

**DUNDEE NATURALISTS' SOCIETY
ANNUAL BULLETIN No 35
2010**

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The Bulletin cover illustration is by Leonore Goodliffe (née Fullerton) and shows a selection of our area's alpine plants, including the Society's emblem, the dwarf cornel. Other illustrations are by Anne Reid, Jim Cook, Christine Reid, Mary Reid and Arfile. A few colour photographs have been included as a treat this year.

EDITOR'S NOTE

Thanks to all members who have submitted articles and reports; it makes Bulletin production much easier, though there is always space for contributions from new authors. Thanks to Jim Cook, Mary Reid and Colin Reid for proof reading and helpful comments (Mary and via e-mail again this year!).

Contributions for the next Bulletin, articles, line drawings and photos, are always welcome and may be submitted at any time during the year.

We now have a website at www.dundeenats.org.uk

Anne Reid

SOCIETY REPORTS

PRESIDENT'S REPORT

It has been another good year for the Society but a difficult one for me because of Barbara's illness and death. I am very grateful for all the support I have received from members during this time.

The winter talks have gone well with a large contribution from our own members. Anne Reid stepped in at very short notice in December to give a talk on Speyside when the speaker was snowbound, having given an excellent presentation on saltmarshes earlier in the year. Brian Allan gave a beautifully illustrated description of Crete for the Wednesday afternoon slot, having previously talked about the flowers of Italy. David Lampard reported on the revamped Dundee museum and arranged a visit soon afterwards.

We also had a joint meeting with the Botanical Society of Scotland, having taken over the role of promoting the BSS from the University, and we plan to continue with this arrangement. Other meetings were devoted to bees, freshwater wildlife and the work of the Edinburgh Botanic Gardens.

Unfortunately we had to cancel two summer field meetings, one because of poor uptake and the other because of the sudden and tragic death of Council member Kim Eberst who was due to lead it - she will be greatly missed.

I was not able to attend all the summer events this year but all were reported to be enjoyable. The weather was kind for the outings I led to Moncreiffe Hill and Linn of Tummel. The coach trips are always appreciated, but we need to keep up numbers for them to be financially viable - please encourage friends to come. The Speyside weekend led by Anne Reid and David Lampard went very well and our Dundee Flower Show stall organised by Lorna Ward was successful.

Once again I thank Vice-presidents Anne Reid and Brian Allan for all their contributions. Anne edits the excellent Bulletin and supervises projection and catering and Brian Allan orchestrates members' night. I am very grateful to Lorna Ward and Dorothy Fyffe for all their work as Secretary and Treasurer respectively. Thanks also to Davie Stein for overseeing the coach outings, to Margaret McLaren for her contribution as Membership Secretary, to David Lampard for being Technical Convenor, to Jim Cook for supervising Carsegowndiemuir Quarry and to all Council members for their support this year. We thanked Alex Rollo who came to the end of his term on Council and we welcomed Colin McLeod and Margaret Bainbridge as new members.

We already have a draft of next summer's outings programme and we are also planning the lecture syllabus for next winter, so there is lot to look forward to in the coming year.

Brian Ballinger

QUESTIONNAIRE RESULTS

Thank you to all of you who took the time to complete the questionnaire which was enclosed with the September mailing. The response was much better than expected. Of 115 questionnaires issued, I received 38 responses - almost exactly one third of the total. The general consensus was that the activities of the Nats suit the membership in general though a small amount of 'tweaking' would improve some things. There were some suggestions which the Council will take up when planning programmes, but, you were generally happy with what we provide.

Thank you to those who said they would be willing to help with leading outings - we will be in touch! Someone suggested that our website address should be on the syllabus, to which my reaction was "Why hadn't we thought of that?" It will be on the next, and subsequent syllabuses, thank you.

If anyone has other suggestions resulting from the questionnaire please get in touch with a Council member.

