NATURE GAZETTE

The Newsletter for Young Naturalists

August 2025

IN THIS ISSUE;

Little Things (Insects), The Wild Service Tree, Looking at Carnivorous Bogs, Bird's Feet, Leaf Quiz, Working with Nature, Photo Gallery - A Nettlebed Habitat, Extremophiles, Young Naturalists Hub and more!

Looking at Science

Photograph - Roy Stewart with Dr Alice Roberts who is on tour with her new book, a stunning children's novel, 'Wolf Road'. Dr Roberts is Professor of Public Engagement with Science at the University of Birmingham since 2012. She is a best selling author and television celebrity. Now see page 13 to read about Roy who is now our new President of Young Naturalists.

Looking at Science!

Extremophiles

By Roy Stewart FBNA

Definition: An extremophile is an organism that thrives in "extreme environments" – conditions considered inhospitable or even deadly to the majority of life forms on Earth. They're called "extremophiles" because they love (phile) extreme conditions. These conditions are extreme only from a human perspective; for the extremophiles themselves, these are their optimal living conditions.

Habitats: Extremophiles can be found in a wide range of harsh environments, including:

- High Temperatures:Hydrothermal vents, hot springs, deep-sea volcanic vents.
- Low Temperatures:Glaciers, deep ocean waters, polar ice, permafrost.
- High Salinity:The Dead Sea, the Great Salt Lake, salt pans.
- Extreme pH:Acidic hot springs, sulphuric pools, highly alkaline lakes.
- High Pressure:Deep-sea trenches.
- High Radiation:Environments with high levels of ionizing or ultraviolet radiation.
- Lack of Oxygen:Anaerobic environments.
- Dry Conditions:Deserts.
- Inside Rocks:Endolithic environments.

It's usually assumed that extremophiles are micro-organisms such as bacteria and archaea (more on archaea in another article) but some examples can also be found among eukaryotes (like certain fungi, algae, and even some animals like tardigrades and brine shrimp). Fungi have been found growing in and around Chernobyl and there is evidence that the fungi may be utilising radiation as an energy source. Chernobyl was a nuclear accident that occurred on April 26, 1986, at the Chernobyl Nuclear Power Plant in the former Soviet Union (now Ukraine) and it is considered one of the worst nuclear disasters in history

Types of Extremophiles:

Extremophiles are categorized based on the specific extreme conditions they tolerate or prefer:

- Thermophiles:Thrive in high temperatures (41°C to 70°C).
- Hyperthermophiles:Thrive in extremely high temperatures (above 80°C).
- Psychrophiles (or Cryophiles):Thrive in very low temperatures (15°C or lower, sometimes even below freezing).
- Halophiles:Thrive in environments with high salt concentrations.
- Acidophiles:Thrive in highly acidic environments (pH 3 or below).
- Alkaliphiles:Thrive in highly alkaline environments (pH 9 or above).
- Barophiles (or Piezophiles):Thrive under high pressure, such as in deep-sea environments.
- Radiophiles:Thrive in environments with high levels of radiation.
- Xerophiles:Thrive in extremely dry conditions with low water activity.
- Anaerobes:Thrive in the absence of oxygen.
- Polyextremophiles:Organisms that can tolerate multiple extreme conditions simultaneously.

Extremophile Adaptations:

The ability of extremophiles to survive and thrive in these harsh conditions is due to remarkable evolutionary adaptations at the cellular and molecular levels. These adaptations often involve:

Extremophiles *Continued....*

By Roy Stewart FBNA

- Specialized Enzymes (Extremozymes):These enzymes are highly stable and active under extreme conditions (temperature, pH, salinity, etc.) where conventional enzymes would denature or cease to function.
- Unique Cell Membrane Structures:Extremophiles often have unique lipid compositions in their cell membranes that help maintain membrane fluidity and integrity under extreme temperatures or pressures.
- Compatible Solutes (Extremolytes):Many extremophiles produce small organic molecules that accumulate within their cells without interfering with cellular processes. These "compatible solutes" help balance osmotic pressure, protect proteins and nucleic acids from denaturation, and stabilize cellular components under stress (e.g., high salt, desiccation, or temperature).
- DNA Repair Mechanisms:Radiophiles, for example, possess highly efficient DNA repair mechanisms that allow them to recover from extensive DNA damage caused by radiation.
- Metabolic Pathways:Some extremophiles have unique metabolic pathways, such as chemosynthesis, which allows them to derive energy from inorganic chemicals in environments without sunlight (like hydrothermal vents).
- Genome Adaptations:Extremophiles can have adapted genomes in terms of size and composition to suit their specific niches.

