

John Muir Award

Pandora Oates

Student number 2317746

ECEY 6005_BIRM

Sustainability in Early Years



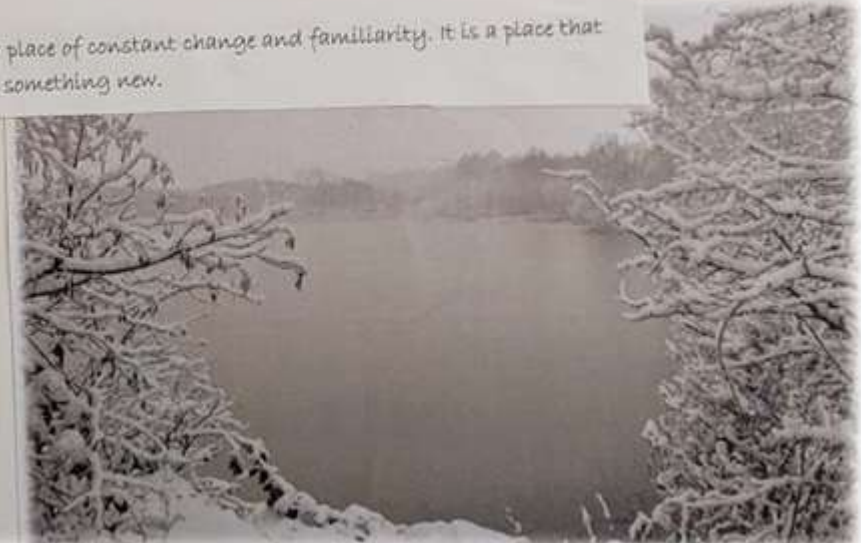
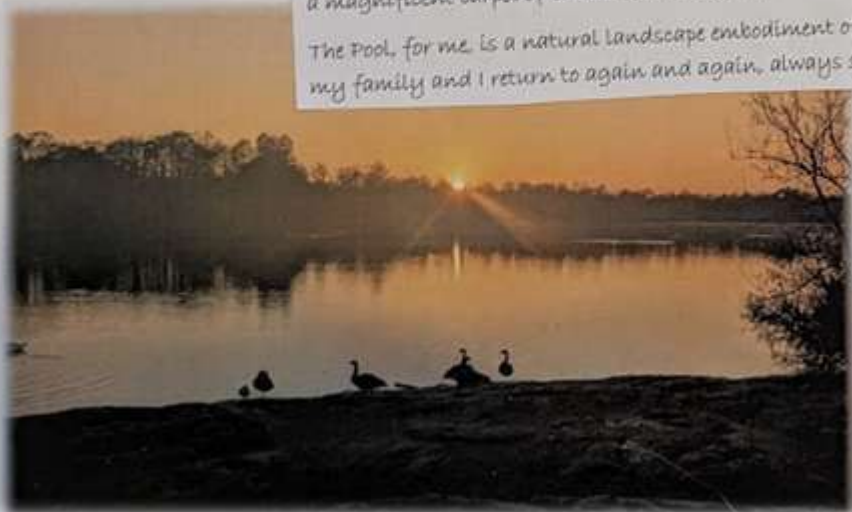


Discover

I live in Leicestershire and am fortunate to have woodlands, open fields, and the site I wanted to explore and learn more about, Groby Pool, all within walking distance of our home.

I have spent many hours at Groby Pool exploring and discovering its flora and fauna over the years, both on my own and with my children. The large Pool sits within a diverse number of habitats, including marsh, grassland, and woodland, and as such, attracts numerous waterfowl, perching birds, and insects and supports a variety of trees, plants, and fungi. It is important to me because of my connection with it, memories of my children discovering its different birds, mammals, and plants, and its changes throughout the seasons, and of watching swans create nests, fox cubs playfighting as their mother rests, and field mice gobbling blackberries in the hedgerow. We have collected blackberries to make crumbles and elderflowers to make cordial. Every May, there is a magnificent carpet of bluebells in the woods.

The Pool, for me, is a natural landscape embodiment of my family, a place of constant change and familiarity. It is a place that my family and I return to again and again, always sure to discover something new.





Explore

Grobby Pool is a large water body, but its origins are uncertain. The present lake is a nineteenth-century artificial water body, probably based on a medieval fishpond and marsh. It is thought that Victorians later developed it for a combination of amenity and water supply.