Anne Reid

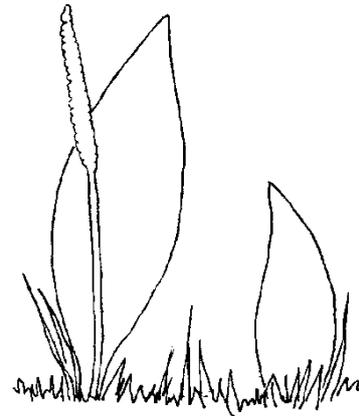
CARSEGOWNIEMUIR CONVENOR'S REPORT

This past year has, without doubt, been dominated by the weather. The quarry was flooded for the longest-ever period in our 25 years at Carsegowndiemuir, for 11 weeks, from the end of

November 2009 to early March 2010. At its highest, the water was estimated up to three metres deeper than normal in places and, for the first time ever, Ronnie reported that for a day or two water just lapped over the barrier between ponds three and four. The water was remarkably clear, showing that it hadn't just run off nearby fields but had welled up from the sandstones underlying the quarry. At times, in the cold, the water carried a distinct skin of ice but nobody, apart from the dogs, was daft enough to venture out onto it and even then, Millie and Purdey were very cautious and easy to call back.

The harsh weather brought out the worst in the **rabbits**, however. The long period of frozen ground reduced the starving animals to eating tree bark and we were rather surprised to find that several moderately large **ash** trees had been seriously damaged. These trees had thick tough bark and we believed them to be immune to sharp teeth. The wire mesh protectors had been removed a few years previously and the trees had not been attacked in any way since - until last winter. We protected the trees again and will keep our fingers crossed that they survive. One or two small trees were chewed as well, where snow had flattened the protective wire and allowed the rabbits in. Overall, though, damage was mercifully slight considering the conditions.

Even after the flood finally subsided, the grass in the lowest flooded areas was much affected and covered with a skin of drying **algae**. It didn't really recover until mid-summer. But it was not all bad news; good numbers of **adder's-tongue ferns**, 64 fronds in total, appeared in late April. The fern site had been underwater most of the time and the conditions obviously favoured the plants. This was the largest number we've seen in over five years. Unfortunately though, most disappeared fairly quickly, very few lasting long enough to form fertile fronds. Probably the rabbits had enjoyed the fresh growth.



Due to the difficult conditions, only a few trees were planted last spring. In a way, this was fortunate as late spring turned out to be exceptionally dry for a few weeks. The time was not wasted, but spent on path improvement projects. Several days were spent completing the sloping path up from pond three onto the plateau. It was much widened and smoothed out and a large numbers of projecting rocks were dug out. It is now suitable for all Nats' members when they visit the Quarry. During the same period, the steps on the steep slope at the far end, part of the "Fraser highway", were finished and many more projecting rocks were dug out to smooth the paths in the vicinity.

In early July the usual task is to clear the **rosebay willowherb** away from the paths. The difference this last year, though, was that all the paths were cleared in one very long day, rather than taking several days. This speed could be attributed to increasing proficiency in handling the brasher and to a campaign, over the last two years, of removing as many projecting rocks as possible from the sides of the path to allow easier cutting. Later in the summer a few visits were spent pulling **ragwort** but the numbers of these noxious weeds in flower were much reduced, perhaps due to the weather and the hard work put in the previous year. On the same visits we spent time just enjoying the quarry. On a good day, it's both pleasant and fascinating to sit and enjoy a leisurely lunch beside one of the ponds, to watch the wildlife, and to bask in the sun.

In early autumn a number of holes were dug in preparation for tree planting and also to help Ronnie Young thicken up one of his wind break lines. Nearly a whole day was spent moving a small ash, which had been over-topped and wasn't growing well, to an area of open ground at the edge of a dense clump of willowherb. We needed to borrow a wheelbarrow to move the small tree and the earth around its roots and, so far, the little ash seems to have taken well to its new home. The same day, we spent some time looking carefully at the **ash** and **gean** trees that had been 'rabbited' earlier in the year. I'm pleased to say that they have all survived and may be able to make a full recovery. We'll have to wait for the next few years to see.

A few trees were planted in late October and early November but the continued wet weather hampered our efforts. Then the snow in late November halted all work. The Youngs reported that even they'd been stuck for nearly a week, only able to get in and out along their side road by tractor. A visit in mid December, during the first thaw, allowed a walk around the quarry - accompanied by two very enthusiastic dogs - to satisfy ourselves that there had been little new rabbit damage and that all the apparently vulnerable trees were reasonably well protected. However, heavy snow falls in the New Year (2011), giving rise to deep drifts, may sorely test the defences (as last happened in 1997). We can only wait and keep our fingers crossed!

