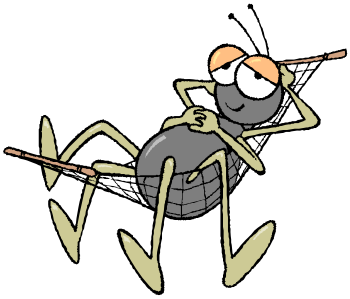

Nature's Web

Issue No. 42 Summer 2016

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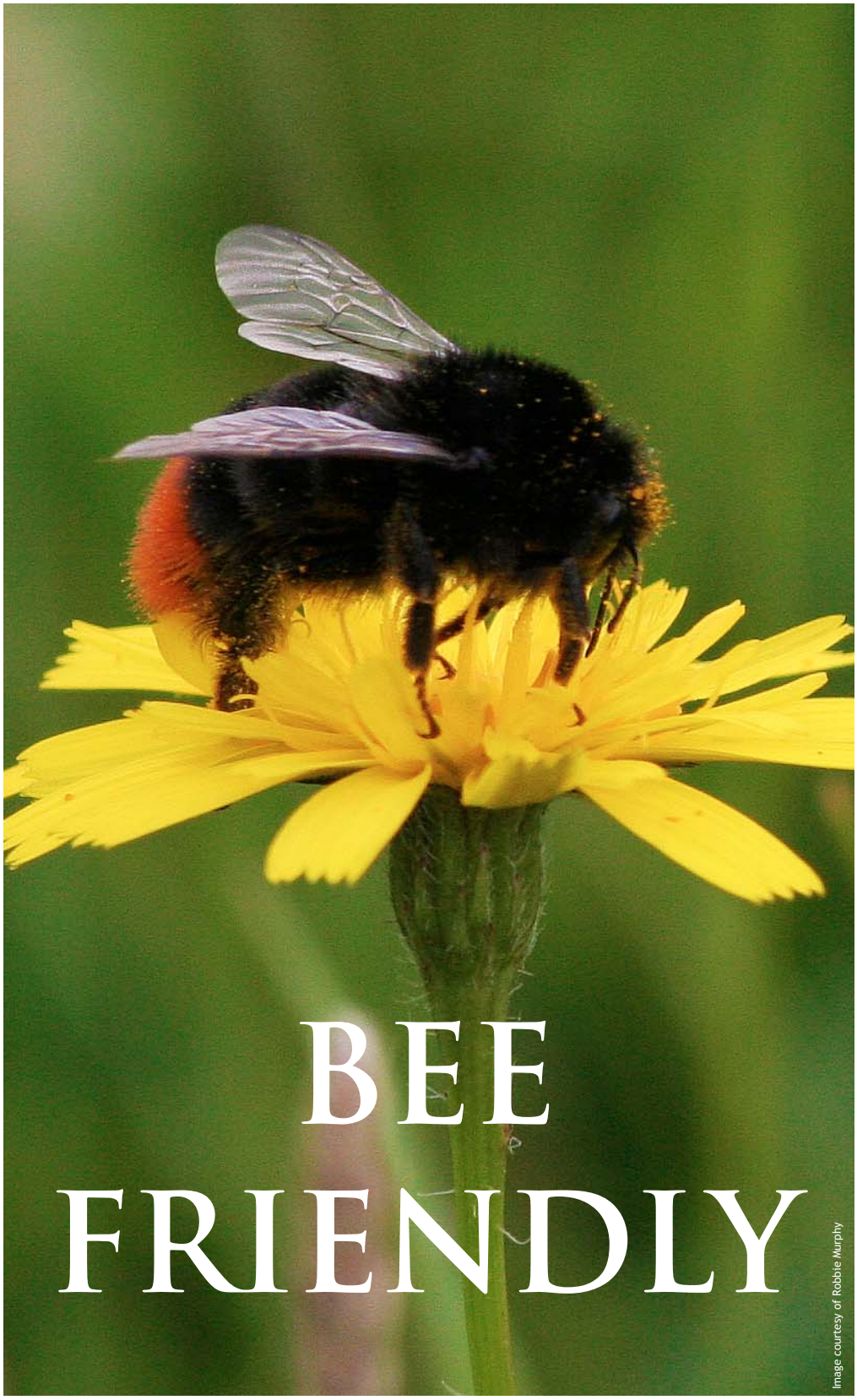

Editor's Page

Bees Love A Little Meadow!

It isn't hard to create a little patch of meadow in your garden. You don't have to dig up the lawn, just don't cut parts of it quite so often. Leaving a heart, circle or spiral shape of uncut grass creates an interesting meadow that is also pretty and fun to look at. If you leave the grass grow you may be surprised to find some wildflowers could emerge, such as clover, dandelions or ox-eye daisies. Bees love to feed on these flowers (see page 6 and 7) so you'll be providing them with food!

Image courtesy of Audrey Murphy Cain

Image courtesy of Robbie Murphy

As Gaeilge! We are delighted to have teamed up with An Gúm, who are translating Nature's Web into Irish. Issues are now available, as gaeilge, at:
http://www.gaeilge.ie/maidir-le-foras-na-gaeilge/an-gum/lion-dulra/

Haddock with Pasta & Broccoli

Photo courtesy of www.bordbia.ie

What you need:

- 700g haddock, skinned and boned
- 375g pasta - linguini or spaghetti are ideal
- 250g broccoli, broken up into small florets
- A little salt and black pepper
- 125g cream
- 125g stock
- 2 cloves garlic, finely chopped
- 2 chillies, deseeded and finely chopped
- Juice and grated rind of 1 lemon
- 1 handful parsley, chopped
- 2 handfuls watercress or spinach leaves, roughly torn

What to do:

1 Cook the pasta in a large saucepan of boiling water as per packet instructions. For the last minute add the broccoli. Drain and return to the saucepan, along with a couple of tablespoons of the cooking liquid. Keep warm while you cook the fish and make the sauce.

