

East Lothian Council Countryside Rangers

January / February 2024



MUD in your EYE

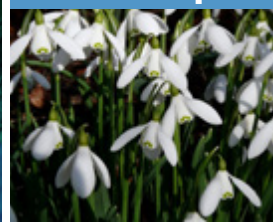
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Snowdrops



WOW!





Mud In Your Eye

January - February 2024

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Editorial

We've made it through another festive season and are emerging into a New Year! We hope you all had a lovely time and managed to enjoy some time outdoors to walk off the Christmas dinner and mince pies!

At this time of year it does feel like we have turned a corner and the lengthening days and increase in warmth guide us nicely towards spring. One flower that makes us really feel like spring is round the corner is the well-loved snowdrop, which you can learn a bit more about in this edition. You can also find out about the excellent work of the South of Scotland Golden Eagle Project, as well as the usual favourites on geology and the stars. Enjoy!

We'd love to hear from you!

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 East Lothian Council Countryside Rangers

Mud In Your Eye is published by East Lothian Council's Countryside Rangers



WOW!

New Volunteer Group for 2024

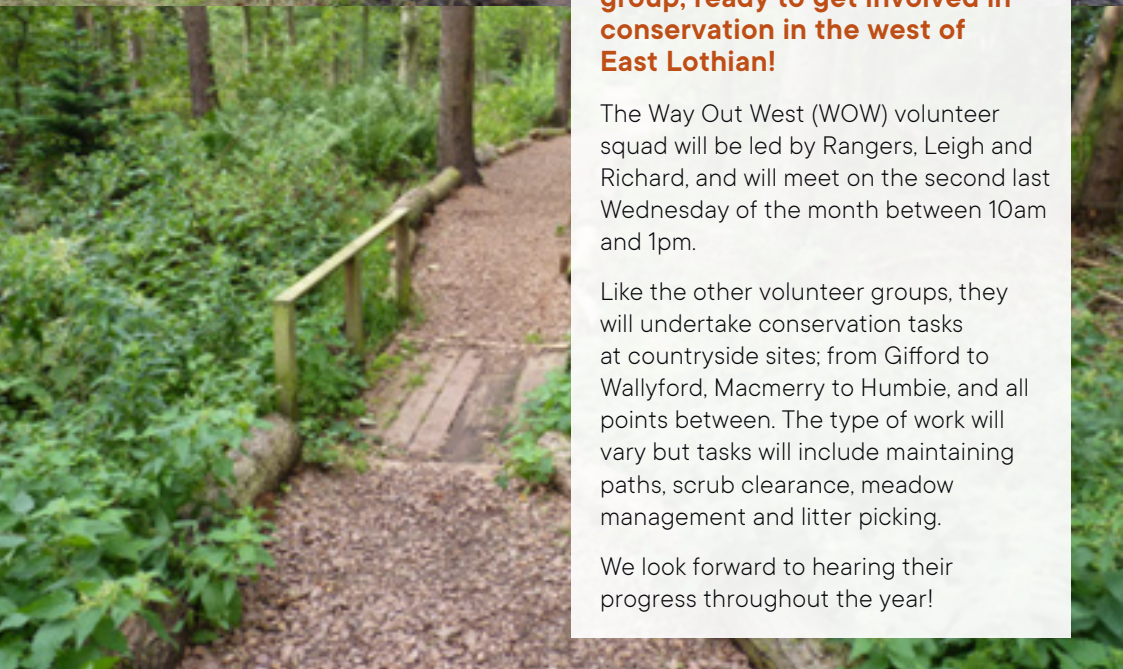


We have another new volunteer group, ready to get involved in conservation in the west of East Lothian!

The Way Out West (WOW) volunteer squad will be led by Rangers, Leigh and Richard, and will meet on the second last Wednesday of the month between 10am and 1pm.

Like the other volunteer groups, they will undertake conservation tasks at countryside sites; from Gifford to Wallyford, Macmerry to Humbie, and all points between. The type of work will vary but tasks will include maintaining paths, scrub clearance, meadow management and litter picking.

We look forward to hearing their progress throughout the year!



Heavens Above

At the start of a new year, it's maybe worth looking at what to expect from a night sky watching perspective over the coming year. It's safe to say it's a year with two halves.

In early January you have the possibility of observing the **Quadrantid meteor shower** which peaks on the 3rd to 4th of January. In addition, Jupiter is still very bright in the night sky, and through a small telescope you should be able to make out the four Galilean moons as the sunlight reflects off them.