Meanwhile, can I invite all members to go up and enjoy the pleasures of a good weather visit to our very own nature reserve? It's always rewarding from a wildlife point of view and can be a very pleasant experience if the weather holds!

Jim Cook

TECHNICAL CONVENOR'S REPORT

Having just been in the job a year, I have mostly been thinking about what I want to achieve in the future. As a result, this is a short report. It seems to me that, amongst the membership, there is a wealth of knowledge about wildlife in this area and in other parts of Scotland. Despite this, our Society as a whole contributes little to any national recording schemes, though some individuals do their bit. I want to try and capture some of this information.

I intend to produce an observation sheet that can be taken on Nats outings so that people can make notes about what they have seen. These sheets can be given out on bus trips and collected on the return journey. I hope that outing leaders will encourage members to fill these in. I hope these sheets will not be too time-consuming and will help us map the distribution of plants and animals on our outings. This information will be very useful in tracking the spread or decline of animals and plants throughout the country and I hope that the Nats can contribute to this effort.

On the practical front Anne Reid, David Lampard and Bruce Lynch took part in the very successful 'Bioblitz' day at Trottick Ponds at the end of May when an effort was made to catalogue as many plant and animal species as possible on the site. In addition the Dundee Rangers, who had organised the event, had activities for children and organised walks for the general public to show them the diversity of life at the site.

Over the summer Dundee University employed a student, Jamie McEwen, to survey the campus for biodiversity interest and, again, Anne and David helped with the identification of species. We also lent a moth trap and other equipment to Jamie to enable him to complete the surveys with minimal assistance. This did result in a number of e-mails with photos attached for identification but also in an up to date report on campus wildlife, following on from the one the Nats did a few years ago.

David Lampard

SPRING EVENING ACTIVITIES

Only four of our exploration and survey outings were organised this last year. They were all memorable, although not necessarily for all the right reasons!

25th May An exploration of the beach and foreshore around the mouth of the Dighty - on a rather chilly evening - yielded a good record of the usual plants, large numbers of **gulls** and **ducks** and some interesting **shells**, including a number of **pelican's feet**. Unfortunately there were no **pelicans** to go with them! (This was the area where a real live pelican appeared for a few days in 2006! Ed.)



Pelican's foot

1st June The best outing, by far, was the Tayport trip on a glorious evening. A large number of interested members turned out - 24 in total - to enjoy the scenery, plants, birds and numerous invertebrates. Well over 100 species of plants were recorded along the path and down to the foreshore on the rocks and tiny salt marshes. Also, numbers of **snails**, several **centipedes** and **millipedes** and numbers of **woodlice** (including the surprisingly athletic **sea slater**, *Ligia oceanica*) were found. A number of the usual woodland birds were heard singing, including a **thrush** in full song, a **whitethroat**, **chaffinches**, **greenfinches** and a **yellowhammer**. Calling

oystercatchers and **gulls** wheeled overhead along the shore. Most of us reached the lighthouse before turning back. It had been a wonderful evening.

8th June Only a few hardy souls, Daphne, Margaret, Doug, Jean and Joy among them, appeared at Dronley Wood to 'enjoy' (if that is the word!) a walk in a very wet wood among the showers of rain. At least the rain had eased off from the monsoon earlier in the day. Not much of great interest was seen

or heard but at least we had a good look at a variety of woodland plants and honed up our **fern** identification skills.

15th June It was a little damp, as well, along the Craigmill Den path, although we were all well protected and enjoyed the birds and plants in the Den. Perhaps the most interesting was the single plant of *Daphne* above a steep rocky slope on the other side of the stream (located in 1980 by Henry Noltie for his 'Flora of Angus').

Jim Cook

OBITUARIES

BARBARA BALLINGER

Barbara Ballinger, who died at the end of October at the age of 69, had been a Nats member for more than 20 years. Born in Middlesbrough, she qualified as a doctor in Sheffield, moving to Dundee in 1969. She was appointed a Senior Lecturer in Psychiatry in the University of Dundee, later transferring to the NHS as a consultant. She made many contributions to the field in clinical work, teaching, research and management and was appointed OBE in 1998.

