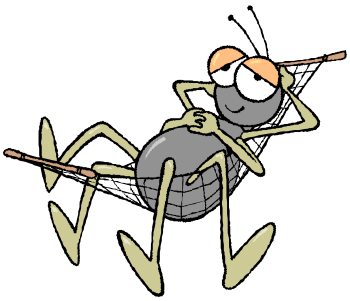

Nature's Web

Issue No. 11 Autumn 2008

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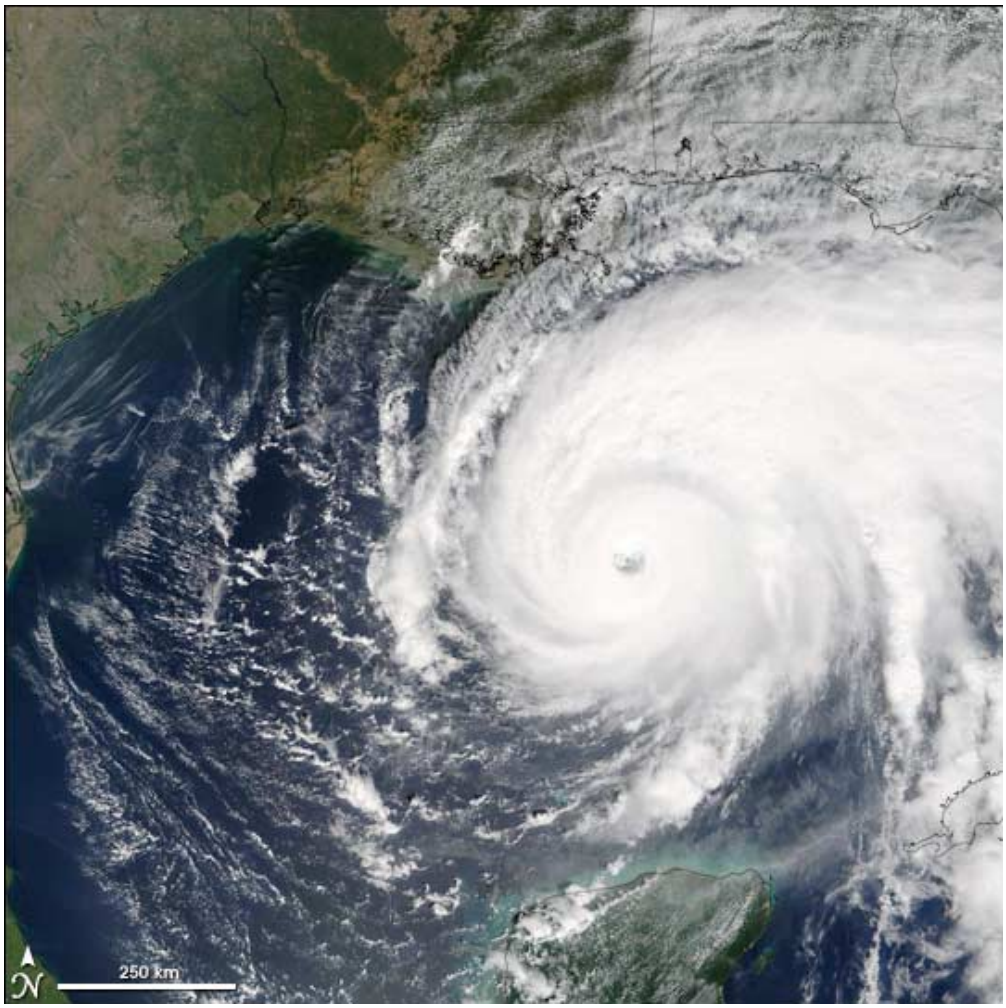


NASA image courtesy of Jeff Schmaltz, MODIS Rapid Response Team

Hurricane Rita became a Category 5 hurricane on September 21, 2005, reaching a wind speed of 275 km per hour, making it the fourth most powerful Atlantic Ocean storm ever recorded.

Whirling Winds

We often complain about our weather and with all the rain this summer, there must have been lots of moans and groans over the holidays! Sometimes the idea of living in place that is always warm and sunny sounds wonderful. But would it be so great if it brought with it a hurricane season that could last for six months?

In the Atlantic Ocean, around the Caribbean and Central America, hurricanes have been developing over the last few months – a number of them have made the news on this side of the Atlantic, such as Hurricanes Gustav, Hanna and Ike. In this issue of Nature's Web we take a closer look at what hurricanes are, and why and where they occur.

As well as hurricanes, we also look at the work that Lorcán O'Toole and his colleagues are doing to bring back the Golden Eagle to Ireland after 100 years!

Editor's Page

Dolphins doing the doggy paddle!

One Saturday morning, at the end of August, our brother Robbie heard about 8-10 common dolphins swimming in Kinnish Harbour (the large inlet in the centre of Sherkin Island). Not only that, but standing on the shore at the mouth of the harbour, he had a clear view of three dogs jumping into the water and swimming towards the dolphins. The dolphins swam briefly around the dogs and away again, with the dogs in hot pursuit. The dogs would get tried after about 10 or 15 minutes and swim back to shore, take a quick rest and then head back into the water. Apparently, the dogs were doing this since the dolphins were first spotted at 11.30am, until about 5pm when a small punt came into the harbour. When the punt left again soon afterwards, the dolphins followed. It seems like they really enjoyed their day of sport with the dogs!

Photo: © BIM

Seafood Recipe

Fish goujons with sweet potato chips

What's Needed:

- 450g gurnard fillets (or other white fish fillets), skinned and cut into 5–7cm strips
- 2 large sweet potatoes
- 1tbsp olive oil
- Lemon juice, dash
- Salt and pepper
- 2tbsp runny honey
- A few handfuls fresh breadcrumbs or oat bran.

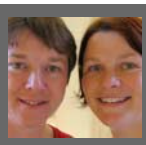
Note: You can also use cod, haddock, dogfish or pollock fillets for this recipe.