Biotechnological Applications of Extremophiles:

The unique properties of extremophiles and their extremozymes make them incredibly valuable in various biotechnological and industrial applications:

- Polymerase Chain Reaction (PCR):The heat-stable enzyme Taq polymerase, isolated from the thermophilic bacterium *Thermus aquaticus,* is fundamental to PCR, a widely used technique for DNA amplification in molecular biology, diagnostics, and forensics.
- Biofuel Production:Methanogenic and thermophilic bacteria are being utilized to convert various organic substances (sugars, cellulose, waste products) into biofuels like methane, butanol, and biodiesel.
- Bioremediation:Extremophiles, especially those tolerant to heavy metals or capable of degrading toxic compounds, are being explored for cleaning up contaminated sites (e.g., oil spills, polluted soils).
- Industrial Processes:Extremozymes are used in detergents (stable at high temperatures or pH), food processing (e.g., enzymes for milk fermentation, ice cream production), textile industry, paper manufacturing, and various chemical synthesis processes due to their stability and activity under harsh industrial conditions.
- Pharmaceuticals and Medicine:Extremophiles are a source of novel bioactive compounds, including antibiotics, anti-tutor agents, and enzymes with therapeutic potential.
- Agriculture:Some extremophile-derived compounds can improve crop tolerance to adverse climate events like drought, flooding, and extreme temperatures.
- Cosmetics:Extremozymes and extremolytes are being investigated for use in cosmetics due to their protective and stabilizing properties.

Astrobiology:

- Understanding Life's Limits:Studying extremophiles on Earth provides crucial insights into the potential for life beyond our planet, particularly in environments like Mars or icy moons that may have conditions similar to Earth's extreme habitats.
- Origin of Life:Extremophiles also offer clues about the conditions under which life might have originated on early Earth.

Research into extremophiles continues to expand, revealing new organisms, unique adaptations, and promising applications that could revolutionize various industries and deepen our understanding of life's fundamental limits.

The Little Things

by Di Farrar MBNA

Summer is the best time of year to explore our own gardens in the search for insects. It is often the little creatures that get overlooked but they play an important part in keeping our gardens healthy. Many species of wasps, beetles, flies, moths and butterflies, as well as bees, pollinate our plants. They also help with the control of garden pests by feeding on aphids which damage fruit and vegetables and many varieties of flowers.

Cuckoo Spit

You might be surprised by the colours of some of the insects, they can be beautiful, delicate and tiny. These are some I found in my garden, so take a magnifying glass with you in your search and see what you can find.

Froghopper

Common Froghopper - A tiny insect measuring between 5-7mm. Their colour varies between black and white to shades of brown. You might see them sitting on long stems of grass or bushes but if disturbed they are capable of jumping up to 70cm into the air! They look oval shaped with their wings held over the body. Adults create a frothy mass of bubbles attached to plant stems known as 'cuckoo-spit' as a protection for the nymphs.

Lacewing

Green Lacewing – These delicate insects are about 10mm long, generally have a green body and translucent wings, sometimes tinged with pink and blue. The wings are longer than the body and covered with veins that are similar looking to lace. They have huge coppery coloured eyes and long antennae. Green lacewing larvae are always hungry, feeding on insect eggs, caterpillars and small insects such as aphids. They have been nick-named 'aphid lions' as they can munch their way through around 200 a week!

Plant Bug

Plant Bugs – There are over 200 species of plant bugs in the UK and most do not have a common name. Some are plain brown or green but there are other brightly coloured species. Not all of them will appear in our gardens but this one is a common visitor to mine feeding on flower heads. (If you'd like to look it up the scientific name is Grypocoris stysi). It's quite slim and measures around 6-8mm, is black with orange and yellow markings.

Rosemary Beetle

Rosemary Beetle – These shiny beetles are commonly found in gardens as they feed on herbs like lavender, thyme and rosemary after which it is named. They are metallic green and red and 6-8mm long. These are not really the gardener's friend as both the adult and nymph feed on the herb leaf.