2 Heat the grill. Lightly oil a baking tray and place the fish on it. Season with salt and pepper. Cook under the hot grill for 5-6 minutes until the fish flakes easily.

3 Put the cream and stock in a saucepan along with the garlic, chillies, lemon juice and rind and season with salt and pepper. Bring to the boil, reduce the heat and let it simmer for 4-5 minutes. Then stir this mixture and the watercress and parsley through the pasta.

Brought to you by Bord Bia **www.bordbia.ie**

Welcome to the Summer Edition of Nature's Web!

Dear Reader,

Welcome everyone to the Summer 2016 issue of Nature's Web. In this issue we meet Úna FitzPatrick, from the National Biodiversity Data Centre. She has recently helped put together an All-Ireland Pollinator Plan to teach us how important bees are and how we can make the world a safer place for them to live in. Black John explains how the ocean influences weather and climate and we look at cabbage, a vegetable we all know, as well as the Common Tern, a migratory seabird that comes all the way from Africa for the summer. Check out nature news from around the world on page 12 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!

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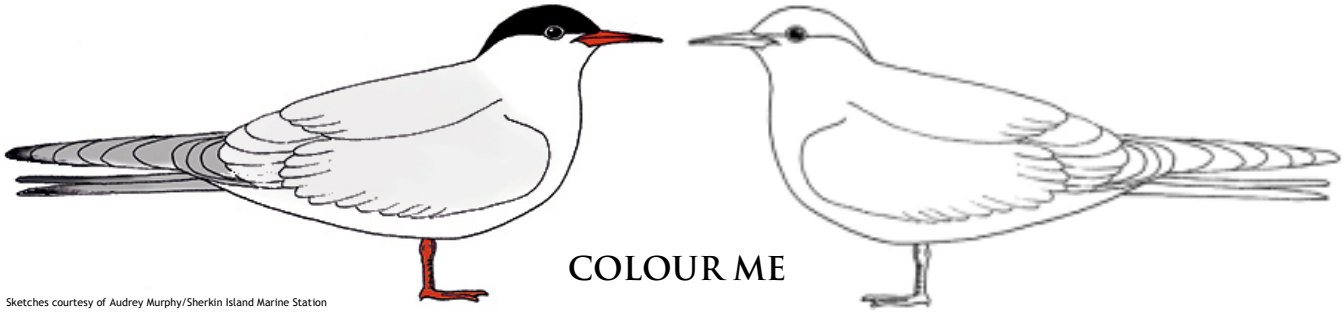
Common Tern

Scientific Name: *Sterna hirundo*
Irish Name: Geabhróg

The Common Tern is a migratory sea bird that arrives in Ireland to breed around April. It leaves again for western or southern Africa around October. The Common Tern has a number of breeding sites in Ireland, including Dublin Port, where it nests on manmade floating rafts, known as pontoons. As Common Terns nest on shingle beaches of small stones and pebbles, the pontoon have shingles placed on them to replicate the tern's natural nesting environment. The birds lay their eggs in a small shallow scrape, which protects them from the wind and stops the eggs from rolling away. Their camouflaged mottled eggs are very hard to see, keeping them safe from predators. The Common Tern is a very graceful bird with its slender beak, streamline body, long narrow wings and pointed forked tail. These characteristics make it ideal for fast flying, flying strong winds and diving for small fish - its staple food. It has grey upperparts and white underparts, a black cap on its head and on its wing tips, an orange-red bill with a black tip and long red legs.

Image courtesy of Robbie Murphy

When the Common Tern feeds it hovers over the water and dives on seeing a fish.



Sketches courtesy of Audrey Murphy/Sherkin Island Marine Station

COLOUR ME

FACT FILE:

Colour: Grey upperparts with black crown, white underparts, red legs and bill.
Length: 34-37 cm
Diet: Fish, mostly sand eels and sprats.
Habitat: Along the coast, and sometimes inland by rivers and lakes.
No. of eggs: 2-3

Terns Species in Ireland

Five species of tern breed in Ireland: the Common Tern, Sandwich Tern, Roseate Tern, Little Tern and Arctic Tern. The Arctic Tern looks very similar to the Common Tern - little details telling them apart. The Arctic Tern is outstanding in that it makes the longest migration of any animal on earth. Most Arctic Terns breed in the Arctic, though some breed as far south as Ireland and Britain. Arctic Terns will fly from these breeding grounds to the edges of Antarctic and back again each year.

Compass Jellyfish

Scientific Name: *Chrysaora hysoscella*
Irish Name: Smugairle an chompáis

The Compass Jellyfish is bluish-white, with distinctive brown V-shaped markings on the top of its bell-shaped body and a "frill" of brown markings around its edge. It has 24 tentacles that are arranged in groups, as well as four very long and "frilly" mouth arms and eight sense organs.
Adult Compass Jellyfish are found floating near the surface in shallow and deep coastal waters from July to September. These can also be seen washed up on the beach. Often growing up to 30cm in diameter, the Compass Jellyfish feeds on a wide range of prey, including plankton, worms and small jellyfish.

