

Dundee Naturalists' Society

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Bulletin No 47 2022

DUNDEE NATURALISTS' SOCIETY

ANNUAL BULLETIN No 47

2022

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The Bulletin cover illustration is by Shelagh Gardiner and shows the Society's emblem, the dwarf cornel. Other illustrations are by Anne Reid. Two pages of colour photographs have been included this year. All other, unacknowledged, photographs are by Anne Reid.

EDITOR'S NOTE

Thanks to all members who have submitted articles and reports. This year's Bulletin is back to usual after resumption of activities since the Covid pandemic. Thanks to Colin Reid, Mary Watson (Reid), and Jim Cook for proof reading and helpful comments. Thanks also to those who have willingly, and promptly, supplied photos at my request.

Contributions for the next Bulletin, articles, line drawings and photos, are always welcome and may be submitted at any time during the year. The deadline for submissions is usually the end of the calendar year.

Our website is www.dundeenaturalists.org.uk . Facebook page: Dundee Naturalists' Society

Anne Reid

SOCIETY REPORTS

PRESIDENT'S REPORT

Life is slowly returning to normal after Covid. Can anyone remember what normal was like pre-lockdown? With Covid still about (I know of several people who have been infected recently) we do still need to exercise caution. Covid forced us to learn about Zoom, and to maximise the benefits that the technology can offer. It is not ideal, but it does give us access to speakers who would not normally be able to travel to speak to us face to face. A zoom talk is better than missing the talk. It also creates the possibility for recording a talk, so allowing it to be watched later. I have personally benefited from a number of recordings of talks, when I missed the original. Should we investigate further the possibilities here?

The Newsletter has continued to be our essential fortnightly reading, with many of us contributing to it and I hope that you have all enjoyed reading it as much as I have. But no matter how much is contributed, the work of producing it has fallen on the shoulders of Anne and Lorna again. We are all very grateful, thank you both. But you cannot have a Newsletter without content, so please do all keep your contributions flooding in!

Despite all the problems, and not to mention some very unhelpful weather, we have had some very successful local trips which are all reported further on in this Bulletin, thank you to those who organised them. We went back to something like a 'normal' summer outings programme, but only managed two coach trips with a national driver shortage causing cancellation of the third planned trip. Other Saturday outings were by car.

Our autumn lecture season started off by thanking our recently retired Hon President Gordon Corbet for many years in post and welcoming our new Hon President, Prof Jeremy Greenwood. Jeremy introduced us to the amazing Emma Turner who was a very early Bird Ringer, as well as an accomplished Bird Photographer and Bird Watcher. It was with photographic evidence from Norfolk that, in 1911, she demonstrated **bittern** breeding again in the UK after a long absence. Keith Broomfield told us a tale of two seas. This was a look at the inshore marine life of the Mediterranean and Britain. In a complete change of habitat, Christopher Ellis talked about Scotland's Temperate Rainforests later in November. For the Christmas meeting, our very own Brian Ballinger told us about his Lockdown Year. The January zoom talk took a look at some tracking studies on **short-eared owls** by John Calladine from BTO Scotland. Later in January we entertained ourselves with our very successful Members' night.

As I write this report I am looking forward to the two remaining talks in February. We then have the spring and summer Tuesday evening and Saturday field trips to look forward to, who knows what we will find!

Barry Caudwell

CARSEGOWNIEMUIR QUARRY REPORT

The first visit to the quarry was much earlier than in either of the two previous years, even although the threat of the latest variant of Covid-19 still hovered around. In late January Ronnie Ogg and Jim Cook visited to cut through the trunk of another fallen tree, a **birch**, that had been blown down by Storm Arwen in late November over the fence of enclosure 1a. They also cleared away more fallen branches from the paths and cut away the branches of a low hanging **blackthorn** that was flattening part of the fence of enclosure 2, at the far western end. The fences of both enclosures were re-erected. A separate task was to dig out four small **Scots pines** that had germinated on the dumped stones at the far west end. They were potted up by Ronnie Young, in the hope that they will grow enough to be planted back out in the quarry in a year or so. Five bird boxes were repaired and then put back up into the trees in time for the new breeding season. At the same time the flattened wire hoop over the duck-breeding raft on pond 3 was lifted up again so that a duck would again be able to jump up and tuck itself away underneath. (A **mallard** did nest there successfully later in the year.) Finally, the work (started the previous autumn) to reduce the slope and insert steps on the path down to pond 5 was completed, making it much easier and safer to climb down the steep slope.

A short while later a male **mute swan** appeared on pond 5. It seemed to be finding enough to eat but how would it be able to leave? In case the bird couldn't escape we decided that the fallen **bird cherries** (originally planted by Margaret Duncan in the late 1980s) which Storm Arwen had blown down

over the shallow end of pond 5, would have to be cleared. In the end, the growth habit of the trees, with large numbers of small twiggy but tough branches, made it a laborious task and it took nearly three weeks of effort, one for each tree, to finally clear them all away. However, another gale brought down two more trees, self-sown **willows** this time, further along across the shallow eastern end of pond 5. Anyway, the swan disappeared just before our last visit (it had been there for nearly a month) and the pressure was off. The cut wood from the bird cherries was left stacked near the end of pond 5 or dropped into the shallow water to allow access to the last fallen bird cherry. Most of the smaller branches were piled up into a very large heap further away from the water where they will be left to rot down over the years.

During the next visit we started planting trees, firstly transplanting a small **hawthorn** that had been left to grow for a couple of years and then five fairly large and robust self-sown **hazels** from beside the paths. (Similar trees further away from the paths are left to continue growing and adding to the diversity and randomness of the woodland.) Additionally, eight more of Ronnie Young's larger pot-grown **oaks** (from quarry acorns) and a rather large and robust pot-grown **hawthorn** were planted out. Finally, a couple of self-sown **hawthorns** from beside pond 3 were planted in previously dug holes in area M. This brought the grand total of trees planted in the 21/22 season to a magnificent 50 trees of five different species.

Later in spring the falling levels of pond 5 allowed access to the floating round bale of straw (which had been dumped there the year before) and it was carefully towed across the deep end of the pond and tied up to a tree at the far west end to anchor it in deep water. With luck this might help suppress the growth of dense masses of **blanket-weed** there this summer. Ronnie Young also completed rebuilding the spawning raft in his workshop and Ronnie Ogg and Jim managed to drive a large post into the mud of pond 2 to anchor it. This work was finished just in time to collect up the newly-laid **frog spawn** from ponds 2, 3 and 4 and empty it inside the raft, with its wire mesh lid to help prevent the spawn from being hoovered up by visiting **mallards**. We'd also heard at least two croaking **frogs** from across pond 5, but if frogs laid spawn there it would be impossible to reach. We can only hope that the visiting hungry ducks didn't guzzle all of it.

The choking green masses of **blanket-weed** did develop on pond 5 in early summer and had to be cleared away. Ronnie Ogg got to work with the grapnel and rope with his favourite curved rake and over several weeks gradually reduced the size of the blanket-weed 'rafts' on the pond. The floating bale of straw didn't seem to have made any obvious difference! He finished off by digging a narrow path along the base of the steep south bank at the western deep end just above the water level. This will allow much easier access to the deep area of the pond during the summer for clearing future growths.

Meanwhile the grass along the paths grew very densely and heavily in spring and early summer this year and took considerable efforts by Jim to clear the path edges with our motor-driven strimmer in July and early August, in good time for the barbecue. The earlier cutting back of the old **willowherb** stalks and particularly the very tough **raspberry** stalks with the metal blades of the brasher head paid dividends in allowing freer and easier use of the strimmer head. Another full day was spent in cutting back and removing the main branches of a large old **willow** tree that had fallen across pond 3 during Storm Arwen the previous November. The fear was that if the pond water levels rose again with a flood the branches might snag the raft and either sink it or rip it apart. Ronnie Ogg and Jim started in the morning but it was a tricky task because although the pond water level was low, it was still deep enough to fall into completely. Ronnie Young came along with his chain saw in the early afternoon and the three of us managed to clear all the worst branches out.

The Society barbecue on 17th August was highly successful with some 20 members and friends coming along during a lovely warm evening. Ronnie and Jim had earlier in the year reduced the slope down from the picnic table winter storage area. During the afternoon they were able to move the two tables and the large hooded barbecue much more easily down into position beside the stone plinth. (Full report on page 21. Ed.)

Most of September was spent preparing for the tree planting day on Saturday 29th October. This again involved a barbecue but at mid-day. (Report on page 27. Ed.) A total of 24 trees were planted during the day; a highly successful outcome and almost as many as we did last year - and with fewer people. In the next few weeks Ronnie and Jim spread matting



around the newly planted trees and put in stakes and wire protection where needed. They also planted another ten trees to fill in several more of the spaces, which added to the very creditable total for the autumn of 34 trees.

Efforts to improve the paths continued, and several sessions were spent in freeing larger trees with well-developed thick bark from the wire netting surrounding the trunks. The most notable event in the later autumn, though, was that several weeks of heavy rains followed by a succession of torrential downpours not surprisingly culminated in a flood. This one, however, was exceptionally deep. The main path beside pond 1 was flooded and forced walkers onto back-path 1 while the main path between ponds 2 and 3 and past the barbecue site would have required scuba gear to negotiate (right, JC). Fortunately, back-path 2 allowed access to the hide. The barbecue plinth was covered over by an estimated metre or so of water. Care was needed to reach the bird table and feeders, the rocky knoll overlooking pond 5 became an island and ponds 2, 3, 4 & 5 joined up. The ridge dividing ponds 2 & 3 from ponds 4 & 5 was flooded over by about a metre, for only the third time ever. It was the deepest since the 'great flood' of 2016. Water levels remained high for nearly a month but gradually receded again during the drier spell in early to mid-December. Most of the flooded ponds froze over during the cold blast in mid-December. At the very end of the year, though, Ronnie Young reported that the recent heavy rains had caused the water levels to rise again and once more the main path was flooded and impassable. Overall, it had been a busy year in the quarry, overcoming the effects of Storm Arwen and trying to catch up on some of the many tasks missed because of the pandemic restrictions over the previous two years.



The lists of species recorded from the quarry continue to grow slowly but steadily and at the time of writing was nearing a grand total of 900, including more than 250 plants of all kinds, over 100 species of fungi and more than 450 species of a wide variety of animals. The criterion for inclusion is that any species recorded in the 4.5 hectares of the quarry inside the boundary fence, must either be in or on the ground, perching in or growing on the trees or living in one of the ponds, not just flying over or in the area nearby. An interesting report this year was of a **weasel**, a species which we'd suspected must at least visit the quarry on occasion but were unable to obtain a definite record. During the cold and snowy period in mid-December Ronnie Young found the distinctive tracks of one in the snow along back-path 2 during one of his morning walks with the dogs. It is hoped that several experts will be able to come along next summer to help swell the identified and recorded totals considerably.

Jim Cook

RECORDING CONVENOR'S REPORT

The **speckled wood butterfly** (*Pararge aegeria*) continues to spread, we saw it again in our garden and there is an unconfirmed report from a neighbour 1km along the road from us. This is a credible report because it has also been seen in Kinnaird, the next village. Unlike the **purple hairstreak** (*Favonius quercus*), the **speckled wood** is a much easier butterfly to see as it has a display flight out in the open, while the **purple hairstreaks** do their best to hide, often high in the canopy of **oak** trees. Survey work this year has continued to find the **purple hairstreak**, but it is not an easy butterfly to see. To increase your chance, you need to be looking in suitable habitat (typically an oak tree), at a suitable time of day and with the sun shining on the tree. The big question is, are we finding new sites for it because it is spreading or is it because of the increased search effort?

It is always exciting to see a new species in our area like the **holly blue** which has been seen in North Fife for the first time by our own Nats members. Some new moth species have also been moving in. **Blair's shoulder-knot** (*Lithophane leautieri*), which is now common in Fife, was found last year in East Perthshire. This is a moth that was first reported in Britain from the Isle of Wight in 1951 and has been spreading north since then. The moth is common further south in areas with **cypress**

trees which are the food plant of the larval stage. The **buff footman** (*Eilema depressa*) has also occurred this year. It is a moth species that is associated with scrub and woodland and the larval foods for the caterpillar of this moth are the lichens and algae growing on the branches of trees. One possible reason for its spread could be the increased growth of lichens resulting from the reduction in pollution from burning of fossil fuels.

It is not only species of insect that have continued to expand their range. The **nuthatch** (*Sitta europaea*) has continued to occupy new sites around us. As an adult, the **nuthatch** is generally a sedentary bird, but the juvenile birds can go roaming, looking for a new territory to occupy. At least some of the sites occupied last year still have **nuthatch** present, which suggests that at least attempted breeding is likely. Locally they have been reported from new sites again this year, which adds support to the idea that local breeding has occurred, which is good news (proven breeding in Dundee. Ed.). But I must admit that I have still not seen one.

The status of our bird species is classified according to three levels of conservation concern, going from green, the least concern, through amber to red, the most concern. A new list is published about every five years reporting the current status. One of the birds that we are likely to see regularly, especially close to water, is the **dipper** (*Cinclus cinclus*) (right). In the first four 'Birds of Conservation Concern' lists it was green listed, but due to a long-term moderate breeding population decline in the current list it is elevated to amber status. You can contribute data to the ongoing dipper study, by submitting records when you see a dipper. If the bird is ringed, and particularly if it is colour ringed, then the records are even more valuable. If you take a photograph you may be able to sort out ring details more easily later.



Lots of Nats have been out recording, just look at the vast number of accounts of walks on our Facebook page and on the pages of the newsletters. With our field meetings starting to return to normal again, lots of bird records have been submitted to Birdtrack and mammal records to the Mammal Society recording scheme from these meetings. Recently, interest in moths and moth trapping has increased, and many of our members now run a moth trap. Running these traps has been generating lots of records both from gardens and other local sites. Several interesting species new to the area have been found as a result. When you are out do take lots of photographs of what you spot. That way it's easier to get help in identifying what you find, and it also provides some interesting images for the Newsletter, so we can all get to see it.

Our evening field meetings have added a substantial number of records to the BSS Urban Flora project, thanks in no small part to Brian Ballinger. These are in addition to the large numbers of records that the botanists have already produced by walking around the local area. If we can cope with the pandemic years then, surely the coming year will be something to look forward to and even more successful for recorders.

If you are lucky you could find something very exciting that the **cat** has brought in. An observant recorder in north east England found a very interesting **shrew** and because she reported her record, a new species of mammal was found in Great Britain in 2022. The shrew was eventually identified as a **greater white-toothed shrew** (*Crocidura russula*)*. Photographic evidence has been collected to suggest that the shrews had been present probably from as early as 2015. Up to this point the shrew had only been known from the Channel Islands of Guernsey, Alderney and Sark and not in the rest of the UK. After a lot of work the identification was confirmed and, even more excitingly, a second population was also found at a site about 5km away. This discovery only came to light because the **cat** owner recorded her finding. So the moral of the story is keep recording, you never know what you could be looking at.

Covid may be less devastating now that most of us are well vaccinated, but we still have a devastating virus causing problems. It is Highly Pathogenic Avian Influenza (HPAI) and is devastating both wild birds and poultry. Close by, the birds on the Isle of May and the **gannet** colony on the Bass Rock have been particularly badly hit over the breeding season. Go for a walk by most open water and you are likely to find a number of casualties. Sadly, our walk at Murton recently was no exception.

I would like to finish with some better news. I hope that we can restart our identification workshops this year. These have suffered from the effects of the Covid lockdown rules for the last three years. It would be nice if we could use the facilities at the Nature Reserve at Murton again.

Barry Caudwell

*Bond, I.F., Gilford, E., McDevitt, A.D., Young, M.A., Coomber, F.G. (2022) First records of the greater white-toothed shrew *Crocidura russula* from Great Britain. Mammal Communications 8: 23-28.

