Outdoor & Woodland Learning Scotland Bulletin

July 2015

Welcome to the new format OWL Scotland bulletin which is adapted from the Outdoor Learning Wales bulletin – thank you to OLW for letting us share their bulletin! If you have items for inclusion in the bulletin please send them to Bonnie.Maggio@forestry.gsi.gov.uk

OWL Scotland Update:

Courses and Events:

CLPL Programme

We are delighted to announce our first free CLPL course dates confirmed for Fun with Fungi with Alison Murfitt. Alison Murfitt will take you on a journey to discover how vital fungi are to the world as we know it, learn top tips to tell different species apart and hear some of the folklore surrounding the mysterious kingdom of fungi.

Venues and Dates:

Saturday 19th September 2015	**Mabie Forest, Dumfriesshire**
Saturday 24th October 2015	**Glenmore Visitor Centre, Aviemore.**
Saturday 7th November 2015	**Kinnoul Education Shed, Perth**

To Book please fill out a booking form available from the OWLScotland website.

We are working on the rest of this year's series of CLPL courses which will include courses on Soils (for International Year of Soils) and more...
More details to follow.
– If you would like to host one of these or have ideas or contacts to help run them please get in touch.

Local News:

OWL North East Group – Skogsmulle Conference

The North East OWL Group is hosting a Skogsmulle (the use of a fantasy nature charcter to aid transition from Nursery to Primary) course on Friday 7th August at Camphill Aberdeen, Murtle Estate, Bieldside, AB15 9EP. For further information and booking can be found on the website.

Launch Events

There are a number of local OWL group launch events being planned:
East Lothian OWL group will be launched on 5th September.
Argyll OWL Group will take place on 19th September at Inverary Primary School
and Tayside OWL Group will be launched also on September 19th in Perth.
See the website for further details.

Other news:

Outdoor Learning Directory – a new online resource to support Outdoor Learning!

The Outdoor Learning Directory aims to provide a one-stop-shop to the learning resources, grants and training provided by Scotland's Environment & Forestry (ENFOR) bodies, with links to others who are involved with Outdoor Learning in Scotland. This directory is a currently a collaboration between Cairngorms National Park, Loch Lomond & Trossachs National Park, Forestry Commission Scotland, Royal Botanic Gardens Edinburgh, Scottish Environmental Protection Agency and Scottish Natural Heritage. For further information or comment, contact Penny Martin (ENFOR Outdoor Learning Project Officer Penny.Martin@snh.gov.uk).

Dig It! 2015 and **Forestry Commission Scotland**
have joined forces to discover archaeology's creative potential. Scotland's heritage will take centre stage in this exciting competition for all ages. There are many different ways to enter and lots of prizes to be won, so grab your cameras, pencils, paintbrushes and trowels and show us what Scotland's past means to you.

Who Can Enter?
The competition is open to all, whether you are a budding artist or smartphone photographer.There will be three age categories: Novice (under 16), Apprentice (16-24) and Artisan (25 plus).

What Can I Submit?
Participants will compete in four categories:

Snap It! - Grab your camera and capture a site, monument, object or the people who visit or even uncover them

Wish You Were Here - Show us your photographs which put the archaeology, and perhaps its visitors, within the drama of its wider landscape setting

Archaeology Is… - Mysterious? Beautiful? Muddy? This category is seeking artistic responses to archaeology and the medium is entirely up to you

Putting the Art in Archaeology - Archaeologists, from dig volunteers to site directors, can present their artistic examples of plans, models, drawings and reconstructions

'Archaeology' can mean a whole range of things. From the smallest prehistoric arrowhead to imposing industrial landscapes, archaeology is all around us!
Please visit **digit2015.com** for information on how to enter, prizes and inspiration and examples.

The hunt is on for Scotland's best loved tree!

