

# Botany Bay Community Interest Group 2021 Newsletter



*2021 has been a very busy year for Botany Bay CIG. We have stepped up our recording of biodiversity; adding surveys of butterfly, bats, moths, and birds alongside our regular riverfly and mink monitoring. We now have a growing database of species as well as entering observations to iRecord. This year we said goodbye to our Bath University student Will Morris and thank him for all his work, not least on still pond habitat restoration. Special thanks also go to Matthew and Jude Sennitt for their work on the restoration of our wildflower meadow. Our on-going woodland management comprised removing of invasive Cherry Laurel and Grey Poplar, making safe Ash trees with dieback, and re-planting supported largely by volunteers and donations. So, we say thanks to South Downs National Park Authority, Sussex Wildlife Trust, Portsmouth Services Fly Fishing Authority and the Woodland Trust as well as Arun Trees and Weald Woodsman for their support. We are really pleased that we have created so many educational and mindfulness opportunities for visiting schools, conservation, and other local groups this year. We would not be able to do any of this without our many volunteers, advisors, friends, and supporters. Another big thank you goes to our committee members Jude Sennitt on finance and Anne Dennig our secretary who puts our Newsletter together. Thanks to all for making 2021 one of our more productive years. - Message from the Chair – Clive Lightfoot.*

## Biodiversity Surveys

One of our main aims is to increase the biodiversity of the site. Since the start of the restoration we have had many experts who have surveyed the site and we have added our own observations using iRecord <https://irecord.org.uk/home>. This year with the help of **Sussex Biodiversity Record Centre** (SXBR), Will Morris (on placement from **Bath University**) was able to create a database for Botany Bay.

### Riverfly Monitoring



From March to October, Alfie Dudley-Warde, Josef Amin and Anne Dennig have recorded the indicator riverfly species for **The Riverfly Partnership**. Alfie has been volunteering with us since 2018, and we were extremely pleased that his stream survey work was acknowledged by being named the runner-up at **The 2021 National Biodiversity Network Young Person of the Year awards**. Will has also been recording the flow of the chalk stream using a Geopacks Flowmeter.

## Moth Survey

Derek Lee, Laurie Jackson & Michael Blencowe of **Sussex Wildlife Trust** undertook a moth survey in August. Michael ran three Robinson Mercury Vapour (125w) moth traps at Botany Bay, spending the night checking the traps and the generators! Some past and present student volunteers came in to observe the moths; over 100 different species were recorded including the beautiful Canary-shouldered Thorn, Blood Vein and Chinese Character moths.



## Bat Survey

In September the **Seaford College Countryside Management BTEC students** set up a bat survey which recorded 13 species: Barbastelle, Serotine, Alcathoe, Brandt's, Daubenton's, Whiskered, Natterers, Noctule, Common and Soprano Pipistrelle, Grey and Brown Long-eared, and Greater Horseshoe bats. We are very pleased to see these results especially as this was the first record of a Greater Horseshoe bat in Botany Bay and has encouraged us to manage the woodland with particular care to provide habitats for bats.



## Bird Observations



Over the past years we have noticed many more nesting birds on the lake, these have included: Gadwall, Tufted Duck, Moorhen, Coot, Mallard and Little Grebe. The most notable of these is the breeding Gadwall, an Amber listed species of medium conservation concern, classed as a very scarce breeder and scarce summer non-breeder in Sussex. Other birds of note in the woodland and ghyll include the tiny but stunning Firecrests, Kingfishers (in the winter months), Spotted Flycatchers, Tree Creepers, Blackcaps and Grey Wagtails.

## Butterfly Transect



To familiarise students and volunteers with running a butterfly transect, Matthew Sennitt set up a scheme that includes the details of the UK Butterfly Monitoring Scheme (UKBMS), such as the conditions of the day and recording only butterflies seen within the imaginary 5-metre cube. To enable most of the habitats at Botany Bay to be viewed, the transect was divided into sections starting at the head of the stream near Beechwood Lane passing above the dipping pond and then running along the track beside the lake and finally entering the meadow through the field gate near the A285. We have had a few practices this year and Greta Pasteiner has kindly offered to help to survey the butterflies in 2022.

## Mink Monitoring

In 2015 we started trapping mink, since then Graham West and Steve Batten have despatched an average of 4 mink per year. This year 6 were despatched, 3 in spring and 3 in autumn. We would like to hear the experiences of other conservation groups, as we feel that to make a significant impact a more coordinated effort is needed.

## Habitat Restoration

Habitat restoration is a central component in our strategy to increase biodiversity. Our work this year focussed on re-profiling one of our still ponds and restoring our pasture meadow into a wildflower meadow.

