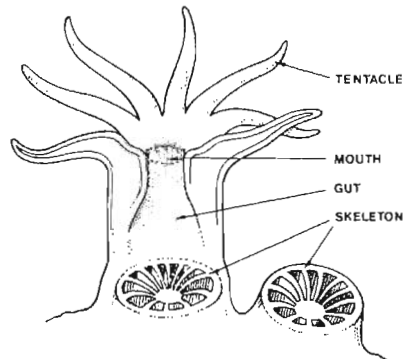
Coral reefs as you know, are made up of Polyps.

Polyps reproduce either by producing eggs (sexual reproduction) or budding (asexual reproduction).

The polyp has a tube shaped body and a mouth with tentacles round it.

THE **CORAL POLYP**

shown on the right is cut away to show the gut and the skeleton beneath the polyp. A skeleton without its polyp is shown at its right.

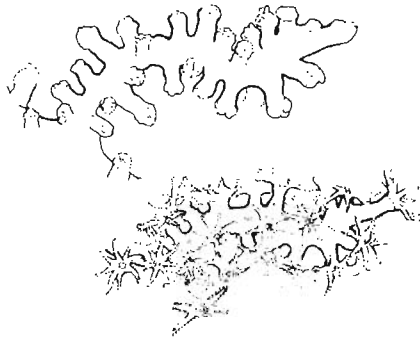


When polyps are part of a hard coral they have hard stony skeletons made of calcium carbonate (limestone or chalk) around their bases or bottoms! The polyps can go inside their skeletons and live there.

During the day the polyps are usually inside their skeletons. But at night they come out to feed.

Day :

Polyps stay in their skeletons.

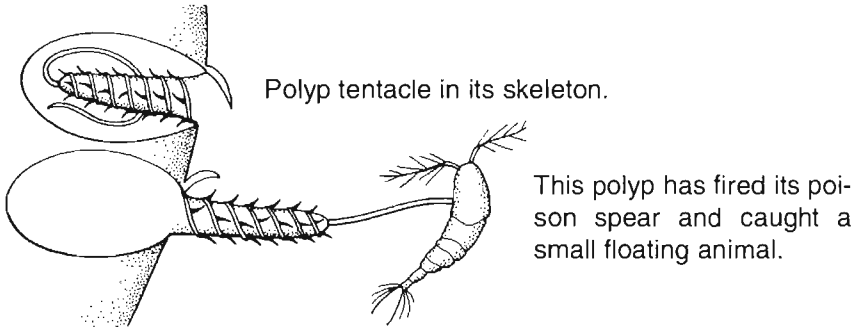


Night :

Polyps come out and feed.

HOW POLYPS CATCH SMALL ANIMALS

The polyps feed on small animals called zooplankton which float by in the sea. They are speared by the small stinging tentacles of the polyps. The tentacle passes the zooplankton to the polyps mouth where they are eaten.



Polyp tentacle in its skeleton.

This polyp has fired its poison spear and caught a small floating animal.

HOW OTHER PLANT CELLS HELP THEM TO GET FOOD

Polyps also get food from small plant cells called zooxanthellae which live inside their tissues. The plant cells use sunlight and nutrients in the salt water to make food which they share with the coral.

It is the zooxanthellae which give corals their beautiful colours and it is these plants which die or leave the corals when 'bleaching' occurs.

When corals lose their colour and become totally white, they die.

The relationship between corals and the zooxanthellae plants is called 'symbiosis'. This means they depend on each other - the plants get shelter from the coral and the coral gets food from the plant. That is why corals can only be found in clear water where the sun shines through, because the plants need sunlight for photosynthesis and they feed the coral.

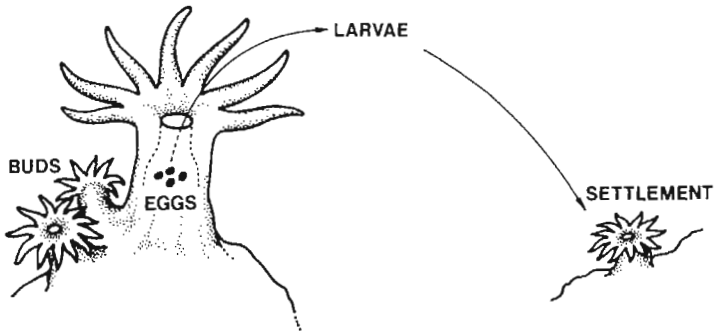
Corals cannot live in muddy water because they cannot feed themselves without sunlight. Dirty water (muddy or heavily polluted by sewage) will kill corals.

REPRODUCTION

As we said corals reproduce either sexually or asexually.

Sexual Reproduction

The coral polyps produces eggs and these hatch into very small coral animals called Larvae. These larvae come out through the polyps mouth and drift up to the surface of the sea. Most of them are lost or eaten there, but a few reach warm shallow water and find a nice hard surface on which they can begin to grow into new corals.



Budding

In budding small polyps appear as buds on the side of the original polyp (see above).

These buds grow into separate polyps which form their own skeletons and enlarge the coral they are on, rather than starting a new one.