What to do:

- Preheat the oven to 190°C/gas mark 5.
- Cut the sweet potato into chips, cook in the microwave for 2 minutes on a high setting.
- Remove from the microwave and toss in olive oil, then roast in the oven for 10-15 minutes.
- Place the fish into a large bowl, and add the lemon and seasoning. Add honey and stir gently to coat the fish pieces.
- Toss the fish in the breadcrumbs or oat bran. Place onto a lightly oiled ovenproof tray, and bake for 8-10 minutes until golden brown.
- Serve with the sweet potato chips, salad and tomato ketchup dip.

Brought to you by BIM. www.bim.ie.

Welcome to the Autumn Edition of Nature's Web!



Dear Reader,

Welcome everyone to the autumn issue of Nature's Web. For this issue, we have enjoyed learning about the wonderful work Lorcan O'Toole has been carrying out with the golden eagles in Donegal (page 7). You can read all about golden eagle on page 3. In this newsletter we also look at structures animals build and why they are necessary. With autumn comes fruit and we find out exactly what its purpose is and we also learn why it is important to collect seeds. Check out nature news from around the world on page 11 and enjoy a giggle 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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Foreign Correspondent: Michael Ludwig

The Golden Eagle

For thousands of years, there were two different types of eagles breeding in Ireland. Both species were driven to extinction through changes to the landscape and then they were shot, trapped and poisoned by humans. Golden Eagles were found especially among our mountains and White-tailed Eagles were common along our coasts and big Loughs.

For over 100 years, Ireland has been without Golden Eagles. Efforts are now being made to re-introduce the Golden Eagle, and The Irish Golden Eagle Project in Glenveagh National Park, Co. Donegal, has had some great success with this. Between 2001 and 2007, they have released young eaglets, from Scotland, into Glenveagh National Park and hope to release 60-75 birds altogether. They only expect a third of the released birds to survive until they are old enough to breed and hope that 6-8 pairs of Golden Eagles will become established in Donegal by 2010. The good news is that one chick has already hatched!

Birds of Prey

Golden Eagles are birds of prey. Birds of prey eat or prey upon other birds, animals, fish or even insects and so are known as carnivores. They have powerful talons with sharp claws for grasping their prey, a sharp hooked beak for tearing at flesh and large eyes giving excellent vision. Most birds of prey hunt during the day (owls hunt at night). They range in size from tiny falconets (almost as small as sparrows) to the massive vultures, condors and eagles.

Photo courtesy www.goldeneagle.ie

A Golden Eagle before fledging.

Golden Eagle Life Cycle

Golden Eagles build their nests (called eyries) on cliff ledges. Breeding Golden Eagles lay two eggs in mid March each year. The adult eagles must keep the eggs warm and dry for about six weeks. The adult birds sit on or incubates the eggs through all types of weather.

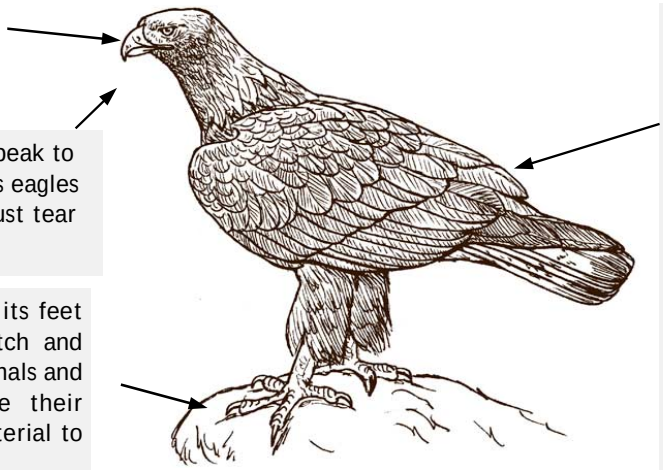
In early May the eggs hatch and two white fluffy chicks emerge.

The adult birds tear off small bits of food to feed the delicate chicks. It takes 5 years before the young birds mature and are old enough to nest and breed themselves. A Golden Eagle can live up to 30 years of age. The chicks are fed in the nest or eyrie for 10–11 weeks before they fledge (ie fly away from the eyrie). Very often only one chick survives.

Golden Eagles also have tremendous eyesight. An eagle's eyesight is 8 times better than a human's.

Every bird of prey has a strong hooked beak to tear up its food before swallowing it. As eagles (and other birds) have no teeth they must tear up their food and swallow it in pieces.

A Golden Eagle has very sharp toes on its feet called talons. Talons are used to catch and grasp the Golden Eagles prey, both animals and birds. Sometimes Golden Eagles use their talons to grasp and bring back nest material to their eyrie – such as sticks or heather.



From the tip of one wing to the tip of the opposite wing in a Golden Eagle is over 2 metres. The Golden Eagles wing has large flight feathers at the back of the wing which are used for flying. The rest of the wing, including the bones and muscles, are covered by small feathers called coverts.

Text and drawings courtesy of "The Irish Golden Eagle Project" Information Booklets. The booklets are available for download from www.goldeneagle.ie