She was always attracted by natural history and had a great love of plants. After retirement we acquired woodlands in Fife, Easter Ross and Caithness as well as a pond in Angus and Barbara made a particular point of identifying all sorts of wildlife in these places. She also became skilled in the use of a chainsaw and the wildlife was the main management priority in these properties. To give a base for these activities we bought a flat in the railway station building at Fearn, near Tain.

Barbara later became joint Botanical Recorder for Easter Ross for the Botanical Society of the British Isles (BSBI) and developed a deep knowledge of the botany of the area, which includes much remote countryside and 25 Munros. She did survey work, wrote articles, led outings for various societies and was co-author of the Plant Checklist and also the Rare Plants Register for Easter Ross. She was vice-chairman of the Scottish Committee of the BSBI.

She was given a moth trap for her birthday and this fired her imagination. Barbara later became joint moth recorder for Butterfly Conservation for the vice-county of Easter Ross and set about mapping the moths of this large and under-recorded area. We recently published a Checklist of the larger moths of this area.

She was also involved in the work of the Highland Biological Recording Group being a member of the executive committee. Barbara had many other natural history interests, also recording birds and mosses. She will be greatly missed by people in many fields of nature conservation who appreciated her careful observation and quiet humour.

Brian Ballinger

I shall remember Barbara particularly for her gentle, motherly admonishment of 'come on, Anne' when I was shirking observation of the finer details of a plant when trying to identify it, and for her encyclopaedic knowledge of Scottish moths. Always pleased to share her local knowledge of Easter Ross, Barbara supplied much useful information about salt marshes in the area when Mary was doing the field work for her final year dissertation. Barbara was one of only six Nats on the 2009 Inverurie weekend who made it to the top of the Mither Tap of Bennachie, despite the howling gale which threatened to blow us all off.

Anne Reid

KIM EBERST An Appreciation

We were all horrified and appalled to hear of the tragic loss of Kim Eberst in a diving accident in late August. It seems that she was with a diving instructor in relatively shallow water, at the same site at Fife Ness where the Nats next outing was to take place. She was a keen, if rather new, diver who, along with her husband Alastair, had promoted the idea of a joint outing between us and the Tayside Sub-Aqua Club. We were to identify the specimens to be brought ashore by the divers, a

novel idea which would allow us to access many more species than could be found during our usual rock-pool excursions.

But Kim's passion for natural history extended much further than just marine and shore life. She was an excellent and enthusiastic photographer and at meetings often showed us her "latest crop". Indeed, she was keen enough to get up very early on summer mornings and go out in search of red squirrels, jays and deer (a few subjects of her mid-summer efforts) and many other birds and mammals, all before putting in a full day's work at the Social Work Department in Dundee. Her digital camera was always at the ready during our Saturday excursions, on hand to catch any subject of wildlife interest seen during the day.

Her youth (by Nats standards!) and friendliness commended her to many of our regular members and she was enthusiastic enough to take part in organising several of our February social evenings. Who could forget the painting on easels competition, à la 'Generation Game', with Kim in the Bruce Forsyth role and her good friend Julie as the expert? Both the competition to construct a new animal from modelling clay and the wildlife version of 'Weakest Link' were her ideas and great fun and highly entertaining as well. We can only reflect with sadness and a deep sense of loss on her potential for the future, both in the Nats and in her many other interests.

She and Alastair maintained a circle of close friends and entertained regularly at home. I can attest to her skill and versatility as a cook and to her role as an excellent and generous hostess. Kim's open, friendly and enthusiastic nature endeared her to all who knew her.

She is a sad loss to the Society and will be sorely missed. Our sincere condolences go out to Alastair, her son and grandson and to her many friends.

Jim Cook

It has been decided that a Dundee Naturalists' Society photographic competition would make a fitting and appropriate way of remembering Kim. There will be full details on a separate sheet included in the March mailing.

The Nats outing to Fife Ness, of which Kim was to have been a joint leader, was cancelled as a mark of respect. A few members privately arranged a walk to remember Kim on that day. An account of this appears on page 19. Ed.