Scottish Tree of the Year is the search for the nation's best loved tree. It's organised by the Woodland Trust Scotland and supported by players of People's Postcode Lottery, alongside sister competitions in England, Wales and Northern Ireland. The competition is open to any living tree in Scotland, and anybody can enter. We're looking for individuals or groups to nominate trees that have an amazing story to tell and to champion their trees through the competition. Virtually every community in Scotland has at least one tree that forms a local landmark or has a great story to tell. It could be associated with a famous figure or historical event. Maybe it's the sole survivor of much bigger forest woodland, or one that local people rallied to save from being felled? It might be a tree that everyone in the community knows and loves. Entries are open until Sunday 12 July, after which an independent panel of judges will shortlist six trees. Later in the year, a public online vote will decide the winning tree, which will be announced at a reception at the Scottish Parliament in October. The winning tree will go on to be Scotland's representative in the 2016 European Tree of the Year contest. To enter, simply fill out the application form on the link below and tell us about the tree and how you would campaign for it to win a public vote. Please include at least one photograph of the tree (and remember to contact the owner of the land on which the tree stands, for his/her permission.)**More information about the competition can be found at www.woodlandtrust.org.uk/treeoftheyear. Entries close on Sunday 12 July.**

Scottish Learning Festival

The Scottish Learning Festival (SLF) is the key education event in Scotland welcoming thousands of educational professionals.

SLF 2015 takes place on Wednesday 23 and Thursday 24 September in the SECC, Glasgow. The theme of this year's event focuses on raising achievement and attainment for all by maximising educational outcomes through:

•Local partnerships and collaboration – to share approaches that lead to better outcomes

•Self-evaluation – to ensure creative and innovative approaches to sustained improvement

•Work-related learning – to improve transitions into sustainable productive employment.

EU Forest Pedagogics Congress 2015

Registration is now open for the 10th EU Forest Pedagogics Congress to be held in Zvolen, Slovakia on 29th September to 1st October. These are a great opportunity to network with other working in our field and learn from the vast array of experience and sharing at the congress. The 7th Congress was held in Scotland – check out the video to get an idea of what that involved. http://vimeo.com/53467212

http://www.forestpedagogics.eu/annual-congress/2015-zvolen,-slovakia.html

International Year of Soil

This year is the UN International Year of soil: http://www.fao.org/soils-2015/en/
If you are working on anything to do with soil for children and young people and would like to share with others please let Sally York know at

Sally.york@forestry.gsi.gov.uk. Sally is working with a range of folk working on soil to identify what is out there, where the gaps are and what we could collectively do to make soils exciting …yes it can be done!! If you haven't come across the OPAL soil pack then check it out at http://www.opalexplorenature.org/soilsurvey

Learning for Sustainability online

MOOC with Edinburgh University: a free online course. A few hours a week for a few weeks for anyone in the world http://www.ed.ac.uk/studying/moocs/subjects/subjects

Contact Us:

To contact your local OWL group please go to the OWL Scotland website

Or contact us:

Bonnie Maggio

Outdoor & Woodland Learning Manager
Forestry Commission Scotland
Silvan House
Edinburgh
EH12 7AT

Bonnie.Maggio@forestry.gsi.gov.uk

Join us on Facebook – "Forest Education Initiative" group (we have over 4000 members so were unable to change from our original name!)

Monthly Fact and Ideas Guide

Quote of the month

"You should sit in nature for 20 minutes a day…..
unless you are busy, then you should sit for an hour"
Old Zen saying

Activity of the Month

Fill a Bucket Relay Race

You need a lot of energy and determination for this game!
It's a great one for the beach but could be adapted to play near any safe access to water. And don't forget to wash hands in clean water before eating, etc.

You will need 2 small buckets of the same size and two evenly divided teams to play

Have each team form a line by the shore.
Set up a buckets about 10 feet from the water's edge.
The object of the game is for each team to carry the water in their bare hands to the bucket (if this is too challenging you can add in sponges)
Once a player fills the bucket then the next player in line can grab a handful of water and race to the bucket and so on until the bucket is filled.
The first team to fill the bucket wins!

Fact of the Month

Did you know more people die from falling coconuts then from shark attacks?