There will be a **partial solar eclipse** as viewed from northern UK which is best seen the further west you go, but there will still be something to see from East Lothian as the sun sets on April 8th. If you want to see a total eclipse, you will

need to travel to North America. It tends to quieten down over the summer, and you may need to wait until the latter part of the year for some good planet watching. Saturn reappears in late summer and will be at its brightest on 8th September. Jupiter also appears high in the night sky again in autumn and Mars will also be prominent then and well into winter. Uranus is also high in the night sky during autumn, but is very small and dim, so will be very difficult to spot amongst the background of stars unless you know exactly how to find it.

The Quadrantid Meteor Shower © earth.com



Five deep space comets will pass by the Earth during 2024. Three will only be visible through telescopes or decent binoculars, but two may become fuzzy, naked-eye objects. **Comet Pons-Brooke** will be an early evening sight in March, passing through the constellations of Andromeda, Pisces and Aries. In the autumn **Comet Tsuchinshan** will best be seen in the early evening October sky. Astronomers are hoping that this one will be what is known as a naked-eye spectacular, but we'll just have to wait and see.

There is a lot of space exploration activity this year, with launch missions to the moon, Mars and Jupiter's moons. A manned space flight, **Artemis II**, will take off in November and orbit the moon over a ten day period carrying out various trials, which, if successful will pave the way for the first moon landings since the 70's, with Artemis III visiting the moon next year.



Illustration: Artemis II
© NASA



Fossils



One topic in geology which always grabs the attention is palaeontology, i.e., fossils and stuff. Whether it's a childhood (or grown-up) fascination with dinosaurs, or a scientific desire to interpret ancient environments, many people are thoroughly captivated by the remains of long dead organisms.



Trilobite Pygidium, East Lothian

Fossils come in two main groups: body fossils, which are the actual organisms (or at least what's left of them) and trace fossils, or the tracks and trails left behind by living things. In this article I'd like to concentrate on the body fossils of ancient animals which can be found in the county.

Barns Ness is rightly acclaimed for its fossils and some of the commonest finds are corals. These can be divided into two categories. Firstly, there are the colonial corals such as *Siphonodendron* and *Lithostrotion*, which, as the name suggests, lived together in large numbers forming reefs. Then there are solitary corals, including *Koninckophyllum*, which make up the limestone known locally as Dunbar marble. These were much larger than their reef-building relatives, some of the fossil remains showing detailed body structures.

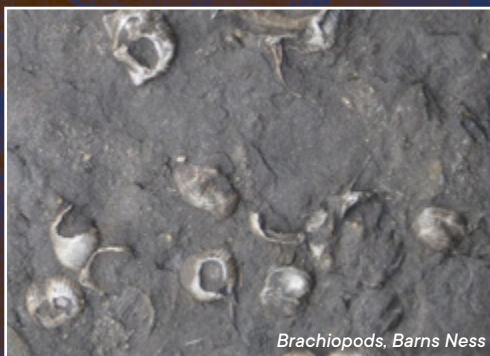
If the corals are some of the most common and recognisable fossils at Barns Ness, there are others lurking there. Bivalve molluscs, related to modern mussels, can be found, as can another group of shelly creatures, the brachiopods. The latter are a group which are still around today but are relatively rare. Although bivalves and brachiopods can seem ostensibly very similar, they are very different animals. Brachiopods generally are sessile creatures attached to the sea floor by a fleshy stalk called a pedicle, whereas bivalve molluscs have evolved a range of lifestyles. Some, like the mussel do attach themselves to rocks, but others burrow into sand or soft rock, or are free swimming. Unfortunately, these differences aren't obvious from fossils, so to tell the two apart you need to look at the shape of the shell. As a rule of thumb, molluscs will have two halves

of the shell (the valves) which will be very similar, if not mirror images of each other. In brachiopods the two valves may be very different in terms of size and shape. Like most rules of thumb this can, sadly, go horribly wrong.

Crinoids, or sea-lilies, are relatives of starfish and sea urchins. Their bodies consist of a series of branching arms, made up of hundreds of round, shelly plates. These are attached to a central cup, or calyx, which is then usually connected to the sea floor by a stem. Complete fossils are rare, but broken stems and arms can be found fairly easily.

Trilobites are a rare find in East Lothian, but they can be seen at Barns Ness and near Gosford Bay. These are an extinct group of animals, belonging to the arthropods and were therefore distantly related to crustaceans, spiders and insects. Their bodies were divided into three sections: the head or *cephalon*; the thorax; and the tail, or *pygidium*.