The Wild Service Tree

Text by Trish MacDuff ABNA
Photographs by Dr Chris Gibson

This native broadleaved tree was once very common in UK but with many woodlands having been cleared, it is not as widespread as it once was. As a native tree it is an indicator of Ancient Woodland and is now mainly found growing in the south and east of UK. This tree has adapted to warm climates with plenty of moisture. It does not tolerate being very exposed and is vulnerable to early and late frosts. It does not do well in nutritionally poor soils or very wet soils. Its lifespan can be between one hundred and two hundred years.

The Wild Service Tree (Sorbus torminalis) has white blossom between May and June. The little cluster of flowers is a called a “corym”, the same as flowers on the other members of the sorbus family - Common Whitebeam and Common Rowan. The flowers later develop into small brown apple like fruit. The leaves become a very colourful red in autumn. The leaves are divided into 3 to 5 pairs of toothed lobes. Found in woodland, particularly on clay soil it can grow up to 25 m. Old trees will have a very scaly bark.

It is rarely found as a stand-alone tree, more often in groups in woodlands which is the result of its habit of spreading through suckers. It is considered a useful plant to be used when planting hedges of native trees.

It was sometimes known as the chequers tree, after the fruit as they tended to be spotted and chequered. The fruits could be used to flavour beer, and this could account for the number of pubs called The Chequers. The Latin name for beer is cervisia - which sounds very similar to service tree!

As a hardwood with a fine grain, in the past the wood was used to make musical instruments, billiard cues and wooden veneers.


Leaves


Flowers


Fruit


Autumn Leaves

Wildlife Safari - Habitats
Looking at Carnivorus Bogs

By Elizabeth Fowler and Carol King

Common Butterwort

When exploring a bog you may, with luck as they are quite rare, find a beautiful little blue flower. A dainty violet shaped flower on a thin stem that grows to about 10cm, but don't be fooled by its pretty appearance, this little plant is a meat eater. The low growing rosette of pale green leaves have a sticky surface which traps insects. The leaves then curl over and the plant digests the insect. Looks can deceive!

Dried Sphangnum Moss

Wetlands and bogs are a hugely important feature of the countryside, storing carbon, holding water that would otherwise cause flooding and as a unique habitat for acid loving plants.. There are a wonderful variety of plants and as a result huge variety of insects that live in bogs. The bogs or mires have built over 1,000s of years by gradually decaying plant matter. The most prominent of these is sphagnum moss, of which there are many species and colours.

Apparently there are 380 accepted species and it has historically been used medically over the centuries for its antibacterial and absorbent properties and extensively during the first World War as a wound dressing. This moss can hold up to 26 times as much water as the dry weight which means it keeps an area almost constantly wet. A sphagnum plant consist of a main stem, 2 or 3 spreading branches and hanging branches, the top of the plant has compact clusters of young branches that give it a tuft-like appearance.

Example of a bog and plants

As it grows it can spread forming larger mires and raised bogs. The moss decomposes very slowly and eventually forms peat which gives an acidic environment with little plant nutrients easily available. This is why some plants have evolved as carnivorous, trapping and consuming insects to provide necessary nutrients. One of the most intriguing and colourful of these is Sundew, which forms a striking red carpet across bogs. This plant also has a dainty flower with five white petals on a thin stem. However the business part of the plant are the rosettes of round leaves with a fringe of sticky hairs which curve inwards to trap insects.

Sundew

Bladderwort, which is a floating plant of still water, sends up attractive golden yellow flowers from the submerged small leaves. Among the leaves are small bladders that are filled with air, when an insect brushes against the bladder it triggers a trap door in the bladder to open and the insect is pulled into the bladder with the inrush of water. Having absorbed the soluble products from the decomposed insect the bladder opens again and the water is pumped out along with the remains of the insect. The plant is now primed ready for the next casualty.

Continued on page 7.....

Looking at Carnivorous Bogs *Continued....*

By Elizabeth Fowler and Carol King

Bog plants with Bog Asphodel

Another lovely flowering plant of bogs is the Asphodel which produces tall stems of fragrant yellow flowers and can create a mass of colour which is followed in autumn by deep orange coloured fruits. In the 16th century women in Lancashire collected bog asphodel and used it to dye their hair, giving the plant the alternative name of maiden hair. The seeds have long tails which helps them to float during flooding to colonise new areas.