OBITUARIES

FRED WOODWARD

Fred Woodward died on 2nd December 2020, aged 81. I believe he was only a member of the Nats for a brief time after moving to Invergowrie around 2013, and I only saw him attending a single meeting as a member, although he had once lectured to the Society, on 'Shells, snails and slugs' in 1981. An old footballing injury resulted in limited mobility in later life. However, he was a notable figure in malacology, with a particular interest in freshwater mussels, and author of numerous publications including his book *The Scottish Pearl in its world context* (1994). His career was spent working with various museums services, eventually in Glasgow. His achievements in the fields of molluscs and museums earned him a fulsome 4-page obituary in *Journal of Conchology* (Vol. 44(3), April 2022), which noted that "the singularity of his interests meant that few...were aware of his passing" – which will perhaps excuse the delay in announcing the fact in this Bulletin.

Colin McLeod

BARBARA BELL (1946 - 2022)

We were saddened to hear of the death of Barbara last year. Some of us had known Barbara for many years as she lived in Newport and was an active member of the local community.

Barbara was an only child, born in 1946 in Edinburgh and spent her early years there. Her father died when she was quite young and her mother moved them to Ayr, where Barbara attended secondary school. She completed her education at Aberdeen College and became a secretary.

She met her future husband David and moved to Dundee where he was studying at the university. They moved to Norwood in Newport where she brought up her family. Barbara worked for many years for Barnardo's in Dundee as an administrative officer, until her retirement. She also volunteered for a charity 'Compassionate Friends', an organisation which supports and befriends families who have lost children.

Barbara loved her garden and spent a lot of time in it; she knew where each plant had actually come from. Locally, she was involved with 'Newport and Wormit in Bloom'. She joined the Dundee Nats after retirement and came regularly on outings and weekends and attended the evening lectures. Latterly she held the role of treasurer at the Nats, until ill health forced her to give it up.

She died suddenly on 12th April whilst away on the west coast with her daughter and family.

Liz Olejnik

RUTH ARNOLD (1935-2022)

The sad passing of Ruth, in May 2022, marks the end of an era in the Society's affairs. She was the last remaining member who had joined back in the 60s with the encouragement of her older sister (the late Joan Thompson, an important member in the Society's recent history) and friends, not long after the family moved up from London when their father came as a member of staff to the new

Timex factory. Ruth soon joined in with the Society's activities and was keen to accompany parties of members in their summer explorations of Angus and further afield. She also was a regular attendee at the winter lectures but never talked to the Society herself. She served several terms on the Council and contributed to the discussions of Society activities. However, she declined to take a greater part by helping the Secretaries or Excursion Secretaries in their efforts on the Society's behalf. She was a keen botanist and travelled to a number of countries in Europe on plant hunting holidays with her friends. Ruth is survived by her niece and nephew and their children.

Dorothy Fyffe and Jim Cook

MARGARET DUNCAN (1940-2022)

Margaret Duncan played a significant role in the Society, as a Council member for many years and as President in the later 1990s but particularly as the person most responsible for initiating the long-standing Carsegowniemuir Quarry project. Although not unexpected, her death in her native New Zealand therefore became a notable Society loss. She will be much missed by those who knew her well.

Born and brought up in New Zealand, the young Margaret Svendsen trained as a primary teacher, but then thirsted for travel and adventure and joined a minibus trek in the early 1960s from Singapore overland to Britain, a journey that would be impossible today. Once in this country she re-qualified as a teacher before working in Dundee. She married Fred, who was an excellent photographer and mainstay of Dundee Photographic Society. He encouraged Margaret who, in her turn, also became an excellent photographer and a devotee of the images of her idol, the photographer Heather Angel. Margaret worked in the Anatomy and Physiology department of the University from 1967 to 2001 as secretary and administrator.

In the Society, which she joined in the mid-1970s, Margaret became well known for toting around a load of cameras, lenses and other gear, most notably a heavy Benbow tripod. In fact, for a time she was known as 'the lady with three legs'. Soon Margaret was elected onto the Council and enthusiastically joined in, suggesting and leading a number of excursions and other activities as well as giving several lectures. She gradually developed a great interest in and expertise in trees and other tree-related life, particularly fungi. This led her to join with and become a committee member of the Dundee Tree Group.

In this context, while serving on a committee of the local SWT Group in late 1984, she heard about a derelict quarry site in central Angus which the then Chair owned and proposed as a site for planting and nurturing tree seedlings for planting elsewhere. She and a few others were invited along to visit and soon realised that it was not suitable for germinating trees but ideal for development as a wildlife site (for which the Society had been searching for several years). This was the start of the Carsegowniemuir Project.

Margaret's enthusiastic promotion of both the idea and site brought in the rest of the Committee and, despite misgivings by some, it was decided to investigate the potential of the site in some detail. Much of 1985 was spent in carrying out detailed surveys and studies of the Quarry site, particularly involving Alastair Fraser (for the birds), Joan Thompson (for plants and birds), Colin McLeod (for birds and fungi) and Margaret herself (for plants, trees especially, and fungi). Steve Fulford, along with Colin McLeod and Hamish Petrie, mapped the quarry accurately. The whole matter was published in some detail in the Bulletin for that year and discussed before the AGM of the whole Society in April 1986. It was one of the few AGMs that involved an actual debate between those for and opposing the project. A free vote among members settled the issue with the great majority of those present voting to continue the project.

Margaret was elected as chair of a subcommittee to manage the project, a small group negotiated an agreement with John Compton, the owner, and she and Colin drew up a management plan as a guide for action. She immediately set to work to organise a large planting session in the quarry. This involved identifying sources of suitable native trees, obtaining a supply and delivery of a load of excellent larch posts from Alf Robertson at the small sawmill in Camperdown Park (the posts are still in good condition and have been re-used a number of times) and choosing suitable protective enclosures and mulching materials for the trees to be planted. She also set up an appeal to the members for funds, receiving a series of generous donations. In the autumn she arranged with neighbouring farmer Jim Mitchell for permission to drive across one of his fields and gain easy access to the quarry during one weekend in October 1986. Her enthusiasm encouraged a party of more than

20 members to come along on both the Saturday and Sunday and help plant nearly 200 trees as well as tagging, recording and measuring them all. From then on, she worked tirelessly to encourage members to come along and help in the quarry, as well as frequently going up there herself in an evening after work to carry out more tree-nurturing tasks. Her outstanding leadership did much to guide the project through its early years and was able to overcome many problems and to improve and refine our work.

Margaret handed over the chair of the Quarry subcommittee when she became more involved with the Society as Senior Vice-President and then President. Not long afterwards her husband Fred was disabled by a severe stroke and she spent a lot of time visiting him in a nursing home. When he eventually died, Margaret decided to finally return to New Zealand. She left us in early 2002 and moved into an Eco-community on the outskirts of Auckland where she spent a number of happy years and was able to renew her contacts with siblings and other relatives and made many friends. Her excursions to explore local wildlife areas were communicated to us through several reports in the Bulletin and numbers of letters (and later a few emails) to individual members. She moved into a nearby old folks home four years back, where she died peacefully in November 2022. Several Nats watched the funeral via Zoom. She is survived by a niece and nephew and will be remembered with grateful thanks by many members of this Society.



Jim Cook

Photograph of Margaret with her brother, in about 2021, taken by her niece, Lynne.

MARK TULLEY

Mark died in June after a long illness. He had been a Nats member for a few years, but was chiefly known as one of the BSBI plant recorders for Angus.

MARY REID

Mary died in June, aged 102. She was the widow of Norman Reid, a former Nats Treasurer.

WINTER MEETINGS CROMBIE COUNTRY PARK - NEW YEAR BARBECUE

4th January

Frost overnight meant that there was rather less mud than when a recce of possible walks was done. It also meant that it was very cold, but this did not stop 15 Nats from turning out to explore what walks were actually possible with a lot of paths blocked by fallen trees as a result of Storms Arwen and Barra a month previously. After due warnings, all set out on longer or shorter routes while Anne lit the barbecue. A lot of huddling and hand-warming took place around it at various stages in the day!

A **red squirrel** was seen at the feeding station in the woods and someone also reported seeing a **grey**. We were looking for plants in flower for the BSBI New Year Plant Hunt, but only found two - a single **ragwort** clump beside the driveway and **gorse**, which Ronnie brought back to prove it was in flower!

Birds around the barbecue site were scarce - a singing **coal tit** and a **crow**, but Christine (Reid) managed to find a total of 15 species on her walks including **mute swan**, **wigeon**, **coot**, **long-tailed tits**, **yellowhammer** and a **treecreeper** - she probably walked further than most, which helped. She

was one of three who actually managed to navigate their way right round the circular path around the reservoir, finding ways round the obstacles (against advice!).

Hot food from the barbecue was most welcome, and vanished very quickly (photo on page 43). Despite the cold everyone seemed to enjoy the day, but nobody lingered once lunch was eaten and we were finished earlier than usual.

Anne Reid

DUNDEE BOTANIC GARDENS

Kevin Frediani - 11th January

This was a very thought-provoking talk which included both the history of the garden, the plans for the future and the reasoning behind the plans. A holistic approach to education about plants throughout Dundee is in progress, working with schools, universities, citizens and the Council. It is also proposed to cooperate with/complement the new Eden Project recently announced. The full title on the first slide was: The Botanic Garden as a Living Lab - Evolving Relevance Through Nature-based Solutions, and this was developed throughout. A green infrastructure was proposed, not just for the garden, but for the whole of Dundee with tree-planting, rewilding and outdoor learning to the fore.

Kevin very kindly sent a PDF of all the slides from his talk, which Lorna circulated to all members (on 12.1.22) - it is well-worth a look.

Anne Reid

MEMBERS' NIGHT

25th January

This year was, once again, on Zoom with a slightly reduced number of contributions from members - perhaps the fact that it was Burns' Night diverted people. Most chose to review 2021's activities, both with the Nats and independently. Those who showed photographs were:

Brian Ballinger - Another Unusual Year Brian started with the Nats outing to Monifieth where **purple milk vetch** (*Astragalus danicus*) was one of the specialities and **maiden pink** (*Dianthus deltoides*) was also found, with the help of Brian Allan. Storm damage in Brownie Wood was shown, along with the invasive **white butterbur**. Garrick Wood had been taken over by **gorse** over lockdowns, but a trail camera was also used there which found **badgers** and **pine martens**, but not the suspected poachers. Tarroul Wood in Caithness had dying **lodgepole pine**, though whether due to **needle blight** or **pine weevil** was not known. Much recording effort had produced 5,000 records in E Ross but also 4,500 all over Scotland for the BSS Urban Flora. Small studies of cemeteries, car parks and town and country had been undertaken, with some interesting finds.

Mathieu Soetens - Into a Telescope Having started birding in summer 2020, Mathieu has refined the use of telescope and mobile phone to record his sightings, as he does not have a camera. His 2021 highlights were **hooded merganser** at Kinnordy, **little gulls** at Monifieth, **red-necked phalarope** on Shetland, **osprey** at Insh Marshes and a **spotted redshank** at Riverside.

Anne Reid - 2021 A selection of highlights including **sand martin** nests at Murton (right), some with young at the entrance; **newts** and **toad spawn** at Loch Lee, a **mistle thrush** nest at Glen Prosen; Nats at the orchid meadow at Newmill; Quarry barbecues in summer and at the tree-planting day; and outings to Murton, Guardbridge and Riverside in wet weather.

Alban Houghton - 2021 by Month January - **dippers** on the Dighty and one of the mosaics there and also **red squirrels** at Morton Lochs. February - snow on **hogweed** umbels and a **jay**. March - **beaver** damage at Kinnordy, **larch** flowers and a **comma butterfly** near Tayport. April - **osprey** with ring blue YP returned to Balgavies at nine years old. May - a **bluebell** wood near the River Isla and a **siskin** at garden feeders. June - **cloudberry** on Clach Na Beinn; **lesser**



butterfly orchid and others at an orchid meadow. July - Ben Vrackie speciality *Astragalus alpinus* and a **painted lady** at Arbroath cliffs. August - **ceps** in local woodland. September - distressed and dead **guillemots** in the Tay and up the coast (the cause was researched but no explanation found). A **purple hairstreak** egg found on a fallen piece of oak branch, showing the architectural egg surface. October - a **red admiral** at Arbroath cliffs. November had no photos but many raptors were seen and storm Arwen devastated local trees and forests. December - fallen trees at Balgavies and two **great northern divers** at Broughty Ferry.

Anne Reid

DUNDEE BOTANIC GARDENS

5th February

We had arranged that Kevin Frediani of the gardens would give a short introductory talk before we set out to explore, as a follow-up to the talk which he gave us in January. He was, unfortunately, late in arriving so some of the 20 Nats who came started to explore, to keep warm on a rather windy and wet morning. We regrouped for his introduction on the ecologically based principles of the garden and the main native habitat areas were pointed out.

After thanking Kevin, we set out to see what there was, and how much damage the recent storms had done - a lot of trees had been lost but much of the timber will be used in the garden or left to rot naturally. Some areas were completely cordoned off but there was still plenty to see, and everyone will just have to go back to explore the rest of the garden. The birds were very shy - the list was only nine species, but included **buzzard** and **sparrowhawk**, and a flock of small birds which may or may not have been **siskins**. Some saw one of the resident **red squirrels**.

Retreating to the greenhouses at the end of the morning (for warmth) some were struck by the resemblance between the **Spanish moss** (*Tillandsia usneoides*) and Barry's beard, when he stood beside it! A number of participants then went on to sample what was on offer at the coffee shop, and to warm up further.

Anne Reid

SOLITARY BEES IN EAST SCOTLAND

Gavin Ramsay - 8th February

Gavin has had a long interest in bees, not least as a beekeeper. When he started to monitor a "Bee Walk" for the Bumblebee Conservation Trust (BCT) he found this a really good way of building up further knowledge of wild bee species. The advent of digital cameras was also a great thing for enabling good quality photos of bees to be taken for ID purposes. Another inspiration was seeing some of the bees which turned up whilst he was digging in his (then) new garden at Kingoodie.

The talk was structured to give us a concise introduction to the types of bees we might expect to see in the environs of Dundee. He also gave a guide to the ways in which they can be identified and recorded, and to their taxonomy.

We discovered that bees can be divided into families representing **mining bees** (*Andrena*), **plasterer bees** (*Colletes*), **leaf cutters** and **wool carders** (*Megachile* and *Anthidium*), **masons** (*Osmia*), **flower bees** (*Anthophora*), and **furrow bees** (*Halictus* and *Lasioglossum*). The recommended text is Stephen Falk's Field Guide which can, however, be quite difficult owing to the large number of species found in the whole of the UK. We were shown screenshots of a variety of online resources including Stephen Falk's Flickr site and the invaluable BWARS (Bees, Wasps & Ants Recording Society) site.

Gavin then introduced us to the species that we are most likely to happen upon in our area.

Mining bees likely to be encountered are:
Andrena clarkella (**Clarke's mining bee**)
Andrena nigroaenea (**buffish mining bee**)
Andrena scotica (**chocolate mining bee**)
Andrena bicolor (**Gwynne's mining bee**)
Andrena barbilabris (**sand pit mining bee**)

Megachile sp.



Of the mason bees the common species which are around are:

Osmia bicornis (**red mason bee**) which is common.

Osmia caerulea (**blue mason bee**) seen in the walls at Megginch Castle.

Of the flower bees, *Anthophora furcata* (**fork-tailed flower bee**) can commonly be seen in herbaceous borders around Dundee and Monifieth later in the summer and looks somewhat like a **honeybee**.

Others likely to be seen are:

Anthidium manicatum (**wool carder bee**) which has black and yellow spots and likes to “shave” the hairs off hairy leaves such as **lamb’s ear** in gardens. They use these hairs to close their nest entrance.

Colletes succinctus (**heather bee** or **heather colletes**) is a more upland species of features such as cuttings on heathland.

Nomad bees (often yellow and black) and **bee flies** are parasites of solitary bees in whose nests they lay their eggs. We saw a video of a **bee fly** (right) shooting eggs into their nests whilst hovering expertly and despatching each egg with a flick of the abdomen.

We were told to look out for some of the species which, like *Bombus hypnorum* (**tree bumblebee**) which has colonised Scotland over recent years, are also spreading northwards. These include *Colletes hederæ* (**ivy bee**) already recorded from East Lothian; it is most likely to be seen later in the summer when it nests in sunny soil banks close to **ivy**, a species which flowers late in the year. It forms easily seen aggregations in late summer.