These wonderful fossils give us valuable insights into the distant past. The rocks bearing their remains date from the Carboniferous Period (roughly 300-360 million years ago) and the fossils' presence indicate the warm shallow marine environments that were around at the time. Of course, things were a little more complex than that, but more on that next time.



Snowdrops

One of the first flowers to emerge in the New Year, seeing a snowdrop reminds us that spring isn't too far away!

As a result, the flower has long been viewed as a symbol of hope for better times ahead. However, to see a single snowdrop flower was once viewed as a sign of impending death and it was considered bad luck to take one into a house!

The scientific name for snowdrops is *Galanthus*. This name comes from the Greek words “gala” meaning milk, and “anthos” meaning flower, referencing the pure white colour of the blooms.

They usually appear from January, but the ground temperature needs to be above 6 degrees for them to do so, therefore it is all dependent on the weather. A study at Kew Gardens, which records the flowering time of 100 plants, documents these changes in plant life cycles over time. This research shows that the average flowering date of the common snowdrop has moved from around the end of February in the 1950s to early January in the 1990s.

In cold spells you will often see snowdrops collapse to the ground, only to resurrect themselves once the temperature rises. Plant tissue is often damaged or killed by ice crystals forming in the cells during freezing. However, many plants, including snowdrops, have ‘anti-freeze’ proteins that help inhibit ice crystals forming and limit their growth, protecting the plant cells from damage. Snowdrop leaves have specially hardened tips to help them break through frozen soil. These are essential qualities for plants that grow and flower at the end of winter. Recording the flowering time of plants can help provide valuable information about climate change.

The outer segments of snowdrops move in response to changes in temperature. When air temperatures are above 10°C, and pollinating insects such as bees are likely to be flying, and the petals move upwards and outwards, opening the flower for them. The flowers also emit a sweet



fragrance, also attracting these early pollinators.

The flower has a long association with the Christian festival of Candlemas. Christians dedicated them to the Virgin Mary, scattering the flowers on altars on Candlemas Day (2 February) and bringing bunches into churches as symbols of purity. As a result, churchyards are often full of snowdrops, probably planted there to supply flowers for these rituals. In some traditional herbal medicine practices, snowdrops have been used to treat various

ailments, including headaches and respiratory issues. The alkaloid Galantamine, used to treat Alzheimer's disease, was first isolated from the snowdrop *Galanthus woronowii*.

So not only do they brighten our day towards the end of winter, they have some fascinating adaptations to surviving late winter and attracting early pollinators.





The South of Scotland Golden Eagle Project

“Eagles in southern skies”

The South of Scotland Golden Eagle Project launched in late 2017 with the aim of increasing the small, isolated and vulnerable southern population of golden eagles, a population which was thought to have dropped to less than 10. Through a series of translocations taking chicks under licence from nests in the Highlands and Islands, the population now stands at around 45, its highest for over 300 years.

As an apex predator they would never be described as common, but studies suggest golden eagles were once found right across the south of Scotland. Documentary evidence exists, as do many place names giving us an insight into the past. Using the old English word for eagle, ‘*Earn*’ we have ‘*Earn Cleuch*’ (eagle gully), ‘*Earn Hope*’ (eagle hollow), ‘*Earn sike*’ (eagle stream) and many others, undoubtedly linking the landscape to the historic presence of eagles.



From satellite tag data we are now seeing birds back in these very places; passing through, roosting and now even on territory and nest building. There are no chicks from released eagles as yet but it is surely a matter of time until we see a fledgling taking to southern skies.

“Bigger than a buzzard”

Whilst we hope to boost the population in southern skies, sightings will always be infrequent. The golden eagle is a secretive bird, hiding itself in the far reaches of the Southern Uplands and susceptible to disturbance from humans.

As young birds, golden eagles wander far and wide; from the Lamermuir in the east to the Galloway Hills in the west. They have also explored cross


border. The furthest journey we have observed was to the Forest Of Bowland in Lancashire and back again.