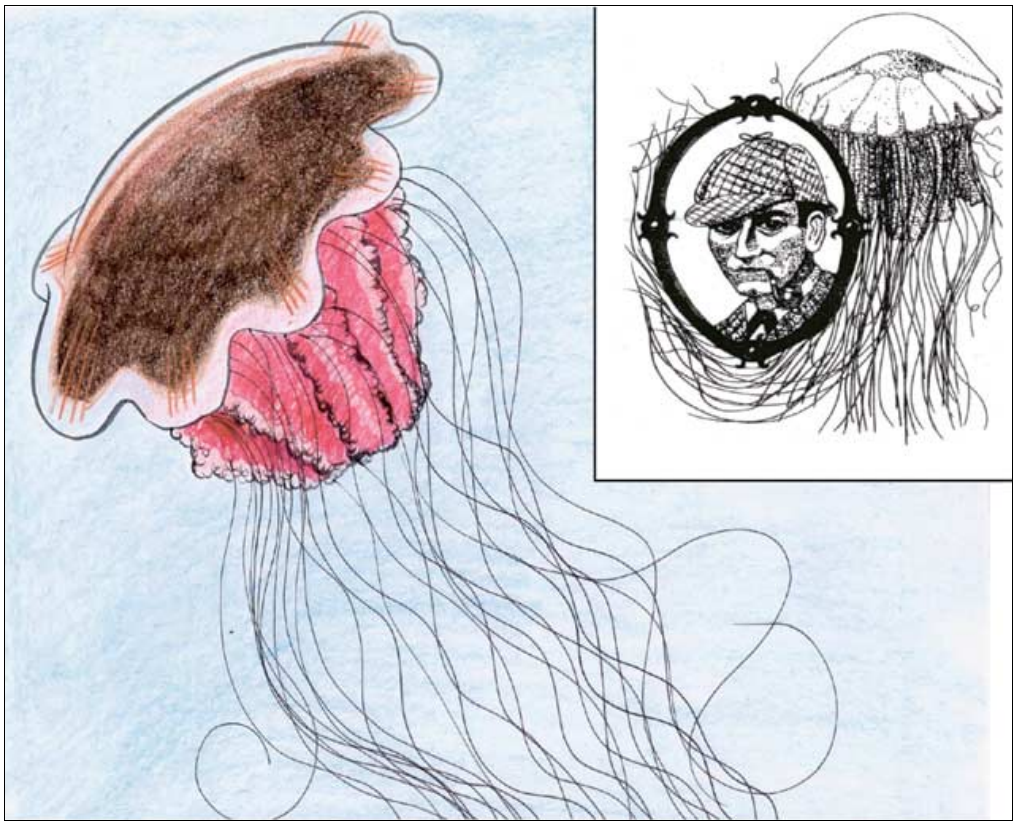
Elementary Dear Watson...

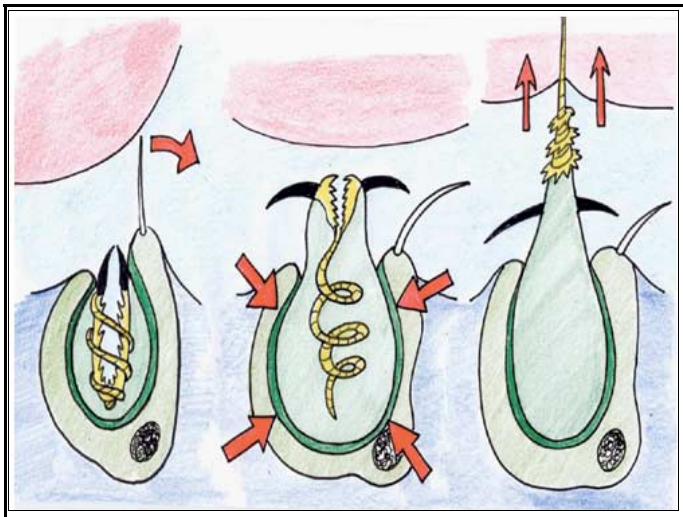
... The Culprit is a Jellyfish!

The jellyfish that caused such a panic around our beaches a few summers ago was the "Lion's Mane" (*Cyanea capillata*) which starred as the villain of the piece in the Sherlock Holmes short story of the same name.

Lion's Mane Jellyfish occur from the Arctic to Mexico and resemble a pulsating brown soup plate with tentacles that can reach up to thirty metres long.

Stings can be severe, but rarely fatal although several people were hospitalised in the Dublin area in recent years. Tentacles continue to sting even when detached from the body or washed up on the beach. To be safe, do not swim when red flags are flying on beaches and never touch jellyfish of any kind, even if they appear dead.





How Jellyfish Sting

Jellyfish tentacles are lined with thousands of stinging cells, each resembling an inside-out rubber glove with one finger and a poisonous fingernail.

If the trigger hair is touched, the cell squeezes, the gloves turns right-way-out and the fingernail injects poison through a hollow thread.

These cells live on in the tentacles that otherwise appear dead, which is why it is unsafe to touch even beached jellyfish that appear dead.

Captain Cockle's Log

Welcome aboard shipmates! Together, we'll be taking a look at the world's greatest natural resource – the sea!

Words & pictures by John Joyce John Joyce 2005

For more adventures from Captain Cockle, visit his website at

www.captaincockle.com

Building Animals

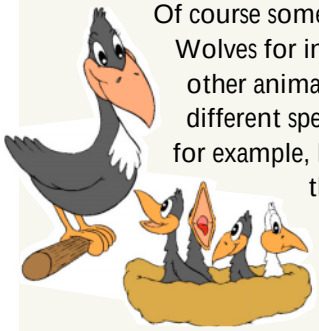
By Jenna Poole

Why do animals build homes?

Just like you and I, most warm-blooded animals (such as birds and mammals) build homes as shelter from the wind, rain and heat. Some species have to create a home safe and strong enough to last an entire winter as they hibernate. Polar bears for example, after eating their fill for the summer, begin "denning-up" in the snow and ice, where they remain undisturbed for months.

Animal homes also act as protection from predators, this is especially important when there is young to feed and keep safe. Other animals use their homes as traps to catch their prey. Spiders put many hours and a lot of energy into building a web to catch flies and other insects and will then probably spend it's whole life sitting on this web waiting.

Squatters



Of course some species do not build their own homes at all. Wolves for instance use the long-abandoned homes of other animals. Other animals invade the nests of different species leave their young in their care. Cuckoos, for example, lay their eggs in the nest of small birds (like the Reed warbler) and when the egg hatches the young Cuckoo will push the warbler's own young from the nest and take all the food for itself!

Building Materials

Twigs and other dead plant material are the favoured building materials of most birds for their nests high up in the canopy. The start of the breeding season is obvious to most of us when we start to see birds flying back and forth with beaks full of sticks. These sturdy platforms are often lined with soft feathers or scraps of sheep wool, and come in a range of shapes and sizes.

House martins are birds that tend to build their nests in the roofs of houses or barns and use a mixture of mud and sticks to construct a solid structure in which they can leaves their young until there are ready to fly themselves.

Some animals will not gather many additional materials at all, but will dig large and complicated tunnels and dens in the earth. Badger sets are excavated in carefully chosen sites according to food and water supply and security, and may contain many generations and up to 12 individuals.