Despite the problems of global warming, it is always a great excitement to hear of new species colonising that we can look forward to seeing in the future. Some of the species are already buzzing on our doorstep waiting to come in. These include *Anthophora plumipes* (**hairy-footed flower bee**), already in Fife and the **ivy bee** mentioned above.

To finish a phenomenally useful and inspiring talk there were a few ideas of what we as a group can do and some videos including the **sand pit mining bee** at Dunkeld and the **hairy-footed flower bee** down south. Many thanks to Gavin for preparing this most fascinating talk which was keenly awaited and certainly did not disappoint.

Cathy Caudwell



A talk had been organised for 22nd February, but the speaker moved away from Dundee and had no internet access to give the talk on Zoom. We were not able to organise a substitute in time, so had to cancel.

SOCIAL EVENING

25th February

Once again we resorted to Zoom for our meeting, with a selection of members' photos on the theme of 'weather' and some quizzes. We started on the photos and found that the subject had been widely interpreted. Some showed actual rain, wind, snow and sun, but others the effects of these on the local natural history. Sunny scenes were in the majority, closely followed by snow and ice. Rain was best represented by images of a New Year barbecue at Riverside with many umbrellas to the fore. As was the intention, the photos got everyone chatting and adding their own stories and observations.

Mike Sedakat had made up three quizzes on the subjects of 'TV Naturalists', 'the Female is More Deadly than the Male' and 'General Natural History', each with ten questions. We had mixed success with these, but enjoyed the chat that ensued when the answers were given, and all learned something new.

Thanks to all who supplied photos and, especially, to Mike for his quizzes, which all made the evening seem to pass very quickly and enjoyably.

Anne Reid

WORMIT TOWARDS BALMERINO

5th March

The day started off with lovely sunshine and virtually no wind, after a frosty night. 14 Nats gathered at Wormit Bay for a 10 o'clock walk along the Fife Coastal Path towards Balmerino. They had been well warned that the fields contained some **Highland cattle** and, after rain, the footpaths were very muddy and slippery in places.

From the Bay, we could see **redshank**, various **gulls** and a pair of **shelduck** (right), new arrivals for the nesting season. A **skylark** was singing over the field. It was very low tide and the sandbanks were all exposed. Two **magpies** (these have only colonised this area in the last two years) and a **cormorant** flew over the river.

Moving off at a slow pace, we followed the path up into the fields where it was, indeed, very muddy. The **gorse** bushes showed bright yellow in the sunshine and **yellowhammers** were seen, along with **blue tits**, **great tits** and a pair of **long-tailed tits**, flitting through the trees. Most of the trees were **ash** with some **blackthorn**, **sycamore** and **hazel**.



Most of the group got as far as the little den, where there is a low wooden bridge over the stream, before heading back. At this point, it is possible to see an old semi-submerged boat, just offshore. It may be an old dredger.

The river was like a mirror, with scarcely a ripple, and so, when some ripples were spotted, it took a few seconds of watching and waiting to see the cause. Eventually a **seal**, with a large **fish** in its mouth, broke the surface and seemed to play with its catch before disappearing beneath the surface again, letting the river return to its mirror-like state.

On our return, we saw some **goldfinches**, **dunnocks** and **blackbirds**. We thought the only flowers out at this time were the **gorse** blossoms, until Mary McIntyre spotted flowering **dog's mercury** beside the path when we were nearly back at the cars. Jim's list of fungi was short - only five species - but included the bright yellow **witches butter**. Gathering back at Wormit Bay, it was agreed that we had had a very pleasant walk, with a beautiful morning to go with it.

Liz Olejnik

SCOTS PINE IN A WARMING WORLD

Prof Rob Wilson - 8th March

In 2016 the Society heard a talk from Prof Chris Smout on 'the history and archaeology of Scots Pine'. This latest talk brought the subject up to date, considering the climatic factors which influence where Scots Pine grows in Scotland - now and in the future.

Numerous graphs illustrated the responses, in terms of growth and productivity, of trees to interactions between temperature, rainfall and soil types. This is important not just for explaining current distribution and predicting future range and optimal areas for planting, but also for carbon sequestration. Measurement of annual ring width and density give measures of growth rate, and carbon retention within the wood.

So far, Scotland's present climate is around 1°C warmer than a century ago, a modest change compared with the 4°C experienced in Alaska, but the trend is projected to continue, and the worst-case scenario predicts a further 3°C warming by 2100. Core Caledonian pinewood areas are becoming less suitable for pine, and increasingly favourable for oak; at lower elevations even beech may become more suitable. Most western pinewoods are at low elevation, and are relatively warm and very wet, and here pine is struggling. Conversely, higher elevations are becoming more favourable for tree establishment.

It is at higher elevation that trees demonstrate the clearest response to climate impacts, but there is no simple trend with elevation or latitude, as there are conflicting effects of temperature and

precipitation, and also soil depth and quality are important factors. Tree-ring density is strongly controlled by summer temperature, and is a better indicator of carbon uptake than ring width - however, at lower elevations the sensitivity is weakening with warmer temperatures in recent years. A southern site at Smailholm in the Borders, with poor soil, supports very slow growth; a site 230km farther north at Dallas in Moray at similar elevation but with better soils has very high productivity and consequently much better carbon sequestration.

A typical pine tree in Glen Queich will sequester 3 tonnes of CO₂ over its lifetime (10 kg/year), but there is much variability between sites: average annual sequestration rates range from 2-3 kg/year to 15-17 kg/year. Non-stressed trees are best for capturing carbon, although very rapid growth is also bad, and young trees sequester less carbon. (To put this in context, in 2019 Scotland emitted 47.8 million tonnes of CO₂.)



Although the network of sampling sites is improving, additional tree-ring data is needed. Scotland has a discontinuous dendrochronological record extending over 8000 years, clearest in eastern Scotland, including elevational transects for the Spey, Dee and Tweed valleys extending from sea-level to 550m. 30-40 trees need to be sampled at each site. Much more modelling of the data is also needed. Some of the findings presented to the audience of 25 logins were very new.

Colin McLeod

PHOTOGRAPHIC COMPETITION AND AGM

22nd March

The AGM was again held on Zoom this year and, after the formal business had been completed, we moved on to the results of the 2021 photographic competition for the Kim Eberst Trophy. The subject was 'Garden and Urban Natural History' which had been chosen to be close to home when there was still uncertainty over travel further afield. This was judged by Colin McLeod, Lorna Ward and our new Hon President, Jeremy Greenwood. The disappointingly low seven entries, in order of receipt, were:

A frog he would a wooing go	Alban Houghton
Just a Rat Run away from my Garden	Joy Cammack (red squirrels)
Garden Strawberry Thief	Mike Sedakat (house mouse)
Hoverfly on Garden Echinops	Jon Cook
Stormburst	Colin Reid (storm-broken tree trunk)
Bud Bingeing Bullfinch	Stevie Smith
Great to be in the Sun	Jim Smith (grey wagtail)

The winner was Jon Cook with his beautiful close-up portrait of a hoverfly. Second was Alban Houghton's mating frogs and third was Mike Sedakat's strawberry eating mouse. As there was no physical meeting, Jon was presented with the trophy the following morning by Anne. All winners received a certificate.

Anne Reid

The winning entry is on page 22, in the colour section.

SUMMER OUTINGS AND TALKS FORFAR LOCH

2nd April

The sun shone and 20 Nats turned out at Forfar Loch for what proved out to be a slow but interesting circuit of the Loch. Mostly, the birds appeared on cue, with **mallard**, **moorhen** and **coot** near the east end; **bullfinches**, a **treecreeper** and **tits** in the woodland and **great crested grebes** out on the water. The latter even put on a mating display for us. The bonus was several sightings of **osprey**, newly returned for the summer. **Ground ivy** was in flower along with **celandines**, **coltsfoot** and **dandelions**, and Jim (C) recorded 20 species of fungi, including **common mazegill**, a **brittleghill** and **violet bramble rust**.

Many then went on to Murton Reserve where the pair of **garganey** were still to be seen.

Anne Reid

BIRDWATCHING IN THE CANARY ISLANDS

Mathieu Soetens - 26th April

This was an extra Zoom lecture, to keep everyone in touch. Member Mathieu Soetens described his winter birdwatching trip to the Canary Islands in November 2021. Away from the tourist 'hotspots' there is a good range of species to be seen, and Mathieu was particularly looking for the Canaries' endemics, including **laurel pigeon**, **Berthelot's pipit** and **blue chaffinch**. Research before he travelled resulted in him choosing two islands, Fuertaventura and Tenerife, with contrasting habitats.

Fuertaventura is dry and fairly barren. The island was explored on foot with the help of local buses (sometimes erratically timetabled!) and the mileage covered was impressive. Little was seen at the coast, but inland such species as **trumpeter finch**, **spectacled warbler** and **Sardinian warbler** were seen and heard. **Spanish sparrows** and **Fuertaventura stonechat** were seen here and **Berthelot's pipit**. Many of the other target species were not found here, but **black-bellied sand grouse** was seen.

There were high hopes that the seven-hour boat trip to Tenerife might provide interesting sea-watching. It did not! Only two **shearwaters** were seen, and none of the hoped-for **petrels**.

Once on Tenerife two targets were in the lush **laurel forests**, the **Bolle's pigeon** and the **laurel pigeon**, both shy and very difficult to spot amongst the greenery. Both were eventually seen, the last just before departure for home. The **blue chaffinch** was heard but not seen, not helped by rain and cold, but **Atlantic canaries**, **Tenerife goldcrest** and **Canaries chiffchaff** were added to the list, amongst others.

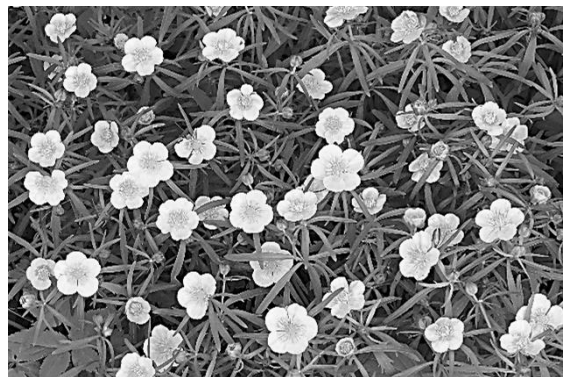
Mathieu achieved sightings of many of his target species. Along his journey, we all learned a lot about the less well-known side of these holiday islands.

Anne Reid

TROTTICK PONDS

3rd May

Fourteen members turned out on a fine evening to explore this Local Nature Reserve. There was much discussion at the start over the identification of clumps of a yellow buttercup, which both Lyn and Jim C agreed was **goldilocks**, *Ranunculus auricomus*, (right) but in one of its many variants. Meanwhile a **song thrush** was singing lustily and two **dippers** were seen on the Dighty near the bridge, one of them a juvenile. Up at the main ponds the **mute swan** was sitting on its nest, there was a pair of **tufted ducks** and two male **mallards** were harrying a single female. Elsewhere, Lainy spotted a family of 12 small ducklings and some **long-tailed tits**, and we heard **willow warbler**, **blackcap** and **chiffchaff** singing. A number of plants were in flower, including **red campion** and **sweet cicely**, and the **wild garlic** was very nearly in flower.



Anne Reid

INVERGOWRIE BURN

Joint with Botanical Society of Scotland

17th May

We met in a rather concealed car park off the main street in Invergowrie. This was a meeting partly devoted to the BSS urban flora project and also to making observations of other wildlife. It had been a sunny day, but it had clouded over and finally there was some rain which was not heavy, but enough to make me reach for my waterproof notebook.

We started looking at the plants in the car park and the surrounding grassy area, which had probably originally been a rubbish dump. We noted 47 plant species here, including **bulbous buttercup** (*Ranunculus bulbosus*).

A short walk along the Main Street took us to the burn, which has a pleasant path alongside, amongst the houses. There was a good growth of a **water crowfoot**, just coming into flower, which was difficult to identify to species with certainty as it was out of reach. I seem to have seen water crowfoots less frequently in recent years, perhaps because of pollution of waterways.

Rather less welcome was the **giant hogweed** (*Heracleum mantegazzianum*), which seems to be spreading along the bank. There was plenty of other plant life, including **hawkweeds** (*Hieracium* sp.), **water avens** (*Geum rivale*) and **ramsons** (*Allium ursinum*).



Pendulous sedge (*Carex pendula*) was by the bridge, perhaps of garden origin here.

Further north the path goes under the main road to Perth and now passes out of the urban area. The meadow alongside the path was covered in **meadow buttercup** (*Ranunculus acris*) and on the other side a variety of **willows** grew by the burn.

Crossing over the bridge, we approached the hotel, where there are wet areas which would have been associated with mills in the past, but are now covered in vegetation. An unexpected find was **wood millet** (*Milium effusum*), at the beginning of a rather unsafe path that we did not venture along. A single plant of **wood sedge** (*Carex sylvatica*) was also spotted.

Altogether we recorded 111 vascular plant species and Lyn Jones added 23 mosses and liverworts.

Other members of the party were observing the birdlife and 19 species were reported, including **kestrel**, **grey wagtail** and **dipper**. I did not see any butterflies during this evening visit, but earlier in the day **orange tips** had been in the air.

Brian Ballinger

PORTMOAK MOSS AND LOCH LEVEN RSPB

28th May

This bus outing was the first to be made by the Society since the Covid pandemic started two years previously and it was well-attended with 16 people on board. After a brief stop at Kinross service station the bus by-passed the RSPB Loch Leven Centre to drive to Scotlandwell beneath the impressive Bishop Hill. The weather was kind that day. A happy band of Nats disembarked from the bus near Portmoak Moss, one of the few raised bogs in central Scotland, for a two-hour walk around its perimeter. Meanwhile, some members decided that they would prefer to spend the day back at the RSPB reserve where they could enjoy the local walks, hides and facilities.

Much of the neighbouring raised bog has been lost due to peat cutting, afforestation and farming over the years, but 12 hectares of open raised bog remains, skirted by mixed coniferous and **birch** woodland. Raised bogs are areas of deep peat raised above the surrounding land. They form over thousands of years from shallow glacial lakes and wet hollows. Over this time, each lake or hollow becomes filled with the undecayed remains of plants and silt, and peat begins to form. The raised bog at Portmoak Moss is at least 6m deep in places. Portmoak, managed by the Woodland Trust, provides

refuge to all sorts of wildlife, from **roe deer** and **red squirrels** to a wide variety of birds, fungi and sphagnum mosses. The site is also a hotspot for damsel and dragonflies, butterflies and moths.

As we walked down the path into the wood **blackbirds** were singing, **wrens** calling and a **house martin** cruised overhead. Near a water-filled ditch a **seven-spot ladybird**, **large red damselflies**, a **yellow-banded snail** and a splendid **comma butterfly** were noted. **Chiffchaff**, **willow warbler**, **blackcap** and **chaffinch** called above in the tree canopy. After climbing the staircase on to the open moss we heard the distinctive yaffle call of **green woodpecker** a few times - a special feature of this moss - but were never lucky enough to see it. (We did see one on the recce. Ed.) Up on the moss **meadow pipits** were in flight and 'parachuting' back down into the **heather**, **cotton grass** and



sphagnum moss. Visitors were asked not to walk beyond the paths because of ground-nesting birds, but there was much to see beside the paths, such as **mouse-ear chickweed**, **forget-me-not**, **hawkweed** and **heath speedwell**. **Orange tip** (left) and **green-veined white butterflies** were recorded and as we entered the woods at the west side of the moss a **jay** called.

The calls of **great spotted woodpecker**, **wren**, **song thrush**, **blue tit** and an occasional sighting of **willow warbler** in the **birch** trees made for a good haul of species. At the north side of the moss a **pheasant** and **cuckoo** were heard (the latter probably up on Bishop Hill). On the recce, made 10 days previously, Anne and Brian had found the nest of a **great spotted woodpecker** full

of chicks that were being fed by the parent, but it was disappointing to discover that the nest was now empty. A passing dog-walker informed us that the young had been present the day before, but must have now fledged. (Anne had failed to remember exactly where the nest hole was in the tree trunk, and had feared that the nest had been predated. She resolved to be more observant in future!)

