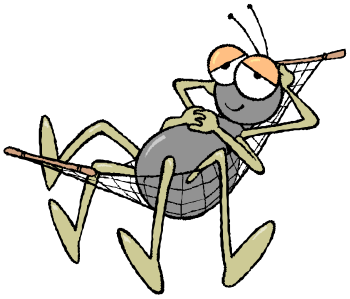


Nature's Web

Issue No. 5 Spring 2007

Inside This Issue...

New Beginnings

Spring is starting to peek out and as we wave goodbye to winter, the days are lengthening. Flowers, such as daffodils, tulips and bluebells are appearing through the softening ground and birds are becoming more vocal. Spring is a time of new beginnings with many animals giving birth to their young, and others, such as birds, are returning to our shores from their winter holidays in warmer lands.

In this issue we feature frogs, a real symbol of spring, who go through an extraordinary journey from spawn to tadpole to frog. With buds appearing on the trees, ready to "spring" into leaf, we look at the difference between deciduous and evergreen trees. We also feature the most amazing of displays, the northern lights – fantastic and magical sights which appear in the night skies around the poles, in spring and autumn. On occasion we're lucky enough to catch a glimpse of these extraordinary displays, so read on to see how and why they appear. We also get a chance to read about Susan Steele's busy life as a Fisheries Training Instructor, as well as the wonderful work that the children of Rathcoole National School, Co. Cork, are doing for the environment.

Right: Bluebells enjoying the flickers of sunlight shining through the trees.

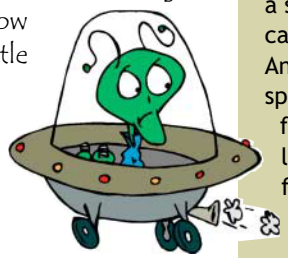
Photo: © Robbie Murphy

Editor's Page

Close Encounters!

Photo: © Robbie Murphy

I remember the first time I saw the Northern Lights (see page 15). I had been at a night class on the island and afterwards a friend was walking with me to the car. Looking skywards we were astonished when we saw an extremely bright green sky. We had never heard of the Northern Lights so it was really alien to us. And you can imagine that "aliens" was one of the wild ideas going through our heads! My friend usually walked home but I insisted on driving her just in case! Obviously, now that I'm a little older and a little wiser, I know what causes the lights and that there is nothing to be afraid of. It makes me laugh now when I think how innocent we were.



You want to plant a tree but don't have a garden?

Each year we are encouraged to plant a tree for Tree Week. Many people are lucky enough to have a garden with the space to plant a tree but some people either don't have a garden or just don't have the room to plant one. So what can they do? Well, there are a number of options. Firstly, you could sponsor a tree. The Tree Council of Ireland have two different schemes, one which assists the cost of planting and maintaining special Family Tree groves and the other is the Larch Hill Family Tree Scheme which enables you to commemorate an important event, or to remember a loved one. The Native Woodland Trust also have a sponsorship scheme, where you can dedicate a tree to someone. Another option is to donate or sponsor the planting of a tree in a family or friend's garden or in a local park. Obviously you would first have to check that they would like another tree planted!

Welcome to the Spring Edition of Nature's Web!

Dear Reader,

Welcome everyone to the spring issue of Nature's Web. This issue we are focusing on trees, with National Tree Week coming up in March (page 14). We're also highlighting the Central Fisheries Board's school resource pack, "Something Fishy" which they are re-launching this spring and is a great resource for children (page 4). In every issue, something stands out and this time it has to be the Cuckoo (page 3). We always knew it laid its eggs in other birds' nests but never realised it was quite so selfish! Check out nature news from around the world on page 11 and enjoy a giggle with the jokes on page 13.

We would love to hear your views and comments and suggestions for future articles. Have a good read!

Susan & Audrey

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Layout and Design:
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Photographs & Clipart:

Fish in a Parcel

Photo: © BIM

What you need:

4 x white fish portions - boned
1 courgette
1 handful of cherry tomatoes
1 yellow pepper - all roughly chopped
2 cloves of garlic
Basil leaves (optional) torn
Salt and freshly milled black pepper

What to do:

- Place fish on chopped vegetables, in centre of the foil
- Season fish
- Make the foil bag by folding the foil in half to cover the fish and vegetables
- Fold the foil on each side twice on each side of the parcel. Finally fold the remaining open end
- Place in a preheated oven at 200 °C/400 °F Gas Mark 6 for 15-18 minutes
- Slit bag and slide the fish and vegetables on to a plate

To Serve
Serve with baked potato, wedges or salad.

***Cook's notes*:** You can use any vegetables - spinach, leeks, aubergine, red onion, celery etc along with whatever herbs are available. For summer seafood just pop the fish parcel on the barbecue and cook for the same amount of time.

Dive in!

***Brought to you by BIM. For more fish recipes visit* www.bim.ie**

The Cuckoo

The sound of the cuckoo is a real sign that spring has arrived. Returning in April from its winter home in Africa, the cuckoo is more often heard than seen. Both the male and female bird are the same size, roughly 30cm in length. They are similar to sparrowhawks but are bluish grey in colour, with a white underneath. The male's call, "cuckoo" or "cuck-cuckoo", is more often heard than the female's bubbling call.

Cuckoo's don't build their own nests. In May and early June the female lays her eggs in the nests of other birds, particularly Dunnocks, Meadow Pipits, and Reed Warblers. These other birds only discover that these chicks are not their own, only after having cared for them.
The cuckoo will remove and destroy, or eat one of the bird's own eggs, replacing it with her own. Because the egg of the cuckoo is very small and varies in colour, these birds do not notice that the egg is not their own.

When the cuckoo chick hatches, it is blind and naked. When it feels the other chicks in the nest rubbing against it, it wriggles about until it pushes the other chicks out of the nest. The foster mother doesn't notice the dead chicks outside the nest and continues to look after the cuckoo chick, as her own.