A colony of bees will find a large hollow in the ground or a tree trunk and, using wax that they produce themselves, build massive amounts of combs to store the honey they produce for food. In a similar way, some wasps produce a paper pulp by combining their saliva with chewed wood to build their large, complex nests.

Fruit

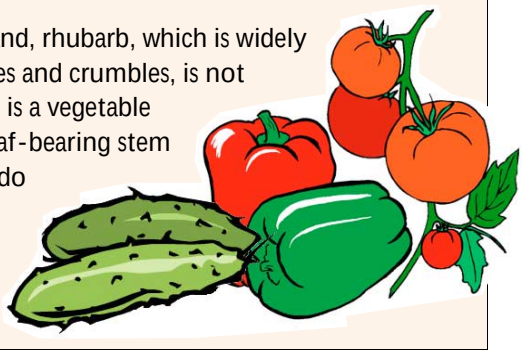
By Jenna Poole

What is a Fruit?

The true meaning of the word "fruit" is actually quite complicated. A fruit is formed when the female part of a flower is pollinated. This happens when pollen from the stamen (the male part) of one plant, is transferred to the stigma (the female part) of another.
Plants produce fruit to protect or encase their seeds until they are ready to grow into plants themselves. Nuts, in fact, are also types of fruit, but they normally only contain one seed in a single hard case.
Some plants make their fruit fleshy, colourful and appealing to birds and insects so that they eat them and spread the seed over wider areas in their droppings. These large, colourful fruits are probably the types of fruits we would recognise and buy in the shops.

Fruit or Vegetable?

There is a lot of confusion between the foods that we call fruits and those that we call vegetables. Most of the items we find in a salad we would think were vegetables, but in actual fact tomatoes, cucumber, and even peppers are all fruits because they are the part of the plant that contains the seeds.
On the other hand, rhubarb, which is widely used in sweet pies and crumbles, is not really a fruit but is a vegetable because it is a leaf-bearing stem and nothing to do with the flower or seed of the plant!



A Fruity Fact

Did you know that citrus fruits such as oranges, lemons and grapefruits are actually types of berry? A berry is defined as a soft fruit containing many seeds. Citrus fruits have a tough leathery skin, which is full of strong-smelling oils that are used for making perfume as well as food and drink.

Human Health

We all know that fruit and vegetables are good for us, but some are much better than others. Many of the most colourful fruits, for example blueberries and strawberries, are now known as "superfoods" because they help to balance out the more unhealthy parts of our diet. Pineapple is even believed to help prevent the blood clots that cause heart disease and strokes in later life.

Wild Fruits of Ireland

Many of the wild plants in Ireland produce fruits that are edible to humans. For example blackberries or Brambles are very common in hedgerows, and strawberries can even be found occasionally. The fruits and berries of some other native trees and shrubs, such as crab apples and sloe berries, are also used in traditional desserts and drinks, but are quite often very bitter when raw. **No wild fruits should be eaten unless you are certain that you know what you are eating!**

All in a Day's Work

Lorcán O'Toole – Manager, Golden Eagle Trust

Lorcán O'Toole works for the Golden Eagle Trust, managing the reintroduction of the Golden Eagle into Glenveagh National Park in Co. Donegal. Together with the National Parks and Wildlife Service, the Trust imports, rears and releases wild Scottish Golden Eagles in Glenveagh, hoping to re-establish these birds that were once native in Ireland.

Lorcan O'Toole

What is your main aim?
Our aim is to conserve and restore some of Ireland's rare and extinct bird species. Ireland has the lowest range of breeding birds of prey of any European country. When we started there were more extinct Irish bird of prey species than existing Irish species. Now we have reintroduced Golden Eagles in Donegal, White-tailed Eagles in Kerry and Red Kites in Wicklow. Buzzards are now spreading naturally southward with up to 20 pairs now breeding in Co Cork and Goshawks are probably breeding in a few isolated big forests too. We hope Ospreys, Marsh Harriers, Hobbies, and maybe even Honey Buzzards, will recolonise Ireland over the coming decades.

What is a day in your life like?
My job really has two main parts. I might spend half the week writing reports and dealing with queries regarding eagles. As a small charity I also need to keep on top of all the paperwork involved in running a small business. The rest of the week is spent in the field either feeding the chicks in the cages or once they are released, or following the older birds as they wander around Donegal. I also try to locate and monitor new breeding pairs in the Hills of Donegal.

What is the best thing about your job?
Walking out onto a hilltop and watching the young eagles get stronger and stronger, week by week, after they leave the rearing cages. At first they can only fly short distances and are often quite clumsy when they land. After a few weeks their wing muscles develop and it is a joy to watch a young bird soaring for the first time and learning to control its direction by lowering one wing or the other. My job is very rewarding!

What is the worst thing about your job?
Unfortunately some people are still using poison to control foxes and crows, as they are traditionally entitled to do so. We are constantly asking people to consider using other control methods. One can never be sure what bird or animal will eat a poisoned meat bait – will it be the fox or crow one is after or will it be a passing Golden Eagle or Red Kite or maybe even a neighbour's sheep dog? It is really frustrating to see eagles live for 3-4 years and begin to establish a territory and then suddenly disappear almost certainly because they have eaten a poisoned meat bait left out for foxes or crows.

Where does your work take you?
I have got to know many of the most beautiful and remote spots in Donegal over the last eight years whilst tracking Golden Eagles. Every year I go to many parts of the Scottish Highlands and Islands to collect Golden Eagle chicks. I am also beginning to visit Leitrim, Sligo, Mayo and Galway more often in search of Golden Eagles – any eagle sightings from these four counties would be especially welcome.

Do you work alone or as part of a team?
Myself and Damian Clarke (managing the Red Kite project in Wicklow) and Allan Mee (managing the White-tailed Eagle project in Kerry) work closely together and share ideas all the time. We all get great support from Ronan Hannigan, John Lyden, Tony Nagle and Gilbert Little who help run the Golden Eagle Trust Ltd– a small but vibrant charity.

What would you say to someone wanting to do your job?
Nowadays it is quite important to get as much training or education as possible. But do also try and get some practical experience, maybe helping out a local conservation group or doing some voluntary work as you get older.