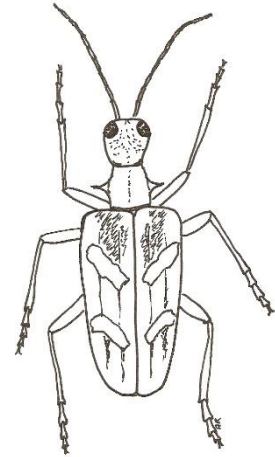
At this point in the proceedings seven member separated from the main group to walk around part of the Loch Leven Heritage Trail from Portmoak to the River Leven, Findatie and on to the RSPB Reserve on the south side of the loch below Benarty Hill. We followed a short-cut beside a drainage ditch lined by **raspberry** canes and **willows** running between farmed meadows, past Grahamstone Farm buildings to join the Heritage Trail by Loch Leven. A **sedge warbler** was giving its call, a **yellowhammer** alighted on the fence nearby, a few **swallows** skimmed the grasses and flowers were in bloom aplenty, such as **yellow comfrey** (*Symphytum officinale*), **red campion**, **cow parsley**, **bistort**, **red dead nettle** and **field pansy** (*Viola arvensis*). A **common carder bee** was found too. At the farm a **pied wagtail** and **goldfinch** were seen.

On the Heritage Trail the constant singing of **blackcaps** and **willow warblers** was enjoyed, along with **song thrush**, **blackbird** and **great tit**. When all seven of us were seated on a long felled tree trunk for lunch a splendid **two-banded longhorn beetle** (*Rhagium bifasciatum*) was discovered (see below). Occasional gaps in the dense **willow** woodland along the path gave views of the open loch where **black-headed gull**, **great crested grebe**, **tufted duck**, **moorhen** and **mallard** were noted as another **sedge warbler** called from the reeds. From a bird hide located by a small lochan surrounded by reeds at the SE corner of Loch Leven, we added a male **goosander**, **little grebe** and **reed bunting** to the list of birds seen. By the paths we noted **sweet cicely**, **lady's smock**, **tormentil**, **silverweed**, **water avens** (*Geum rivale*) and **wood avens** (*Geum urbanum*) with hybrids between them.

After crossing a footbridge over the River Leven we found a **grey heron** under an arch beneath the old mill at the outfall of the loch and a pair of **gadwall** were seen on the Loch. At Findatie Meadow (a marsh) there was a splendid display of **bogbean** and **butterwort**, both in flower. There we also found **lesser spearwort** (*Ranunculus flammula*), **marsh marigold**, **red clover**, the first flowers of **northern marsh orchid**, **yellow rattle**, **ribwort**, **red campion**, **lady's smock**, **crosswort**, **pignut**, **bird's foot trefoil**, **greater stitchwort**, **marsh violet** and **field buttercup**. Ronnie found a **rust** on **wild rose** stems (probably *Phragmidium rosae-pimpinelliforme*) and Brian found nearby the **rust** *Puccinia poarum* on **coltsfoot** (*Tussilago farfara*). A **common red soldier beetle** (*Rhagonycha fulva*) was found on the path. After we entered the RSPB reserve the walking group spotted a **great spotted woodpecker**, and a **whitethroat** was singing from the cover of a **hawthorn** in blossom.

Brian Williamson

From Barry *Rhagium bifasciatum* lays its eggs in dead wood, mostly of coniferous trees, where the larvae bore deep, broad tunnels until they are ready to pupate after about two years. The adults feed on a wide range of coniferous and broad-leaved trees. A quick search on NBN produced two recent records of it from Scotlandwell in 2021. Other than that it is the most commonly seen longhorn beetle.



Those who were transported to RSPB Loch Leven in the bus all went their separate ways on arrival, with lunch being a priority for most. The outdoor picnic tables were popular with accompanying birdsong from a **chiffchaff**, and **swallows** swooping low in pursuit of insect prey. Anne went most of the way up the hill, through the woodland, where **blackcaps** and **willow warblers** were singing and **blue tits** were carrying food into some of the numerous nestboxes. The **birch** leaves were a beautiful fresh green and the **bracken** was unfurling everywhere. Jim C went to the top of the hill where the views were excellent on such a clear, sunny afternoon.

Everyone else contented themselves with visiting the three hides overlooking the various stretches of water and scrapes. There were a few **gadwall** and **shovelers**, though these were hard to see as they kept moving in and out of cover. There was a family of nine small, fluffy **shelduck** ducklings with their parents (at the very cute stage) and several families of **greylag geese** with goslings of differing ages. Perhaps the best bird sighting was of five **pochard** (four male and one female) from the furthest hide. The single males were just resting, but the pair was actively feeding.

The wildflower meadow was not yet in flower, so few insects were seen there. A couple of **green-veined white butterflies** and a **peacock butterfly** were recorded from the path along to the hides, which was suitably warm and sunny.

Anne Reid

CRETE FROM EAST TO WEST

Brian Allan - 31st May

This extra Zoom lecture gave Brian the opportunity to show us a wide range of Crete's spring plants, working from east to west on the island. **Orchids**, **tulips**, **cyclamens** and **anemones** all featured, along with some anecdotes from the many trips Brian has made to Crete over the years.

GLEN LETHNOT

11th June

It was blowing a gale as we headed for Glen Lethnot. Where there were flowering **broom** bushes by the roadside, the road was covered in drifts of petals, like yellow snow. A startled **hare** ran off into a field. As leader, I feared that the weather might have put people off, which turned out to be the case. There were five of us: Anne, Barry and Cathy, and Jim Cook and Ronnie. After three attempts (at Cathy's suggestion) I managed to find the timer function on my camera and took a group photo of all of us together - perhaps the smallest attendance in recent times.

It was dry and the main glen was at least partly sheltered from the worst of the wind, though some gusts did bring us to a standstill. Near the carpark a **pied wagtail** was being harried by two hungry youngsters and a few **sand martins** and **swallows** swooped low over the water. There were agitated **common sandpipers** (right) at intervals up the river and **meadow pipits** everywhere, many doing their parachuting display song down to the



heather. Beside the track the **tormentil**, **lousewort** and **heath bedstraw** were in flower along with **milkwort**, which, in addition to the usual blue, had flowers in colours ranging from almost white through various shades of mauve and pink to 'true' blue.

The clouds at the head of the glen rarely looked anything other than threatening, but the rain held off. Insistent contact calls were heard from a **stonechat** which must have had family hidden in the **heather**. Cathy spotted a **red grouse** and a **wheatear** and, as we came near to the path junction, there was a squashed **adder** on the track - described by Barry (not entirely accurately) as a 'herbarium specimen'. Two **ring ouzels**, possibly young birds, flew up from beside the track, and a **wren** and a single **willow warbler** were heard singing. A second family of **stonechats** were heard here. By this time, we had decided against heading for the higher ground, but kept on to the end of the flatter ground where we all had lunch sitting on a wooden plank footbridge together.

The only flying insects seen were **common heath moths**, which were numerous, though there was also a possible **pug moth** which evaded capture (and identification). A couple of **marsh thistles** were just coming into flower and **cowberry** and **chickweed wintergreen** were seen low in the vegetation. At this point flurries of rain started, so we worked our way back towards the cars and spotted little else apart from a single **red kite** which swooped low over the river. Back at the cars a **buzzard** soared over, heading for some of the remaining trees, and another **wheatear** sat conveniently on a fence post for us all to see. Though we headed homewards rather earlier than originally planned, we all agreed that it had been well worth the effort.

Anne Reid



The five who braved the weather

DEN O' MAINS, DUNDEE

14th June.

This evening meeting was held jointly by the Dundee Naturalists' Society and the Botanical Society of Scotland (BSS). Den O' Mains is an area of ponds and woodland around the burn running through Caird Park in Dundee, where there is also a golf course and athletic facility. The weather was kind to us, with a dry and mild evening when a dozen of us met.

The meeting was devoted to botanical recording for the BSS Urban Flora of Scotland project and also to making other wildlife observations and records. Some of us knew this site well and others were visiting for the first time. We followed the track around the ponds, making frequent observations and not quite reaching the far end where the burn meets the golf course. The council had cut the vegetation round the pond in the few days before the visit, but many plants had escaped the mower's attention.

Some members visited surrounding areas including the track to the rubbish tip. We were recording in one tetrad (2 x 2km), but ventured into three one-kilometre squares. We were only aiming to record plants that had not been planted, although some probable introductions had proliferated and this can sometimes lead to difficult distinctions.

Some **northern marsh orchids** (*Dactylorhiza purpurella*) had escaped the mowing, although we did not manage to get to the site where *Carex hirta* (**hairy sedge**) had been seen in the past.

Both of the commoner *Geum* species were present (*G. urbanum* and *G. rivale* or **herb bennet** and **water avens**) as well as their hybrid. Ferns were represented by **broad buckler**, **male**, **scaly male** and **lady ferns**. The woodland was notable for a large population of **pignut** (*Conopodium majus*). The large populations of *Carex pendula* (**pendulous sedge**) and **yellow iris** (*Iris pseudacorus*) had probably originated from introductions.

The flora of the track to the waste dump was quite different, with large populations of **dame's violet** (*Hesperis matronalis*) and **soft brome** (*Bromus hordaceus*). A total of 131 vascular plant species was recorded during the evening.



The birds made their presence felt with 21 species, including **great spotted woodpecker**, and **long-tailed, blue** and **coal tits**. **Goldcrests** and **chiffchaffs** were singing in several places, but not seen.

A few moths were identified, including **silver ground carpet**, **gold swift** (left) and the micro moth *Agapeta hamana*. Fungi were also added to the records, and a single **rabbit** was seen.

Brian Ballinger

MORTON LOCHS

28th June

Short notice and a wet day kept numbers disappointingly low for this evening walk. We actually had dry spells, punctuated by showers when we retreated to one of the hides. There were few other people about so the birds were to the fore, with singing **chiffchaff**, **chaffinch**, **blackbird**, **wren**, **goldcrest** and **coal tit** in the woods. Large numbers of **mallard** (going into eclipse plumage), a few **dabchicks** and **moorhens** and a **coot** sitting tight on its nest were on the ponds.

Along the paths we saw a resting **ringlet butterfly** and a flying **meadow brown** but also a number of moths including **bordered white** which is characteristically found flying around **Scots pines** and other pines, sometimes in pest proportions. Other moths seen were **shaded broad bar**, **gold swifts** (lekking along the old railway line), a **snout**, a possible **yellow shell** and the micro *Anania fuscalis*.

The grassy path to the south hide was looking particularly attractive with flowers of **northern marsh orchid**, **yellow rattle**, **ox-eye daisy**, **ragged robin** and **red clover**. The damselflies which are usually seen on this stretch were sheltering unseen in the undergrowth, but a few **common carder bees** were seen at the flowers.

Those who attended thoroughly enjoyed the evening, and I recommend a visit to those who missed out.

Anne Reid

BALKELLO WOODLAND

16th July

Part of Balkello Woodland is a former landfill site. When building rubble ceased to be dumped here, the site was capped and trees were planted in the 1990s. The young woodland, containing both deciduous trees and conifers, is adjacent to some older trees and leads on to the open Sidlaws hillside, so providing a range of habitats for wildlife. Balkello Community Woodland is a site managed by Forestry and Land Scotland (FLS).

We were wonderfully fortunate to have a perfectly sunny day for our walk at Balkello. Parking at the car park we took a variation of what was described on the information board as the "Raven path". Close to a dozen Nats gathered, many more people than on the previous meeting - could the good weather have attracted them? We started by skirting to the east and then through the north side of a block of woodland, before joining a path which leads uphill to the more open south-facing slope. The woodland was full of **willow warbler** and **chiffchaff** song. A **buzzard** was heard, and **whitethroats** were found up in the more scrubby areas. We made a brief stop by a seat where we took in the spectacular view over to Dundee and the Tay, then went on, past an old quarry, onto the higher slopes below Balkello Hill. Here we had a very pleasant picnic just south of a marshy patch (rather dry on this day owing to the very hot weather) with another good view. We were surrounded by insects and the sound of **whitethroats**. This area is florally rich with **lady's bedstraw**, **bird's foot trefoil**, **lady's**



mantle, wild thyme and foxgloves. The damper ground supported **marsh thistle**, attractive to **six-spot burnet moths** and **dark green fritillaries** amongst others.

All in all we saw 12 species of butterflies on the walk. The highlights were the **fritillaries**, mainly **dark green** (left, Cathy Caudwell) but also one **small pearl-bordered**, looking rather worn. There were a couple of **northern brown argus**, as well as eggs on the very few remaining **rockrose** plants, and several **common blues** around. The other more commonly seen species were **small heath**, **peacock** (also larvae), **small tortoiseshell**, **ringlet**, **meadow brown**, and **small, green-veined** and **large whites**. The **northern brown argus** site is being increasingly encroached on by **gorse** and the fact that there are few **rockrose** plants remaining is a cause for concern.

We netted or photographed a variety of day-flying moths, which included, as well as the **burnet moths** mentioned above, an attractive micro-moth *Pammene aurana*, sitting on **hogweed flowers**, and a **northern spinach** netted on the higher ground between Auchterhouse Hill and Balkello Hill.

Other insects abounded, too many to mention. There were at least five species of bumblebees seen on the day, namely **common carder** (*Bombus pascuorum*), **early bumblebee** (*B. pratorum*), **garden or heath bumblebee** (*B. hortorum* or *B. jonellus*), **white-tailed bumblebee** (*B. lucorum* agg.) and **buff-tailed bumblebee** (*B. terrestris*). The **blaeberry bumblebee** (*Bombus monticola*) was also photographed working **raspberry** flowers when we did our recce for the walk on 22nd June.

Hoverflies included *Rhingia campestris*, *Cheilosia illustrata* and *Leucozona glaucia*. The second two were common on **hogweed** along with a small distinctive bug, *Grypocoris stysi* (identified by Richard Brinklow). There were some **large red damselflies** close to the ponds and ditches.

The bird list was short, 12 species were reported including **blackcap** in the woodland, **whitethroat**, four **ravens** and **stonechat** up the hill, **Chiffchaff** and **willow warbler** were calling across the site. **Roe deer** were also present in the woods on the day of our recce.

Following our lunch, the Nats walked to the col between Auchterhouse Hill and Balkello Hill where the hillside was more heathy and covered with flowering **bell heather** (*Erica cinerea*). Here we saw more of the **small heath butterfly**. Our descent back down the hill was via an interesting "short-cut", whereby only the heads of Nats were visible sticking up through the **bracken**. We think all eventually emerged safely to return to their cars!

Barry and Cathy Caudwell

KILMINNING AND FIFE NESS

30th July

Fourteen members assembled at the SWT Kilminning car park on a sunny morning, not put off by the overnight rain (group photo on page 23). Though breezy, the rest of the day was fine and sunny, and we made our way down to the shore where the whole of the Firth of Forth sparkled in the sunshine. There was a selection of gulls on the shore and pleasingly large numbers of **gannets** flying past, despite bird flu (no dead birds seen), and a few **sandwich terns**. We made our way slowly eastwards along the shore path where we saw **red admiral**, **small copper**, **meadow brown**, **small white** and **green-veined white butterflies** and **cinnabar moth** larvae. There was also a **six-spot burnet moth** which had recently emerged from its pupa. **Swallows** swooped overhead all along this section of the path.

Lyn Jones made a full list of the plants with particularly notable species being **wild cabbage**, **Scots lovage** and **small timothy grass** (*Phleum bertolonii*). A marshy area beside the path had **great hairy willowherb**, **meadowsweet** and **brooklime**.

As we neared Fife Ness, in the **brambles** and scrub above the shore, there were **song thrushes**, **linnets**, **whitethroats**, **reed buntings** and a family of **stonechats**. The dense **blackthorn** near here probably hid other unseen birds.