Grobby Pool is partly fringed with tall herb vegetation, including ditch reeds. In the centre of the Pool is a manmade island which is home to Grey Herons and Cormorants, and the Pool is reportedly only about one metre deep over much of its area. Along the northeast side are outcrops of granite that are covered in lichen, surrounded by heath and wet grassland, which is grazed short by wildfowl. To the northwest is pastureland with again wet places where species such as bog pimpernel, star sedge and skullcaps thrive. Species such as water-dropwort and small blur-reed can be seen in the Pool itself. The wet alder woodland on the western side of the Pool supports a diverse range of mammals and plant species. There are also a wide variety of beetles, bugs, and butterflies to be seen.

This section will delve into the unique flora and fauna that I've had the pleasure of encountering at Grobby Pool.





Birds

At all times of the year, a good selection of wildfowl can be seen. In autumn and winter, Wigeon, Gadwall, Tufted Duck and Pochard are numerous, with smaller numbers of Teal and Shoveler. Occasional, but almost annual, visitors include Pintail, Goldeneye and Goosander. Great Crested Grebes are regular and attempt to breed most years, whilst Little Grebes can occasionally be seen skulking around the margins.

In the centre of the Pool, small numbers of Grey Herons and Cormorants breed on the island, although the trees they nest in are rapidly declining. Little Egret can be viewed either on the island or around the edge, and recently, Great White Egret has become a scarce but increasingly regular visitor.

At the overflow, scan both sides of the Pool, checking for Grey Wagtail and Kingfisher.

I have also seen many Raptors with Buzzard, Sparrowhawk, and Red Kite observed flying over. Osprey is almost annual and, although not a bird of prey, Ravens are often seen or heard 'cronking' around the pool area.

The reedbed is host to several pairs of Reed Warblers during the summer months, and Water Rails can be heard 'squealing' throughout the year. There are different kinds of Bittern that can be seen and heard, but I am still learning to tell the differences between these.

Great Spotted and Green Woodpeckers, which are much bigger than I expected the first time I saw one. Willow Tit, Marsh Tit and Blue Tits often visit the impromptu feeding station just inside the footpath kissing gate, alongside Nuthatch, Coal Tit and occasionally Reed Bunting.

In total, 177 species have been recorded at Groby Pool, and for its size, it has an impressive list of rarities. Highlights include: Whooper Swan, Bewick's Swan, White-fronted Goose, Blue-winged Teal, Ring-necked Duck, Honey Buzzard, Iceland Gull, Woodlark, Yellow-browed Warbler, Firecrest, Bearded Tit, Hawfinch and Lapland Bunting. Because of this, the Pool also attracts twitchers who are very kind and keen to share their knowledge with you if you ask.





Shieldbugs

I love shieldbugs, but I knew very little about them until I started this award. I have observed their patterns and shapes, and I find them extremely beautiful in close-up. I have even handled them, and luckily for me, they have not lived up to their other name of 'stink bugs' as sometimes they can excrete a putrid-smelling substance, hence the name.

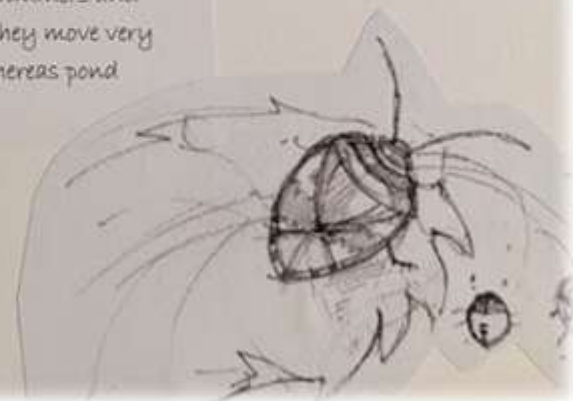
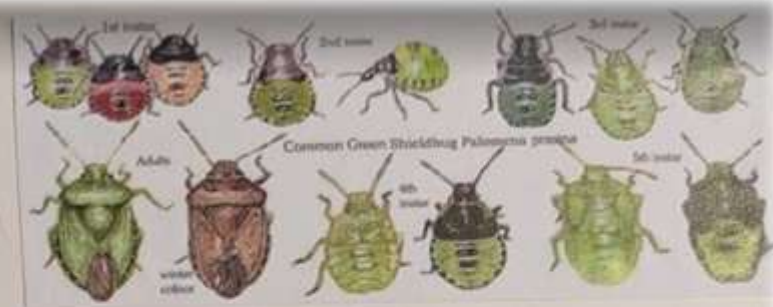
I have discovered that they are true bugs, and there are over 2000 species in the UK. Shieldbugs are just one family, with around 44 species currently in the UK. Their beak-like shaped mouths pierce to suck liquid from plants and other animals. Some shieldbugs are carnivorous, and some are not. Shield bugs start as nymphs that go through five stages of development or 'instars', progressively gaining adult-like characteristics as they grow.