Mossy Bog

You will often see little puffs of something that looks like cotton wool growing among the other bog plants. This is cottongrass another plant that thrives in damp places, this is not actually a grass but closely related to sedges and distinguished by the three sided stems, which in common cottongrass applies just to the tips of stems. The cotton like heads can make wonderful pillow filling, if you could ever gather enough.

This very brief look at bogs only includes a tiny portion of the wonderful things to find exploring bogs and wetlands. Many bog plants can easily be bought from nurseries ready to create a wet garden for yourself.

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Sundew and Cottom Grass

Birds Feet

Text by Trish MacDuff ABNA
Illustrations by Endymion Beer MBNA

Birds' feet have evolved over the years so that they can maximise their surroundings and thrive to pass on their genes to the next generation. Birds from different habitats will have very different feet. Their feet need to carry out many different tasks, which might include some of the following:
swimming,
perching,
preening,
egg rolling and
mating displays.

Swans and Ducks and waterfowl – have webbed feet for swimming and paddling. As they swim, their feet paddle behind them, the webbing between their toes stretching out to propel them forward.

Birds of prey have strong talons, for catching, holding onto their prey and ripping apart the flesh. Eagles, Osprey, Sparrowhawk.

Songbirds usually have three toes pointing forwards, one pointing backwards so that they can safely grip onto branches. For example, robins and sparrows.

Woodpeckers have two toes pointing forward, and two pointing backwards, to cling onto trees. They have sharp toes that can dig into the bark so that they can cling on easily.

Scratching birds - birds that find their food by scratching need the right feet for the job. Their sharp curved toes are ideal for rooting for insects in the soil and leaf litter. Their toes are also in a position that makes it easy for them to run away from predators. Ring-necked Pheasants.

Waders have long legs so that they can search for food in shallow water and long feet so that they will not sink in the mud, for example, Herons and Egrets.

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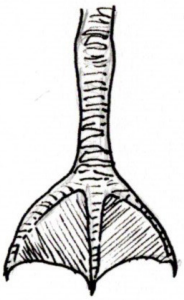
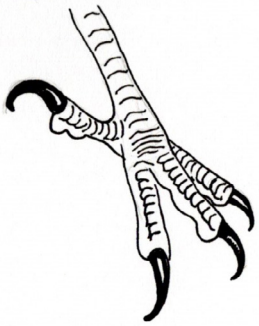
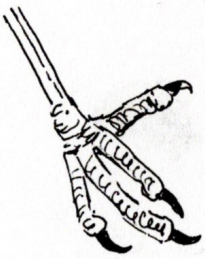


Waterfowl - Waders

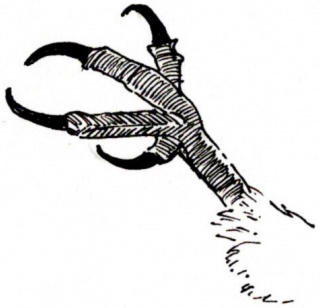


Bird of Prey - Talon

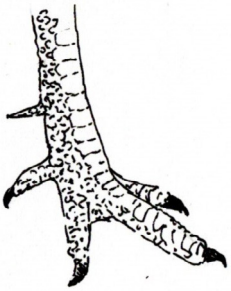
Bird of Prey - Oprey



Songbird



Woodpecker

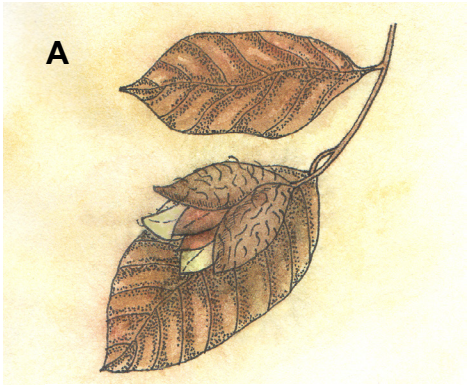


Pheasant

LEAF QUIZ

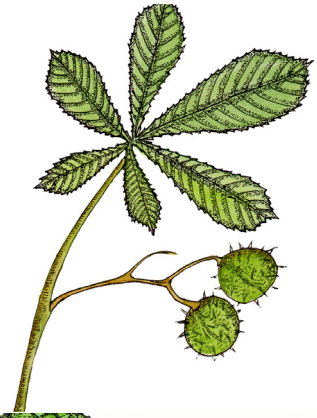
Can you match the **picture**
with the correct **leaf shape** description and
with the correct **identification** (name).