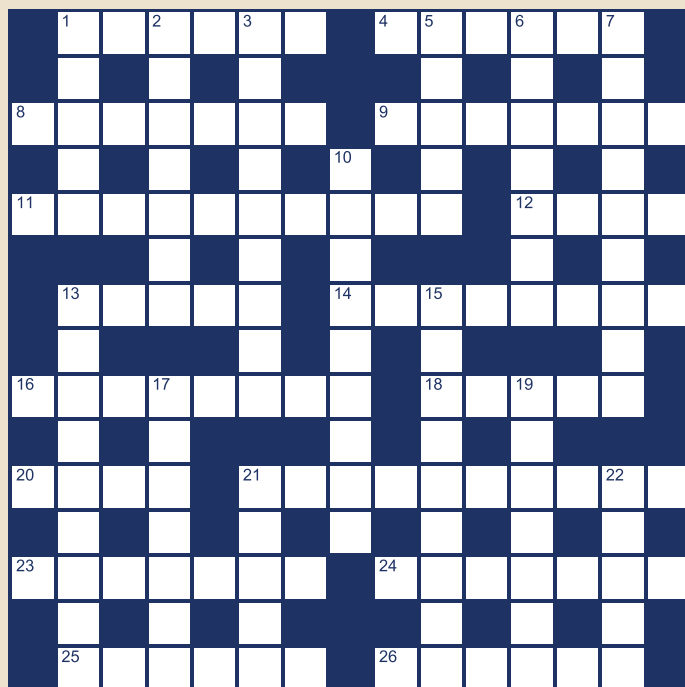
A chance sighting of a golden eagle is a wonderful thing but often a distant thing. *“It was bigger than a buzzard”* is a common observation. A close encounter will blow you away, leaving you in no doubt, but at a distance it is much harder to tell. There are giveaways in the shape, colouring and behaviour. For a really helpful video guide, visit the British Trust for Ornithology website and search for ‘identifying eagles’.

You can get in touch with us via our website if you have a photo you’re not sure about or if you’re interested in a talk for your group or an educational session for your school.

Visit us at www.goldeneaglessouthofscotland.co.uk 

Quick(ish!) Crossword

The answers here are the same as the Cryptic Crossword (p14) – so if you get stuck you could always look at those clues! You can also click [HERE](#)  to complete online. (The solution is on p15)



Across

1. Large feline (6)
4. Admirably brave (6)
8. Translucent cartilage (7)
9. A fir (7)
11. Village on the Tyne with a beach (10)
12. Inferior, in poor taste (4)
13. Farther (5)
14. Next to (8)
16. Fish with a prehensile tail which swims upright (3,5)
18. Come out of an egg (5)
20. Move in water (4)
21. Change the time (10)
23. In East Linton it opened on 13 December (7)
24. Place where weapons are stored (7)

25. Something uncommon (6)
26. Secondary schools in France (6)

Down

1. Dried meat strips (5)
2. Young goose (7)
3. Crocodile (9)
5. Run off with lover (5)
6. Free from chemicals (7)
7. Small bird (9)
10. A state of prolonged rigid posture (9)
13. Joins the sea at Belhaven (4,5)
15. ELCV chairman (4,5)
17. Rodent popular as a pet (7)
19. Amphibious larva (7)
21. Place where birds rest (5)
22. Mischievous songbirds? (5)

Next Year's Spring

by Johann Wolfgang von Goethe


The bed of flowers
Loosens amain,
The beauteous
snowdrops
Droop o'er the plain.
The crocus opens
Its glowing bud,
Like emeralds others,
Others, like blood.

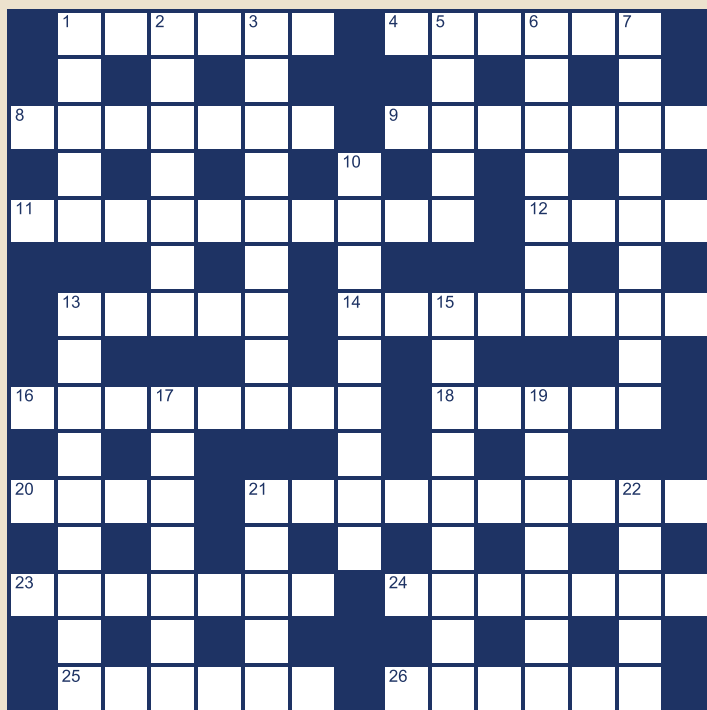
With saucy gesture
Primroses flare,
And roguish violets,
Hidden with care
And whatsoever
There stirs and strives,
The Spring's contented,
If works and thrives.