Furthermore, the females watch over their nymphs until they can look after themselves.

Around Groby pool I have observed mostly Common Green, Birch and Bronze Shieldbugs.

Water Bugs

Groby pool is also home to several water bugs, including pondweed bugs, common pond skaters, common backswimmers and common water-measurers. In the past, I have confused pond skaters and common water-measures even though they move very differently over the water's surface. Pond skaters glide across the water surface propelled by their middle legs, whereas pond measurers move in a 'trotting' like motion.





Dragonflies and damselflies

In the warmer days of late Spring, you can often see a dazzling display of dragonflies and damselflies at Groby Pool. I love watching dragonflies hunting and greedily eating flies and midges on summer evenings. Furthermore, azure damselflies numbers are prolific.

Some top facts

- Most damselflies are much smaller than dragonflies.
- Dragonflies rest with wings open, and the closely related damselflies rest with wings closed or partially closed.
- Dragonflies' huge eyes take up most of their heads, whilst damselflies have much smaller eyes at each end of their heads.
- Damselflies flight is weak and fluttery compared to a dragonfly.
- Dragonflies will, however, devour anything smaller than themselves - gnats, greenflies, mosquitoes, butterflies or smaller dragonflies. This is the key to their enduring success - dragonflies were around on Earth long before mammals, birds or even dinosaurs.

Damselflies and dragonflies are an indicator of the good health of aquatic ecosystems, their presence suggesting that the water is relatively unpolluted.





Wildflowers and other flora

At pool fringes and surrounding areas, both grasslands and meadows can be found. Grassland faces significant threats, as do wildflower meadows; habitats are lost to development, farming practices and invasive species. Around Britain, we have lost 99% of our wildflower meadows, which brings home to me how precious this sight is.

Some key plant species found in the Pool include fennel-leaved pondweed, yellow water-lily and fringed water-lily.

Around the bank-side, pool edge and grassland, you can find chickweed, crow garlic, water mint, meadowsweet and reed sweet grass.

The wet woodland is dominated by alder, but you will find oak, crack willow and hazel.

The flowers and trees of Groby Pool are a continual source of inspiration for my glasswork and mandala artwork.





Butterflies, beetles and bees

The combination of woodland, wet and dry grassland, marsh, reed swamp and open water. Supports a diverse range of plants and many species of butterflies, beetles and bees.

Some people think butterflies fly in the day and moths only fly at night, but, as you've just discovered, we have many day-flying moths, and some butterflies - like the Red Admiral fly at night to migrate and the Six-spot Burnet I observed in the grassland.

Butterflies tend to fold their wings vertically over their backs when they're resting; and moths tend to fold them horizontally, but again, there are exceptions to this rule.

Moths and butterflies share the same basic biology and have far more similarities than differences.

There are several beetle species, including red soldier beetles, red-headed cardinal beetles, various types of ladybirds and common carder bees, honeybees and solitary bees.





Fungi and lichens

Elias Magnus Fries was a Swedish mycologist and once said that fungi were the 'insects of the botanical world', predicting that mycology would eventually surpass the rest of botany in scope. I find fungi absolutely absorbing and really enjoy discovering new species of fungi. I recently learnt that lichens are formed by the symbiotic relationship between a fungus and a photosynthetic partner, most commonly algae or cyanobacteria.

The diversity of habitats at Groby Pool lends itself to the discovery of a myriad of fungi and lichens, they can be found on wood, stone and the ground. I have discovered rosy bonnets, bleeding oak crust, chicken of the woods and powdered loop lichen, to name a few. As you can see from the photograph, the chicken of the woods fungi was an astonishing size and colour, but I get equally excited by the small white tips of candlesnuff fungi. The lichens specimens I found I have enjoyed trying to identify. I discovered, too, that the area by the car park of Groby pool, a community meadow and downy furzong, has as many variants of lichen as fungi.

Identifying fungi and lichen can be tricky, but here are a couple of websites that I have found handy tips, including <https://britishlichensociety.org.uk/identification/tips/general> and <https://www.woodlandtrust.org.uk/blog/2017/08/types-of-mushroom/>.