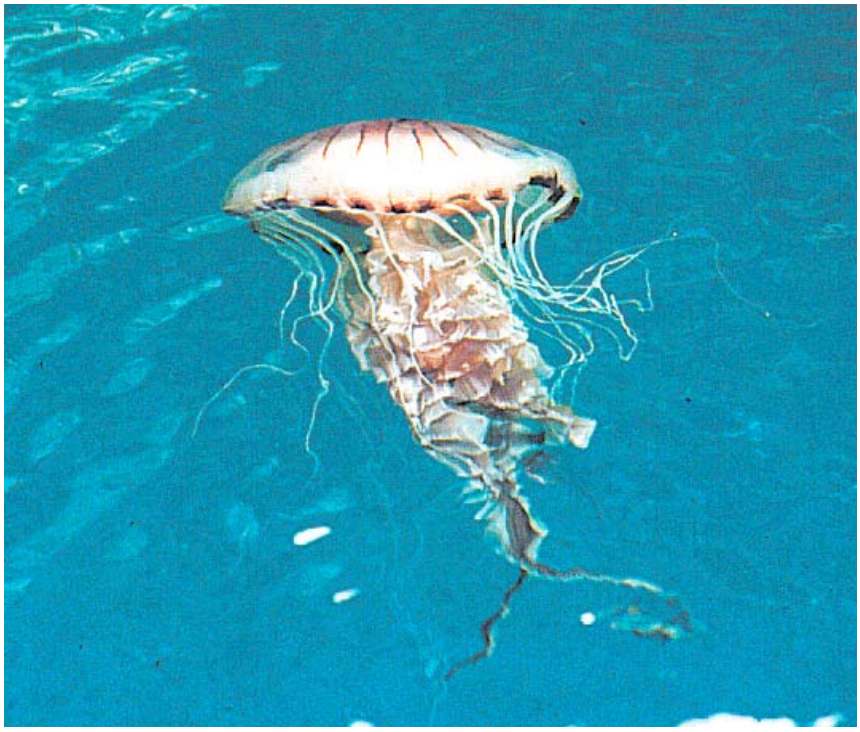
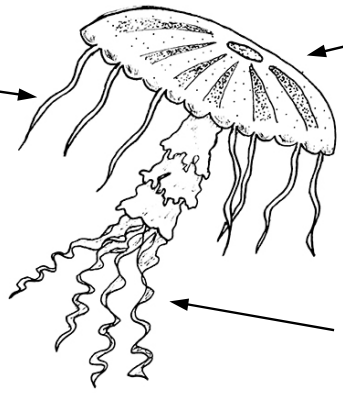


Image courtesy of Paul Kay/Sherkin Island Marine Station

Compass Jellyfish can have quite a dangerous sting.

Jellyfish

Jellyfish have a soft bell-shaped body with tentacles underneath. These tentacles, which can have quite a dangerous sting, catch food such as plankton and small animals in the water and also help the jellyfish protect itself from attackers. Jellyfish can be identified by the colour and pattern of the markings on their body.



Sketch courtesy of Sherkin Island Marine Station

Jelly Animals

Jellyfish and sea anemones belong to a group of animals known as cnidarians (pronounced nid-ar-ians) - the jelly animals. Cnidarians have many tiny stinging cells on their tentacles, which they use for self-defence and to catch food. Although some jellyfish have only a very mild sting, others can be quite dangerous so it is best not to touch any of them - just in case!

Check Jellyfish Safety on the Irish Water Safety website: http://www.iws.ie/beach/jellyfish-safety.321.html

Make a Compass Jellyfish

Image by Susan Murphy Wickens

You will need:

- An empty 2L plastic bottle
- Clear plastic
- Tape
- Scissors
- String
- Paper & colours

1 & 2. Cut the end off the plastic bottle, approximately 10 cm from the bottom (you may need help from an adult). This will be the bell of the jellyfish. Use the top of the bottle to make another jellyfish.

3. Bunch together a large handful of plastic and shape it into a ball, slightly bigger than the diameter of the bottle. Secure the shape with tape.

4. Cut two circles of plastic, approximately 25cm in diameter. Draw a spiral on each circle with a pen, with the lines about 2.5 cm apart (see photo). Cut each circle until you have two spiral lengths.

5 & 6. Find the centre of the two spiral lengths and drape over the plastic ball, cris cross them in the centre and secure with tape. Then gather the spiral lengths underneath the plastic ball, twist them together and secure. These are the jellyfish's mouth arms.

7, 8 & 9. Cut out triangles of paper, decorate and stick to the ball of plastic.

10. Tape thin strips of plastic around the inside edge of the cup to make tentacles.

11. Push the ball of plastic into the plastic "bell" and secure in place with a few pieces of tape.

12. Secure a long piece of thread to the top of the bell and hang up.

All-Ireland Pollinator Plan

In 2015 bee experts in Ireland came together to produce the All-Ireland Pollinator Plan 2015-2020. They decided to do this because they know that lots of our bees are in big trouble and could disappear from Ireland if we don't do something to help. Without bees we won't be able to grow our own fruits and vegetables, and our wild flowers will begin to disappear making Ireland a very dull place. We don't want this to happen. We want to hear the buzz of hard working bees carrying out their important pollination work. We want them to be there so that we can grow healthy food to feed you, and so that you can grow healthy food to feed your children someday. To stop bees disappearing from Ireland help is needed. You must tell everyone how important bees are and you need to make your school and garden a safe place for bees to live.

What is Pollination?

Pollination happens when pollen is moved from one flower to another. Pollen is the powder that flowers have inside. They use it to make new seeds which are tiny little baby plants waiting to grow. To make a seed, plants need to move pollen from one flower to another flower of the same type nearby. It's hard for flowers to do this because they can't move like you or me. Instead, they have worked out lots of clever ways to get help. Some flowers have pollen that is so light the wind blows it from flower to flower. These are the plants that cause hay fever in summer as the pollen gets blown up your nose or into your eyes! Other flowers have bright colours and sweet smells so that they will attract a pollinator to help.

Download the full All-Ireland Pollinator Plan Junior Version 2015-2020 from http://ark.ie/downloads/Junior_Pollinator_Plan_for_Web2.pdf

But What is a Pollinator?