What would you do if you weren't doing what you do?
Conservation is not the best paid profession in the world and I always remember my dad and mom advising me to get a 'real' or a 'good' job and continue birdwatching as a hobby! I know if I was not working on the Eagle project I would still be working in conservation, but if not I might become a landscaper or a psychologist.

Photos © Lorcan O'Toole

Above: Irish Golden Eagle chick flying shortly after fledging.

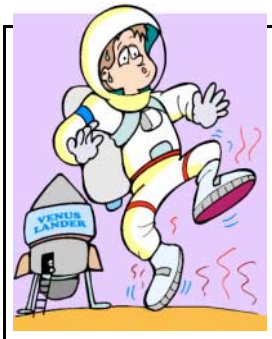
Right: Locations from a satellite-tagged female Golden Eagle, released in Glenveagh National Park, from 2006 to spring 2007.

Tommy Time

Hi Kids, I'm Dr. Tommy Prawn, I'm a mad scientist that lives in the river Shannon in Ireland. My good friends at Nature's Web rang me on the watermobile and told me ye had a few questions about science and asked if I could answer them. I told the gang at Nature's Web "no probs, of course I would try to answer the questions you asked." So here I go…….. Enjoy!

Remember, if you have any other science questions, just send them into editor@naturesweb.ie and they'll pass 'em on to me!

Dr. Tommy



What are the Hottest and Coldest Planets?

I had a dream the other night, that myself and my best friend Harold Eel were after getting jobs in NASA. We were just going into space when my mother woke me for work. I hate when that happens!

Anyway, as I was up out of bed I decided to answer the question. The clouds on Venus trap heat like a greenhouse traps heat to keep plants warm. On Venus, the heat is out of control. It can get up to almost 465°C. The air is thick and deadly. Venus is a strange planet. Venus spins backwards so the Sun rises in the west and sets in the east, and because the planet rotates so slowly, a day on Venus is longer than it takes to go around the Sun. On Venus, a school day would last four months.

At a chilly -230ºC, Pluto is one of the coldest places in the Solar System. You might want to make sure you time your trip for the summer months. During the winter, it is so cold that even the atmosphere freezes. Formerly the smallest planet in the Solar System, in August 2006 the International Astronomical Union redefined the term 'planet'. Now Pluto is classified as a dwarf planet.

There was you thinking Pluto was Mickey Mouse's dog. I don't think I'll be going to any of those planets if I have my space dream again. I'll stick to the moon. My aunt Breda Prawn always tells me there is loads of space between my ears, so I told her I wish she would live on the moon and stop annoying me, she was not impressed and told me to stop giving her cheek, I said prawns don't have cheeks. I was sent to my room!!

What Creature has the Biggest Brain?

I think its prawns. I'm a prawn and I can answer all these questions, so it must mean I'm very clever. Also my Uncle Alfie Prawn is always telling me I'm too smart for my own boots. I don't know what he is on about. Hello Alfie, I'm a prawn, I don't wear boots, I wear slip on sandals.

Although humans are known to be the most intelligent creatures on the planet, they don't have the biggest brain. So the first point to note is that brain size does not make you smarter or dumber than someone else. The biggest brain is inside the head of a Sperm Whale. This Great Whale's brain is six times larger than the human brain. It is by far the largest brain of any creature that has ever inhabited the Earth and thus, the largest brain for which we have evidence anywhere in the universe.

How do Dolphins Sleep?

Dolphins are mammals, so in many ways, they are just like human beings. Among other things, they have similar bone structure, are warm-blooded and give birth to "live young." The biggest differences between these animals and us as human beings are the environments in which we live. We live on land and they live in water. But how can they sleep without drowning? The solution for dolphins is to let one half of the brain sleep at a time. In this way, the animal is never completely unconscious, but it still gets the rest it needs. And where do dolphins sleep? They could probably sleep anywhere, but it makes sense that they would do it near the surface of the ocean so they can come up for air easily. It's not uncommon to see dolphins "logging," swimming slowly along the surface, with very little movement. Presumably, these are dolphins at rest.

Dr. Tommy Prawn would like to acknowledge the help of his good friend James Ring. Text: © James Ring

Nature's Web Wordsearch

Nature's Web Autumn 2008 Wordsearch

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

f	e	r	o	k	i	w	s	p	j	w	m	s	m	b	y	a	k
i	p	a	l	m	p	s	r	e	v	e	u	v	k	z	a	t	r
s	h	z	k	m	t	l	g	y	n	n	l	s	t	r	u	g	k
h	d	o	z	a	z	a	k	x	e	a	b	l	m	t	n	h	g
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p	h	n	l	t	M	s	d	e	e	s	g	n	i	v	a	s	v

army ants

autumn

beaver dam

black bear

building animals

doggy paddle

fish goujons

fruit

golden eagle

hurricanes

jellyfish

Lorcán O'Toole

Mount St Helens

razorbill

saving seeds

termites

Venus

weaver bird

SOLUTIONS *(Over,Down,Direction)*: army ants (16,2,SW); autumn (17,14,NW); beaver dam (10,16,NE); black bear (8,17,E); building animals (7,16,N); doggy paddle (8,7,SE); fish goujons (1,1,S); fruit (4,13,N); golden eagle (18,4,SW); hurricanes (17,10,NW); jellyfish (10,1,SE); Lorcan O'Toole (3,8,E); Mount St Helens (6,18,NE); razorbill (3,1,S); saving seeds (17,18,W); termites (11,6,W); Venus (9,5,NE); weaver bird (2,13,N).

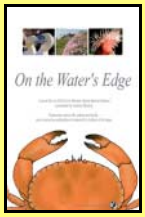
Learn More

A Beginner's Guide to Ireland's Wild Flowers
Have you ever wanted to put a name to the wild flowers you see about you every day, or while on a walk, or on holiday? With the help of this pocket-sized guide, you will be able to do just that. Beginners of all ages will be introduced to the many common wild flowers found around Ireland. *206pp*

Only €8.50 including postage

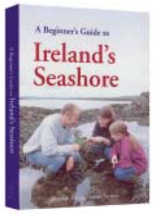
Sea Life DVD: *"On the Water's Edge"*

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. €13.30 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 €8.00 including postage



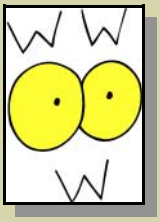
Only €1.95 each including postage or €12.00 for all eight! *32pp each*

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* 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.