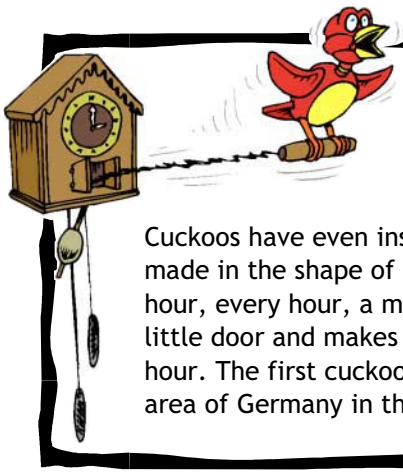
Fact File

Colour: Adult has blue-grey head and back, white underneath with black bars and yellow feet. Wings are spotted.
Length: 32-36 cm
Diet: Insects and their larvae, with caterpillars being their favourite.
Habitat: Woodlands, farmland, coastal fields.
No. of eggs: 12-13 (each in a separate nest of "host" birds)

The cuckoo chick grows very quickly, needing continuous feeding by the foster mothers, and though the chick grows much bigger than even the foster mother, no notice is taken of this.

The cuckoo's own parents take no further interest in the chick and having left its foster mother's nest, the young bird must find its own way to the wintering habitat in Africa. This is often in late September, when the older birds would have already gone.

Help record the first sighting of the cuckoo this spring. Visit www.springalive.net!

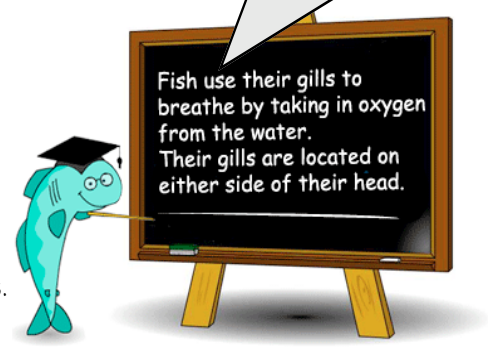


Cuckoo Clocks!

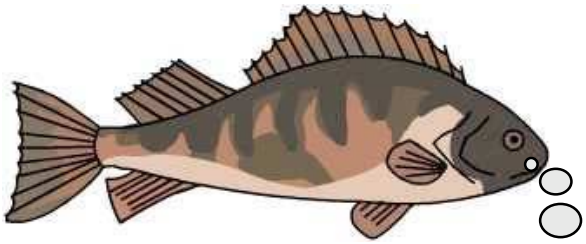
Cuckoos have even inspired clocks! These clocks are usually made in the shape of a chalet or little wooden house. On the hour, every hour, a miniature cuckoo comes out through a little door and makes a "cuckoo" sound to announce the hour. The first cuckoo clocks were made in the Black Forest area of Germany in the 1700s.

Something Fishy

Put your hands on each side of your head and pretend they are gills.
Open your mouth - *close your gills*
Close your mouth - *open your gills*



Fish have been around for about 500 million years. They were the first animals to have backbones (*vertebrates*). In the beginning, they looked like tadpoles.



Fish live in water and breathe with the use of their gills. They have fins. They lay eggs in the water. These eggs contain material which will provide nourishment for the young fish in the first stages of life.

An interesting fact is that freshwater species are the most threatened species on the planet. They are dying out 5 times faster than animals that live on land.

You can tell the age of a scaly fish by counting the number of rings on its scales. Fish scales are coloured so that the fish will blend in with its surroundings. This is called **camouflage**. Sometimes the rings on scales are wide and sometimes they are narrow, depending on whether the fish has had a good supply of food.

And speaking of food, fish is an important source of protein, vitamins and minerals. To ensure healthy bodies and minds, humans should have healthy and balanced diets, including plenty of fish!

A **vertebrate** is an animal with a backbone. Each animal listed below is a vertebrate.

- **Mammals** – eg rodent, humans, horses, foxes, whales & dolphins.
- **Reptiles** – eg turtles and tortoises with tough shells, meat-eating crocodiles and alligators, snakes and lizards.
- **Amphibians** – eg frogs and tadpoles.
- **Birds** – eg robins, swans, ostriches and penguins.
- ....and **Fish**!

Something Fishy is a resource pack which has been produced by the Central Fisheries Board. It is geared towards fifth and sixth class pupils and is linked to the curriculum. Working through the pack will help children become more aware of the importance of good water quality and the dependence of all forms of life on it, particularly fish! For further details contact your regional fisheries board or Mark Corps (Mark.Corps@cfb.ie) at the Central Fisheries Board. Visit the Something Fishy website at **www.somethingfishy.ie** and the Central Fisheries Board website at **www.cfb.ie**

Fish In The Food Chain

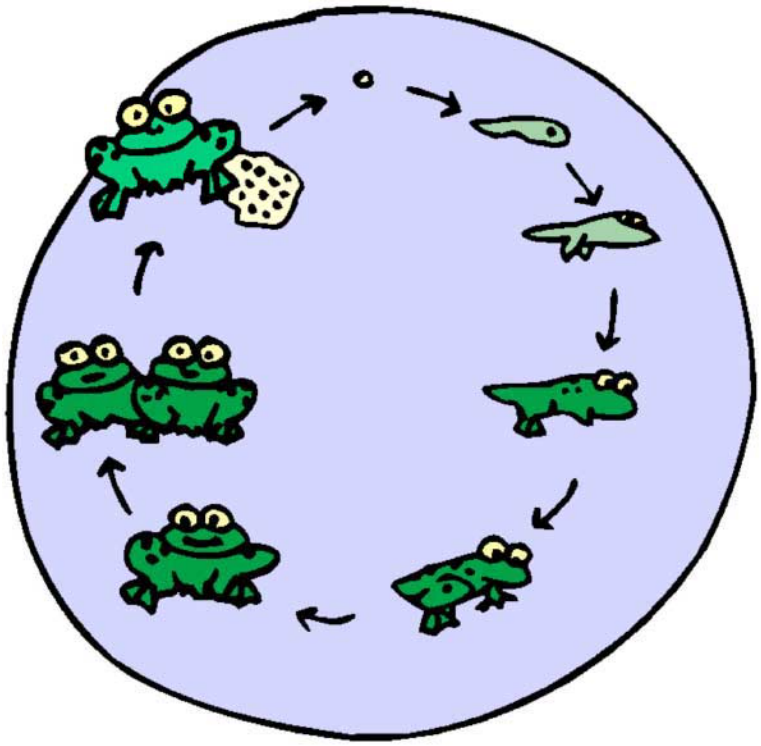
Freshwater fish live in rivers and lakes, while saltwater fish live in the seas and oceans. Some fish such as the salmon and eels can live in both freshwater and salt water.