The polyp that landed as a larvae on a hard surface will grow by budding. Eventually a large number of corals share a skeleton which has the shape of a particular kind of coral.

CORAL REEFS

Coral reefs are mainly made up of dead polyps skeletons, with living polyps only on the outside. Over thousands of years the skeletons of the tiny polyps have been laid one over the other, until they make the huge reefs we know now.

One kilogram of coral rock, contains up to 80,000 polyp skeletons. Some of the world's largest natural structures, coral reefs, are built by the tiny animals, coral polyps. Coral reefs can be many kilometres long.

The Pacific Ocean is the largest ocean in the world and has many coral reefs of many different kinds.

MAP OF THE WORLD SHOWING WHERE REEFS ARE FOUND

The reef are the dark areas.

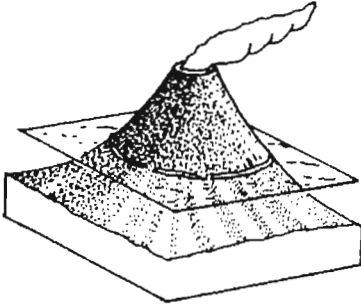
The shaded areas show roughly where sea water is warmer than 20° centigrade.



TYPES OF CORAL REEFS

There are three kinds of coral reefs.

1. FRINGING REEFS :

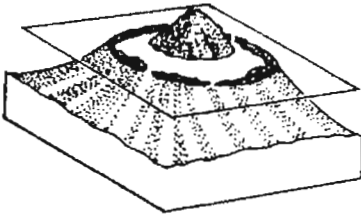


These grow round continents or islands, right on the shore.

The top of the reef has many live corals growing on it.

Pieces of broken corals can be found washed up on the shore or on the reef itself.

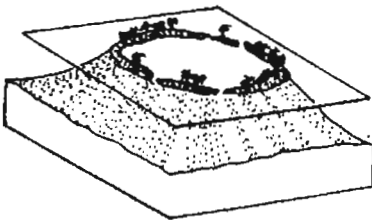
2. BARRIER REEFS :



These do not come right up to the shore, but are separated from the land by an area of sea water, called a lagoon.

These lagoons are often deep. Corals can grow on the lagoon bottom, as the water is calm and clear, as well as on the reef itself.

3. ATOLLS



Atolls are coral reefs that grow in the shape of a circle around a lagoon. The coral grows above the water, forming small islands round the lagoon.

TYPES OF CORALS

Fire coral	(Hydroids)
Anenomes	(Actinaria)
Brain corals or stony corals	(Madreporaria)
Organ pipe coral	(Stolonifera)
Soft coral	(Alcyonacea)
Horny corals	(Gorgonacea)

Corals come in all shapes and sizes. Their common names are usually given to them because of the way they look. Stony or hard corals, where the polyps have built skeletons of limestone (like brain coral) are the reef builders.



* **STAGHORN CORAL (Acropora)**

is a well known reef builder.

It has many horn like branches.

These branches can come in many colours from delicate pastel shades to brilliant green, blue and orange.

TABLE CORAL (Acropora)

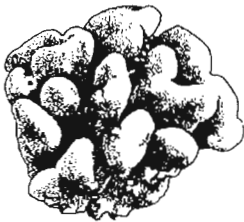
This stony coral forms a flat table or a step.



* **BOULDER CORAL (Dorites)**

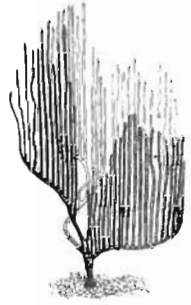
This forms large yellow masses often the largest of the rocky areas of the reef.

These hard corals all have polyps that produce a stony skeleton.



*** HORNY CORALS or GORGONIANS**

have the polyps skeleton of calcium carbonate embedded inside a horn like material.



*** SKELETON CORAL (*Isis hippurus*)**

This is a horny coral which is made up of section of calcium carbonate separated by the horny substance.

*** BLACK CORAL (a zoantharian)**

has no symbiotic algae, which explains why it is black. For this reason it can live in very deep water, where sunlight cannot reach.

Black coral is very valuable and is carved polished and sold.



ALCYONACEA

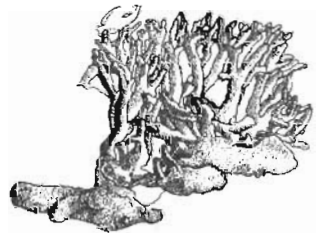
Soft Corals



*** SOFT CORALS** - These are soft, fleshy masses, more like plants to look at. Some are soft enough to move and wave in the water currents.

*** FIRE CORALS** - Hydroids, have stinging cells (the polyps poison spear) strong enough to hurt people.

If you touch the fire coral the spears will enter your skin, making you feel as if you have been burnt.



REEFS ARE PART OF AN ECOSYSTEM

Corals grow together and on top of one another. Tunnels form between them and caves and larger tunnels. These are homes for many other creatures. Shellfish, crustaceans like prawns, lobsters and crabs and many, many kinds of fish.

The small fish that live in the coral attract the big fish.

Some reef animals help others. Brightly coloured shrimps, and fish live on the surface of large sponges and brain corals.