We also record the passing of Janet Spalding who died, aged 96, in November 2010 at Edzell; and of Dr David Shepherd, of Invergowrie, who died in May 2010

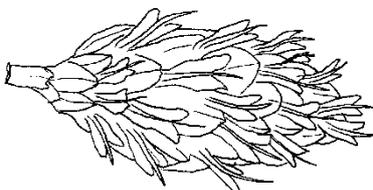
WINTER MEETINGS

TEMPLETON WOODS

2nd January

There had been snow on the ground for two weeks and I woke up to rain battering on the window - not promising for safe underfoot conditions. A quick phone call ascertained that it was snowing in Birkhill so the barbecue might actually go ahead - if anyone turned up!

There was indeed a significant depth of snow in the small car park at Templeton, but there was also Jenny Allan waiting with mulled wine for us all to arrive. Most welcome on such a wintry morning. In the end 11 people set out for a walk in the snowy woods, armed with a list of things to look out for. The original intention had been to seek plants with **berries**, but all had been stripped



bare so berry-bearing plants were listed, in addition to **cones**, **birds** and **mammals**. Jim and Gordon even managed to record four species of **fungi** including **turkey tail** (*Coriolus versicolor*) and **wood woolly-foot** (*Collybia peronata*).

Everything looked magical and enough fresh snow had fallen to make walking easy, though in places it was ankle deep. **Blackbirds** rummaged amongst the leaves and twigs under the trees and **goldcrests** and **coal tits** squeaked away at the tops

of the trees. As we approached Clatto Reservoir, Brian Williamson spotted a male **bullfinch** at the top of a nearby tree. The water was completely frozen over and some **gulls** huddled on the ice. Then it started to snow again and little more was seen.

On our return to the Visitor Centre we set up and lit the barbecue - the quick lighting charcoal helping it to get up to cooking temperature quite soon. There was less competition for space than usual and we all got to cook together, for once. While we were eating a dog-walker pointed out a **roe deer** which he had spotted nearby in the wood. A few minutes later we saw two more in the opposite direction - most unusual that they came to us, rather than being flushed as we walked. It just showed how few other people were about!

Despite the very low turnout we all agreed that it had been worth the effort and had been a most enjoyable day.

Anne Reid

SALTMARSHES - BETWEEN LAND AND SEA

Anne Reid - 12th January

Anne treated us to an insight into the often neglected area between the land and sea, the saltmarsh. A saltmarsh is an area of vegetation covered by the tide at least a few times a year. The lecture was based on a summer of field research helping her daughter, Mary, to gather information for her degree dissertation, and involved studying the vegetation to be found on saltmarshes.

Most of the areas discussed were on the east coast of Scotland and it was interesting to note that while we can all probably recognise the larger areas of saltmarsh there were some very small patches that could be easily missed. Anne then went into details of the botany to be found and it was an eye-opener to discover the variety of plants that are well adapted to surviving on the saltmarsh. These range from the showy **sea aster** (*Aster tripolium*), familiar to many, to the **saltmarsh rush** (*Juncus gerardii*) which is very easy to miss.

Anne then went on to discuss the management of coastal areas by allowing the sea to invade reclaimed areas through breaching the dykes protecting them. This is called managed retreat or coastal realignment. The RSPB reserve at Meddat on Nigg Bay was shown as an example, where the saltmarsh is re-establishing itself, and providing improved habitat for birds and mammals.

The lecture was interesting and supported visually by a variety of slides showing the different types of saltmarsh, many of their characteristic plants, and some of the extremities of the weather conditions during the study.

Lorna Ward

MEMBERS' NIGHT

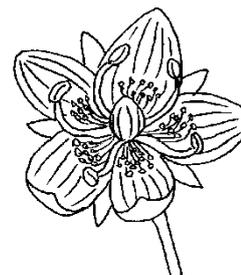
26th January

Once again, Brian Allan organised everyone's photos into a coherent programme for ease of showing and then compered the whole show to keep us right. We saw a magnificent variety of wildlife and some excellent photography from eight members.

Alban Houghton 'Balgavies, Four Seasons' A stunning set of photographs from snow and ice through spring **cherry** blossom and **wood anemones** to summer **ospreys**, **damselfly** and **water lilies**. Autumn **fungi** included **stinkhorn** and **fly agaric** and there was a close up of paired **darter dragonflies**. There was even a clear image of the illegally released **terrapin**, basking on a dead branch well out of reach.