Lunch was taken at Fife Ness beside the hide where, amongst the **gannets**, a few **eider**, **common scoters**, **redshanks** and **black-tailed godwits** were seen to fly past. **Pied wagtails** and

rock pipits busied themselves on the shore. A few of the party rounded the Ness to look at the historic tide mill site in the next bay, before we all retraced our steps to the cars. Though the distance covered was not great, there was plenty to see and we had enough time to explore what was around and enjoy our surroundings on such a lovely summer day.

Anne Reid

CARSEGOWNIEMUIR BARBECUE

9th August

A beautiful warm evening greeted a group of 17 or so hungry members and friends to the quarry. Once again, Anne came along early with charcoal, tools and other paraphernalia in a wheelbarrow to light the fire in the large hooded barbecue before most members began to arrive, and then presided over the hot coals. In the interval she had taken a quick walk around the quarry to visit all the best places. Gradually members began to drift in and then take a walk around, to feast on the abundance of lusciously ripe but rather small **raspberries**. Those who looked downwards were also rewarded with sweet, tasty **wild strawberries**.

A **wren** and a **yellowhammer** were singing intermittently and a **great spotted woodpecker** called from amongst the trees, but the time of day reduced the number of birds recorded. **Small** and **large white butterflies** were seen flying and some **common carder bees**.

Jenny and Brian began dispensing their 'Château Allan' mulled wine. Delicious! Ken and Moira, Tom and Mary and several other veteran members joined us in good time for the feast. It wasn't long before the wire frame over the glowing coals was crowded with foil-wrapped bundles of cooking goodies. Loraine and Ronnie Young joined us with Mollie and Whiskers and both dogs were rewarded by pieces of (deliberately) dropped delicious sausages and other tasty morsels. Both were very reluctant to leave until they were absolutely sure there was no chance of any more! The main course, so to speak, was followed up by plenty of cakes, biscuits and chocolates, washed down with whatever had been brought. The evening was finished by plenty of stories of times past, present and guesses about the future.

Anne had taken her bat detector but the evening stayed too bright and warm and everything was tidied up without so much as a flutter being spotted. However, by the time Anne and Jim left the cottage a single **bat** (unidentified) was seen around the trees there.

Jim Cook and Anne Reid

BARRY BUDDON JOINT MEETING

21st August

After a two-year gap in meetings, the usual pattern was followed, with separate groups of birders and botanists (and entomologists) covering as much of the site as possible in the day. Meanwhile, David and Anne had set up moth traps at the lighthouse the previous evening.

The dry, windy weather meant that very few butterflies were seen, but two interesting **shieldbugs** were found at Happy Valley. These were the **spiked shieldbug** and the **bronze shieldbug**, which are both predatory species (photos in colour section, page 22). Both have a scattered distribution and neither appeared to have been recorded from Barry Buddon before. A **kidney spot ladybird** (left, Cathy Caudwell) and a **common white wave moth** were also found at Happy Valley.



The bird group did reasonably well with around 50 species noted. Most were the expected common ones but a possible juvenile **redstart** was seen at Happy Valley, with **swallows** overhead everywhere and a family of **stonechats** by the lighthouse road. An **osprey** flew over at one point, and those who visited the shore near the lighthouse recorded **ringed plover**, **sanderling**, **dunlin**, **bar-tailed godwits** and a single **ruff**.

Everyone came to the lighthouse at lunch time where they were able to see the moth catch, by this time all sorted out and labelled. Some of the highlights were **canary-shouldered thorn**, **purple bar**, **chevron**

and **antler moth**. In passing, a **small tortoiseshell butterfly** and a **small heath** were also noted near the lighthouse.

All agreed that it was good to be out together once more on Barry Buddon.

Anne Reid

PHOTOGRAPHS



Hoverfly on Garden Echinops, by Jon Cook.

The winning entry in the 2021 photographic competition for the Kim Eberst Trophy



Bronze shieldbug (left) and **spiked shieldbug** (below) seen at Barry Buddon on the joint outing.

Photos by Cathy Caudwell





Marjory Tennant planting her hawthorn tree at Carsegowniemuir Quarry on the tree-planting day, 29th October, with "planters in chief" Jim Cook (right) and Ronnie Ogg. (See page 27)



Group photo from Nats' outing to Kilminning and Fife Ness, 30th July. (See page 20)
 From left, back row: Russell Nisbet, David Keeble, Colin McLeod, Yvonne Lewin, Alban Houghton, Brian Williamson, Lyn Jones, Lesley Dron and Ronnie Ogg.
 Front row: Alison Keeble, Kati Smith, Amanda Jones and Liz Houghton

THE HERMITAGE, DUNKELD

10th September

Our final bus outing of the summer was to The Hermitage, near Dunkeld. The fungal foray was to have been led by Jim Cook, but he was unable to come at the last minute, so the fungal enthusiasts from the TAFPG group headed off themselves to see what they could find.

The alternative walk was led by Anne, up to Rumbling Bridge, which was eventually reached by most of the party after a leisurely walk with lots of stops to look at things of interest. Our first objective was Ossian's Hall where the main feature was the amount of water in the River Braan after a wet week. There was so much spray here that a small **rainbow** was enhancing the view (with the spray also reaching camera lenses!).

As non-specialists we did find some fungi but were only able to identify the obvious species, such as a large group of **fly agaric**, a small **cep (penny bun)** and a group of **sulphur tuft** on a tree stump. Photos were taken of others but most received no definite identifications. Our bird list was very short, especially in the forest, but included **goldcrest**, **crossbill** (only heard), **jay**, **great spotted woodpecker**, **coal tit** and several singing **robins**.

Above the forest there were a couple of **swallows** over the meadow and **buzzard** and **kestrel** were seen. An unfamiliar call was eventually identified as a **nuthatch**, which Anne and Tom Harwood actually saw at the top of a dying **ash** tree along with a **chaffinch**. Everyone settled down on some



convenient logs to eat lunch in the sunshine (photo on page 43). One of the logs, probably **oak**, had a crop of black cup fungi which turned out to be **black bulgar**, *Bulgaria inquinans* (left). A **red admiral**, four **peacocks** and a **small tortoiseshell** were seen here and Liz O thought she might have seen a **small copper** which didn't stay for the rest of us. Ronnie got so comfortable on his log that he actually fell asleep.....

On the return walk a few ripe **brambles** were found (and eaten) and a list was made of plants still in flower, which was surprisingly long (over 20) and included **knapweed**, **harebell**,

woundwort, **eyebright**, **tormentil** and **marsh thistle**, mostly growing at the edges of the forestry track. Everyone enjoyed the day, especially as we had plenty of time to stop and look at anything interesting.

Anne Reid

AUTUMN MEETINGS

EMMA TURNER, BIRD RINGER, BIRD PHOTOGRAPHER AND BIRD WATCHER

Jeremy Greenwood - 11th October

Introduction of Professor Jeremy Greenwood as Honorary President

This was our first "real" face-to-face indoor meeting since the Covid Pandemic which kept us at home for so long. It was not only special for that reason - but it was also the first time that our recently appointed Honorary President, Prof Jeremy Greenwood has been able to join us - so a great event on both counts! The event was held in an upstairs room at the Queen's Hotel since the University were still not accepting outside room bookings.

Jeremy was introduced by the President, Barry Caudwell, who, firstly paid tribute to the wonderful work done by our past Honorary President, Gordon Corbet, who like Jeremy had also started life as a zoologist in Dundee University.

Barry was delighted to be able to introduce Jeremy to the Nats at last, having known him for some years as a fellow member of the University and member of the Tay Ringing Group. Although members had had a chance to meet him online, an in-person meeting with the DNS had been delayed by Covid.

Jeremy started his academic career as a lecturer in Zoology at Dundee University before moving south with his family, to become Director of the BTO (British Trust for Ornithology). After almost a lifetime devoted to the study of birds down there in Norfolk, and following retirement, he and Cynthia couldn't wait to get back to Scotland again. We are most happily the beneficiaries of their return!

Appropriately, Jeremy started by quoting the poem reproduced below:-

"A Naturalist" by Edith Joy Scovell.

*The stones and dust seemed flowers in the lane's warm shade.
He in his dust-white coat went down through the breached
Low wall by the road into a flowering glade
Where the small briars his hand, the cow-parsnip reached
His shoulder, with flower-heads, level umbels spread
On their thick fluted pillars, head beyond head.*

*Spacing the parsnip flowers and passenger rose,
The grass like air stood everywhere in channels.
There he thigh-deep, a patient man in flannels,
With his glass-green net still, and in repose
His heavy thoughtful head, seemed rooted in the brome,
Stock of that natural garden, never so at home.*

The Naturalist described may be Edith Joy Scovell's Oxford ecologist husband, Charles Elton. Thanks to Jeremy for providing the full text and for asking Charles Elton's son Rob, who has kindly waived copyright so that we can quote it here. (I am not aware of many poems about Naturalists, but there is also "Death of a Naturalist" by Seamus Heaney, which is worth looking up, although I did not find it too encouraging of the pursuit of natural history!) I wonder if you can recognize any fellow naturalists in it?

Jeremy continued by mentioning the lack of a book on "The Nature of Angus" - was this a challenge to Nats perhaps? Our retired Hon President, Gordon Corbet, was editor of "The Nature of Fife".....

EMMA TURNER

"Emma Turner – a life looking at birds" written by James Parry and Jeremy Greenwood was published by Norfolk and Norwich Naturalists' Society in 2020 and is obtainable as detailed below. It is a great read and I can thoroughly recommend it as the story of a fascinating lady. A very brief resumé follows, however, as I cannot do it justice, you should read the book yourself.

The story of the book started as follows. The head of the BTO's ringing scheme was interviewed on TV and mentioned Emma Turner as one of the earliest bird ringers. Following that event one of Emma Turner's great-nieces contacted the BTO who put Jeremy in contact, leading to a visit and access to her memories and archival material relating to her great aunt. James Parry also heard the story of Emma Turner on a visit to Hickling Broad and wrote about her, leading to contact from another of her great-nieces. Jeremy and James then agreed that it would be a good idea to write about this remarkable woman.

Emma Louisa Turner, the daughter of a Kent shop-keeper (both grocer and draper), was born in 1867 and died in 1940. She grew up in a relatively well to do family home and was privately educated. Her life however was not easy and much influenced by the loss of her mother when she was only 13 as well as her sister some years later. She subsequently took care of her father as well as a nephew and niece. The niece was the child of one of her brothers, John, and was the mother of one of the great-nieces who was instrumental in providing memories and archive material for this book.

It seemed remarkable for the time that at around 30 years of age, Emma became inspired to devote much of her life to the study of birds. It is not known how this occurred, although it seems possible that it resulted from meeting or attending lectures by Richard Kearton, a well-known bird photographer at the time. At any rate, she resolved to become an outdoor bird photographer herself, and went on to pursue this vocation with both determination and dedication. She may have initially had

another reason for following an outdoor life since she suffered an illness, perhaps TB, for which fresh air was often prescribed.

Among Emma's many birding adventures, the first one involved living in a houseboat, on what became known as "Miss Turner's island" on Hickling Broad. From here she took her wonderful black and white photographs of birds and produced photographic evidence of breeding **bittern** taken at Sutton Broad in 1911. This was headline news as there had been no known breeding of **bittern** in Britain since 1886. At the age of 57 she spent several seasons as the first Tern Warden on isolated Scolt Head, living alone in a wooden hut. She also travelled widely, including to Scotland. Later in life she resided in Cambridge and was known, even from quite a young age, as an impressive lecturer, imparting her vast knowledge of birds and their behaviours to a wider community. She holds the distinction of leading the way as one of the first four lady members of the British Ornithological Union, and one of the first women to be elected a fellow of both the Linnaean Society and the Zoological Society, a triumph indeed!

What I found particularly impressive about Emma Turner was not entirely that she lived on a houseboat, hid under vegetation until she could get the best of bird photographs, wrote and spoke eloquently and accurately about them, or even lived in a hut on a remote shingle island - any one of which was a great thing to do - but that she had the organisational ability to enable her to carry out and succeed in all of these activities to the highest standard, with profound and life-long determination, professionalism and spirit, whilst still fitting in time for the war effort, her family and many friends.

Cathy Caudwell

Availability of the book

Jeremy has copies of the book for sale, at a price of £9.50 (all of which goes to the Norfolk and Norwich Naturalists' Society) plus postage if necessary.

If you want a copy, contact him via email (jjdgreenwood@gmail.com) or by post (Bayview, Smithy Rd, Balmullo. KY16 0BG).

FIFTY YEARS OF COASTAL ECOLOGY

Dr Tom Dargie - 25th October

This was a joint meeting between the Dundee Naturalists' Society and the Botanical Society of Scotland. It was our first meeting in the University of Dundee since Covid and it was good to be back.

Tom Dargie, who is based in East Sutherland, described his lifetime's study of coastal ecology, in Scotland, the rest of the UK and overseas. After a period as a university lecturer, he has run an ecological consultancy for many years.

He described some of the species found on the coast, including **slender spike-rush** (*Eleocharis uniglumis*) and **saltmarsh flat-sedge** (*Blysmus rufus*) in wet salt-marsh. On dunes **marram** (*Ammophila arenaria*) and **lyme grass** (*Leymus arenarius*) are frequent and, less commonly, **grass of Parnassus** (*Parnassia palustris*) (right), **juniper** (*Juniperus communis*), **rockrose** (*Helianthemum nummularium*) and **coralroot orchid** (*Corallorhiza trifida*) occur,



Scotland has a long and varied coastline, from the golf courses of the south to the subarctic north coast. Tom's work has involved many important Scottish sites such as Tentsmuir, Morrich More, Menie, Coul and the west coast machair. He has also worked in England in such places as the golf course at Sandwich, with its important population of **lizard orchid** (*Himantoglossum hircinum*). The Isles of Scilly have special botanical attractions.

Elsewhere in the world he has studied habitats in Brazil, Norway and Tasmania. Tom commented that overseas sites often had more adjacent woodland than coastal places in Britain.

Much of his work has involved precise measurement, which he illustrated with diagrams. His earlier work pre-dated the digital age, but he has been able to compare data sets over a long period.

In places there has been increased wetness, and in others loss of diversity. Changed management practices have sometimes also been a factor.

He assessed the controversial Trump golf course development at Menie links. This important SSSI with dune slacks and mobile dunes contained rarities such as **curved sedge** (*Carex maritima*), **small adder's-tongue** (*Ophioglossum azoricum*) and **intermediate wintergreen** (*Pyrola media*). The predicted damage has subsequently occurred and part of the SSSI has been denotified.

Tom has undertaken long-term surveys of the dunes and saltmarsh at Morrich More by Tain, now a military range. There have been changes with dune loss and increased wetness.

Recently he has taken a leading role in highlighting the implications of a proposed golf course development at Coul Links near Dornoch.

In these times of climate change and manmade developments this sort of work has never been more important.

Brian Ballinger

CARSEGOWNIEMUIR TREE PLANTING DAY

Saturday 29th October

Some 16 members came along to help us plant as many trees as possible. Not everyone was able to help plant the trees and several instead walked around to admire handiwork from previous years and 'supervise' the current efforts. The work was made much easier and quicker by using the holes dug previously with trees to go into them close by, along with matting, posts and wire. More than a dozen trees were planted in this way before it was time for some food. Then it was time to gather round the barbecue and enjoy a good lunch on the picnic tables. Straight after the meal Marjory Tennant, who had visited the quarry for the first time in some 10 years and marvelled at the changes in that short period, ceremonially planted a **hawthorn** in front of the whole party in the 'memorial garden' of area S along back-path 2 (photo on page 23).

The McGregor clan planted several trees, particularly transplanting four small **bird cherries** from further along in the quarry, but then had to leave. Once the barbecue had cooled and been packed up Anne joined with Mike, Ronnie O and Jim to form two pairs to complete the planting of trees into pre-dug holes. Once finished, we counted a total of 24 trees that had been planted during the one day, a very creditable effort indeed for a small group of members.

The rest of the planned autumn plantings were completed by Ronnie and Jim in the succeeding weeks.