Plant of the Month

Broad-leaved Dock;Rumex obtusifolius

This is a common plant that grows on waste ground, in hedgerows, gardens and roadside verges, and next to water all over the UK. An abundant perennial it is well-known to most of us as the herbal remedy for nettle stings, yet there are differing opinions as to whether it really works or not.

In the UK the two common species that you are likely to have come across are, Broad Leaved Dock and Curled Dock.

Broad-leaved Dock is a tall perennial herbaceous flowering plant that grows to a height of 50 to 130 cm. It is easily recognizable by its very large oval leaves with cordate bases and rounded tips, some of the lower leaves having red stems. The edges of the leaves are slightly "crisped" or wavy, the upper surface is hairless and the under surface may be papillose. The leaves of this plant can grow to about 40 cm (16 in) in length. The stems are tough, often reddish, and unbranched. Flower spikes appear from June to October.
Curly dock - is very similar in appearance but with thinner and wavier leaves.

Best known as the alleged antidote to nettle sting though there is no proof of its efficacy. It has been suggested that the dock is alkaline and counteracts the acidity of the nettle there is not even agreement that it is acidity in nettles which cause the sting. 'Touch a nettle, get a dock', however, is one of those beliefs where very few people occupy the centre ground. Most people either believe dock works in seconds or that it is of absolutely no value.

The 'milk' of the dock leaf is known to contain tannins and oxalic acid, which is an astringent. Broadleaf dock leaves have been used to soothe burns, blisters, and nettle stings. A tea prepared from the root was thought to cure boils. In the early 19th century, broad dock leaves are used to wrap farmhouse butter. It was used in the past to treat scurvy. Useful also combined as part of an herbal tea mix.

Regular ingestion in small amounts can lead to calcium deficiency and to the build-up of kidney stones if the calcium oxalate formed is not excreted. Its unattractive appearance and its unpleasant taste to mean it is not a plant that is regularly consumed.
The toxic component is calcium oxalates. These needle-shaped crystals can irritate the skin, mouth, tongue, and throat, resulting in throat swelling, breathing difficulties, burning pain, and stomach upset.
Oxalates in plants preferentially bind to calcium in the body.

Rumex obtusifolius is one of the five injurious weeds named in the 1959 Weeds Act and is very frequently seen in pasture land but does not attract the same interest as is created by the ragwort.
www.wikipedia.org
www.eatweeds.co.uk
www.wildlifetrusts.org
www.thepoisongarden.co.uk

Recipe of the month

Apple Pie on a Stick

Ingredients

- 170g sugar
- 1 tbsp. cinnamon
- 4 cooking apples
- 4 dowel or roasting sticks

In a small bowl, mix together sugar and cinnamon and set aside.
Push the stick or dowel through the top of the apple to the bottom until the apple is secure.
Roast the apple 2 to 3 inches above the bed of hot coals and turn frequently. (As the apple cooks, the skin starts to brown and the juice dribbles out.)
When the skin is loose, remove the apple from the coals but leave it on the stick.
Peel the skin off the apple, being careful not to burn yourself because the apple is very hot.
Roll your apple around in the mixture until evenly coated on all sides. Roast over fire for a few more minutes and let cool.
www.koa.com

Species of the Month
Jellyfish
The word jellyfish is a common term used to describe animals that are gelatinous or made up of 'jelly-like' material. There are many different types of jellyfish, including stinging kinds called medusae and non-stinging kinds called comb jellies or ctenophores. Another type of jelly animal called a salp is even in the same group as humans.

When huge numbers of plants or animals appear suddenly, scientists call it a 'bloom'. In some areas of the world, millions of jellyfish can swarm together, and these blooms cause problems for fisheries and tourism.

Jellyfish are plankton (from the Greek word *planktos*, meaning to wander or drift) and are not strong swimmers, so they are at the mercy of the ocean currents. Blooms often form where two currents meet and if there is an onshore breeze thousands of jellyfish can be beached.

When conditions are good (for example, the temperature is just right and there is plenty of food) it is normal for jellyfish to grow fast and reach large numbers. This is part of the natural seasonal cycle of many species of jellyfish.