A



B

C



D

E

F - PALMATE
(RESEMBLING THE PALM AND FINGERS OF A HAND)

G - LANCEOLATE
(SHAPED LIKE A SPEAR OR LANCE)

H - LOBED
(ROUNDED PROJECTIONS CALLED LOBES EXTENDING FROM THE MAIN PART OF THE LEAF)

I - OVATE
(WIDER IN THE MIDDLE THAN AT THE TIPS)

J - DOUBLY SERRATE
(TOOTHED EDGES, WITH THE TEETH ALSO HAVING SMALLER TEETH)

K- HORSE CHESTNUT LEAVES

L- WHITE WILLOW LEAVES

M- HAZEL LEAVES

N- BEECH LEAVES

O- OAK LEAVES

Your Answers:

Picture	- Leaf Description -	Leaf Name
A	-	-
B	-	-
C	-	-
D	-	-
E	-	-

The Environment and Science Snippets

Compiled by Endymion Beer MBNA

Plastic Eating Worms

Researching online I came across – Planet Fix – BBC Earth Science and the scientific research into investigating plastic eating worms!

Apparently the observation of wax worms has lead to the discovery of enzymes which can break down plastic! Plastic dissolves the moment it meets with the saliva in the worm's mouth.

Whilst it would be a mistake to breed wax worms, because they are considered a pest - to plague proportions particularly among bee keepers - the enzymes they produce are key in oxidising plastic and thus breaking it down. Oxidations break down the long chains of polymers that make up plastic. However the process of using wax worms to break down plastic is too slow to be of benefit in solving our plastics problem. Observing them and studying these enzymes has however, lead to the discovery of identifying 30,000 enzymes all capable of dissolving plastic. It is fantastic progress.

In fact scientists are able to engineer enzymes to break down plastics and currently PETase can break down plastic in a matter of days! It doesn't change our plastic problem, not yet anyway, but Fast PETase which were created using AI – essentially by using a vast database of all known enzymes in the natural world and then running simulations about which combinations and mutations would speed up the process – like a form of computerised, accelerated evolution. Isn't that amazing and it all started with the observation of wax worms!

Once plastic is broken down it can be recycled into something better. While this is great news, there are many types of plastic in the world such as PEs and PPs which remain a problem and we are yet to find enzymes that can make these plastic biodegradable.

Watch these YouTube Video to learn more:
https://youtu.be/Z-HHbU0zoXk?feature=shared
https://youtu.be/-m0YaE8uKcg?feature=shared

Ref: PET is short for Polyethylene terephthalate

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Getting Curious About Seahorses

The Seahorse Trust, founded by Neil Garrick-Maidment FBNA, in 2000, has a fantastic Facebook page. Do follow it. Neil is also the Executive Director of the Charity. Neil will be at the BNA's Encaenia which will be held on the 13th of September 2025 in the Natural History Museum in London in the Flett THeatre. You need to book your ticket if you are going and details are all on the website under National Events. www.bna-naturalists.org

Check this out on the Seahorse Trust Facebook page:
https:www.facebook.com/share/.p/.1ZfYcjRAJp/.

Working with Nature

Looking at careers and talking with people who are actively working with nature from all walks of life.

This time, we talked with
Professor David Skydmore

For many years, Professor David Skydmore worked in universities, teaching nature conservation and horticulture. He is now retired from teaching and has become an Emeritus Professor. However, Professor Skydmore continues to work, advising on plant health which means he is very involved in looking at procedures for stopping invasive pests and diseases arriving in the UK and diseases spreading. He said;

"I also do voluntary work as Honorary Director of the Lovell Quinta Arboretum in Cheshire. This is a wonderful job to have as I am responsible, with the Arboretum Curator, for looking after about 2500 trees, including the important National Collections of pines, ashes and oaks. We plan all the new trees and shrubs to be planted. We also have some ancient trees and looking after these is an honour and a responsibility considering how old and precious they are. The Arboretum has about 6000 visitors a year which means we get lots of enquiries about all sorts of things. I really enjoy taking guided tours around and talking about the trees."