In Europe most pollination is carried out by insects, especially bees. When you see bees and other insects buzzing around the garden they are adults looking for food. Bees have special hairs on their body that pollen gets stuck to. When bees get covered in pollen, they spit on their front legs and then brush the pollen into a sticky ball that they store on their back legs. They do this because the baby bees (larvae) back in the nest need to eat pollen to grow strong. Adults need lots of energy to collect all this pollen for their babies. They get this energy from nectar. Nectar is the sweet, sugary liquid inside flowers and bees are crazy about nectar! As the bee goes from flower to flower throughout the day collecting nectar and pollen, they are like a delivery guy, bringing the pollen from one flower to the next. And once a flower gets pollen from another flower of the same kind it can start to make seeds which will eventually grow into new plants. In return for their help, plants make lots of pollen so that the bees can bring the extra pollen home to feed their babies.

What can you do to help

1. Plant lots of different flowers in pots or flowerpots around your school or at home.

2. Plant a shrub that flowers in early spring - this provides very hungry queen bumblebees with lots to eat.

3. Grow some fruits and vegetables like strawberries, raspberries, peas, courgettes or apples.

4. Let it grow! Bees love weeds like dandelions, so let them grow instead of cutting them.

5. Provide some safe places for bumblebees or solitary bees to make their nests, such as hedgerows, banks of bare soil, holes in wood, or bee nest boxes.

6. Don't disturb nesting or hibernating bees.

7. Don't use chemicals to kill weeks or pests.

8. Tell others about the importance of pollinators.

9. Take part in the Green-Schools' Biodiversity programme (Rep. of Ireland)/ Eco-Schools (N. Ireland).

All in a Day's Work

Dr Úna Fitzpatrick – All-Ireland Pollinator Plan

Úna FitzPatrick works at the National Biodiversity Data Centre, where she looks after information on Ireland's plants and pollinators. She has recently been involved in putting together an All-Ireland Pollinator Plan www.biodiversityireland.ie

Úna FitzPatrick

Photos courtesy of Úna FitzPatrick

Above: Pollinators.
Right: Grown-ups learning about mining bees.

Where do you work?
I work at the National Biodiversity Data Centre. Biodiversity is a word we use to describe all the wildlife and habitats that occur in nature. There are over 30,000 different kinds of plants and animals in Ireland! Lots of these we don't even notice, like tiny insects or fungi in soil. In the Centre we keep information of what plants and animals we have in Ireland and where around the country they occur. Importantly, we also track if their numbers are increasing or decreasing. We want to know which ones are in trouble and are at risk of disappearing from Ireland (going extinct) so that we can try to help before that happens.

Where do you get information on Ireland's plants and animals?
A lot of our information comes from paid experts, but some of it comes from members of the public who are interested in nature. We call these people citizen scientists.

Can I be a citizen scientist and tell you about birds, mammals or plants that I see?
Yes, if you know what animal or plant you've spotted you should let us know. That information is very useful and will be stored safely in our databases and you'll be able to see it appear on our maps. You will need to know what species you've spotted (e.g., Robin, Bluebell, Fox) and then go online and tell us where it was and what date you saw it on. You can do that here: http://records.biodiversityireland.ie/

Do you work alone or as part of a team?
I am part of a great team of eight people. Some of us are experts on nature, and some of us are experts on computers and make sure that the data we collect is safely stored and can be viewed by everyone on the maps on our website.

What is a day in your life like?
My job is very varied. I respond to a lot of emails and often teach adults how to identify different bees or plants. I also study the data to check which plants or animals are disappearing from Ireland. Recently, I have spent a lot of time working on the All-Ireland Pollinator Plan which is a plan to try and save Ireland's bees.

Why does Ireland need a Pollinator Plan?
If we want to have fruits and vegetables to eat, or wild flowers in the countryside, we need insects to pollinate them. Bees are the most important pollinators in Ireland but unfortunately they are declining. The Pollinator Plan has come up with a big list of 81 things we could do to help. Bees need flowers to feed on and safe places to live right across Ireland, not just in the countryside. You can read about how to help in your school or garden in the junior version of the All-Ireland Pollinator Plan.

What advice would you give to someone wanting to do your job?
I'm very lucky. I love nature so my job is like a hobby that I get paid to do. Don't forget that you will spend a lot of your life at work. Don't just think about how much money you will make – you should find something you are interested in and will enjoy.

Bee-Friendly Plants

Bees are great pollinators, helping to bring pollen from plant to plant. To help them, it is good to know what flowers they like so you can either plant them or allow them grow in your own garden. Here are some:

Dandelion

Some people think Dandelions are weeds but bees just love them!

Apple Blossom

Apple Blossoms provide lots of food for bees, while at the same time the bees help to pollinate the trees so they can produce apples.

Thistle

Like other perennials, such as clovers and vetches, thistles are rich in pollen.

Clover

Leave a little of the lawn uncut to allow clover to grow. Bees love white clover especially.

Hawthorn

When wild bees come out of hibernation in the spring, the Hawthorn tree provides much-needed food.

Ivy

Ivy flowers are one of the last sources of food for bees before winter sets in.

Primrose

Primrose are also a welcome source of food for bees in the spring.

Lavender

Lavender and other flowering herbs provide lots of food for bees.

Willow

Willow is an important early source of pollen for bees.