Fish may occupy many levels in the food chain throughout their lives. For example, fish eggs and fry are an important food for other fish, birds and insects. Fish such as salmon are predators. They live on freshwater insects and crustaceans in the river and on small fish and crustaceans such as shrimp in the sea. Salmon also serve as food for other animals such as heron, otter, seals, other fish and humans.

Join in the Hop To It Frog Survey 2007. For information visit www.ipcc.ie

Life Cycle of Frogs

A human baby looks very much like a tiny adult, but many animals look nothing like their parents when they are babies. They undergo a dramatic change from egg to adult. This change in form is called "**metamorphosis**". One creature which goes through this change, or "metamorphosis" is the frog. The eggs of the frog are known as spawn. Each egg is surrounded by a transparent, jelly-like substance. This jelly is so slippery that when any predators try to eat the spawn, they cannot hold on to it. The jelly also helps to let the sun's warmth through to the egg inside.



Frogs pass through three stages of development - egg, tadpole and adult frog. The tadpole grows from the round dot that can be seen inside each blob of jelly and while they are developing they feed on yolks, also contained in the jelly. Tadpoles have a head and body which is all in one and these tadpoles feed through gills. They have no legs at first and swim by means of a long tail. Gradually legs begin to sprout and the tail shrinks and is absorbed into the body. They also lose their gills and develop lungs, until they become tiny frogs.

Frogs take from three to four years to reach their full size and often live as long as 40 years.

Fact File:

- Frogs are amphibians.
- Frogs can live in water or on land.
- Water is absorbed through their skin, so they must live in wet or damp places.
- They do not have scales.
- They range from 1cm to 30cm in length.
- They lay 4,000 eggs at one time.
- Frogs can change colour to match its surroundings.
- They have four legs.
- They have big round ears on the sides of their heads.
- To make a croaking sound, a frog squeezes its lungs with its nostrils and mouth closed. Air flows over the vocal chords, causing its vocal sac to inflate like a balloon.
- The earliest frog appeared about 190 million years ago.
- There are around 3,500 species of frogs and toads in the world.
- A group of frogs is known as an army!

AMPHIBIANS

Amphibians have four legs, are born from eggs, live in water as babies and can move to land when grown.

Leap Frog!

Frogs can jump a distance of 10 times their body length.

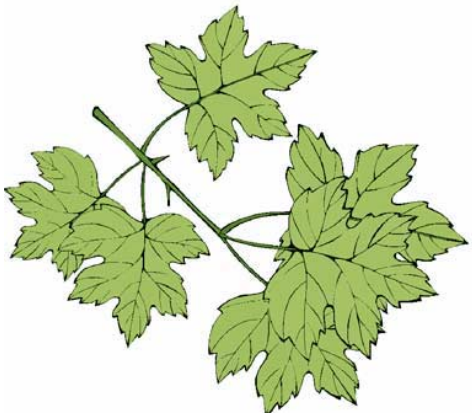
TREES – Deciduous & Evergreen

In the Trial Issue (2005) of Nature's Web, we briefly mentioned the difference between evergreen and deciduous trees. To tie in with the theme of tree conservation on page 14, here's a little more information on the subject!

Evergreen trees, as their name suggests, keep their leaves all year round. **Deciduous** trees usually lose their leaves in autumn, sending out new shoots and leaves in the spring.

DECIDUOUS TREES

Deciduous trees are generally thought of as **broadleaf** trees, meaning that they have broad, flat leaves eg sycamore. They are also considered to be **hardwood** trees. Usually these trees take longer to grow, their wood is harder and has good preservative qualities. Their wood generally lasts longer, is harder to work with and more expensive. A deciduous forest is a forest made up of trees that will drop their leaves in autumn. These leaves will rot, producing a rich carpet of soil on which plants can feed. Therefore deciduous forests are full of plants and animal life.



EVERGREEN TREES

When we talk about evergreen trees, we usually think of **conifers**, which are trees that have needle-like leaves eg pine trees. However there are also evergreen trees that have broad, flat leaves. The wood of a conifer tree is known as **softwood**. Generally, softwood is easy to work with and this is what we mostly use in our houses for flooring, doors etc... Also, conifers grow more quickly and more upright than deciduous trees, which has led to the planting of plantations of coniferous forests purely to provide wood for our use.

The narrow leaf of the conifer has a small surface area and is therefore able to stop water loss. This helps it grow in cold climates and poor soils.

An evergreen, or coniferous forest, is a forest made up of pine trees that are always in leaf. They do not shed leaves, except for a few pine needles to make way for new ones. These fallen needles have very little nutrients and make very poor soil. Not many plants grow in these forests and so fewer animals and plants are found there.

THE AGE OF A TREE

When a tree is cut down, or felled, you can tell how old it is by counting the number of rings on its stump. Each ring records one year of growth.

Hard softwoods & soft hardwoods!

To totally confuse you, not all hardwoods are harder than softwoods. Some softwoods, such as yew, are really hard!

All in a Day's Work

Susan Steele – Fisheries Training Instructor

PROFILE

Susan Steele works as a training executive for Bord Iascaigh Mhara (BIM) – the Irish Fisheries Board, running aquaculture and business training courses around the coast. She also works with primary and secondary schools as part of her job and is based in Castletownbere, Co. Cork.

Photos: © Susan Steele

A Day in the Life of Susan Steele

Have you always been interested in the sea?

I decided at the age of three that all I wanted to be was a marine biologist. I grew up on the Beara peninsula in West Cork. It is a spectacularly beautiful part of the world and I spent every minute that I could down at the shore looking at rock pools and in the sea to catch a glimpse of the life that was there. I was very lucky to have parents who were willing to support me and who didn't mind the drying seaweed, aquariums and the odious smell of fish around the house. When I was 11 years old, I managed to get a job working in a local salmon hatchery. I saved up money from this and went on a Marine Ecology course when they ran them at Sherkin Island Marine Station, years ago .

What training did you do to get where you are today?

By the time that I was 17, I had worked on mussel farms, oyster farms and in Trinity College Dublin as a research assistant. I did a degree in Marine Biology in Bangor and learnt to dive. I won an environmental scientist of the year and then did a PhD in UCC. I got a postdoctoral position in London in the Royal Holloway and then started lecturing and working as a tutor for the Open University. I had a mad notion to work on every aspect of Marine Animals from ecology (study of animals in their environment) through microscopes, electron microscopes (to the cell) and molecular biology (to the genes). I did manage to work and write scientific papers on all of these things, which have all helped me get to where I am today!