Conservation

I have visited Groby pool and its surrounding area regularly for several years I have grown a strong connection to the flora and fauna of this very special place. Tuning into seasonal changes, the different bird songs that can be heard at different times of day and year and various fungi that occur during late summer and early spring months. Furthermore, the most important lesson I learnt by undertraining the John Muir Award is that I will always be learning something new about this diverse habitat, how it sustains its inhabitants and how, on an individual level, I can drive positive action to conserve this beautiful place.

In the past, I have taken action to preserve the surrounding areas by bringing awareness of the rarity of the wildflower meadow to the local community and by doing so, I played a part in preventing development on the site and have also recently signed a petition that hopes to prevent further loss of forests, rivers, and local green spaces for unchecked development.

<https://protectthewild.org.uk/planningbillpetition/>.

I have taken children from the local toddler group to explore the area and observe its wildlife through scavenger hunt games, exploring how different green items could be found, fern, grass, flower, leaves and explained reasons why it is important to keep the area clean and tidy for the animals and birds that live there and the impact that littering has on freshwater ways because of its direct impact on the health of the ecosystem and wildlife, causing pollution of water, contaminating the habitats and potential harm to aquatic life and other animals and the role children can play as responsible stewards of the environment.

They made fat ball feeders using wild bird seed and dried mealworms in winter and discussed who different birds like to access their food, while tits will visit the tops of logs or hanging feeding stations or birds such as wren and dunnocks prefer to forage on the ground and nuthatches and woodpeckers like to get into cracks and crevices of branches and bark. To cater to all taste's the children sprinkled crumbled fat balls and seeds beneath shrubs for ground-feeding birds, and smearing fat mixtures into the cracks on tree trunks.

While looking into the history of the site, I discovered that the Pool had suffered accidental pollution in the past, which decimated the fish population; the pollution also had a negative impact on the march, mammals and invertebrate populations. Lowland water

bodies such as Groby Pool are more susceptible to having issues around water quality, and it is thought that the pollution which affected the Pool was due to runoff from the surrounding area after severe storms. I discovered that one way of supporting the conservation of the site might be through the planting of marginal water plants.

The introduction of marginal plants to the pond offers numerous benefits, including natural filtration, habitat creation, erosion control and aesthetic appeal. They also support the maintenance of healthy ecosystems by absorbing excess nutrients. However, it is important to add only native plants to avoid plant species that might cause more harm to the environment than good, as some plants may be invasive and dominate a site.

My mini wildlife pond

I used a regular garden plant container after failing to find a wooden barrel. I placed the barrel in a spot that has some vegetation at the back to create some shade but also a place that gets plenty of sun.

I have used four types of plants.

Emergent vegetation – flowering rushes and a yellow flag iris – enables dragonflies and damselfly nymphs to crawl up and hatch out into their adult forms.

Floating leaf plants – I used a fringed water lily, perfect for a small container, but you could also use a watercress. These plants help keep the water temperature down and prevent blanket weed. When creating a pond, you should aim for 60% to 70% surface coverage.

Oxygenators – I used Hornwort, which stops the water from stagnating and supports life in the pond. The use of oxygenators also means that you do not need to use a pump and that the pond is self-sustaining.

Marginal plants – I really love the scent of water mint and the architectural shape of the fibre optic plant and lesser spearwort, a member of the buttercup family. Marginal plants are beneficial ponds because they naturally filter water and create shade and habitat for pond-loving creatures.

I used aquatic plant baskets for planting, but you could also repurpose hanging baskets and line them with old t-shirts. Aquatic compost is best because of its heavy clay structure, which is also low in nutrients; other composts might be high in nitrogen and cause algae blooms. I used old house bricks with holes to support the baskets and gravel around the plants to keep the compost in place, but it also provides niches for creatures to lay eggs.

I used tap water to fill my container. It will take a few days for the chlorine to evaporate, but ideally, you would use rainwater from a water butt.

Finally, I added a few accessories, rocks for frogs and newts to haul out onto and a branch for birds to perch drink. I also piled logs up one side of the container pond so that frogs and newts could get in and out of the pond and a piece of an old drainpipe so that frogs could shelter and hide from birds.

After only a couple of weeks, I saw insects, snails, and birds enjoying the introduction of the pond.

I have learnt a lot in the process and created a poster, which I have put up at the Pool to encourage the visitor to have a go and create their own pond. I have also shared how to create a mini wildlife pond with my local village magazine. Hopefully, they will publish it, and it will energise and inspire people to create their own pond.