These creatures clean the surfaces and mouths of larger fish like groupers and snappers. These large fish would normally eat the small fish and shrimps, but they let the little creatures clean them.

One strange little fish, the saber tooth or false cleaner blenny, pretends to be a cleaner fish and waits near a cleaner station. When a fish comes to be cleaned the saber tooth blenny jumps out, bites off a piece of flesh from the fish and runs away.

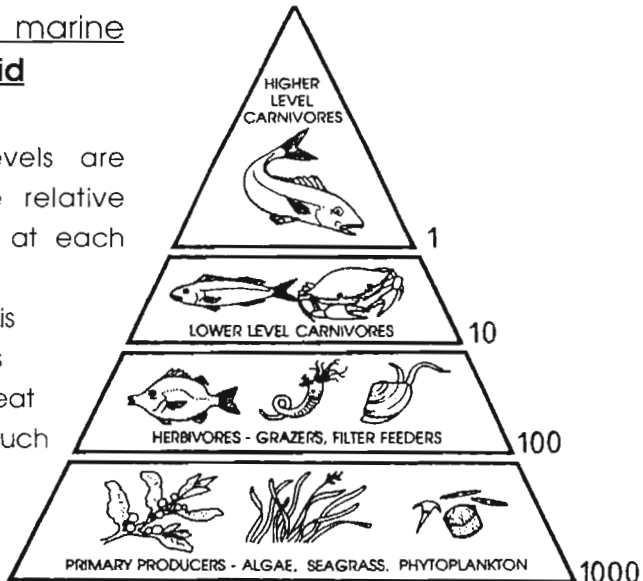
Other animals are helped by the corals. A coral sea fan looks as if nothing lives on it, but there are spider crabs the same colour as the sea fan that feed among its branches. Long nosed hawk fish and tiny gobies live on it. Cowries, brittle starfish, fire worms, shrimp and small fish all use the sea fan for shelter and food.

All these creatures need one another!

A generalised marine energy pyramid

Four trophic levels are shown with the relative biomass present at each level.

In other words, this pyramid shows us which creatures eat what and how much food they need to survive.



HOW CORAL REEFS CAN BE DAMAGED

Not many creatures can damage corals but some fish, like parrot fish, have strong enough jaws to break off bits of coral. Butterfly fish suck up coral polyps with their tube like mouths.

Sea urchins graze on coral but they in turn are eaten by large fish.

Crown of thorns starfish feed on coral and can destroy large areas of reef.

But people are the greatest threat to the reef.

They collect coral itself to sell. In the Philippines, they export thousands of tons of live coral every year.

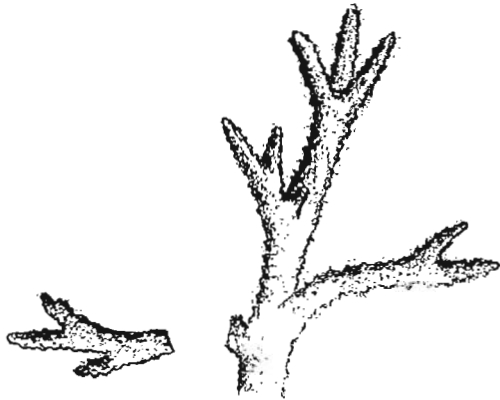
People damage reefs by anchoring or landing boats on the reef. The corals are crushed and take a long time to grow back.

People take too many animals of one kind off the reef (like beche de mer) destroying the balance between the living things on the reef.

They use explosives and poisons to kill large numbers of fish, but also kill corals.

Pollution from factories and oil from ships makes the water dirty and kills the corals.

Dredging near corals, building projects in harbour areas and forestry (when trees that held down the soil are cut down) all send silt into the sea water, blocking off sunlight and killing coral.



A GLOSSARY OF CORAL REEF TERMS

(with English pronunciations)

CALCIUM CARBONATE : The white limestone material which makes up the skeletons of coral polyps and the shells of molluscs such as giant clams and trochus. The chalk used on blackboards is mostly calcium carbonate.

LARVAE (pronounced "lae-vee") : The young stages of many marine animals including corals. Most larvae are small and drift in the sea before becoming adults.

LIMESTONE : The calcium carbonate material which makes up coral reefs.

PHOTOSYNTHESIS (pronounced 'fo-to-sin-the-sis') : The process by which plant material is formed from water, nutrients and carbon dioxide using energy absorbed from sunlight.

Phytoplankton (pronounced 'fy-to-plank-ton') : Small plants, which drift in the sunlit surface layers of the sea.

SYMBIOSIS (pronounced 'sim-by-o-sis') : A relationship between two different creatures which live together for the benefit of both. Plant cells (called Zooxanthellae) have a symbiotic relationship with coral polyps.

TENTACLES (pronounced 'tent-a-culls') : The "arms" which surround the mouth of a coral polyp. Other animals, such as the octopus, also have tentacles.

ZOOPLANKTON : Small animals, or the larvae of larger animals, which drift in the sea.

ZOOXANTHELLAE (pronounced 'zo-zan-thell-eye') : Small plant cells living within coral polyps.