What is your main aim as a trainer with BIM?

In aquaculture training BIM's logo is 'give a man a fish and you feed him for a day, train him how to grow a fish and you feed him for a lifetime'. I firmly believe in this and also in educating young people about the importance of protecting our marine environment.

What is the best thing about your job?

I have the privilege of teaching many incredible people who work around our coast most days of the week. I have learnt so much from them. Working with children is great as they excite you about the sea. Every day is a great adventure at work. I also have a small recirculation unit in my office and get to hatch out dogfish eggs, teach octopus tricks and learn about feeding different animals.

What is the worst thing about your job?

Time! I find it hard to say "No" and I am always trying to do too much. Still, I do manage to get things done and try to make a difference.

What is a day in your life like?

I have four brilliant children Emma, Lizzie, Martin and Molly. Days start with the usual chaos of getting ready for school. I cycle into work with Martin on the back of the bike. It is nearly five miles and we get to argue about dinosaurs on the way in. Martin is four and at playschool. He is convinced that dinosaurs still exist. I arrive in and usually teach for the day. I have become a "jack of all trades" and teach first aid, personal survival techniques, boat handling, radio courses, manual handling, and all of the marine biology and fish farming courses.Days vary from taking 20-30 school children out to the shore and showing them how life survives to teaching shellfish farming. Imagine that you can hang rope in our waters and grow mussels! I try and inspire people doing the courses so we spend a lot of time eating the produce of the sea such as seaweed (no wonder, I need to cycle). I go with my husband and two smallest children to the beach for our lunch, sometimes collecting seaweed for the garden. At the end of the day, I cycle home and eat. My husband has a farm and we have great vegetables (probably due to the seaweed)! Then I try and fit in time to study. I believe that we should never stop learning. I am just finishing a Masters in Business Administration (MBA) and will have finished a Masters in Education by next October as well.

Rathcoole NS

By Susan O'Connor, Principal

Rathcoole National School is a rural village school located in the Barony of Duhallow in North Cork. The school is a five-teacher school with 99 pupils. It is overlooked by the forested hills of Laught and nestles in the valley where the Aubane and Blackwater Rivers merge. One of our claims to fame is the Rathcoole airfield which can be found if you google it on the internet.

Our pupils are very interested in the environment. We proudly boast an organic school garden which grows vegetables and flowers of all varieties - from aubergines to sunflowers. The Third, Fourth, Fifth and Sixth classes work very hard in the school garden. They dig, plant, weed and harvest the crops. The school community enjoys dishes from the organic produce of the garden at an annual harvest lunch. We have tasted vegetable and pumpkin soup served in a scooped out pumpkin saucepan and delicious colcannon made from potatoes and cabbage grown in our garden. Our school garden is a great place to conduct a mini beast hunt and nature walk - Mrs. Healy's First and Second class and Mrs. Lynch's Infants can tell you all about it.

Near our school vegetable patch are two compost bins with worms that eat all our uncooked food waste, egg shells and teachers' tea bags. These two bins provide wonderful nourishment for our school garden, window boxes and newly planted fruit trees. Our newly renovated front garden patch has bushes to attract butterflies. So we look forward to the summer and a great variety of coloured butterflies. Pupils can already identify birds, which feed regularly at our bird table.

Aluminium cans are gathered in the school and collected by the Blue Dragon Company. Batteries, photocopier toner and computer printer cartridges are gathered and taken by one of our teachers to the excellent recycling centre in Millstreet. We recycle milk cartons and paper in the Dry Recycle bin for weekly collection.

Photos: © Rathcoole NS

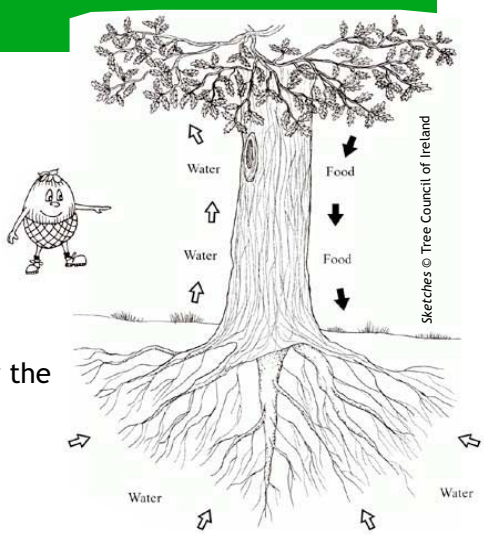
The highlight of our year is the Sherkin Island Marine Station Environmental competition. We research and enter projects on the theme: *"What is important to me in the Environment"*. Above is a photograph of some of last year's entries.

We studied pigs, hedgehogs, snails, bees, hens, horses and many more. The trip to the Carrigaline Court Hotel to collect our wonderful prizes and view all the other entries is a great day out. We are already planning this year's entries. We recommend that every national school pupil in Munster enter the competition and support Matt Murphy's marine station in its excellent work of promoting care for the environment.

Rathcoole NS, Mallow, Co. Cork.
Email: stbrendansrathcoole@gmail.com

Right: Our Harvest Display
Below: Hard at work in the vegetable garden!

How a Tree Lives



The **leaves** of the tree make **food**. They use **sunlight** as energy for this. Food is only made during the day.
The food moves **down** the tree through the bark to the roots.
Like all plants, trees need **water** to live. Water is taken from the soil by the **roots**.
It moves **up** the tree to the leaves through the wood of the trunk.

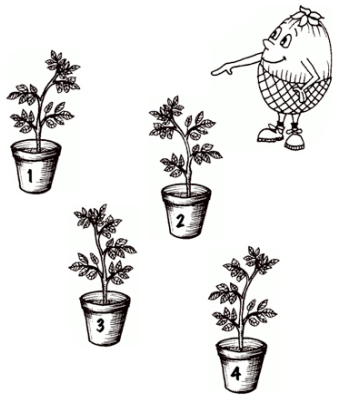
This experiment shows that plants need light and water.