## Reprofiling of Still Pond



We gave Will the challenge of writing a proposal for the restoration of a deep pond which until this year had been blocked to visitors as we had deemed it dangerous. Will's work was to determine if there was a significant difference in the physical characteristics and biodiversity of the deep pond compared to the other ponds, and if there was a significant difference, to attempt to understand why. The biodiversity levels were calculated by performing pond dipping experiments on the still-ponds. The biodiversity of the

samples was calculated using the Simpson's Biodiversity Index, which factors in species richness and the number of individuals of each species. Will also measured the pH, dissolved nitrate and phosphate levels and the dissolved oxygen concentrations of each of the ponds. These experiments informed his proposal which we then showed to **SDNPA** ranger **Charles Winchester**. After CIG members had cleared and coppiced the surrounding area to let in the light, **SDNPA** helped us to restore the deep pond. Using chalk (kindly donated by **Seaford College**) and a large digger (funded by **SDNPA**), the contractors (**Wild Sussex**) were able to reprofile the pond. This new shallower pond with its uneven profile and marshy surroundings is quickly becoming an excellent habitat for dragonflies, newts and beetles.

## The Wildflower Meadow Restoration (by Matthew Sennitt)

The dry weather in March followed by the dry and cold weather in April and early May meant that spring mowing was needed only once, and then on the late date of March 27<sup>th</sup>, which reduced the annual opportunity of removing excess nutrients. This contrasted with 2020 when the meadow was first mowed on March 3<sup>rd</sup> and a further twice more that spring. This year the cold dry spring weather resulted in a poor germination of wildflowers, but the subsequent wet and warm June caused a lush growth of grass. Nevertheless, there were noticeable signs of the meadow maturing.



Ox-Eye Daisy dominating the meadow with Common Poppies showing in the more recently dug area.

Firstly, the small area hand-dug and seeded in 2018 showed an increase in the number of wildflower plants visible with many more Cowslips, Bird's foot Trefoil and Wild Basil than in 2020. Flowers of Greater Knapweed and Field Scabious were also new to this area. The large

area sown in 2019 seemed to follow the annual progression of this hand-dug area in that Ox-Eye Daisy was the prevalent species, as it was in the hand-dug area last year. Both areas later sported a mass of Wild Carrot, which was the dominant flower in 2020. It will be of interest to see what new species appear next year.

In the autumn of 2020 an additional small area was dug by hand, to straighten the outline of the wildflower area to make mowing of the path easier. This area was sown with a custom-made seed-mix intended to boost the population of Lady's Bedstraw and Cowslip while introducing Common Poppy an annual, Viper's Bugloss a biennial much beloved by bees, and Crosswort which flowers early, from April to June. The grass chosen, Sheep's Fescue, is a fine grass that was considered to offer little resistance to successful development of the wildflower seedlings. Unfortunately, after preparation the seedbed still contained coarse grasses, including Couch Grass that hid the development of the wildflower seedlings until the coarse grasses were weeded out in September. It was only then that the full extent of the successful germination and development of the wildflower seeds became apparent. All the species sown were well represented and should add to the flower content of the meadow in seasons to come.



Seedlings of Vipers Bugloss



Crosswort



and Lady's Bedstraw.

Pot grown plants to bolster current populations were planted in the spring and included Small Scabious, Betony and Lady's Bedstraw. Greater Knapweed and more Betony were planted in the autumn.



Rose Chafer

The poor summer weather meant that observations of unusual insects were infrequent, nevertheless Marbled Whites and Meadow Browns were regularly seen. The large and beautiful beetle the Rose Chafer, found feasting on Wild Carrot, was a new record for the site. The Red Soldier Beetle in the background of the picture shown gives a good size comparison. The large micro-moth, Sulphur Pearl, was found in the meadow in July. It is a scarce immigrant and only occasionally a resident species. The larvae feed on the seed heads of Wild Carrot, which were plentiful in the meadow.

The path around the meadow that allows easy access to its wildlife was widened this year to discourage the spread of seeds from the coarser grasses in the

remainder of the meadow invading the wildflower areas. Continual mowing of these areas will help reduce the overall nutrient level of the field, though it will be many years before the level is as low as in the wildflower area. Several Common Daisy and Selfheal plants were incorporated into the path to encourage diversity in the meadow overall.

The meadow is north facing, so receives less than average sun resulting in lower temperatures. One plan to ameliorate this as well as introducing more species into the meadow is to plant additional species in the small copse found to the west of the field gate and to plant another small copse on the east side of the field gate. This will create a warm area, its height catching the sun early, and it will further enhance the meadow's ability to provide sustenance for insects. Trees included are Goat Willow with its early source of pollen beloved of bumblebees and Whitebeam, which like the already planted disease resistant Elm will produce flowers later in the spring. The shrubs will include Wayfaring tree, Guelder Rose, Spindle, Common Buckhorn and Wild Privet providing opportunities for pollinators from May to July and a later feast of berries.