'Mongst all the blossoms
That fairest are,
My sweetheart's
sweetness
Is sweetest far;
Upon me ever
Her glances light,
My song they waken,
My words make bright.

An ever open
And blooming mind,
In sport, unsullied,
In earnest, kind.
Though roses and lilies
By Summer are brought,
Against my sweetheart
Prevails he nought.

Cryptic Crossword

The answers here are the same as the Quickie Crossword (p12) – so if you get stuck you could always look at those clues! You can also click [HERE](#)  to complete online. (The solution is on p15)



Across

1. Fast car spotted in the zoo (6)
4. Having a mixed choir with an English leader is brave (6)
8. Stiff hair burst blister (7)
9. Type of fir found in Lanark (7)
11. Anything around me is near the mouth of the Tyne (10)
12. In foreign affairs it's in poor taste (4)
13. Plead for an alien father (5)
14. Next to each other, Dec and Jan may, at the outside, be confused (8)
16. Sand moves in the seashore revealing a fish (3,5)
18. Devise a way to produce young (5)
20. How fish move starting some where in Musselburgh (4)
21. He'd gone into rescue ladies first, but came second to last, so had to change the time (10)
23. East Linton - take away its line, but, I add, makes a new stop there! (7)
24. Army has our place to store weapons (7)

25. I am into art in a railway setting, which is uncommon (6)
26. Young Conservatives in the French-Spanish schools in France (6)

Down

1. Shaky dried meat strips (5)
2. Waterfowl is going to swallow seal skin (7)
3. A gorilla started to turn into a crocodile (9)
5. Cut off in the middle of speech and run away to marry (5)
6. Love caring about being free of chemicals (7)
7. Bird makes a very loud sound in between churches (9)
10. Inability to move around place to stay (9)
13. We liberate revolutionary Belhaven flower (4,5)
15. Can stay outside all winter, says chairman (4,5)
17. Mouse, rat - he's mutated into another rodent (7)
19. A little perch for a larva (7)
21. Kangaroos typically have a place where birds nest (5)
22. Mischievous song birds? (5)

Volunteer Diary Dates

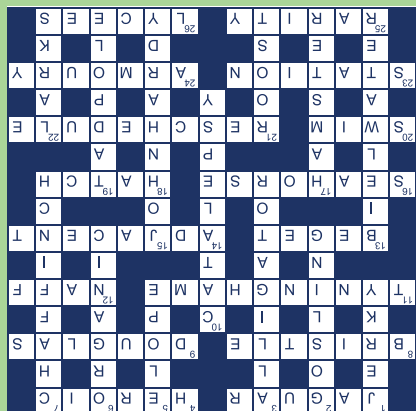


Remember to save the date!

Where	Day	Date	Time
Yellowcraig	Thursday	4 th January	09:30-15:00
North Berwick	Thursday	11 th January	13:00-15:30
Longniddry & Gullane area	Tuesday	23 rd January	10:00-13:00
NEW! Way out West	Wednesday	24 th January	10:00-13:00
Levenhall Links	Tuesday	30 th January	10:00-13:00
Dunbar	Wednesday	31 st January	10:00-13:00
Yellowcraig	Thursday	1 st February	09:30-15:00
North Berwick	Thursday	8 th February	13:00-15:30
Longniddry & Gullane area	Tuesday	20 th February	10:00-13:00
NEW! Way out West	Wednesday	21 st February	10:00-13:00
Levenhall Links	Tuesday	27 th February	10:00-13:00
Dunbar	Wednesday	28 th February	10:00-13:00

For information on all events please contact ranger@eastlothian.gov.uk 

Crossword Solution




Get in touch

We'd love to hear from you!

Email us at ranger@eastlothian.gov.uk
or follow us...

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 East Lothian Council
Countryside Rangers