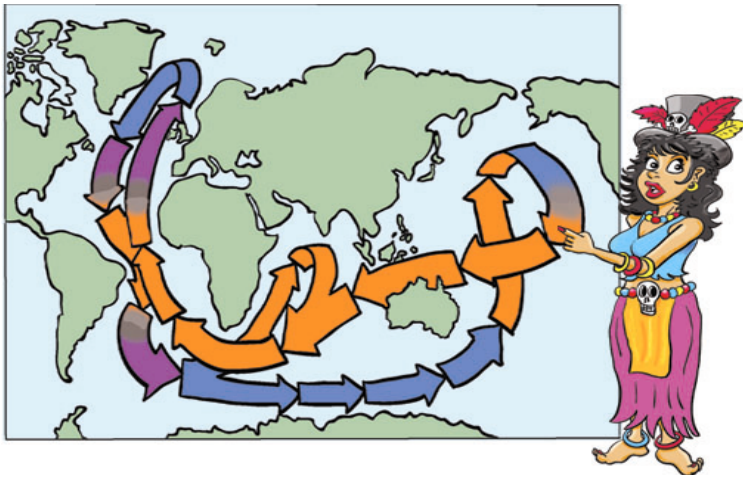
Images courtesy of Robbie Murphy

Colour In

Black John the Bogus Pirate

Third Principle of Ocean Literacy

Avast there, Mateys! Today I'm going to hand over to an important member of my crew - Zelda the trainee Voodoo witch to talk about the Third Principle of Ocean Literacy which says that "The Ocean is a major influence on weather and climate" . . . and here's how . . . .



Images and text courtesy of John Joyce

Because the Ocean covers over 70% of planet Earth's surface, its waters absorb most of the radiated heat reaching Earth from the Sun. This heated water is less dense than colder water and rises to the surface, moving north and south from the Equator as ocean currents.

At the North and South Poles seawater becomes very cold. Cold water is denser than warmer water and sinks to the bottom of the Ocean at the Poles, to be replaced by warmer water moving in from the Equator. The cold water then flows back to the Equator as a deep ocean current, where it warms and rises again.

The Ocean also releases heat back into the atmosphere as water vapour, which falls back as rain upon the land and the Ocean. Heat released from the Ocean also drives the circulation of air as winds and even tropical storms.

The overall climate of the world is influenced by the amount of carbon dioxide in the atmosphere. This is because carbon dioxide absorbs heat from the Sun, so the more carbon dioxide there is in the air, the hotter Earth will become, leading to rapid climate change. This is why carbon dioxide is called a 'Greenhouse Gas'. The Ocean is vitally important in protecting us against rapid climate change because of the tiny, tiny plants (called 'phytoplankton') that live there. These tiny plants absorb about half of the carbon dioxide in the atmosphere and convert it to oxygen. This is why it is so vitally important to protect the Ocean against pollution because, if these tiny phytoplankton stop absorbing carbon dioxide, then life on Earth could become unbearable.

Tropical storms can occur when seawater temperatures rise above 27 °C. This causes seawater to evaporate into water vapour which rises into the air, cools (releasing heat) and condenses into enormous cumulonimbus clouds. Inside these clouds, the water droplets collide with each other and eventually fall as rain. The rising water vapour at the centre of the cloud creates an area of low atmospheric pressure which also pulls in air at sea level, creating high wind speeds. This process keeps feeding on itself to create a towering tropical storm around a central calm area (the 'eye' of the storm) and spun by the gravitational forces north and south of the Equator (known as the 'Coriolis Force'). Storms like this lose their power and die out when they reach land and cannot suck up any more water vapour.

Follow 'Black John the Bogus Pirate' on Facebook at https://www.facebook.com/BlackJohntheBogusPirate/

Cabbage

By Borbála Vízkelety

Scientific Name: *Brassica oleracea*
Irish: Cabáiste

When you buy cabbage it is important to choose fresh and healthy heads. If you peel the leaves one by one, the centre stays fresh and crispy for

Cabbage is a leafy plant, grown as a vegetable crop for its dense-leaved, multi-layered head. It is close relative of cauliflower, broccoli and Brussels sprouts and all of these, including many wild flowers, belong to the huge Cabbage family.

Round or oval in shape, a cabbage head can be any size from 0.5 kg to 4 kg, though the world record in 2012 was 62.71 kg! There are many varieties of cabbage, with at least a hundred different types grown throughout the world. Leaves can be green, purple or white and either smooth-leafed or crinkle-leafed and the heads loose or firm.

Cabbage is one of the oldest vegetable in existence and it first appeared in Europe around 4000 years ago in the Mediterranean region. The plant has become extremely adaptable to different climate zones, what results in the variety of colours, textures and shapes within the family.

Cabbage is good for you!

Cabbage is a healthy food to eat. It is a great source of vitamins and minerals, particularly vitamin C, calcium and iron. It contains no fat at all, is low in calories and high in fibre. Plants of the big cabbage family have properties that have many other health benefits in your diet.

Cooking Cabbage

Cabbage can be prepared several ways: steamed, boiled, braised, stuffed, stir-fried, eaten raw for salad or as a snack are all great ways eating this healthy vegetable. They can also be fermented and pickled for dishes like sauerkraut or kimchi.

Cabbage consumption varies widely around the world. Bacon and cabbage is a very traditional meal in Ireland. Russia has the highest annual per capita consumption at 20 kg, followed by Belgium, the Netherlands and Spain. In some countries it is used as a side dish, while others have traditional dishes that feature cabbage as a main ingredient.

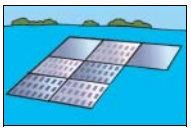
Growing Cabbage

There are so many varieties of cabbage that it is possible to grow varieties that can be picked all year round. For example, Spring cabbage can be picked in the spring and Winter cabbage can be picked in the winter. Cabbage is a hardy plant and is easy enough to grow. It likes fertile ground. Some of the biggest pests for cabbage are caterpillars, slugs and birds.

The World Around Us

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

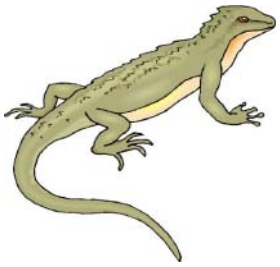
Europe's largest floating solar farm



On the outskirts of London, 23,000 solar panels are being installed on the Queen Elizabeth II reservoir near Walton-on-Thames, Surrey, in the UK. It is the largest floating solar farm (boat) in Europe - for the moment. At a cost of £6 million, the panels can generate 5.8 million kilowatt hours every year, enough for about 18,000 homes. The reservoir water cools the panels, which help power the local water treatment works without taking up space. The system provides drinking water to almost 10 million people in London and south-east of England.