"I have been interested in Natural History as long as I can remember. Like most naturalists, I was firstly interested in mammals and birds. I was lucky we had a garden although the only mammals I saw there, apart from my family, were hedgehogs. But there were lots of insects and I learned the names of all the butterflies and moths I could find. I then felt a need to record things and started a notebook. I used to go around the garden each day, to set points, and write down what I saw there. Although I could not identify everything, I was able to see how things changed during the year and what a variety of life there was. I found it a particular pleasure to be able to identify things, using books, and so being able to name them. I think as humans we find it particularly important to be able to give something a name - we then feel it is something we are familiar with, like a friend. Knowing the name also means that you can find much more out about the animal, for instance its lifecycle, what it eats, and how it behaves."

So what inspired Professor Skydmore initially to become fascinated by the wonderful world of nature.... This is what he said.

"My first inspiration was my parents, who enjoyed the outdoors, and were very willing to answer my questions. They bought me my first identification books which gave the chance to learn and the more I learned the more I wish to learn about the creatures that I came across. Although I now use apps very often to help me identify, I still go back to my old books and like to flick, back and forth, through the pages."

"Later on, I began to watch television programmes and documentaries, particularly Animal Magic and those with David Attenborough. Those gave me lots of information, although I would have benefited from Springwatch and Winterwatch being around then!"

"I joined our local Wildlife Trust when I was about 11. The volunteers were very helpful and I went on trips with them. They help me expand my knowledge, but it was particularly good to be part of a group of people all with the same interest. Their encouragement was great."

"I also did lots of gardening and that is when I really began to appreciate how important and interesting plants are. They are the major part of most habitats, support the animals, and are our source of food. Whilst identifying plants came much later to me than identifying animals, I just really enjoyed being out in the wilds and surrounded by plants."

Continued on page 11.....

We asked Professor Skydmore how he chose his career path and what inspired him. This is what he said:

"I went to university to read biology, because then I could study both plants and animals. However, I much preferred ecology and Natural History to biochemistry. The study of botany is absolutely essential to understanding how ecosystems work. So, most of the courses that I then chose were about plants."

"As the time came when I was close to finishing as an undergraduate, I knew I had to get a job. I had done one course on "plant pathology" which is the study of diseases in plants. There were good science, job opportunities in this and it combined my interest in plants, and how ecosystems worked, with a very practical application of being, essentially, a "plant doctor". A good way to progress in this was to do a PhD, which I did, studying a disease of potatoes."

"Looking back I can't say there would have been anything I would have done differently. Opportunities open up and change. You don't always know what they're going to be. I think the best thing is to see what each might offer and then, if it is right for you, seize that opportunity even if it hadn't originally formed part of your plans."

We asked Professor Skydmore what advice he would offer a young naturalist seeking a career path. He replied;

"I think the most important thing is to get outside and observe all the life around you. It is amazing what you will learn just sitting and watching or listening."

"Then learn how to identify. Remember you have to really look at the detail. What you think something might be, might turn out not to be once you examine it closely. Please remember it is not just the animals, learn about plants too. It helps as well if you have a particular interest in either one type of organism or one habitat as you can then really become an expert. I am often amazed by the expertise of young naturalists."

"For a career path, choose a course that is relevant to your interest, or an apprenticeship in some skill you would like to develop, and then follow that path with dedication. It can be quite competitive so it is important to show to potential employers that you developed your own skills, and been involved in volunteering."

"But remember that a whole career in biology might not be for everybody who has an interest in Natural History and being a talented amateur, and part of a recording group, can be one of the most important ways to contribute to conservation and our understanding of Natural History."

Clearly Professor Skydmore has had an incredible career, but is there anything he still hopes to achieve? Humbly, he answered that in Natural History one can never have learned enough, and so he hopes to carry on learning and making efforts to conserving our vulnerable habitats and biodiversity.

Finally we asked that if he had the power to change one thing to help nature, what would it be and why?

"Having an understanding of nature, realising you are a part of nature, and nature is depending on you, are essential to conservation. I feel that the future of conservation is in encouraging this understanding - and this begins with you as young naturalists, learning and inspiring those around you to learn."

That's a brilliant point of view - spread the word - do you have any friends that would like to become Young naturalists? Strength in numbers. Our thanks to Professor David Skydmore for taking the time to talk to us. Perhaps you will meet him at one of our National Events!

Our Chairman Steven Rutherford welcome's our new Young Naturalist's President

I am very happy to welcome Roy Stewart as the BNA's new Young Nats President. We all know Roy from his writing in this magazine with his, now regular articles, on various aspects of science and nature.