What you need

Four healthy plants, for example busy lizzies or potatoes

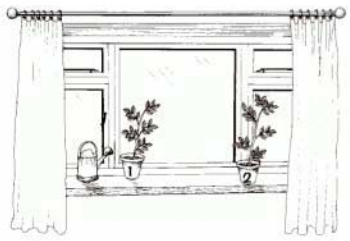
A black plastic bag

Label the plants 1, 2, 3 and 4.



What you do

- Leave Plant 1 on a window sill where it will get light. Water it whenever it needs it.



- Place Plant 2 on the window sill beside plant 1. Do not water it at all.
- Water Plant 3 well. Then put it in the black plastic bag. Seal the bag tightly.

- Leave Plants 1, 2 and 3 for three weeks.
- Use Plant 4 to show that water moves up the plant from the roots to the leaves.
- Cut the top off Plant 4. Lie the pot on its side over newspaper.

What happens to the part that has been cut off?

_____

Is there moisture coming out of it?

_____

After three weeks,
look at Plants 1, 2 and 3.
Place a tick (✓) on the chart to show the condition of each plant.

	Healthy	Yellow	Dying	Dead
Plant 1				
Plant 2				
Plant 3				

Can you explain...

What happened to Plant 1?

_____

Why?

_____

What happened to Plant 2?

_____

Why?

_____

What happened to Plant 3?

_____

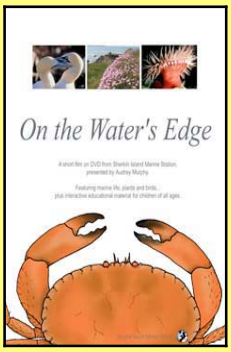
Why?

The Tree Council of Ireland produce very useful and informative leaflets for children on their website and have kindly allowed us reproduce one here. Visit their site at www.treecouncil.ie for more....!

Learn More

Sea Life DVD!!

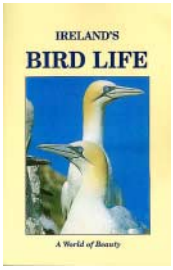
"On the Water's Edge"



Sherkin Island Marine Station has launched a new dvd called '*On the Water's Edge*'. It is made up of a short film on life beside the sea and is presented by Audrey Murphy. It includes 6-10 hours of interactive material for children of all ages. *Available from: Sherkin Island Marine Station, Sherkin Island, Co. Cork. €16.95 post free.*

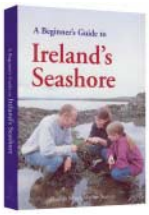
A collection of photographs of Ireland's bird life, featuring over 200 colour photographs taken by one of Europe's finest wildlife photographers, Richard Mills. *160pp*

€16.00 including postage



A Beginner's Guide to Ireland's Seashore is a pocket-sized guide, suitable for beginners of all ages. This book will help you to explore the wonders of marine life found on the shores around Ireland. *206pp*

Only €6.97 including postage

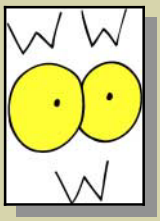


Only €1.75 each including postage or €10.50 for all seven! *32pp each*

Sherkin Island Marine Station has published a range of colouring books, guides and activity books for children. Each thirty two page *Colouring & Guide Book* gives you the chance to colour, identify and learn about the wildlife around Ireland. *My Nature Diary* and *Safety Sam* activity book will keep you busy for hours.

To order books, send your name and address along with a cheque or postal order made payable to Sherkin Island Marine Station to:

Matt Murphy,
Sherkin Island Marine Station,
Sherkin Island,
Skibbereen, Co.Cork. Ireland.



Useful Web Addresses

There are lots of websites to be found on the internet that will give you further information on topics we have covered in this newsletter. Here are a few that may be of interest:

The Cuckoo: http://en.wikipedia.org/wiki/Common_Cuckoo

Cuckoo Clocks: http://en.wikipedia.org/wiki/Cuckoo_clock

Something Fishy: www.somethingfishy.ie

Frogs: http://www.ipcc.ie/hoptoitintro.html http://allaboutfrogs.org/
http://cgee.hamline.edu/frogs/science/frogfact.html

Amazon Rainforests and Dust from the Sahara:
http://earthobservatory.nasa.gov/Newsroom/NewImages/images.php3?img_id=17512

Remains of a Dinosaur found in Spain: http://www.aaas.org/news/releases/2006/1222sauropod.shtml
http://news.nationalgeographic.com/news/2006/12/061221-giant-dinosaur.html

Snakes Predict Earthquakes???: http://news.mongabay.com/2006/1228-snakes.html

White-tailed Sea Eagle Come Back to Kerry: http://www.planetark.org/dailynewsstory.cfm/newsid/39694/story.htm

Trees: www.treecouncil.ie www.nativewoodtrust.ie

Freshwater Fish: http://www.cfb.ie/fishing_in_ireland/index.htm

Northern Lights: www.northern-lights.no

We cannot be responsible for the content of external websites, so please observe due care when accessing any site on the internet.

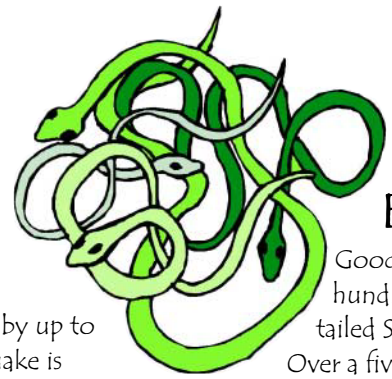
The World Around Us

"Foreign Correspondent" Michael Ludwig reports on some strange goings on in the natural world.

The Amazon Rainforests depend on dust from one Saharan valley

Fertilising fields is one way to keep them productive, and Mother Nature uses the same method for her rainforests. But while we usually get the fertiliser locally She has been reaching across the South Atlantic for her supplies! Each year, millions of tonnes of mineral dust are carried by winds from the Sahara desert in Africa, to the rainforests of South America. This dust helps keep the soil of the rainforests fertile. Scientists in Israel have discovered that 56% of the dust comes from one place, the Bodele Valley in Chad, Africa. Using satellite images, they found that more than 40 million tonnes of Bodele dust is spread over the rainforests. The process is made possible by the topography around the Valley. Two mountain ridges create a wind venturi affect, which lifts the dust high into the atmosphere where it is carried across the Atlantic Ocean.

Snakes Predict Earthquakes???