Comedy Wildlife Awards

You can often see funny things in nature. Check out the winners of the Comedy Wildlife Awards for 2015 at http://comedywildlifephoto.com/ Have you ever taken a photograph of a wild animal that you think could win a prize?



The Irish Wildlife Trust wants your reptile sightings!

The Irish Wildlife Trust (IWT) are calling on the Irish public to send them their common lizard or slow worm sightings, Ireland's two species of terrestrial reptile. Whether you are a seasoned wildlife spotter or happen to come across a lizard while out walking or on the farm please send them your sightings and help contribute to the National Reptile Survey. For more information on the survey and on lizards in general, visit: http://www.iwt.ie/lizard-survey

Green Turtles getting the Green Light!

In the Spring 2016 issue of Nature's Web, we talked about the few remaining Yangtze green sea turtles, but other species of sea turtle also need protection. Many sea turtles feed in the coastal waters of Peru, where there is a lot of food but a large number of gillnet fishermen boats. The turtles often get caught in the nets and drown. Scientists have been trying to find ways of reducing the numbers caught. They found that by attaching battery-powered green LED lights to gillnets the number of sea turtles caught was reduced by up to 64 percent, without reducing the number of fish caught - this is good news for the turtles and the fishermen. The researchers are now working with larger fisheries in Peru and are also looking at different coloured lights to see if they will prevent other species of sea turtles from being caught and harmed by gillnets. The lights cost about €30 per net.

A New Species discovered at almost 4,300 metres

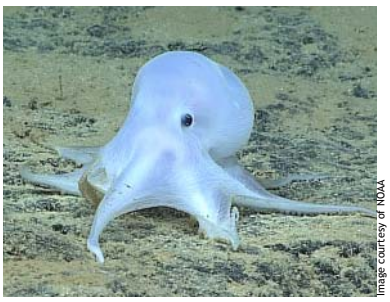


Image courtesy of NOAA

Very little is known about life in the deep sea but the more we learn we see how our actions might affect it, and how we can protect it. Scientists at NOAA (National Oceanic and Atmospheric Administration) in the USA have discovered what they believe is an undescribed species of octopod in that deep sea. Octopod is the general term for species which includes octopus. The previously unknown species was found at a depth of almost 4,300 metres, not far from the Hawaiian Islands, using the unmanned submersible "Deep Discoverer", which was operating from NOAA's Okeanos Explorer. Ghostly white, the jelly-like octopod is without pigment (colour). It doesn't look like it could change colour like octopi can nor does it need to be able to, given that it lives in virtual darkness. Scientists have little insight about its behaviour as they have never seen this species. Visit the Deep Discoverer on-line (see link on page 14).

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 Where does Úna Fitzpatrick work?

2 What do Compass Jellyfish feed on?

3 What is the name of the powder that bees move from flower to flower to pollinate them?

4 When do Common Terns arrive in Ireland from Africa?

5 Cabbage is high in which vitamin?

6 What is being installed in a reservoir near London to power a local water treatment plant?

7 Who is running the National Reptile Survey?

8 What vegetable is in the haddock and pasta recipe?

9 What did Úna Fitzpatrick help set up to protect bees?

10 On what do Common Terns nest in Dublin Port?

11 In Peru, what helps stop Green Sea turtles swimming into fishing nets?

12 Tropical storms can occur when seawater temperatures rise above how many degrees?

13 What do Compass Jellyfish uses to catch food?

14 Which of these is not related to cabbage – Brussels sprouts, cauliflower or tomatoes?

15 From the list of bee friendly plants, on which fruit trees do bees like to feed?

16 Near which islands did the NOAA discover a new species 4,300 m under the sea?

Answers: (1) National Biodiversity Data Centre; (2) Worms and small jellyfish; (3) Pollen; (4) April; (5) Vitamin C; (6) Floating solar panels; (7) Irish Wildlife Trust; (8) Broccoli; (9) All-Ireland Pollinator Plan; (10) On manmade pontoons; (11) Green LED lights; (12) 27°C; (13) Their tentacles; (14) Tomatoes; (15) Apple trees; (16) Hawaiian Islands.

Think of a Title

Have fun with your friends making up a title for this Bullfrog in British Columbia, Canada.

Image courtesy of Alan D. Wilson www.naturespicsonline.com

Nature Jokes

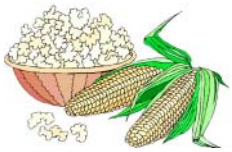
Which fish can perform operations?
A sturgeon.

What kind of bugs live in clocks?
Ticks!

How did the farmer fix his jeans?
With a cabbage patch.

Why do bees hum?
Because they've forgotten the words.

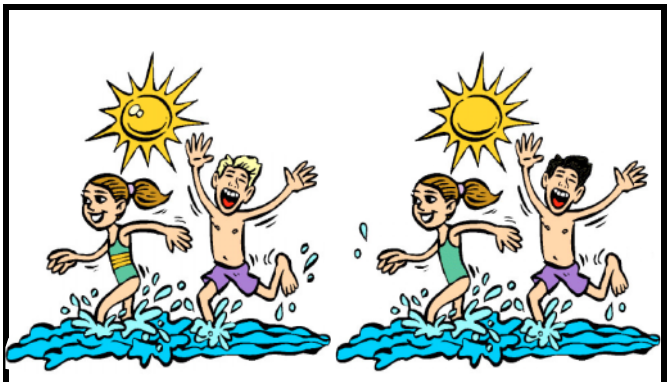
What did the baby corn say to the mother corn?
Where is pop?