Most jellyfish live less than one year, and some of the smallest may live only a few days.
Each species has a natural life cycle in which the jellyfish form is only part of the life.
The most familiar stage is the medusa stage, where the jelly usually swims around and has tentacles hanging down.
Male and female medusae reproduce and form thousands of very small larvae calledplanulae.
The larvae then settle on the bottom of the ocean on rocks and oyster shells and form a smallpolyp that looks just like a tiny sea anemone. Each polyp will bud off many baby jellyfish called ephyrae that grow very quickly into adult medusae.

Some jellyfish have millions of very small stinging cells in their tentacles called nematocysts. These cells are used to capture food by injecting toxin into the prey. When we are stung it hurts because the toxin goes through our skin

Jellyfish eat many different types of things, such as small plants, copepods, fish eggs and other small fish called larvae; they also eat the planktonic eggs and young stages of many different kinds of marine animals. Some jellyfish even eat other jellyfish! When jellyfish form blooms they eat almost everything in the water and this can cause problems for fisheries because there is no food left for the fish to eat!
Jellyfish are very important animals in the ocean. They are food for a number of marine animals such as large fish and turtles. Even humans eat jellyfish. Jellyfish also provide habitat for many juvenile fishes in areas where there are not many places to hide. They can also

protect the small fish from being eaten by predators with their stinging cells. Also, many young crabs hitchhike on the top of jellyfish so they don't have to swim.

Common jellyfish;Aurelia audit occur in huge numbers and are the most common jellyfish found around British coasts. Delicate and exquisitely coloured, common jellyfish gently drift with the ocean's currents. They're also known as moon jellies. They have almost translucent saucer-shaped bodies with four bold purple-coloured circular reproductive organs at the centre. Despite their seductive appearance they are formidable predators, feeding on molluscs, crustaceans and worms. Their food is either trapped in the flowing mucus which covers the jellyfish's bell and passed to the oral arms by tiny hairs, or it is actively hunted using stinging tentacles. The stings are not powerful enough to penetrate human skin, so we cannot feel them.

Did you know?

- Some jellyfish are bigger than a human and others are as small as a pinhead?
- That jellyfish have been on Earth for millions of years, even before dinosaurs?
- Jellyfish have no brain but some kinds have eyes?
- That jellyfish are mainly made up of water and protein?
- A group of jellyfish is called a smack?

www.bbc.co.uk
www.jellywatch.org

Collective noun of the month
An army of caterpillars

Natural Resource Management
Ecological Succession
This the gradual process by which ecosystems change and develop over time.
Succession takes place because the environmental conditions in a particular place change over time.
For example, a bare patch of ground will not stay bare. It will rapidly be colonized by a variety of plants.
In the process of succession, the species present in the area will gradually change.
Each species is adapted to thrive and compete best against other species under a very specific set of environmental conditions. If these conditions change, then the existing species will be replaced by a new set of species which are better adapted to the new conditions.

As an example, the environmental conditions present on a bare patch of ground would be quite different after a few years. The bare ground conditions favour pioneer plant species.
These are often species which grow best where there is little competition for space and resources. Moss species are low growing, carpeting the ground and with little height. As a result of this growth form, many mosses are unable to successfully compete for space amongst taller, dense ground cover.
This makes bare ground ideal for the establishment of a number of different moss species.
These mosses then provide a microhabitat equivalent to a miniature forest for a variety of invertebrates such as mites and spiders. The moss also acts like a sponge when wet, in some cases providing a
Pioneer species are often also 'opportunist' species which are able to rapidly exploit a sudden new opening in ground plant cover.

Seeds begin to arrive, germinate and grow quickly, rapidly reproducing themselves before other slower-colonizing species arrive to outcompete them.

Along with the plants will come the animals which feed on them or use them for shelter.

By the time two years have passed, succession has already taken place on our bare patch of ground.
A new community of plants, animals, fungi and micro-organisms has largely replaced the earliest pioneer species which first colonized the bare ground.
The environmental conditions on the same patch of ground are considerably different to the conditions present when the first pioneers arrived.