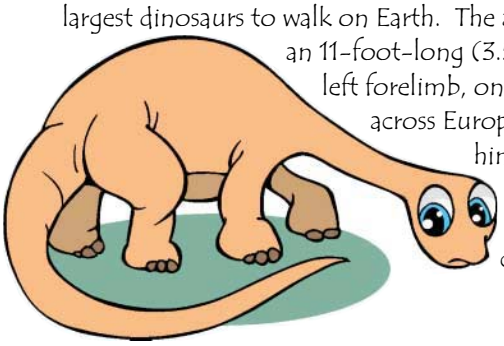
Scientists at the earthquake bureau in Nanning, in southern Guangxi Province, China believe that snakes can predict when an earthquake is about to occur. They are monitoring local snake farms, using internet video links after discovering that their "slithering instruments" can sense the tiny tremors that precede, by up to five days, when an earthquake will happen. When a quake is about to occur, the snakes start moving strangely and if the quake is a big one, they even start smashing into their cage walls, trying to escape. Scientists said the serpents can sense a quake up to 120km (75 miles) away! I'd rather watch a seismograph, thank you!

White-tailed Sea Eagle Coming Back to Kerry

Good news for Kerry where, after one hundred years of absence, the White-tailed Sea Eagle will be re-introduced. Over a five year period starting in the summer 2007, 15 chicks a year from Norway will be reintroduced to The Killarney National Park in County Kerry. The Park appears to be the best place to re-introduce the 2.5 meter wingspan birds. Experts feel that the rich peninsulas and deep bays of Kerry and West Cork are very suitable for the White-tailed Sea Eagle. The 75 bird relocations should create a breeding population that will spread out across the rich peninsulas, coast, windswept islands and deep bays of Kerry and West Cork. It is hoped that the project will be as successful as the re-introduction of the Golden Eagle to Donegal six years ago. Apart from the cultural and tourism benefits of having eagles back in Kerry, this project will help Ireland meet its commitment to maintain and enhance native wildlife under the Rio de Janeiro accords.

Remains of a Dinosaur Found in Spain

Palaeontologists (people who study the history and development of life on Earth) have uncovered the remains of the biggest European dinosaur fossil ever found. The new species, *Turiasaurus riodevensis*, measures almost 120 feet (37 meters) in length and may have weighed as much as 48 tons (more than 50 cars!) The sauropod dinosaur was a giant plant-eater and has been named *Turiasaurus riodevensis*. It takes part of its name from Turia, the name of region, in Spain, where it was found. The size of its bones suggest that it is among the largest dinosaurs to walk on Earth. The animal, with an 11-foot-long (3.5-metre) left forelimb, once roamed all across Europe and its discovery hints at future finds of behemoth dinosaurs on the continent.

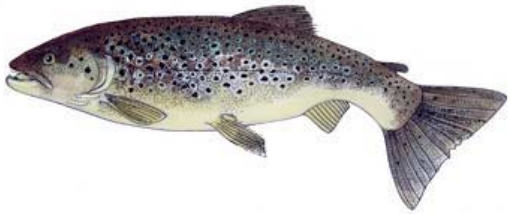


River Fish

Ireland contains hundreds of rivers, ranging from small mountain streams to big broad rivers such as the Shannon, which is the largest river in Ireland and Britain. These rivers often begin high up in the mountains, from where they start their journey to the sea. Most of them contain a large population of fish of different species. These fish vary in shapes, sizes and colours and often live in different habitats within the river.
It is important to protect and conserve Ireland's fish stocks, as they are a valuable natural resource. Fish are badly affected by pollution, and often the first sign that a river is polluted is when the fish begin to die. This fact helps us to monitor the rivers for water quality and to help ensure a cleaner environment. Apart from this, fishing provides an enjoyable hobby for thousands of anglers throughout the country.

Brown Trout

Salmo trutta Breac Donn



The Brown Trout is one of Ireland's oldest and most widespread fish. It can inhabit all types of river systems, from small streams to the largest of our rivers. The trout loves fresh clean water that has plenty of oxygen and it is particularly affected by pollution. The trout has a brown body and is covered in black and red spots, which help to camouflage it against the stony riverbed. Trout will feed on just about anything, but they can often be seen rising to the surface to sip in flies that have been trapped in the surface of the river. You can tell that trout are feeding when you see a series of rings in the water which are caused by the trout sipping the flies down.

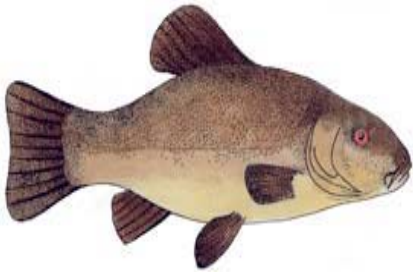
Salmon

Salmo salar Bradán

The Salmon is one of Ireland's most famous fish because of the long and dangerous journey it takes during its lifetime. Salmon are born in small streams, high up in the river system. They spend their early life in these small streams feeding on tiny insects. Then, the small salmon suddenly feel the urge to travel to the sea and they begin a journey (sometimes hundreds of miles) down through the river to the sea. Many salmon are killed by predators on this journey, but those that survive will live and feed in the sea for a year or more. At sea they become silver in colour and can grow very large. Then, after some time, the salmon again feel an urge, this time to return to the river from which they were born. The salmon are able to remember the exact stream from which they came, and they travel back to that stream to lay their eggs and begin the cycle all over again.

Tench

Tinca tinca Cúramán



Tench, as with many fish in Ireland, were introduced by monks hundreds of years ago. The monks kept them in ponds and lakes where they reared them as a source of food. Now, tench have become widespread in Ireland and can be found in many of our larger rivers. Tench have a beautiful olive green colour and they are covered in a thick coating of slimy mucous, which protects them from disease. In ancient times this mucous was often used in remedies to treat human illness! The tench feeds by sucking insects up from areas of muddy bottom in rivers. Its mouth is down turned to make this job easier, and it has 'barbules' on either side of its mouth so it can feel its way around the bottom.

Pike

Esox lucius Gailliasc

The pike is Ireland's most fearsome predator fish. It lives through eating other smaller fish and it has a huge mouth filled with rows of razor sharp teeth. Once it seizes another fish, there is little chance of escape, as the teeth point backwards down into the pike's mouth. The pike loves to wait in ambush for its prey and its green colour is perfect for hiding in weeds waiting for other fish to pass. The pike's long strong and slim body is perfect for bursts of speed over short distances, as it shoots out from its lair to engulf it's prey. The pike normally likes the larger, slower moving areas of the river.