What is a horse's favourite sport?
Stable tennis.

What did the duck say when she bought lipstick?
Put it on my bill.

Why did the shellfish go to the gym?
To get stronger mussels.



Spot the five differences!

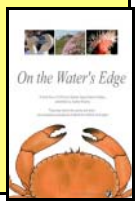
Learn More

Only €2.10 each including postage or €11.00 (plus €2.00 p&p) for all seven!

Sherkin Island Marine Station has published a range of colouring books, guides and activity books for children. Each 32-page *Colouring & Guide Book* gives you the chance to colour, identify and learn about the wildlife around Ireland. *My Nature Diary* contains lined pages to fill in a daily record of sightings and nature news.

Sea Life DVD: *"On the Water's Edge"*

Produced by Sherkin Island Marine Station, the DVD *'On the Water's Edge'*, features a short film on life beside the sea. Presented by Audrey Murphy, it includes 6-10 hours of interactive material for children of all ages. *Only €6.00 plus €1.30 p&p.*

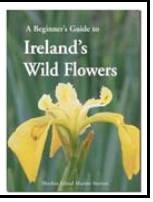


A Beginner's Guide to Ireland's Seashore is a pocket-sized guide, suitable for beginners of all ages. This book will help you to explore the wonders of marine life found on the shores around Ireland. *206pp*

Only €8.00 inc postage

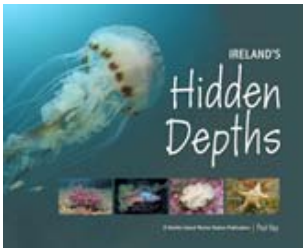
A Beginner's Guide to Ireland's Wild Flowers With the help of this pocket-sized guide, beginners of all ages will be introduced to the many common wild flowers found around Ireland. *206pp*

Only €8.50 inc postage



Ireland's Hidden Depths is another Sherkin Island Marine Station publication. Ireland's amazing marine life, glorious kelp forests and spectacular undersea scenery are featured in over 200 spectacular photographs by nature photographer Paul Kay. 277 x 227 mm 160 pps

Only €13.00 including postage



"An A to Z of Geology" explores the fascinating world of rocks and geology – a world of volcanoes, tsunamis, earthquakes, diamonds, gold and even dinosaurs! Produced by Sherkin Island Marine Station, in association with the Geological Survey of Ireland.

Only €5.99 plus €1.00 postage

To order books, send your name and address along with a cheque or postal order made payable to Sherkin Island Marine Station to: Sherkin Island Marine Station, Sherkin Island, Co.Cork. Ireland. Or visit: **www.sherkinmarine.ie** and pay by Paypal.

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:

Meadow: http://www.bordbia.ie/consumer/gardening/organicgardening/pages/worksheets.aspx
http://www.garden.ie/easycare.aspx?id=616

Common Tern: http://www.birdwatchireland.ie/IrelandsBirds/GullsTerns/CommonTern/tabid/357/Default.aspx
https://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/birdguide/name/c/commontern/

Compass Jellyfish: http://www.iws.ie/beach/jellyfish-safety.321.html
http://www.heritagecouncil.ie/fileadmin/user_upload/Publications/Marine/Jellyfish_poster.pdf
http://www.marine.ie/Home/site-area/news-events/press-releases/jellyfish-keep-your-distance

All-Ireland Pollinator Plan: http://www.biodiversityireland.ie/projects/irish-pollinator-initiative/all-ireland-pollinator-plan/
http://www.biodiversityireland.ie/projects/irish-pollinator-initiative/id-guides/ http://ark.ie/downloads/Junior_Pollinator_Plan_for_Web2.pdf

Cabbage: http://www.giyinternational.org/veg_directory/cabbage
http://www.kew.org/science-conservation/plants-fungi/brassica-oleracea-wild-cabbage

Black John the Bogus Pirate: https://www.facebook.com/BlackJohntheBogusPirate/ http://www.met.ie/education/

Solar Farm: http://www.bbc.com/news/uk-england-london-35705345

Lizard Survey: http://www.iwt.ie/lizard-survey

Comedy Wildlife Awards: http://comedywildlifephoto.com/

Green Sea Turtle Conservation:
http://www.smithsonianmag.com/innovation/these-light-fishing-nets-could-save-sea-turtles-180958634/?no-ist

New Octopod Species: http://oceanexplorer.noaa.gov/okeanos/explorations/ex1603/logs/mar2/mar2.html

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

Wordsearch

Nature's Web Summer 2016 Wordsearch

Try out this giant wordsearch containing words found in this issue of the newsletter.

G	R	E	E	N	T	U	R	T	L	E	A	E	C	N	H	Y	E
S	O	L	A	R	F	A	R	M	R	D	O	P	O	T	C	O	F
F	U	Z	F	F	E	U	A	C	V	A	A	L	M	F	F	Z	I
D	L	N	A	F	S	L	I	O	S	J	U	Y	P	E	M	Y	L
B	E	E	F	R	I	E	N	D	L	Y	P	L	A	N	T	S	D
E	M	V	M	Z	Z	W	W	O	A	G	P	C	S	K	O	C	L
N	X	Q	N	R	E	T	N	O	M	M	O	C	S	P	Y	L	I
H	D	Z	P	T	G	G	D	P	I	R	L	H	J	G	S	I	W
O	Z	C	L	V	F	I	H	X	N	I	L	C	E	T	P	M	Y
J	W	N	A	L	P	R	O	T	A	N	I	L	L	O	P	A	D
K	K	O	U	B	I	A	O	D	Y	X	N	P	L	H	D	T	E
C	O	H	D	P	B	A	U	N	L	T	A	I	Y	A	P	E	M
A	A	S	N	A	L	A	G	I	L	D	T	F	F	D	O	C	O
L	W	E	F	G	E	V	G	Y	E	M	I	X	I	D	N	H	C
B	G	E	X	Z	M	M	F	E	J	V	O	A	S	O	H	A	B
M	U	B	B	S	V	Z	C	G	P	A	N	F	H	C	I	N	K
U	N	A	F	I	T	Z	P	A	T	R	I	C	K	K	O	G	Z
D	R	A	Z	I	L	N	O	M	M	O	C	F	L	Q	N	E	S