By now, a variety of longer-lived, slower colonizers have displaced many of the species in the early pioneer community. These include grasses and flowering herbs such as dock and clover. The ground is almost completely covered in plants.
The plants are not the only species to have colonized the area. Along with the plants have come the herbivorous invertebrates which feed on those particular plant species. The presence of the herbivores then attracts a range of carnivorous invertebrates to feed on them.

Larger herbivores such as rabbits and deer will also graze such an area. Their dung provides another wonderful microhabitat for many different species of fungi and invertebrates. Nothing is wasted in nature and one animal's waste is another's food source! The soil will be enriched as the dung is recycled by the dung-dwelling community.

A number of small mammals will also now be present, including shrews, voles and mice. These will attract carnivores such as owls and foxes to feed on them. Because there are now many more species of plants and animals in the area, the number of possible interactions between species has greatly increased. The simple food chains of the earliest pioneer stage, when few species were present, have developed into more complex food webs.

Many, if not all of the environmental changes which have taken place on our original bare area have actually been brought about by the communities living there. This is because in the processes of living, growing and reproducing, species interact with and modify their habitat.

The grasses and small flowering herbs have by now bound the bare soil with their network of roots, preventing erosion and soil loss. The soil has been somewhat enriched through the addition of dung and the decomposition of dead plants. Legumes such as the clover and trefoil will also have helped to add nutrients to the soil through nitrogen fixation in their root nodules. The cover provided by the vegetation has affected the microclimate of the ground surface, while also providing a great variety of microhabitats for invertebrates.

The environmental changes brought about by organisms often result in their subsequent elimination from the area. For example, pioneering mosses may grow into thick cushiony carpets with great water-holding capacity, which act like sponges. These provide an ideal new environment for the germination and establishment of the seeds of other competing plants, which otherwise might die from lack of water.
These seedlings may eventually grow into tall, tangled, dark thickets which will shade out and displace the moss which enabled them to survive in the first place.

In the space of two years, the biodiversity on our bare patch of ground has soared, as it has been colonized by fungi, plants and animals. The ecosystem has developed from a very simple one with few interactions, to a much more complex system with a staggering number of interactions going on between individuals, species and the habitat itself.

If left undisturbed, the area will pass through a number of further different successional stages, each with its own characteristic mix of species. All of these different successional stages are known collectively as a sere.
Each new community will be better adapted to the changed environment which has been provided by the previous community. Eventually, a climax or 'final' community is reached. At this point, the succession will not go any further. However, this does not imply that there will be no further change.

The climax community for our original bare patch of earth would be woodland. As part of the natural sequence of life, trees mature and eventually die. When they fall to the ground, an opening is provided in the woodland and the process of succession will start all over again on this new opening. The species which colonize the opening will be different to the original bare ground pioneers because the environmental conditions have been altered. Because there is a different starting point, this cycle of succession would be known as a secondary succession. It differs from the succession which first started on our original bare patch of ground, because this had never been colonized before. This first succession is therefore known as a primary succession.
www.countrysideinfo.co.uk

OWL Scotland is dedicated to increasing the use of Scotland's outdoor environments for learning.

Learning outdoors, be in in playgrounds, towns, cities, parks or our stunning natural environments, actively engages young people and connects their broader learning with the world around them.

OWL Scotland is supported by Forestry Commission Scotland and evolved out of the Forest Education Initiative (FEI) which has run successfully for over 20 years.

Nationally OWL Scotland supports outdoor and woodland learning for local OWL groups through provision of:

- **grants**
- **resources**
- **advice**
- **training**
- **networking opportunities**

Contact Us:

To contact your local OWL group please go to the OWL Scotland website

Or contact us:

Bonnie Maggio

Outdoor & Woodland Learning Manager
Forestry Commission Scotland
Silvan House
Edinburgh
EH12 7AT

Bonnie.Maggio@forestry.gsi.gov.uk

Join us on Facebook – "Forest Education Initiative" group (we have over 4000 members so were unable to change from our original name!)