Text: Shane O'Reilly, Central Fisheries Board / Sketches © Central Fisheries Board

Fun Page

How much did you learn?

The answers to all these questions can be found in the newsletter...see if you can remember!

1 How long do you cook the Fish in a Parcel?
2 How does Susan Steele get to work?
3 What animals may be able to predict earthquakes?
4 Who produced the "Something Fishy" resource pack?
5 Where do cuckoos go during the winter months?
6 To which recycling centre does Rathcoole National School bring its material for recycling?
7 Give the dates of National Tree Week in 2007.
8 How far can frogs jump?
9 What important liquid moves up through the wood of trees to the leaves?
10 Vertebrates have backbones. True or false?
11 Give another name for the Northern Lights.
12 Are deciduous trees usually considered to be softwood or hardwood?
13 The Amazon rainforests depend on dust from one Saharan Valley. In which African country can this valley be found?
14 How old was Susan Steele when she got a job working in a local salmon hatchery?
15 Where were cuckoo clocks first made?
16 What bird is being re-introduced to Kerry?
17 Who introduced Tench into Ireland?

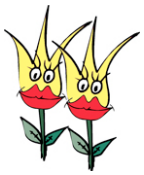
Answers: (1) 15-18 minutes; (2) She cycles; (3) Snakes; (4) Central Fisheries Board; (5) Africa; (6) Millstreet; (7) 4-10th March 2007; (8) 10 times their body length; (9) Water; (10) True; (11) Aurora borealis; (12) Hardwood; (13) Chad; (14) 11; (15) Black Forest area in Germany; (16) White-tailed Sea Eagle; (17) The monks.

What am I saying....?

Have fun with your friends making up a title for this picture of a gorilla.

Nature Jokes

What flowers grow on faces?
Tulips (two-lips)!



What's green and loud?
A froghorn.

What is the difference between a fish and a piano?
You can't tuna fish.

When do monkey's fall from the sky?
During Ape-ril showers!

Why did the spider cross the computer keyboard?
To get on the World Wide Web.

What do you get when you cross a pig and a centipede?
Bacon and legs!

Where do fish sleep?
In a river bed.

What do squirrels give for Valentine's Day?
Forget-me-nuts.

Spot the five differences!

NATIONAL TREE WEEK

4-10 MARCH 2007

Every year the Tree Council of Ireland organise a **National Tree Week** to make us more aware of our natural environment. **National Tree Week 2007** runs from 4-10 March and will be launched by An Taoiseach, Bertie Ahern T.D. at Farmleigh House, in Dublin. National Tree Week, jointly sponsored by Coillte and O2 Ireland, is in its 23rd year and this year's theme, ***"Trees for energy"***, aims to highlight the importance of trees in everyday life.

There are over 300 events organised across the country as part of **National Tree Week**, including forest walks, seminars and talks, workshops, tree planting ceremonies and exhibitions. All events organised by sponsors are free of charge and open to all members of the public. In addition, over 15,000 trees, supplied by Coillte, will be distributed to schools and community groups by every local authority in the country. Free events guides are available from O2 outlets and Coillte offices.

The advantages of planting more trees are not just confined to the survival of ecosystems or protection from severe weather. The beauty of our trees and woodlands in their own right has given much inspiration to writers, artists and many others over the years. Equally, forests have enormous recreational value as places to enjoy walks, nature trails or quite literally "to get away from it all'.

The aim of **National Tree Week** is to raise awareness about trees and encourage local communities to participate in the events, which will take place around the country during the week. Trees are an essential part of our environment and by doing something as simple as planting a tree, everyone can play his or her part in helping the environment. The Executive Director of the Tree Council of Ireland, Mr. John Mc Loughlin, would like to thank everybody who has worked hard on the various events coming up in the week ahead and would ask everyone to either take part in a local event or take five minutes during **National Tree Week** to contemplate the important role that trees play in our lives.

Trees are recognised as one of the most essential parts of our environment for the role they play in cleaning air, preventing the build-up of greenhouse gases, providing renewable energy and materials for building, furniture and all the wooden items that form part of everyday life. In addition trees play an essential role in providing habitats for thousands of plants and animals and stabilising soil as well as being a major contributor to the economy. With 14,000 farmers now having a forestry enterprise, the forestry industry is currently worth over €550m per annum, in Ireland and provides jobs for over 10,000 people, mainly in rural Ireland.

Further information on **National Tree Week** and the events taking place around the country is available on www.treecouncil.ie

Too Late for National Tree Week?

National Tree Week is a good time to focus on the importance of trees in our lives and is also a great time to plant a tree, but you might be reading this when **National Tree Week** is over. Not to worry! The week is designed to focus your attention on trees, but you can discover them all year round. And if you want to plant a tree at other times of the year, check with your local garden centre and they will advise you as to the best times.

Northern Lights

There is a lot of activity in our night sky, from the full moon to falling stars to eclipses. In the Northern Hemisphere, one spectacle that sometimes appears on the northern horizon is a light-show known as the Northern Lights or *Aurora borealis*. This light-show can also be seen in the Southern Hemisphere where it is known as the Southern Lights or *Aurora australis*.

These light-shows are caused when particles from the sun, travelling at 1,600km per second, are thrown against the Earth by solar wind. When these particles collide with the Earth's atmosphere, the energy of the particles turns into colourful light, which appear like dancing lights in the sky.

The particles from the sun are directed north and south by the Earth's magnetic field, toward the two magnetic poles. There are two areas of aurora activity and these lie about 20 to 25 degrees from each pole.