Roy worked in a science laboratory as a senior lecturer for Nottinghamshire Trent University on projects with cancer charities as well as other important studies. His interest in nature goes back, however, to boyhood and working on a farm in the school holidays.

Now Roy is a brilliant all-round naturalist, and his main interests are with astronomy, the science of poisons and venoms, fungi and plants, but has worked on large projects with Great-crested Newts, led tree surveys and has been involved in habitat and biodiversity projects and worked with school children on nature days and holiday times showing them the wonders of the natural world.

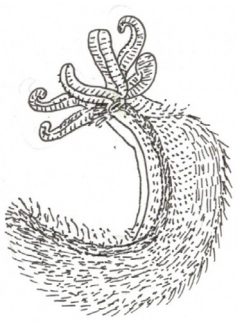
I am looking forward to Roy bringing more to the Young Naturalists and helping Endymion and the team.

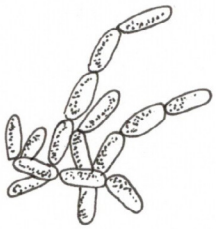
If you have any thoughts, questions or just want to welcome our new Young Nats President, you can send a message to me at srutherfordmbna@gmail.com and I will pass it on to Roy.

Extremophile Quiz

Following on from Roy's article on page 2 and page 3..... Can you put the species identifcation to the name of the extremophile and match this to the extremophile description?

Species depicted:	Extremophile:	Extremophile Description:
Halobacterium	Halophile	Thriving in extreme heat (above 60 degres)
penguin	Psychrophile	Thriving in extreme cold
pompeii worm	Thermophile	Thriving in an environment of high-salt (like the dead sea)





The Young Naturalists' Hub

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BNA Young Naturalists Project 2025
Creating A Wild Habitat

Project Outline

What is a Habitat:

A habitat is a natural environment which provides food, water and shelter in which flora and or fauna (or both) can survive. It could even be a log pile to encourage fungi, insects and small mammals.

Woodlands, forests, bogs, sand dunes, wetlands, roadside verges, grasslands, scrubland, moorlands are all examples of wild habitats, but there are many ways we can create our own habitat for nature. This could be a pot of nettles to encourage our brightly coloured vanessid butterflies, a window box full of nectar bearing plants, a hedgehog house or hibernaculum for hedgehogs (to hibernate in) later on, a bug hotel, bat boxes for bats to roost in, a small garden pond, you could plant some berry bearing trees and shrubs for birds or a tree for the future. These are just some examples but you may have your own idea for a project to help nature. Do send us your news and articles so we can share your projects with our other young naturalists. Idea swapping makes for great progress. We're all part of the same team.

Do submit your project write ups and pictures by February 2026 for a chance to win a mystery prize for your efforts.

How to Get Started:

Research two or three habitats and decide what you would like to do and which species you would like to encourage or increase in population. Use the project plan template below to add some notes in preparation to start your 'Create A Habitat' journal or diary.

	Your Notes
Aim: What kind of habitat will you create and what species do you hope to encourage or increase in population?	
Method: How will you create your habitat? Do your research. Search online, or in books or ask us for help. What will you need? What will it cost? Draw up a plan of action. How will you record your progress? In a journal? Will you use drawings or photographs to accompany your notes?	

PTO

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Conclusion: How do you feel your project went? Did you enjoy doing it? Was it worth doing and would you do it again?	
Results: Record your results. Did wildlife use your habitat or do you think it needs a bit longer to establish? What have you noticed? What have you learned? Are you pleased with your journal / diary?	

Example:

Here is a great example of a wildlife garden created at RSPB Ham Wall. If you look closely you will see they have created lots of habitats. There is a pond, a hedgehog house, a stick pile, a bug hotel, a butterfly dive, compost heap, log pile and a bird feeding station all in a relatively small area – this is a winter picture taken January 2025.

Good Luck, have fun and keep in touch!

Endymion Beer, Hon Youth Officer

www.bna-naturalists.org

Did you all receive the latest young naturalist's challenge? Our project this time is to create a habitat for wildlife to help increase bio-diversity. If you didn't get my email with the above attachments let me know if you did not receive it and I will send it to you.
email me at bna.zoom.talks@gmail.com

Thank you to all of you that have expressed an interest in having a go. As detailed in the last Nature Gazette - there will be prizes!