Sulphur Pearl

## Woodland Management



Our woodland management centres around the removal of invasive species like Cherry Laurel and Grey Poplar; control of Ash Dieback to keep our site safe for visitors; and maintaining our ancient woodland. The **SDNPA** organised for **Petra Billings** to develop a woodland management plan for the site and **The Lost Woods Project** gave us some useful ideas on coppicing overgrown Hazel, coping with Ash Dieback, and managing deer.



The **SDNPA** volunteers with **Charles Winchester**, have been back to help us to take out the invasive Cherry Laurel in our entrance copse and to coppice some of the Hazel. We plan to take out the Ash trees affected by dieback and replant with Field Maple and Oak saplings from the site. **Botany Bay members** were able to practice their hedge laying skills, laying both Hazel and Holly to create another stretch of hedging.



Sadly, we have had to fell some of the Ash trees that have become a health and safety risk to visitors. **Arun Trees** have done a great job leaving as much of the trunks as possible as habitat. Thanks to the **Woodland Trust** we have been able to plant over 100 trees given to us from their Community Pack Scheme; these have been used for hedging and to plant a small copse in the corner of the meadow.

## Fishing Lake Management



**Portsmouth Services Fly Fishing Association** continue to stock and maintain the lake for their members and Seaford College students. Due to COVID restrictions **Steve Batten** (PSFFA fishing coach) has been able to give fewer fishing lessons with the Seaford students, but we look forward to more fishing next year. The **PSFFA** have once again been a great help with our conservation and health and safety work around the fishing lake. **Robin Bray** (PSFFA Water Manager) has worked tirelessly with us

to: take out an unstable jetty; clear Ash affected by dieback; cut down invasive young Grey Poplar saplings; and to improve the wildflower areas. He has also coordinated with West Sussex County Council, Highways Service over the roadwork on the A 285 over the two outlets from the lake. The outlets were inspected, and an old penstock replaced by **Robert Nicholas Ltd.** in order that the council could make repairs to the road.

## Education and Mindfulness Visitor Opportunities

We have been very happy to have more visitors back this year. Some have come to advise us, others to learn “hands on”, and some to enjoy the peace and tranquillity of the site.



**The Sussex Wildlife Trust Community Action for Wildlife** group came to see our progress and to talk about more ways to involve our local community including our local junior schools. Anne was also interviewed about the Botany Bay restoration work for a **SDNPA webinar** for parishes on “Re Naturing” <https://www.youtube.com/watch?v=OqDskPHbPIA>



Our woodland shelter (supported by the **SDNPA Sustainable Communities Fund**) has been used by members of the **Graffham Garden Group**; a **Zen Meditation** group from Chichester and a **Pilgrim group from Graffham church**. Rev. Vivien Turner, kindly wrote this piece:

*“We were delighted to come to Botany Bay for an act of worship. We kept silence as Jude led us quietly and thoughtfully round the conservation project, allowing us to appreciate its beauty and importance and thank God for this blessing. The words of Psalm 23 The Lord is my shepherd... he makes me to walk in green pastures... he leads me beside the still waters... he restores my soul... felt very much brought to life as we travelled. The Roundhouse provided an amazing location for our service, with its central opening in the roof and open sides allowing us to experience sacred space both inside and outside. We used the words of Gerard Manley Hopkins poem and found in this beautiful setting a world indeed ‘charged with the grandeur of God.’ It was a privilege to celebrate the Eucharist here, to make thanksgiving to God for this good earth, and all who work to preserve its beauty and wondrous variety at Botany Bay. We hope to come again.”*

## School Visits



We had some lively visits from **Seaford Prep School Year 5** for pond dipping and kick sampling in the stream. There were a few wet socks, but we had a lot of fun too! A big thank you to Karen Graham-Smith for letting us use some of her excellent photos.

One of Karen's students, **A level photography** student Matilda Yurtsever, set up a Mad Hatter's tea party themed photo shoot in Botany Bay with her model Lily Houweling as "Alice". This was a first for us and we hope to have more photography students in the future.

Julian Hart, Paul Spiers and the **BTEC Countyside Management** students from Seaford College have once again helped us with some hazel coppicing and some spiling in the stream. They also put up some bat boxes which they had made.

## Educational Equipment and Storage Shed.



We want to thank **Jo Morris and Seaford Prep School** for their kind donation to our educational resources. Jo Morris provided the Conservancy with an oxygen meter and a binocular microscope, and a lock box for our equipment was given by Seaford Prep School. These donations spurred us on to build a much needed new shed for our educational materials, which include identification sheets and charts, pond and stream survey equipment, sweep nets and bug boxes for mini beast identification.

**We look forward to seeing you all again in 2022**



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