Jim Cook



A TALE OF TWO SEAS

Snorkelling Discoveries in the Mediterranean and Scotland

Keith Broomfield - 8th November

Keith's interest in the underwater world was fired by childhood visits to Pease Bay where he snorkelled on family holidays. He now explores the Mediterranean on the Sicilian coast, in a very small bay which he has christened 'Paradise Creek'. Though very small, this bay has a huge amount of life and there is always new stuff to be found. Keith does not use a wetsuit here, even in May, when the locals think the water 'too cold'!

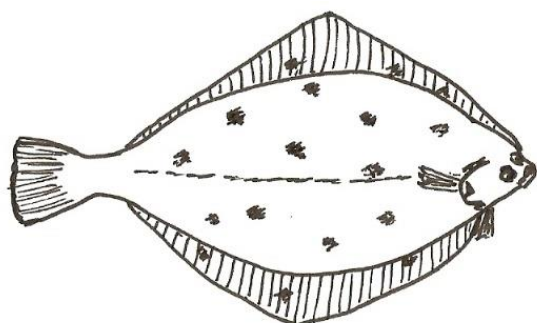
Mediterranean waters are where north meets south, with a high diversity of species. Typically shoals of fish might include various **mulletts**, **wrasse** and **breams** (of which there are up to 20 species).

Around 90 species of **goby** are found in the Mediterranean, but are very hard to identify, apart from the **giant goby** which may be 1ft long. **Cardinal fish** hide in sea caves and come out to feed at night and the **deep-snouted pipe fish** are poor swimmers and skulk in **sea grass** beds and creeks. **Groupers** are territorial and also good to eat (about five species) and some of the **blennies** are curious and come out to investigate divers.

Of the invertebrates the yellow and black **spotted sea hare** was first recorded in the Mediterranean in 2002, having come in via the Strait of Gibraltar, and is becoming widespread. Various **sea anemones** have nematocysts (stinging cells) which make their tentacles feel 'sticky' when touched and there is a very small **orange cup coral** found under rock overhangs. Another coloniser from the Atlantic is the **sea urchin crab**. We were also shown **octopuses**, squeezed into crevices, filter feeding **tube worms** and **sea cucumbers** which eat decaying matter and recycle nutrients.

The Mediterranean has a number of problems. Because it is landlocked and has large cities around it there is a lot of environmental pressure, especially from tourism. Problems are hard to address in a coordinated fashion with 22 countries bordering the sea. In addition to Atlantic species colonising there are more arriving via the Suez Canal including **rabbit fish**, **toad fish** and **lion fish**, all of whose impacts have still to be fully understood.

The favoured Scottish snorkelling site is on the 'Costa del Fife' – a 'Paradise Lagoon' this time, between Elie and Earlsferry. Here a wetsuit, gloves and weight belt are necessary, especially in April and May. The shallow lagoon has **sea lettuce**, **dulse** and juvenile **cod**. Some **lobsters** are found in the intertidal zone, away from the creels in deeper water.



The nocturnal **spiny squat lobster** can be found in early morning and also the **common squat lobster**. Small fish swim amongst the tentacles of **lion's mane jellyfish** for protection and **flounders** are found in various places, always mimicking their background for camouflage. The **shanny** is very common and will 'sunbathe' at the edge of rockpools, but can also move around the shore under wet seaweed and has been called a '**sea frog**'.

North west Scotland has some different species with **goltsinny wrasse**, **corkwing wrasse**, **balan wrasse**, **grey gurnard** and **two-spotted goby** being amongst those we were shown. A very large **hermit crab** and **common prawns** were very colourful and the **velvet swimming crab** has flattened back legs to allow it to swim.

The excellent photos of the diversity of underwater life which Keith showed us made us all yearn for summer again when we might go and enjoy even a small part of what we had been shown - either in Scotland or further afield.

Anne Reid

LAIRD'S LOCH

19th November

After two days of record-breaking rainfall, and floods in some places, a few of us ventured out for a Saturday morning walk. The cloud was still very low at the Tullybaccart car park, but it wasn't actually raining.

As we approached Lairds Loch a party of **crossbills** flew over with their distinctive call allowing identification. **Coal tits** were heard in the conifers and a couple of **jays** called to each other somewhere further away. Despite a quiet approach (and few other people about) the only birds on the loch itself were eight **coots** which were occasionally diving for food. On the path across the dam there was a dead **toad** which looked flattened but not actually squashed and caused some speculation as to its cause of death since it appeared otherwise unmarked.

Once on the good forestry track it started to rain, but we were all suitably clad so just kept going. There was a large **earthworm** moving across the path, enjoying the wet conditions, and a **goldcrest** called from the cover of the trees. As we completed the loop back to the loch another group of about ten **crossbills** flew over and landed in the top of a **Scots pine**, enabling their silhouette to be seen to confirm identification - that beak is very distinctive!

Meanwhile, Cathy was looking for **leaf miners** in **willow** leaves. As a bonus from this we became more critical about the different willows we were searching and positively identified *Salix aurita*, the **eared willow**. There were a few fungi still showing including a yellow *Clavaria* and some rather degraded **boletes**.

The rain stopped again for the final part of the walk so we had dried off somewhat before heading for home. It was good to get out again after the recent dreadful weather.

Anne Reid

SCOTLAND'S TEMPERATE RAINFOREST

Christopher Ellis - 22nd November

Dr Christopher Ellis of the Royal Botanic Garden in Edinburgh gave an interesting talk on this special habitat on the west coast of Scotland, which is also present in some places on the west coast of England, Wales and Ireland. The importance of this has only recently been more fully appreciated. This is an area of high rainfall, relatively moderate temperatures and substantial summer precipitation. It is also regarded as having an oceanic climate.

Temperate rainforest is quite rare in the world, making up less than 1% of the earth's area, in contrast to tropical rainforest which accounts for 7% and boreal forest 16%. Europe has 15% of the world's temperate rainforest and of this Britain accounts for 40%.

The main Scottish sites consist of **oak**, **hazel** and **ash** woodlands near the west coast. The area has been reduced by widespread felling in the past. These woodlands are characterised by profuse growths of bryophytes (mosses and liverworts) and lichens, mainly growing as epiphytes on trees. These include some rare species such as *Pseudocyphellaria norvegica*.

Dr Ellis gave a brief description of the main features of lichens, which are basically fungi of the ascomycete type, which have features called asci containing spores. Within the fungus cortex green algae grow and meet the nutritional needs of the fungus. Alternatively, sometimes fungi are associated with cyanobacteria. The green algae can use water vapour but the cyanobacteria need liquid water. This influences the places they inhabit. Different lichen species have various growth forms, being crustose, frutose (shrubby) or foliose (highly branched).

Spores are produced by the fungi, but to colonise a new site an appropriate algal species must also be present. As well as reproduction by spores, vegetative reproduction occurs by powdery soredia or detachable outgrowths known as isidia.

Studies in species abundance, corrected for recorder effort, have pointed to a steady decline over the years. Conservation groups hope to reverse this decline by protecting existing sites and encouraging the restoration of lost woodland. Scotland's Forestry Strategy supports this approach. Chris Ellis's team has investigated spore dispersal and the colonisation of new woodland by these epiphytes. This colonisation is much more successful if the new site is less than 100 metres from the source.



The overall climate is important, but the local microclimate is also very relevant to success, often influenced by nearby rivers and water bodies. The cyanobacteria and algal groups have different requirements.

In the future climate change may influence rainforest habitats, but we can only hope that these precious places have sufficient resilience to survive with sympathetic management. An alliance of voluntary organisations has been formed to support these temperate rainforests.

Brian Ballinger

MY LOCKDOWN YEAR 2020-2021

Brian Ballinger - 13th December

When lockdown hit us all we had to decide how to spend our time when confined, initially at least, to home. Paint the kitchen? Sort the garden? Organise books and photos? Brian was not inclined to resort to such tasks! In all eight months was spent in Dundee followed by four months alternating between Easter Ross and Dundee.

Garden Wars included keeping the **frogs** in the pond safe from the marauding **heron**, with limited success. In addition, a **mistle thrush** defended **rowan** berries against the **woodpigeons** and the **maggie** became very good at **frog** catching. Some moth trapping in the garden yielded **poplar** (right) and **elephant hawkmoths**.



Around Dundee, Brian continued to record within the city for the BSS Urban Flora and out of 50 possible 1km squares he managed to visit 47 of them (but not Whitfield). On his travels **primroses** were shown from Balgay Cemetery, **ivy broomrape** from the Perth Road area, new sites for **northern marsh orchid** were found and **meadow saxifrage** (below) was seen in Western and Barnhill Cemeteries.

Various small projects were undertaken including a study of 50 walls in Dundee to see what grew there. A follow up of 25 streets, after an earlier survey 19 years before, found some species constant but others had been replaced.

As restrictions eased Brownie Wood in north Fife was visited as just falling within the designated distance (as the crow flies!). The **honeysuckle** was particularly good and most of the **bluebells** appeared to be native. A mystifying plastic food box here seemed to be connected to geocaching.



Further easing allowed visits up north later in the year, in time for a flypast by **whooper swans** and **geese**. Garrick Wood near Tain was showing signs of neglect with some paths blocked by a year's growth of **gorse**. However, the pond here had eight **dragon** and **damselflies** including a **four-spot chaser**. There was also **creeping lady's tresses** (*Goodyera repens*) and **bog asphodel** (*Narthecium ossifragum*) in the wood. Other studies up north included railway station flora, monitoring of vascular epiphytes and comparisons of rural and urban graveyard and cemetery flora.

Brian still has not sorted the garden, painted the kitchen or organised his books and photos; but he concluded that what he had done was much more fun!!

As this was our Christmas meeting we then tucked in to various festive fare brought by members and washed it down with tea or coffee provided by Lorna. It was good to have some social time together after the enforced break.

Anne Reid

MEMBERS' ARTICLES INTERESTING SIGHTINGS

This will probably be the last time these listings will appear in the Bulletin in this form as these are now almost all submitted to and appear in the Newsletters every two weeks. The reports there are more topical and there seems little value in repeating them here. Members are still encouraged to submit notes for the Bulletin (even a few lines) highlighting interesting sightings throughout the year.

Anything particularly interesting should, of course, also be submitted to the relevant national recording scheme. If you need help with this, then ask Anne or Barry which scheme would be appropriate.

All the records below come from Jim Cook.

3rd January The rattle of **magpies** echoed round the garden and next door in the early morning soon after dawn. Are they starting to breed here very early?

5th January Heard two coughing barks of a **red fox** nearby in the early hours of the morning and wondered if it was trotting along the road in front of the house. But then a car came along and the fox stayed silent.

29th January Could again hear the rattle of one or two **magpies** in the garden in the early morning before dawn. Were they nesting in the garden or next door?

16th February In the pre-dawn darkness, the rather sad-sounding territorial song of a lone **robin** could be heard in the garden. At last, the first signs of the dawn chorus.

18th February At about 2am, I woke to hear what was probably a **fox** giving a few barks outside the house. At that time of the night, it surely couldn't have been a dog.

28th February Woke up early and in the calm darkness a **song thrush** was singing somewhere nearby and then, a short while later, a **robin** joined in from the garden. Later on a **great tit's** 'teacher' calls could be heard as well. Was this a rather thin dawn chorus, the first I'd heard this year? Even later another tit, perhaps a **blue tit**, and then a **blackbird's** fluting song came in from the garden along with occasional 'tseee-ee' calls of a **greenfinch**. Finally, after dawn, a couple of **collared doves** (birds I'd not heard around the garden for several years) started their rather mournful calls from the roof. It was good to hear the variety, although the numbers of each bird seemed to be less than last year.



17th March Woke up early, shortly before dawn, but didn't hear a single bird singing in the garden. In previous years I would have expected to hear a full-throated dawn chorus. I'd had the same experience several times earlier in the month, with few or no singers. Why were the birds not singing this year? Was it because of the presence of the nesting magpies?

12th April A butterfly, perhaps a **small tortoiseshell**, was sunning on the south wall of the house, one of the earliest this year. Is this a good sign for the summer to come?

14th and 16th June On both early mornings a **chiffchaff** was heard calling from somewhere close by.

20th September A skein of high-flying **geese** flew over to the south-west in the evening, presumably in the direction of the Tay to roost. This was one of the first large skeins I've seen here this autumn.

25th October Watched a group of young folk chatting among themselves while an unusually large and vocal gaggle of **pinkfoot geese** flew low overhead. Not one reacted nor looked up at the spectacle in any way. Ah well, it's the way of the world.



COTSWOLDS REVISITED

After a long gap of six years, we returned to the Cotswolds for two weeks starting on 24th June 2022. A favourite holiday destination of the Dron family since 1979, we have spent time in most areas of the Cotswolds, but the northern area around Broadway is special and this is where we spent our first week, in an old traditional house on the Snowhill road. We arrived around teatime and managed a short walk before dusk, noting a few **bullfinches** in the nearby trees.

Saturday 25th dawned breezy and there were some showers during the day. As usual, our first day would be spent walking from the house and we started by heading up the hill opposite, towards Manor Farm, where the Cotswold Way comes up from Broadway. In spite of the dull day, we were



pleased to see some butterflies already on the wing, including **meadow browns**, **ringlets** and the beautiful **marbled white** (left). Halfway up the hill, we turned along a fence-line and were met by a cloud of these butterflies on the right and swathes of **pyramidal orchids** on the left. We found a few **common spotted orchids** as well as **shining cranesbill** and there was also the odd **small tortoiseshell**, **speckled wood** and **large skipper**. We lingered here for some time enjoying the sight and made our way up to the farm, where we turned down the hill through a field of **sainfoin**. Near the foot of the hill a **common redstart** was spotted by Russell. Our afternoon walk took us in the opposite direction, where we found more orchids and butterflies, saw **ravens** and **buzzards** and our only **willow tit** of the trip. We noted **white bryony** here also and found this plant in other locations during the holiday.

On our second day, which was again dull and coolish to start with, we spent part of the morning examining the moth catch. While we had encountered most of the moths at home, there were some which were new to us, including **small dusty wave** and **common emerald**. We had only previously seen **muslin footman** in Ireland. The **buff-tip** posed beautifully on the rustic table on which we had set the trap and some of the common birds including **blue** and **great tits** accompanied us. Our walk that day took us to Bourton Downs, starting at a disused quarry not far from Snowhill, a walk described in a 1983 publication of wildlife walks in the North Cotswolds. Described as a remnant of natural Cotswold grassland, this is an area where **great bustards** used to roam and has been spared due to the steep valley sides. The shallow, well drained soils support a rich variety of lime-loving plants and attract a great number of butterflies. New butterflies encountered here were **small heath**, **common blue**, **brimstone** and **painted lady**, while **stonechat**, **great spotted woodpecker**, **chaffinch**, **yellowhammer**, **sparrowhawk** and **rook** were noted here and on the rest of the circuit, which led down the valley to Hinchwell, then back up through woodland above the valley and finally some farmland. A plant which we had only previously encountered in Ireland was also found - **dropwort** (right), which looks rather like **meadowsweet**.



Monday 27th June was rainy and after a short walk into Broadway for supplies and an early lunch, we headed to Chipping Campden, where the Cotswold Way ends (or starts). A short circuit took us to Broad Campden, passing a lovely field of **poppies**, and seeing **stock dove**, **goldcrest** and **pheasant**, more **white bryony** and **red admiral** and **large white butterflies**. **Pyramidal orchids** were also a feature of this walk. The moth trap was set again

that night and yielded 17 species, of which the most exciting was the **beautiful hook-tip**. **Treble-lines**, **single-dotted wave**, **poplar hawkmoth** and **shoulder-striped wainscot** also featured.

The late morning and afternoon of that day were spent at Bourton-on-the-Water, a very popular venue with tourists, but our walk, taken from the same book as the Bourton Downs walk, led us towards the old flooded gravel pits, which are essentially fishing lakes. Over the years since our first visit in the 80s, the vegetation has grown considerably, but there are still good views over the water in many places. The water birds included **mute swan**, **coot**, **great crested grebe**, **mallard** and **tufted ducks**, **grey heron** and **cormorant**, while **Cetti's warbler** was heard. This area is fantastic for dragonflies; **banded demoiselle** and **beautiful demoiselle** being the best and there were **common blue damselflies** too. Our lunch was taken at the edge of a field further on, sitting on a log with a **scarlet tiger moth** on one side and our first **comma butterfly** on the other! On this walk, we also saw a **common shrew**, **roe deer** and **rabbit**.