We've included some examples of habitats here in the Nature Gazette for example, Elizabeth Fowler and Carol King's article on ***carnivorous Bogs*** and my article on ***Photo Gallery - A Nettle Bed Habitat*** shows some of the animals you might expect to find in a nettle patch. You could grow stinging nettles in a container, observe, record and delight in your findings. You can learn so much from observation. Patience really is a virtue.

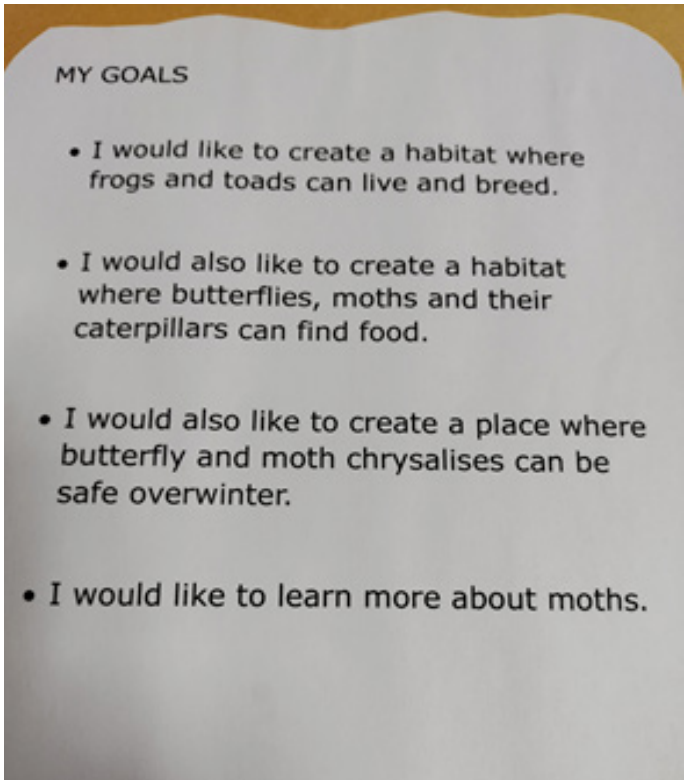
Leah has sent in what she has put together so far for her project. Our thanks to her for leading the way. I'm going to share it here in case it helps to inspire you to have a go. Thank you Leah and well done.

Everyone will receive a certificate for participating. We will email these to you so you can keep them safely or email them to your school, or family members to show what you've been up to to help nature in your summer holidays.

We are here to help so if you have any questions do get in touch. If you don't have a garden, perhaps create a window box or team up with friends or family that might have an idea of what you could do. Could they perhaps allow you some space to create a habitat in their garden? It doesn't hurt to politely ask. Don't forget to make observations and record your findings. Good luck and above all, have fun!

The Young Naturalists' Hub

Leah's Habitat Project



Leah's Photographs clockwise:

White tailed bumblebee
Marmalade hover fly
Vapourer moth caterpillar
Red poppies

Photo Gallery - A Nettle Bed Habitat by Endymion Beer MBNA

From just two nettle beds, here are species actively using the stinging nettle as a habitat. Some creatures like the peacock caterpillars are using it as a foodplant. Many creatures such as spiders are using it as a safe place to live (protected by the stings) and for hunting grounds. Ladybirds are predating the aphids. Every picture tells a story.... Have you seen any creatures using the stinging nettle not pictured here? Do send your pictures in.


Orb Spider


7 Spot Ladybird


Peacock Butterfly Caterpillar


Snipe Fly


Nettle Tap Moth


Large Red Damselfly


Snail


Cocoon


Green Fly


Black Aphid


Midge Gall


Frog Hopper’s - Cuckoo Spit

Photo Gallery continued - A Nettle Bed Habitat by Endymion Beer MBNA

Plant Bug - Suku Grypocoris

Green Leaf Hopper Cicadella Viridis

Common Froghopper

Harvestman

Harlequin Ladybird

Mint moth enjoying the sun!

Soldier fly - Broad Centurion

Ladybird Larva

Contributors please note:

If you are a contributor, or would like to submit articles and pictures for consideration, the **deadline** for the Nature Gazette due out in February will be **12th January 2026**
Please send to bna.zoom.talks@gmail.com
Happy nature watching!

Do you have a query?
email: info@bna-naturalists.org
write: Youth Officer, British Naturalists' Association,
27 Old Gloucester Street, London, England WC1N 3AX

Please note that your membership renewals will be sent to you from bna.zoom.talks@gmail.com