Bee Friendly Plants

Bees

Black John

Cabbage

Climate Change

Comedy Wildlife

Common Lizard

Common Tern

Compass Jellyfish

Green Turtle

Haddock

Jelly Animals

Meadow

Octopod

Pollination

Pollinator Plan

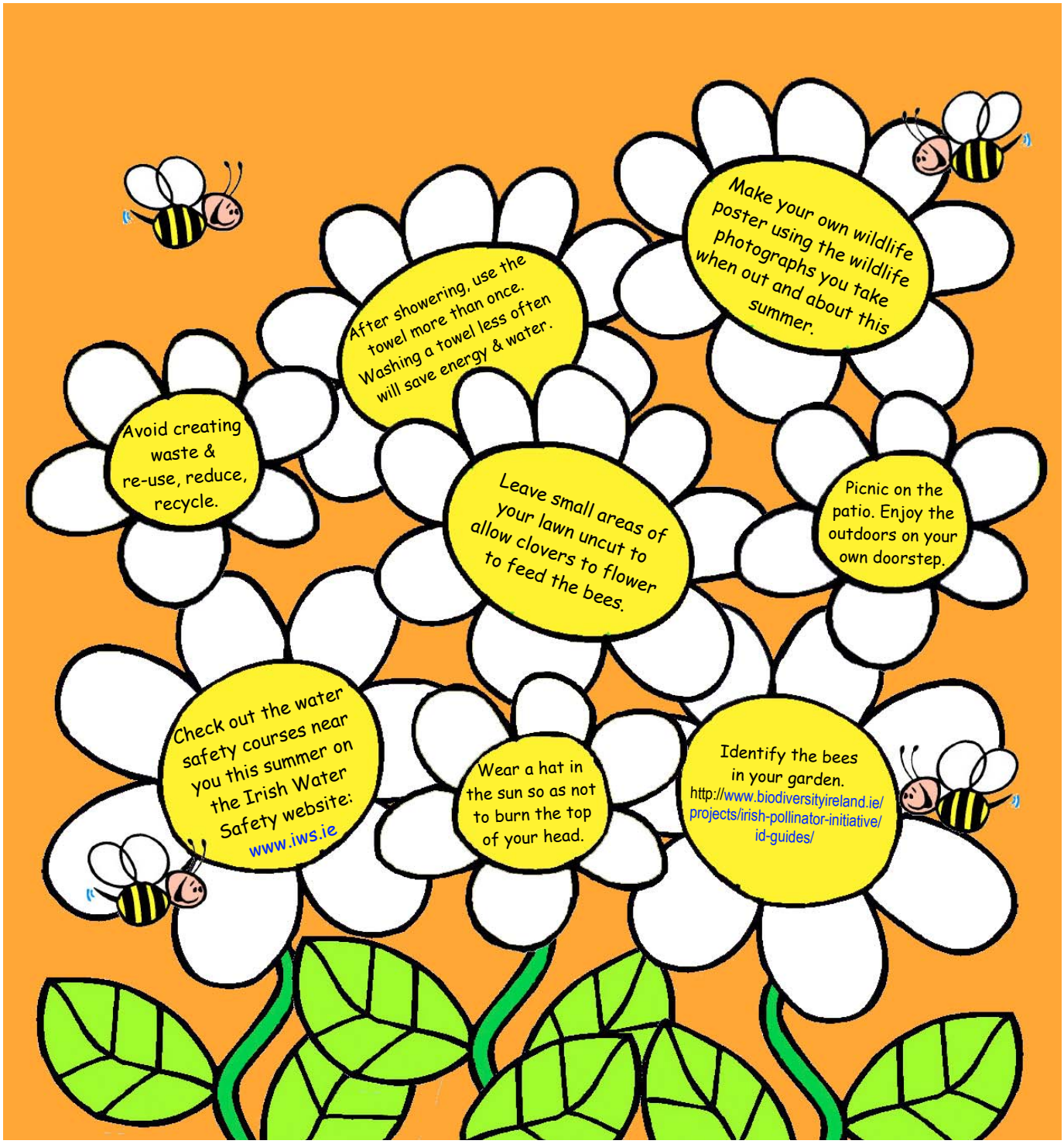
Solar Farm

Una Fitzpatrick

(Over,Down,Direction): Bee Friendly Plants (1,5,E); Bees (3,16,N); Black John (1,15,N); Cabbage (3,9,SE); Climate Change (17,6,S); Comedy Wildlife (18,14,N); Common Lizard (12,18,W); Common Tern (13,7,W); Compass Jellyfish (14,1,S); Green Turtle (1,1,E); Haddock (15,11,S); Jelly Animals (10,15,N); Meadow (7,15,NW); Octopod (17,2,W); Pollination (12,6,S); Pollinator Plan (16,10,W); Solar Farm (1,2,E); Una Fitzpatrick (1,17,E).

Nature's Noticeboard!

Summer 2016



Sherkin Island Marine Station would like to thank the following for their help with this newsletter, especially Úna FitzPatrick, John Joyce, Michael Ludwig, Eimear Murphy, Keelin Murphy, Robbie Murphy, Borbála Vízkelety and Jez Wickens.

We appreciate support from the EPA and the Geological Survey of Ireland toward the newsletter.