On the following day, we decided to go in search of more butterflies and plants on Cleeve Hill and on arriving at the carpark beside the golf course, we headed off along the Cotswold Way towards the Butterfly Conservation reserves on Prestbury Hill, encompassing the Masts Field and Bill Smyllie Reserve, stopping at the topograph (indicator dial) marking the highest spot in the Cotswolds at 1040 feet. The views from the hill encompass the Malverns and Shropshire hills to the north west, the hills and mountains of Wales to the west, the Severn valley, and Bredon Hill nearby to the north. It is well worth spending some time walking on the many footpaths crossing the hill. On entering the Masts Reserve, we were looking for the **musk orchid** and new butterflies. This was where we had seen "**The Duke**" (of Burgundy) on our last trip, which had been in May, but the suite of butterflies was now very different. We saw again most of the species noted already, but **small skipper** was new as were **grass rivulet** and **chimney sweeper moths**, but the highlight of the moth sightings was a **lace border**. This is a nationally scarce moth, found only in three areas of England, and dusk-flying, but, according to the book, easily flushed from the sward by day, which is exactly what happened. The moth obligingly landed on Lesley's trouser leg, where Russell was able to photograph it.

Once again, we were in plant paradise on the Masts, with acres of **common spotted** and **heath orchids**, **common twayblade**, **fragrant orchid** and a few **bee orchids** (right). Our search for the **musk orchid** took some time, but Russell eventually spotted some, very near to where we had entered the reserve. These were tiny, but fairly numerous in a small area and we were highly delighted to have found them, as they were new for both of us. The day also provided us with **kestrel**, **pied wagtail** and **long-tailed tits**.

On our last full day in Broadway, we opened up the moth trap to find 28 species, many of them micros. Macros included **flame**, **clouded silver** and **marbled white-spot** and our first **small elephant hawkmoth**.

It was once again a dull day but we decided to do a circuit up to the Cotswold Way, along the Way to Shenberrow Hill, down to Stanton, with a drink in the Mount Inn of course, then back by way of Laverton, Buckland and Manor Farm. This we did, but the weather was against us, as heavy rain came on at Shenberrow. We ate our packed lunch in a wood below the hill before making our way down to Stanton, but sadly the pub had shut at 2pm. However, on the way there we had encountered **tree pipit** in song, **nuthatch** and **marsh tit** as well as the ubiquitous orchids. Lesley was hopeful of finding a **little owl**, as before, but it was not to be. We returned home rather wet, but happy with our sightings and walks for the week and eagerly anticipating more delights in Painswick.

We left Broadway on 1st July and headed to Painswick via Hidcote Gardens where apart from the wonderful array of plants, two **hummingbird hawkmoths**, a **treecreeper** and a **spotted flycatcher** were noted. We were very pleased with the immediate typical Cotswolds countryside at Painswick, and were equally delighted that there were wooded surroundings which would be good for setting the portable moth trap. Luckily, conditions were pretty good on that evening for setting the trap with 12°C and almost no wind. We did extremely well, catching 26 species including **privet hawkmoth**, **coronet**, **leopard moth** and **large twin-spot carpet**. We were lucky that the evening was dry because rain started at 10 am the next day. Our patience ran out at midday after being stuck indoors for two hours,



so we decided to have a local walk in damp conditions. The weather improved and we added **yellow shell** and **light arches** to the moth list, and a **small white** to the butterfly list. Being the Cotswolds, **red kites** were not uncommon, and we also noted **swifts**, **green woodpecker**, **common whitethroat**, **blackcap**, **marsh tit**, **nuthatch**, **jay** and **linnet**.

Sunday 3rd July was a bit cloudy but with a very nice 18°C and light winds. We walked what is known as the Edge Circuit where we noted **dyer's greenweed**, **betony**, **broad-leaved helleborine** and **quaking grass**. We also watched a **dark green fritillary** plus **sparrowhawk** and **ravens**, which were generally quite common. Apart from seeing swathes of orchids once again (chiefly **pyramidal** and **common spotted**), it was great to watch a family of **kestrels**.

Monday morning was eagerly anticipated as we had put out the moth trap the night before. We were absolutely delighted to catch 21 species including a **white-point**.

We had a walk up to the Painswick Beacon adding **mistle thrush** to our bird list but also having a pretty good look at another **green woodpecker**.

Tuesday 5th July was another fairly cloudy day with 19 degrees of heat. We visited Rough Bank where we noted several **small blues** and **Essex skippers** frequenting the various wildflowers plus adding **jay** to our bird list. From here, we motored along the narrow, hedged roads to Daneway Banks which is famous for **large blues**. By the time we reached there, it was latish afternoon but we still managed to find a single **large blue** amazingly spotted by Lesley at rest on **marjoram**. We also came across the amazing **longhorn moth**, *Nemaphora metallica*.

The temperature reached an excellent 23°C on Wednesday when we had a six-mile walk in the Dursley area adding **gatekeeper** and **green-veined white** to our butterfly list and **fennel** and **stemless thistle** to our plant list. Our daytime moth searching produced **hummingbird hawkmoth** and **scarlet tiger**. A small **bat** (probably one of the **pipistrelles**) was flying around the farm in the evening, and this encouraged us to set the moth trap again.

Our best catch yet took us some time to sort out on the morning of 7th July with 119 moths being caught of 41 species, including **lobster moth**, **fern** and **clay triple-lines**.

This was our last full day, and because we had a long day's driving the next day, we elected to have another local walk. We managed a five-mile circuit, spotting our one and only **hobby** of the trip. On several occasions prior to this, I had mentioned that we were in prime hobby country but without success, so it was particularly pleasing to watch this iconic raptor hunting. Also, being latish in the season, it was a delight to hear **skylark**, **chiffchaff**, **song thrush**, and **common whitethroat** still in song.

We both love the Cotswolds, and visit there chiefly for the scenery, flowers and butterflies. The area is not great for birds but we managed to note 68 species with **hobby** and **willow tit** being the highlights. Our other highlights were the thousands of **pyramidal orchids**, seeing the beautiful little **musk orchids** for the first time, the amazing flower meadows, the hundreds of **marbled whites** and **meadow browns**, **blackcaps** and **chiffchaffs** singing every day and our new moth species.

Lesley Dron and Russell Nisbet

(Photos from Russell and Lesley)

THE SEAGULLS

May-September

A pair of **herring gulls** nested on my next door neighbour's roof. There were only three villas built to this design in 1968, in our then new housing estate in Monifieth. These houses had a suitably flat sheltered area behind the chimney, perfect for nesting, but this was the first time gulls had nested. Last year the birds raised two out of three hatched chicks; the third one fell out of the nest and presumably died of exposure or predation. After the chicks fledged and left the nest in late August, my neighbour, installed a large fake **owl** on the chimney. He was convinced this would deter any future nesting seagulls, but I was not so sure, having watched **crows** and **pigeons** cheerfully roosting on this artefact.

Sure enough, in early May 2022, the birds were back, pecking moss off the roofs to line their chimney nook. Initially,



whenever I emerged from my house, they flew over to my roof and nagged and scolded for food. Yes - I did feed them scraps during the previous year, when they were feeding their chicks. I initially resisted the birds' demands for food, hoping they would go away and find another nesting site, but these birds were determined. I gave in when it was obvious the female gull was sitting on eggs. The male gull's demands for food went up several octaves.

Bread and erratic scraps from the table are not the best food for hungry chicks. I purchased several bags of Tesco value oats and devised a formulaic 'diet' based on porridge, which I made with milk. I added eggs to the mix for added protein, plus any scraps from the table. I figured well-nourished chicks would fledge faster, and hopefully the parent herring gulls would 'behave themselves', since there would be no need to break into rubbish bins in search of food scraps. The gulls loved the seagull porridge. Initially the male bird came down to my back garden, 'hoovered up' the food and then flew back to the nest to feed his mate. Occasionally, the female bird joined



the male bird for 'breakfast'. She was obviously too hungry to wait for the male bird to feed her. This plainly angered the male bird; he pecked her mercilessly until she flew back to her eggs and later chicks. The aggressive male bird also 'saw off' any other seagulls which attempted to muscle in on the food.

The three chicks hatched in late May and grew rapidly on their diet of porridge. The gulls regurgitate the food to feed the chicks. As the chicks grew they would line up on the roof. The fluffy grey down was soon replaced by feathers and the birds would practise flapping their wings. On warm summer days they would cosy up in the shade of the chimney for a snooze. During the day, one parent gull would go out foraging, but the other gull always remained to guard the chicks from predators, a real risk when the chicks were small, since crows, birds of prey and even other seagulls, would enjoy a meal of seagull eggs or baby chicks.



Eventually in August the chicks fledged, but they did not fly away and leave the nest for several weeks. The male parent bird was still aggressive towards the female bird coming down to the garden to feed. I threw scraps onto the roof for her and later the chicks when they could fly. At the end of August, fully fledged, the chicks finally left the nest along with the adult birds, much to the relief of my neighbour, who complained their moss pecking had damaged his roof tiles, (although the 54 year-old tiles were in need of replacement anyway). Lots of other birds,

including pigeons and crows, pecked off the moss to line their nests.

The gulls, chicks and adults, came back to visit several times. They were rewarded with food scraps. I had become quite fond of them. My neighbour paid to have his roof completely re-tiled with fired tiles. He assumes this will deter the birds from returning in 2023, but I advised him to take further steps to deter the birds. The RSPB internet site gives free advice on how to prevent birds nesting on houses.

Herring gulls have a public status more or less on a par with rats. They peck open bin bags and overturn bins in search of food. Most of us have been targeted by thieving gulls, attempting to steal our fish suppers or snacks, unwisely eaten on benches beside the harbour. The gulls have learned to nest on the roofs of houses, in particular beside chimneys, now obsolete thanks to central heating. Nesting birds on houses are regarded as pests, but should we be doing more to help them?



This year, avian flu has decimated many sea bird populations; the herring gulls are not immune to this fatal virus. Adult herring gulls are beautiful, with their sleek white and grey feathers. We would miss their wheeling elegant flights and plaintive calls. Maybe it's time for us to be kinder to them.

Jenny Allan

(Photos from Jenny)

A NORFOLK DIARY

10th - 23rd September

Not having been down to Norfolk since lock-down, Lesley and I were looking forward very much to this visit. We initially were planning a one week trip but soon realised that this would not be enough. So, on 10th September we arrived at the Pinewoods Holiday Park in Wells-next-the-Sea in time to unpack then have a local walk. The usual gulls and waders were noted but an overflying, calling **whimbrel** was the highlight. Best of the smaller birds was a **spotted flycatcher**. A lovely feature was the close-by 'singing' **starling** roost bush at dusk. We were delighted to record **wall browns** which we were to see on most days plus **peacock**. We also noted **migrant hawk** and **common darter** as well as two **muntjacs**. We set the moth trap.

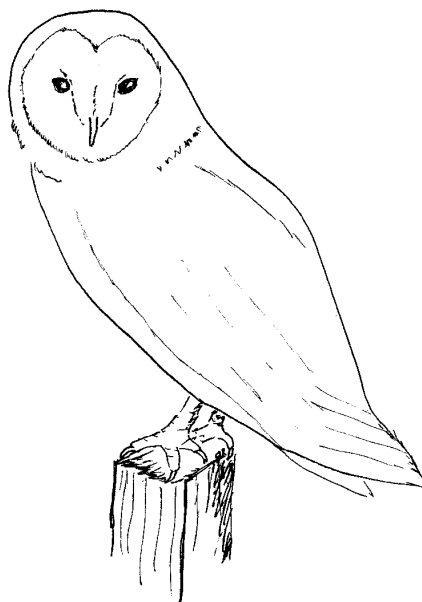
On the morning of the 11th, we caught a **rush veneer**, 11 **square-spot rustics**, two **flounced rustics**, four **large yellow underwings**, a **lesser broad-bordered yellow underwing**, a **setaceous Hebrew character**, a **brimstone** and two **small dusty waves** plus the micro *Ancylosis oblitella*.

There is a very good nature trail on site, and we made use of this before breakfast, spotting two **reed warblers** and hearing the sharp high-pitched call from a **kingfisher**. The main walk of the day was to the local Wells-next-the-Sea marsh where there was a plethora of birds including 300 **greylag geese**, 30 **Egyptian geese**, **pintail**, **marsh harrier**, over 100 **lapwings**, six **black-tailed godwits** and ten **ruff**. In this area, there were **common blues**, **wall browns**, **small copper**, **green-veined whites** and **migrant hawkers** as well as **willow emerald damselflies**. A **brown hare** was also noted. In the evening, a local stroll produced a hunting then perching **barn owl**.

On Monday 12th, we walked along to Holkham, and had a very special 10 minutes watching six species of raptor more or less at the same time! Firstly, Lesley spotted a 'ring-tail' harrier in the company of **red kites** and **common buzzards**. This harrier looked very rufous and had a 'delicate' flight. I pronounced it to be a **Montagu's harrier** as it certainly wasn't a **hen harrier**. These circling birds were joined by a **sparrowhawk** and a pair of **hobbies**! The sixth raptor species came along as we were having lunch, and this time it was a **hen harrier**. The following day, whilst speaking to local birdwatchers, we learned that an immature **pallid harrier** had been sighted at the same time as our Montagu's! Our conclusion now is that our 'Monties' was in fact the pallid! We recorded our first 50 **pink-footed geese** of the autumn. Three **great egrets** were also observed as well as two new butterflies - **small white** and **speckled wood**. We set the moth trap once again.

So, on the morning of the 13th we caught a **rush veneer**, two **small dusty waves**, nine **square-spot rustics**, two **flounced rustics** (a similar pattern to the morning of the 11th, which is why I do not set the trap on consecutive evenings to allow the moths a chance of feeding and mating), a **large wainscot**, two **large yellow underwings**, a **brimstone**, two **red-line quakers** and a small **blood vein** which was new to us.

Our walk today was from Wells-next-the-Sea to Morston, catching the Coast Hopper bus back. En route, we noted several **little egrets**, 50 **spoonbills**, six **brent geese**, a **hobby**, **avocets**, 30 **golden plovers**, **bar-tailed godwits**, two **greenshanks**, four **common snipe**, a **common sandpiper**, **ruff**, **Cetti's warbler**, **whinchat**, **stonechats**, two **wheatears**, **blackcap**, **common whitethroat** and the ubiquitous **chiffchaffs**. The new butterfly was a **comma**, and we also saw another **brown hare** and



another **muntjac**.

On Wednesday 14th September we spent a very good day at RSPB Titchwell. We were hoping to experience the opening of the moth traps but that was cancelled. A wee bit disappointed, we contented ourselves with birdwatching - a **great crested grebe**, a **great egret**, **Arctic skua**, a **marsh harrier**, a **sparrowhawk**, two **hobbies**, a **peregrine**, a **water rail** (heard only), **avocets**, 300+ noisy **golden plovers**, **black-tailed godwits**, a **spotted redshank**, two **greenshanks**, **sanderling**, **ruff**, **Cetti's warbler** and **reed warbler**. En route we also noted **common frog** and **common toad** as well as a **muntjac** and two **roe deer**.

Thursday 15th saw us having our local nature trail before breakfast walk, spotting a **spotted flycatcher** again before visiting the Wells-next-the-Sea marsh once again and heading along the coast to Cley and Salthouse. This day's birdwatching produced **little grebes**, **gannet**, **marsh harrier**, two **sparrowhawks**, **kestrel** (which we were to see every day), another **spotted redshank**, **dunlin**, **ruff**, **kittiwake**, four **sandwich terns**, **stock doves**, **white wagtails**, **Cetti's warbler** and **blackcap**. We added **brown rat** to the mammal list, and we set the trap for a third time.

Our moth catch on the morning of the 16th was a **shuttle-shaped dart**, five **square-spot rustics**, a **setaceous Hebrew character** and a **rush veneer** before heading south to Fritcham and Sculthorpe Moor where we added **marsh tit**, **nuthatch** and **bullfinch** to our bird list. There were some heavy showers during the day. At the end of the day, we moved to our second accommodation at Brancaster Staithe.