Reflection

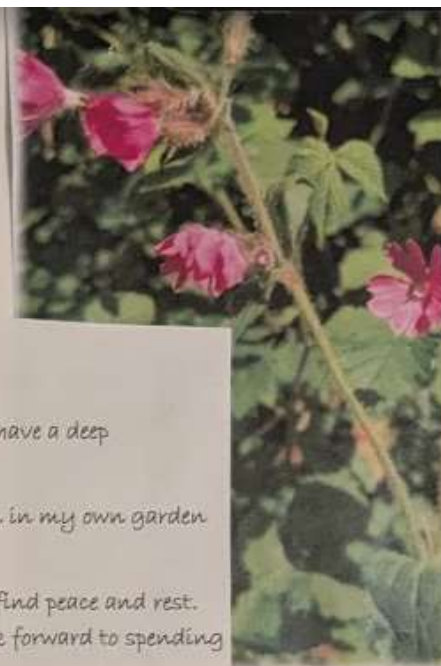
Participating in the John Muir award has reinvigorated me to take action to protect and conserve a place that I have a deep connection with.

I discovered new ways to contribute to and participate in the conservation of the site by promoting conservation in my own garden and sharing my experiences with the local community.

Being in nature awakens my inner child. I can be playful again, and, in the moment, I can be reflective and find peace and rest. During my work on this award, I have learnt so much more about the place I discovered and explored, and I look forward to spending more years supporting the protection, restoration and conservation of the Pool and its surrounding area.

Furthermore, the lessons I have learned during this award are ones that I am excited about sharing with the children, their families and colleagues with whom I work. I have discovered many ways that young children can contribute towards the care of natural environments and support them to become the next generation of active conservationists.

The power of the community to come together is also something that should not be underestimated, and I hope that sharing my experiences of this award will inspire others to do the same.



"I only went out for a walk and finally concluded to stay out till sundown, for going out, I found, was really going in."

– John Muir

Mya-Rose Craig

She is a British Bangladeshi and a recent graduate from St John's College, University of Cambridge. She is an ornithologist and describes herself as a young naturalist, conservationist, environmentalist, activist and leader. Mya-Rose is also the founder of Black2Nature and has written two books, *Birdgirl, We Have A Dream* & *Flight* and has written many articles, all at the age of 21.

Even at the age of 16, Mya-Rose Craig was at the forefront of a campaign to make nature and conservation ethnically diverse. She ran nature camps for inner city minority ethnic children and teenagers, where they could experience bird ringing, mothling and nest box surveys. She organised her first Race Equality in Nature Conference when she was 13 years old, managing to attract Bill Oddie as the key speaker. She has been ringing since she was 9 years old and received her ringing C Licence just after her 16th birthday, the earliest age possible. In September 2018, she was involved in writing the 'Manifesto for Diversity in Nature Conservation' for Chris Packham and his Manifesto for Wildlife. Furthermore, she has been awarded the prestigious NBN Gilbert White Youth Award for Biological Recording and Information Sharing.

She says about birdwatching:

'Birdwatching has never felt like a hobby or a pastime I can pick up and put down, but a thread running through the pattern of my life, so tightly woven in that there's no way of pulling it free and leaving the rest of my life intact.'

To date, she has seen over five thousand different types of birds: half the world's species.

In 2022, she spoke on a panel at COP26 alongside Emma Watson, Greta Thunberg and Malala Yousafzai, cementing her status as one of the world's most influential young activists.

'For me, that love for the planet and for nature transformed into this feeling where, if you really care about those things, you also should be trying to do a bit to go out and save them.'

I genuinely admire Mya-Rose's work, her conviction and her resilience. She is an inspiration in her conservation work and in bringing equity into the field of conversation.

'Because large or small, brown, patterned or jewelled, there is something about birds that makes us, even for just moments at a time, lift our eyes away from our lives and up to the skies.' *The Birdgirl*

The Pond

Natures call is my solace and retreat
Soft mud oozes between my toes and around my feet
The water is cool and gentle and time dissolves in this place
As I watch azure damselflies dance over the glimmering pond surface

Memories echo in my mind of my children wild and carefree
I remember their laughter as they made tea from acorns and blackberries for fairies
Butterflies flutter sleepily from king cups to elderflower
We ponder in awe of nature's beauty and magic hour after hour

The setting suns glow gilds the hour with a golden hue
Birds begin their evening song, and the water reflects the skies pinks, violet and blue
A moment of stillness, I breathe in deep the heady scent of meadowsweet
Warm and content I surrender myself to serene sleep





Inspired by
Nature