Visit: www.sherkinmarine.ie



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:

Golden Eagle: www.goldeneagle.ie http://www.rspb.org.uk/wildlife/birdguide/name/g/goldeneagle/index.asp

Jellyfish: http://www.aquarium.org/jellies/index.htm
http://www.captaincockle.com http://www.marine.ie/home/aboutus/newsroom/pressreleases/Jellyfish.htm

Building Animals: http://www.biokids.umich.edu/guides/tracks_and_sign/build/
http://www.nhptv.org/Natureworks/beaver.htm#3 http://www.nal.usda.gov/outreach/bugscolor.pdf

Fruit: http://en.wikipedia.org/wiki/Fruit

Hot & Cold Planets: http://www.nasa.gov/worldbook/venus_worldbook.html
http://www.nasa.gov/worldbook/pluto_worldbook.html

Whale Brain: http://www.bbc.co.uk/nature/wildfacts/factfiles/103.shtml

Sleeping Dolphins: http://seagrant.mit.edu/education/resources/dolphinsleep/questions/dolphins/sleep.html

Mount St Helens: http://www.fs.fed.us/gpnf/mshnvm/

Bird Ringing: http://www.bto.org/index.htm

Bear Rescue: http://www.floridaconservation.org/whatsnew/08/statewide/News_08_X_BearRescue.htm

Lonesome George: http://www.guardian.co.uk/environment/2008/jul/23/wildlife.animalbehaviour

Saving Seeds: http://www.irishseedsavers.ie/
http://www.regjeringen.no/en/dep/lmd/campain/svalbard-global-seed-vault.html?id=462220

Hurricanes: http://www.nhc.noaa.gov/ http://www.fema.gov/kids/hurr.htm http://www.hurricanehunters.com

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 the some strange goings on in the natural world.

Razorbill M23170 celebrates its 41st birthday!

Photo courtesy of *Gsd97jks*

A razorbill

To learn more about how long birds live and when and where they move, many are fitted with a lightweight, uniquely numbered, metal ring on their leg. This ring provides a reliable and harmless way of identifying individual birds. The British Trust for Ornithology (BTO) looks after bird ringing in Ireland and Britain and they have recently discovered a bird which they can confirm is 41 years old! Razorbill M23170 (its unqiue ring number) was ringed in 1967 as a chick on Bardsey Island (off the Welsh coast), Gwynedd, UK. Forty one years later it was seen again in the very same place. Separately, a 31-year-old curlew, which was ringed in Clwyd, Wales, UK, was seen breeding in Germany. In total, the BTO recorded a total of 11 record-breaking sightings.

Photo courtesy of *US Geological*

Mount St Helens in the early 1980s

Sweet Dreams!

We often hear of volcanoes becoming active, with the increased likelihood of them erupting. However, scientists in the the US Geological Society believe that one well-known volcano, Mount St Helens in Washington State, USA, has gone back to sleep! After three years of activity, the volcano has had no sign of eruptive activity in the last five months. The volcano erupted violently in 1980, killing 57 people, and reawakened in October 2004 with blasts of steam and ash. A lava dome continued to grow on the volcano until January of this year.

Lonesome George may be a Daddy?

http://flickr.com/photos/23005733@N00/1351695967

Lonesome George, on the Galapagos Islands, is the last surviving giant tortoise of his kind in the world and is the world's rarest creature. He was rescued in 1972 from Pinta, an island off Ecuador's Pacific coast but showed no interested in reproducing. Two of his female companions have recently laid nine eggs and a number have been placed in an incubator. If these eggs have been fertiliised, it will take 120 days to discover if Lonesome George is the father!

Life-saving, with a difference

We often hear of humans rescuing other humans who have gotten into difficulty in water, but one biologist took this a step further. Adam Warwick, a biologist with the Florida Fish and Wildlife Conservation Commission (FWC) saw a 375lb male black bear struggling in the sea off Florida and jumped in to rescue it. The bear had been wandering through a residential area and, in an attempt to move it to a remote location, FWC officials shot it with a tranquiliser dart. The tranquiliser took longer to work than they expected and the bear bolted into the water, where it started to become drowsy. Having jumped in after the animal, Adam kept one arm underneath the bear's head and held onto the scruff of its neck with the other. Luckily the water was only 4 ft deep and he was able to guide the bear back to shore. Adam was uninjured, expect for cuts on his feet from barnacles and a scratch from the bear on his foot. A bystander arrived on the scene with a backhoe and with the help of other on the scene, they managed to load the bear into an FWC truck. It was eventually relocated in the Osceola National forest near Lake City, Florida, USA.

Photo provided to FWC courtesy of Becky Bickerstaff

Don't try this at home. FWC biologist Adam Warwick saves a 375-pound black bear from drowning in Gulf waters off Florida, USA.

Animal Homes

Between mammals, birds, reptiles, insects and amphibians, there is understandably a very wide diversity of homes. Most full-time aquatic animals will not have any kind of fixed dwelling, and this includes fish, whales, dolphins and seals. Many herds of animals will also not have homes as they rely on their numbers for protection.

Each animal home can have a different name and within the whole animal kingdom you may find dens, nests, drays, dams, webs, sets, warrens, hives, lodges, mounds, tunnels, holts, and burrows, to name but a few.

Beaver Lodges and Dams

Beavers are medium-sized mammals found in North America and Europe. They live in dome-shaped lodges, which they build out of sticks and mud in deep water. The lodge has a chamber where the beaver lives and which can only be entered under water. To make sure that the water is deep enough for a lodge, beavers will often build a dam further downstream, to back up the water. Beavers can fell massive areas of forest in short amounts of time. They cement tree boughs and branches together with mud and stones, creating dams as long as 850 metres!