We had a walk from our new accommodation on Saturday 17th, doing a circular walk and returning via Burham Deepdale. Some of the birds seen were **common buzzard**, **sparrowhawk**, **kestrel**, **great spotted woodpecker** and **jay**. We added **large white** to the butterfly list, and enjoyed watching **common darters** (left) and **migrant hawkers** whilst eating our lunches. A **hummingbird hawkmoth** was spotted at our accommodation and a **pipistelle** flew around our garden. We set the moth trap once again.

The moth trap produced a **square-spot rustic**, a **turnip**, two **large yellow underwings**, a **lesser yellow underwing**, a **lunar underwing** and a **brown-spot pinion**. It was off to RSPB Snettisham and Holme for the day. Some of the

birds seen at Snettisham were 30 **spoonbills**, a **peregrine** upsetting the thousands of waders, seven **spotted redshanks** and two **ruff**. We also added **red admiral** to our butterfly list, and watched a **weasel** carrying a **rabbit**. At Holme, we saw a hunting **marsh harrier** and **kestrel**.

Our longest travelling day was on the 19th when we headed south to Lynford Arboretum after a stop en route to watch around 60 **stone curlews**. This was the day of the Queen's funeral; so we expected the roads and some venues to be quiet, but the Arboretum was perhaps the busiest we have seen! We still managed to see **little** and **great crested grebes** (right), **sparrowhawk**, a **lesser black-backed gull** (the only one of the trip), **great spotted woodpecker**, six **mistle thrushes**, and **chiffchaffs** (heard every day bar one). We still had time for a visit to the Holkham Estate where we saw the usual waterfowl plus another **great egret**. The mammals noted today were **muntjac**, **fallow deer**, **brown hare**, **grey squirrel** and **pipistrelle**. A regular feature for us was to sit in the back garden to watch the flypast from the **pink-footed geese**. We set the moth trap once again.



This time, the moth trap produced 11 **lunar underwings**, three **lesser yellow underwings**, four **large yellow underwings**, three **setaceous Hebrew characters**, two **black rustics**, a **square-spot rustic**, a **beaded chestnut**, a **shuttle-shaped dart** and a **light brown apple moth**. A favourite day on the 20th was the walk from Brancaster Staithe to Burnham Overy Staithe, returning by the Coast Hopper bus. The highlights were observing the arrival of hundreds of **pinkfeet**, five **cattle egrets**, three **spoonbills**, a pair of **bearded tits**, three **Chinese water deer** and hearing six **Cetti's warblers**.

On Wednesday mornings at RSPB Titchwell, the moth traps set the night before are opened in front of the public and on this occasion there were **grey shoulder-knot**, **black rustic**, **sallow**, **barred sallow**, **pink-barred sallow**, **large wainscot**, **beaded chestnut**, **mottled rustic**, **lunar underwing**, **large yellow underwing**, **broad-bordered yellow underwing**, **setaceous Hebrew character**, **blood vein**, **snout**, **brindled green**, **square-spot rustic**, **white-point**, **deep brown dart**, **straw dot**, **turnip**, **small fan-footed wave**, **beautiful plume** and *Acleris emergana*. Birds of particular interest were two **great egrets**, **gannet**, **water rail** (heard only), four **little stints**, two **curlew sandpipers**, a **sandwich tern**, our one and only **sand martin** (there were still quite a few **swallows** and **house martins** about), our one and only **sedge warbler** and three **ravens** which were new to Norfolk for us. We spent a bit of time along with others watching a very confiding **water shrew** on the main bank. Other mammals noted were **muntjac**, **brown hare** (right), three **roe deer** and **Chinese water deer**.

We also visited the Choseley Barns area where we added ten **yellowhammers** and six **red-legged partridges**. We spent around 45 mins waiting for a dark, distant view of the **barn owl** at Burnham Norton where we also heard a **tawny owl**. Two larger bats were hawking around which may possibly have been **long-eared**. We set the moth trap once again.

Not much to report on the moth front for the morning of the 22nd with only three **lunar underwings**, two **large yellow underwings** and a **lesser yellow underwing** being caught. Today, for the first time, we visited the Wild Ken Wood area (as seen on TV), and had a thoroughly enjoyable visit adding **painted lady** and **small heath** to our butterfly list and seeing ten **common buzzards**, five **kestrels**, two **hobbies** and **nuthatch** plus hearing a **green woodpecker**.

It was time to head for home on 23rd September with our plans being perhaps to do the same as on the way down and have an overnight stop, but both traffic and weather conditions were favourable; so we managed the journey home in a oner. It was a great holiday with 121 bird species seen or heard (especially good with very little migration taking place), 12 species of butterfly, 35 moth species and 12 types of mammal.

Russell Nisbet and Lesley.Dron



A NATURALIST IN NEW ZEALAND FIRST FOUR MONTHS IN NEW ZEALAND

At the end of 2022 we've been in Christchurch, New Zealand, for almost four months and have tried to fit in seeing as much natural history as possible while settling in and looking after our baby. We've also been hampered by the fact that our binoculars and ID guides arrived (along with many of our other belongings) only at the beginning of December.

The first thing that I noticed is just how many British species there are, and that these are often much commoner than in the UK. In town the most common birds are **house sparrows**, **blackbirds** and **starlings** with **song thrushes**, **chaffinches**, **greenfinches** and **dunnocks** also frequently seen, especially in the larger parks. A few native species have adapted well to urban environments including **bellbirds** with their distinctive call, **silveryeyes** and **fantails**. **Fantails** come in two colour morphs - the common pied one and a much less frequent black one which I have only seen once. The impressive **paradise shelduck** (right) are also



found in urban parks, but also in a wide range of rural habitats from farmland to glacial lakes. Despite the adults looking quite different the ducklings are instantly recognisable as shelduck.

The British species which are common in towns are also widely distributed in the countryside and often seem to be found in a wider range of habitats than in the UK - **sparrows** in an upland area (approx. 700m) with very few bushes was a surprise. **Yellowhammers** and **skylarks** are also common in appropriate habitats in the countryside.

Day trips locally allowed us to add some extra species, including waders and water birds. **Bar tailed godwits** we see here are the same species found in Scotland, but are a distinct population which breeds in Alaska and spends the northern hemisphere winter in New Zealand. Their arrival even makes the news here. Other waders we've seen include **banded dotterel** and **red knot** and there are a number of different species of **cormorant** and **shag**. With very few native raptors **swamp harriers** are by far the most common and can often be seen when driving out in the country.

Identification for some groups is far easier than in the UK as there are fewer species. For example, there are only three species of **gull** (excluding vagrants) - **black-backed**, **red-billed** and **black-billed**. As with a number of species which are found in areas other than New Zealand, the common names used here are often different to those used in other countries. For example, **black-backed gulls** are known as **kelp gulls** through most of the rest of their range, and what New Zealanders call a **black shag** is rather confusingly the same species as the **cormorant** found in the UK. This shows the importance of Latin names in order to know exactly which species is being referred to.

There are also fewer common ducks and other waterfowl, though even some of those which are meant to be common have been proving elusive. **New Zealand scaup** are the only resident diving duck which makes their identification easy and the clear water of even the urban rivers allows for some good views of them swimming under water. **Mallard** have been introduced and have hybridised widely with the native **grey duck** meaning that these hybrids are now very common and pure grey duck are threatened. The commonest **swans** are **black swans**



(right) which were introduced from Australia, with a few small populations of introduced **mute swans**. **Canada geese** are also widespread and probably more abundant than in the UK.

There are also a number of species which are instantly recognisable as being closely related to British species, often to the extent that you only know it is a different species because of where you are. **Australasian crested grebes** and **Australasian coots** look indistinguishable from the European species while **welcome swallows** have slightly different colouring but are still very similar to the familiar **swallow**.

With a much wider range it is harder to get to grips with plants, but again there are a large number of introduced species - many European but also Asian and South African. For trees it is helpful to know that all native species are evergreen (a mix of coniferous and broadleaved) but can be confusing that many of these have Maori and English names (e.g. **kahikatea/white pine**). Identification of native trees is made more difficult by the fact that many are heteroblastic, meaning that they have different (often drastically so) juvenile and adult forms.

Around Christchurch it appears that introduced European trees along with many garden plants (and weeds!) generally grow faster than they would in the UK. The oldest **oaks** here are approximately 160 years old (planted by early European settlers) but are larger than oaks of the same age would be in the UK. A welcome sight is mature **elm** trees as New Zealand's strict biosecurity has largely kept **Dutch elm disease** out of the country.

Many smaller plants are also introduced so the common weeds and grasses (at least near to town) are mainly familiar. There are a number of introductions from other regions too, with a number of the more colourful flowers being South African.



A short holiday up into the mountains and down to Dunedin allowed us to add a number of other exciting native species. Up in the mountains highlights were a **New Zealand falcon** landing, with prey in its talons, within metres of us in a busy car park, and **blue duck**, a rare species found only on fast flowing mountain rivers. Several lakes gave us views of **crested grebes** which are rare nationally, though easy to see on specific upland lakes. **Black-fronted terns** also nest in upland regions and near their colonies they are very easy to see. We were also pleased to see endemic **Mount Cook buttercups** (*Ranunculus lyallii*) (left) which are the largest buttercups in the world and have very striking white flowers.

In Dunedin colourful **tuis**, which aren't found in Christchurch, are common. **Royal spoonbills** are more numerous further south and can easily be spotted from the car, though the first ones we saw caused us to turn around to go and get a better view and confirm the identification. Near to Dunedin, Taiaaroa Head is home to the only mainland colony of **royal albatrosses** and also allowed us to see **northern giant petrel**. There are many species of sea birds we've yet to see, including several species of **penguins**, but many of these will be easier on a boat trip with some expert identification assistance.

While I've mainly been paying attention to the birds I have noted a few species from other groups as well. I've seen a few **butterflies** with the most common being introduced **small whites**, though **monarchs** are also relatively abundant with their large size and bright colours making them unmissable. **Copper butterflies** can also be seen in the right habitats - there are several species of these but the classification is currently being revised so I am unsure which species I have actually seen. Even in town I often hear **grasshoppers** or related species (native **cicada** illustrated, right) but these tend to be very hard to actually see, and even if I did I'm not sure I would be able to identify them. In several lakes and rivers I have also seen small **fish** (though I have no idea what species these are) and **eels** (most likely **shortfin eels**).



Most of the **shells** found at the beach are recognisably of species closely related to those I am familiar with from Britain, such as **mussels** and **cockles**. However, a few finds have been more interesting. I've found two types of **sea urchin** - the shell of a **sand dollar** which is almost totally flat and an almost complete spherical one with many of the spines still attached. A New Zealand speciality is the **pāua shell** which has very striking iridescence on the inside (and outside if polished) of the shell.

I'm looking forward to seeing more species over the coming months, though it is getting harder to find new species now that I have seen most of the common ones.

Mary Watson

(Photos from Mary and Jeremy Watson)

URBAN AND RURAL SHORES

A Comparative Botanical Study

Scotland is fortunate in having a long and varied coastline with saltmarshes, sand dunes, cliffs and other habitats. The coastal flora has been described, but often with little mention of the urban shore. Many of our towns and villages are coastal and this limited study looks at the vegetation of such places and compares it with that of nearby rural shores. The urban shore is likely to be subject to both urban and marine influences. This report focusses on short stretches of shore and compares urban and nearby rural coastal paths.

Method:

Ten stretches of coastal path of 100 metres in length were selected in Easter Ross towns and villages (appendix 1). These were the first fully accessible locations within the town that were at least 100m inside the town border. Similarly, ten 100m sections of rural coastal paths were selected on the adjacent coastline, at least 100m away from the urban boundary and the first place where access was possible. The marked paths were at a variable distance from the shore. All vascular plants which had not been planted and were within two metres of the path were recorded. Two visits were made to each pair of sites and the paired sites were recorded within a week of each other.

A similar assessment was made of five paired coastal sites in South Angus and North Fife.

Results:

Taking Easter Ross and Angus/Fife areas together, more records were made in the urban sites than the rural, the urban total being 597 and the rural 513. This difference was statistically significant.

Table 1 Record Totals

Total records	Urban	Rural
E Ross	401 (10 sites)	329 (10 sites)
Angus/Fife	196 (5 sites)	184 (5 sites)
Total	597	513

Easter Ross

In Easter Ross a total of 162 species was recorded, with 131 in urban areas and 109 in rural sites. The commonest urban species were *Bellis perennis* (**daisy**) (right), *Dactylis glomerata* (**cocksfoot**), and *Taraxacum* (**dandelion**). The commonest rural species were *Taraxacum*, *Cirsium arvense* (**creeping thistle**), *Dactylis glomerata* and *Plantago lanceolata* (**ribwort plantain**). Of the urban species 17 were neophytes (aliens) and the corresponding rural figure was seven neophytes.



In the urban areas nine species were typical shore plants and in the rural stretches the corresponding figure was 10. There were relatively few nationally scarce or Red Data Book species in this list. *Astragalus danicus* (**purple milk-vetch**) was present in rural Rosemarkie and two *Zostera* (**eelgrass**) species were in Tain very near the shore, but may have been more than two metres from the coastal path.

South Angus and North Fife

Here there were 129 species in total, with 98 in the urban sites and 86 in the rural. The commonest urban species were *Taraxacum*, *Sonchus asper* (**prickly sowthistle**) and *Poa annua* (**annual grass**) which were present in all five sites. The commonest rural species were *Plantago lanceolata*, *Rumex crispus* (**curled dock**) and *Taraxacum*, present in all sites. Five neophytes were recorded in the urban sites and two in the rural locations. The scarce **sea pea** (*Lathyrus japonicus*) was seen at Carnoustie where it may have been from a population reinforcement.

Ten of the urban species could be regarded as typical of the shore, in contrast to eight of the rural species.

Discussion:

Urban shores are unique habitats, being a combination of shore and built up areas. They vary greatly including sandy beaches, patches of scrub, sea walls, sea defences and others. Some are also urban parks.

The selected sites were accessible by paths and may not be typical of all urban coasts. Likewise, the rural site selection was based on accessibility.

The samples are small, so caution must be exercised in interpreting the results. The urban places chosen in this survey did not include large cities. More records were made and more species found in the urban sites, which may reflect the hybrid nature of the urban habitats.



In some of my comparative studies of other habitats, there was no clear difference in the number of species in the urban and rural samples, although the lists differed. In some instances, there was a greater proportion of alien species in the urban places.

Some of the species found in towns were common wild urban species but others were typical of the shore, such as *Atriplex* (**orache**) species, *Cochlearia officinalis* (**scurvygrass**) (left). *Honckenya peploides* (**sea sandwort**) and *Leymus arenarius* (**lyme grass**).

As in other studies, more neophytes were to be found in the urban locations than the rural. A

particular problem is the occasional practice of throwing garden rubbish onto the shore, which may add to the alien flora. The other feature of the urban footpaths is their frequent usage and also occasional storm damage, which may become more frequent in the future with climate change.

Urban shore paths remain interesting places to visit.

Brian Ballinger

Appendix 1: Places visited for this Study.

Easter Ross: Portmahomack (2), Tain, Shandwick, Hilton, North Kessock (2), Dingwall, Fife/Angus: Carnoustie (2), Wormit, Newport, Tayport.

THE IMPORTANCE OF LUNCH

When Nats get together on outings it is very noticeable that, after preliminary information has been given, one of the first questions asked is "When is lunch and where will we be stopping?". This is something to bear in mind for those doing a recce for a Nats' walk as it can be hard to find a suitable place for a large group. It is sometimes necessary to tell everyone to choose their own stopping place.

The photos on the next page show the New Year barbecue at Crombie Country Park on 4th January (see page 8) and a line of convenient logs up near Rumbling Bridge on the Hermitage outing on 10th September (see page 24).

Anne Reid



A couple of extra photos to fill what would otherwise have been a blank page.

Canada geese at the Lurgies, Montrose Basin



An abnormal fern where exactly half was pure white, Taynish NNR.