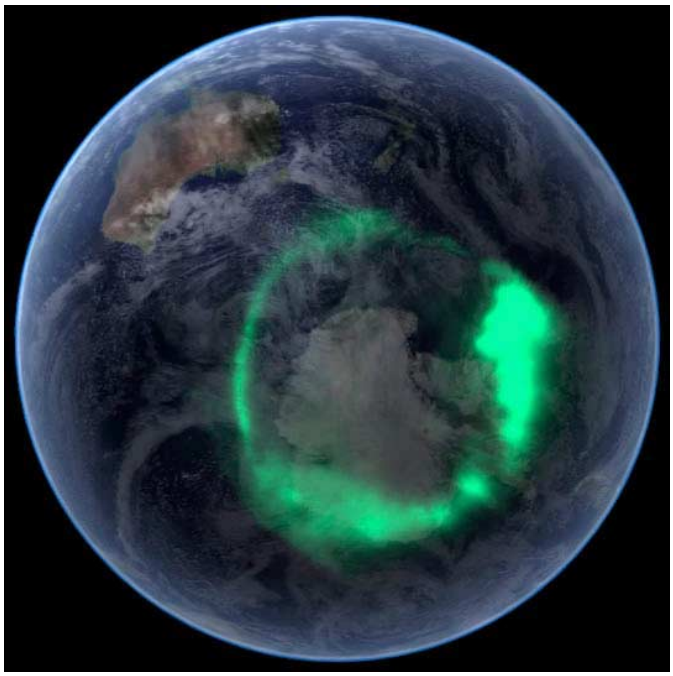


Photo © Robbie Murphy

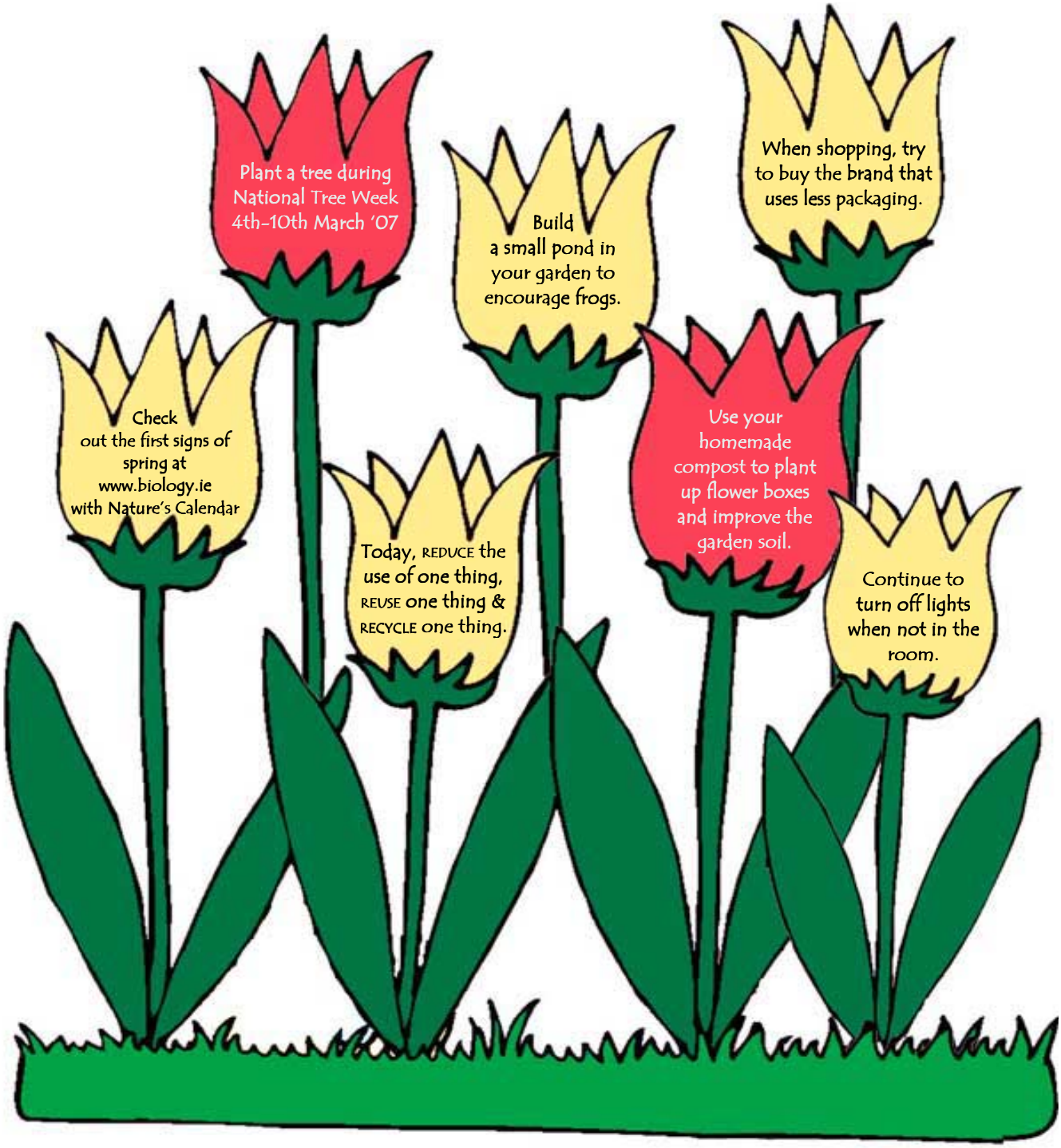
Sherkin Island, Co Cork, is far enough north to catch a glimpse of the Northern Lights. This photograph was taken by Robbie Murphy in November 2003.

So the further north you live, the better chance you have of seeing the Northern Lights. During times of intense activity, the northern lights have been seen as far south as Athens and Mexico City, and the southern lights have been seen as far north as Brisbane in Australia. The best time to view the Northern Lights is from September to October and from March to April. Check out **www.northern-lights.no** for more information and for details of when the lights are most active.

From space, the aurora is a crown of light that circles each of Earth's poles. NASA's IMAGE satellite captured this view of the *Aurora australis* (Southern lights) on September 11, 2005. It appeared four days after a record-setting solar flare sent plasma—an ionised gas of protons and electrons—flying towards the Earth. From the Earth's surface, the ring would appear as a curtain of light shimmering across the night sky.
http://earthobservatory.nasa.gov/Newsroom/NewImages/images.php3?img_id=17165

Nature's Noticeboard!

Spring 2007



Sherkin Island Marine Station would like to thank *PharmaChemical Ireland* for their support in making this newsletter possible. We would like to thank those who have contributed to this newsletter especially Mark Corp, Michael Ludwig, John McLoughlin, Robbie Murphy, Susan O'Connor, Shane O'Reilly and Susan Steele.

PHARMACHEMICAL IRELAND
Focused on a Healthy Future