Photo courtesy of Walter Siegmund CC-A-2.5

Weaver Bird Nests

Certain species of Weaver bird weave hanging nests high in the tree canopy. In one species it is actually the males who build the nests, using grass and other flexible vegetation. They first build a swing suspended from the chosen perch and then make a stiff ring for an entrance. Around this they construct a basket, into which they attract a female. In order to attract several females and ensure the maximum amount of offspring, they build a number of these baskets. Other species of Weaver bird build "villages" of many nests under one roof – often for as many as 95 pairs.

Photo courtesy of Tim Ross

Termite Mounds

There are many species of termite and they occur in tropical and subtropical places. Many dig and mould massive amounts of earth into huge structures. A mound can start with just a single pair of termites that create a small chamber just beneath a rock or stone. As time goes by and numbers increase, the chambers also increase in number and size. Termite mounds taller than 12 metres have been found in Africa! Mounds are often built along a north-south line with two larger flat sides facing east and west to absorb the heat from the rising and setting sun.

Courtesy of Vierka Marákeová, Slovákia

Army Ant's Bivouac

Army ants are always on the move, making it impossible to set up a permanent home that they could return to each night. A colony may have as many as 700,000 worker ants and the "bivouac", as it has been called, is made up mainly of the bodies of these individuals! The ants find a sheltered spot to stop each night and then link legs, using their strong claws to form chains. The temporary structure protects the queen and the young ants or larvae overnight, even controlling the air temperature around them. The structure is dismantled at first light.

www.flickr.com/photos/deanmike/2266189604/

Text by Jenna Poole

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. Which whale has the biggest brain?
2. The giant tortoise, Lonesome George, lives on one of which famous group of islands?
3. How long are the tentacles of the Lion's Mane jellyfish?
4. What type of animal swam with dolphins on Sherkin Island this summer?
5. What is a badger's home called?
6. How old is Razorbill M23170 this year?
7. What type of animal did the biologist, Adam Warwick, rescue from the water?
8. What are the golden eagle's toes called?
9. What type of potato is used in the seafood recipe?
10. How long would a school day last on Venus?
11. A tomato is a fruit. True or false?
12. Which type of bird are Lorcán O'Toole and his colleagues trying to re-introduce into Glenveagh National Park, in Donegal?
13. What volcano has just gone back to sleep?
14. How many different types of Irish apple tree varieties do the Irish Seedsavers grow?
15. What was the first name used in the 2008 hurricane season?
16. How high can termite mounds grow in Africa?

Answers: (1) Sperm Whale (2) Galapagos Islands (3) 30 metres long (4) Dogs (5) Set (6) 41 years old (7) Brown Bear (8) Talons (9) Sweet Potato (10) Four months (11) True (12) Golden Eagle (13) Mount St Helens (14) 140 (15) Arthur (16) More than 12 metres.

What am I saying....?

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

Courtesy of US Wildlife Service

Nature Jokes

What is the fruitiest lesson?
History, because it is full of dates.

Why is it hard to play cards on safari?
Too many cheetahs.

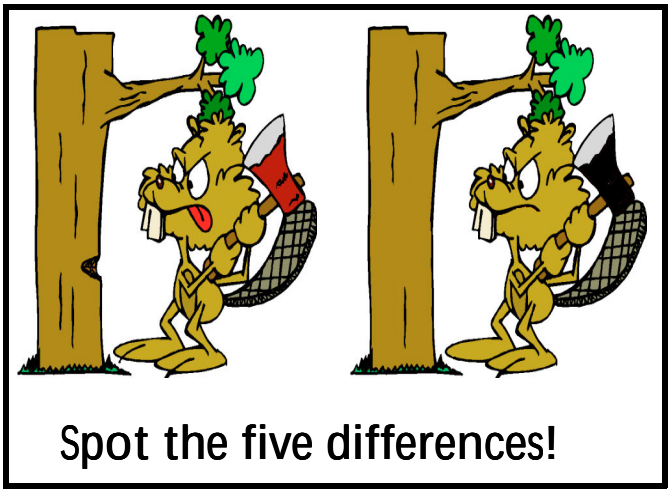
What is the strongest animal?
A snail. He carries his house on his back.

How many rotten eggs does it take to make a stink bomb?
A phew.

What do you get when you cross a porcupine with a balloon?
Pop!

What washes up on very small beaches?
Microwaves.

What happens when you throw a green stone in the red sea?
It gets wet.



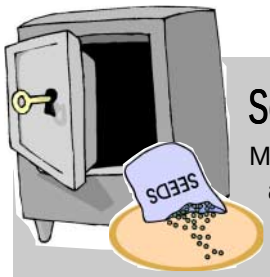
Spot the five differences!

Saving Seeds

By Marketa Janouchova

Collecting seeds

It is easy to collect seeds of vegetables and flowers for planting next year. Most vegetables are annuals, which are plants that grow, flower and produce seed in one year. Annuals, like sweet peas, radishes and sunflowers usually produce lots of seeds, and are easy to grow.
The best time to collect the seeds is on a sunny day when they are ripe, which for many plants means that the fruits are dry and opening. Dry them at room temperature, put them in paper bags and label them. If you want to store them for longer than one year, it is best to put them in a waterproof container, like an old-type jam jar, at the bottom of a fridge (at 0–5°C).



Seedbanks

Most seeds can be frozen and stored at –18 to –20°C in "seedbanks" for many years (maybe even 100 years or more!). This is best done by experts because seeds can be damaged if they dry out too much, or if they do not dry enough (ice crystals can form inside it and damage the cells). There are many expert seedbanks around the world, like the Millenium Seedbank in Wakehurst in England, which are saving seeds of mostly wild and crop plants, many of which are rare, very valuable or endangered. Svalbard Global Seed Vault is a seedbank in a tunnel, which was drilled into a mountain on the frozen Norwegian island of Spitsbergen, only 966 km from the North Pole!

Sleepy Seedheads

Most seeds in our climate become dormant (French word "dormir" comes from Latin and means "to sleep") over winter, when they dry out and chill. It is a way for plants to survive winter. But seeds can sleep longer than that. Poppies can "pop up their flowerheads" from the ground even after 70 years! In north eastern China 1,300 years old Lotus seeds were found and they were still able to grow!

Some seeds, however, do not like to dry out. They mostly come from juicy tropical fruits, like avocados, mangoes or coconuts (coconut is a seed already). If you want to plant them, you have to do so immediately after eating the fruits! But there are seeds in our climate, which do not like drying out either, like acorns or chestnuts. These seeds cannot be dried and stored.

Apple Tree Savers

The Irish Seedsavers are saving seeds of old, mostly Irish, varieties of grain, vegetable and fruit. They have a seedbank, which contains more than 600 rare and endangered vegetable varieties. Apart from that they have an apple orchard and a tree nursery, in which they are growing about 140 different types of Irish apple trees, with names like Lady's Finger, Irish Molly or Cavan Strawberry. These "native" apple trees produce much tastier apples and are more resistant to diseases as they were grown before the discovery of pesticides. This means they can be grown without the use of chemicals and produce far healthier fruits!

Making New Plants

In nature a lot of plants naturally produce hybrids. This is where a male plant of one species pollinates a female of another one and the resulting seed produces a plant that has some characteristics of each "parent". The new plant could, for example, have pink flowers like its "mother" and spiky leaves like its "father". In cultivation, people use this method to create flowers with unusual colours or shape of petals or to get higher yields of crops, with bigger fruits.

Scientists have also discovered a way of changing the inner structure of a plant to make it more resistant to herbicides, pesticides and predators. This is known as Genetic Modification (or GM). The scientists create a new plant by inserting a gene of a different plant (or even a bacteria) into the structure of another plant.

Hurricanes

When the conditions are right, hurricanes form over warm ocean waters. These are severe tropical storms, or cyclones, and normally occur in the Western Atlantic Ocean, around the Caribbean Sea, Gulf of Mexico and in the North Pacific off Mexico. In these areas, hurricane season is officially from 1st June until the end of November.

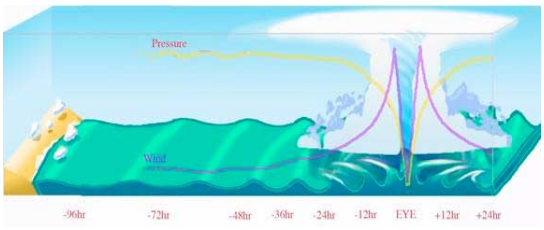


Image courtesy of JNOAA

A example of a hurricane, 92 hours before it hits land.

A hurricane feeds on the heat released from moist air rising from the ocean. This moist air condenses when it hits colder air above it and forms into water drops, which warm the surrounding air. This warm air rises and cooler air replaces it creating wind. There is a force, known as Coriolis Force, which deflects moving objects to one side because of the Earth's rotation. It is this force that starts the wind spinning in one direction around an "eye", creating a hurricane.

When a hurricane occurs in the Northern Hemisphere, it spins in an anti-clockwise direction, but if it forms in the Southern Hemisphere, it spins in a clockwise direction. When a hurricane hits land, heavy rain and strong winds can cause huge damage to buildings, trees and vehicles. Heavy waves, known as a storm surge, are also created and these waves are very dangerous.

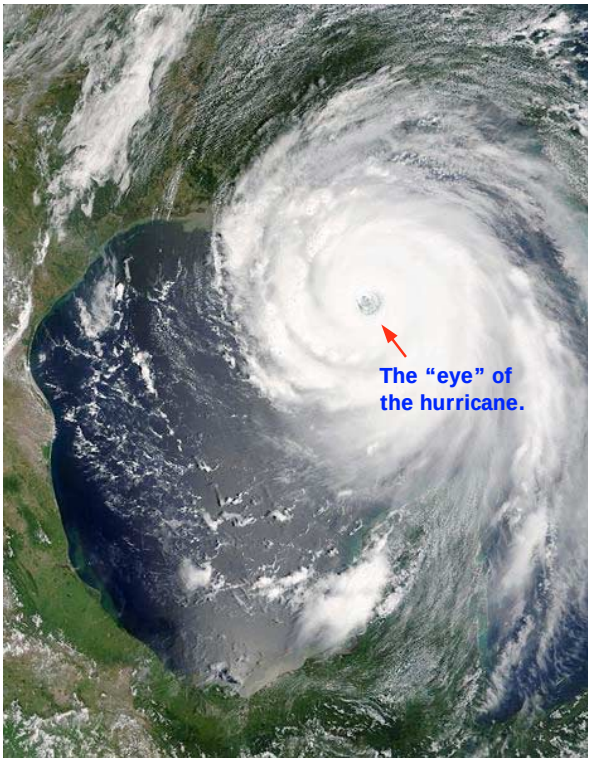


Image courtesy of Jeff Schmaltz, MODIS Rapid Response Team, NASA/GSFC

A satellite image of *Hurricane Katrina*, which caused such destruction when it hit the USA in August, 2008.

Hurricanes, Cyclones & Typhoons

Severe tropical storms do occur in other parts of the world, but they are not usually referred to as hurricanes. If they occur in the Indian Ocean they are usually called cyclones and in the Pacific Ocean they are called typhoons.

Tracking Hurricanes

It is important to track hurricane activity so that people can have some warning before a hurricane hits land, giving them time to evacuate the area. In the US, the National Hurricane Center, which is part of the National Weather Service and the National Oceanic and Atmospheric Administration, tracks tropical storms and hurricanes. They look at satellite images and have brave pilots who actually fly into hurricanes and tropical storms to collect data.

Naming Hurricanes

Parents who are expecting a baby often spend many days and weeks trying to think of the perfect name for their new baby but the scientists who name hurricanes don't have that problem.

To help scientists identify individual hurricanes and tropical storms, a simple name was found to be the easiest way to keep track of them as they moved around the ocean. The World Meteorological Organisation uses six lists of names, using one list each year until all the lists are used, and then they go back to the start again. Each list has a man or woman's name for every letter of the alphabet, except Q, U, X, Y and Z. The only time a name is "retired" is if a hurricane proved to be very deadly or costly. That name will then be replaced with a new name.

The names for the 2008 season are: Arthur, Bertha, Cristobal, Dolly, Edouard, Fay, Gustav, Hanna, Ike, Josephine, Kyle, Laura, Marco, Nana, Omar, Paloma, Rene, Sally, Teddy, Vicky and Wilfred.

Autumn 2008

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