Anne Reid 'A 2009 Miscellany' Glorious weather on the Inverurie weekend and leaping **salmon** at Banchory. The quarry barbecue in August searching for **bats** and the New Year 2010 one in the snow at Templeton Woods - only the hardy turned out! A distant photo of a **barn owl** hunting in broad daylight and some unexpected **crossbills** feeding on thistles on Harris.

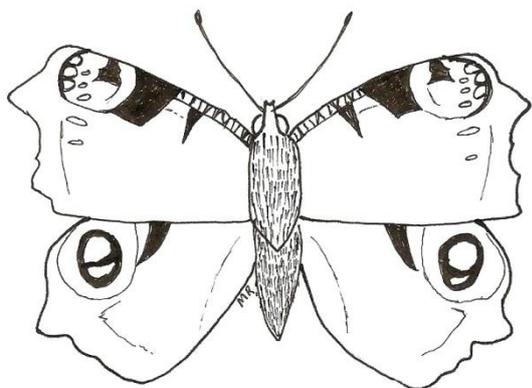
Bob McCurley '2009 was Fine' An eclectic selection from a close-up of **grass of Parnassus** at Barry Buddon, via **comma**, and **purple hairstreak butterflies** to a **convolvulus hawk moth** found at



Arbroath. A **shield bug** found on a wall, a **nightjar** which appeared at Craigmill Den and a lucky shot, from a moving car, of a **tawny owl** flying out of a chimney pot.

Dorothy Fyffe 'Summer and Winter' Three baby **swallows** almost ready to fledge and plentiful **butterflies** on **sedum**, followed by the contrast of the garden transformed by fresh heavy snow.

Brian Ballinger 'Here and There' An assortment ranging from an **iris** in Iran to **twinflower** in winter in Scotland and including a **slow worm** and a **fox** in a snowy garden.



Davie Stein 'Out and About 2009' Nats enjoying the Hill of Tarvit walk, Inverurie weekend and Birks of Aberfeldy interspersed with excellent photos of **peacock** and **small blue butterflies**, an **ear moth**, mating **damselflies**, a **curlew** and another **fox** in a snowy garden.

Gordon Maxwell 'Galls and Bugs' An exploration of the weird growths induced on plants by usually tiny **gall wasps**. These ranged from the familiar **Robin's pincushion** on **wild rose** through **knopper galls**, **sprinkle galls** and **marble galls** on oak to **pineapple gall** on **spruce**.

Brian Allan 'Europe East to West 2009' **Tulips** in Turkey and **primulas** in the Dolomites. Then revisiting old haunts in the Pyrenees, finding

Merendera and **monkshood** and finishing up with the wonderful prehistoric painted caves at Lascaux in the Dordogne.

After such a varied selection Brian thanked everyone for submitting their photos and was then warmly thanked by Brian Ballinger for all the work involved in keeping the evening running smoothly.

Anne Reid

THE PLIGHT OF THE BUMBLEBEE

Bob Dawson - 9th February

As Scottish Officer, Bob Dawson is the public face of the Bumblebee Conservation Trust (BCT) north of the border. The BCT was only set up in 2006, by Stirling University based Ben Darvil and Dave Goulson, to raise public awareness and to promote conservation and gardening for bumblebees and now has just over 6000 members. It undertakes recording and research but relies heavily on volunteers.

Of 268 bee species in the UK around 100 are found in Scotland. Of this UK total only 24 **bumblebees** and the **honey bee** are social, the rest are solitary, and only around 19 of the bumblebees are found in Scotland. This is likely to increase in the near future as the **tree bumblebee** (*Bombus hypnorum*) has been moving north since its arrival in England in 2001 and has now reached Northumberland. We do, unfortunately, also have bees which are declining such as the **great yellow bumblebee** (*B. distinguendus*), but with habitat conservation in its range on the Scottish north coast and island strongholds it seems to be holding its own at present.

The life cycle of all bumblebees is the same with only the queens overwintering by hibernating for up to 9 months of the year, depending on species. When they emerge in the spring the availability of early flowers, such as **sallow catkins** or garden **crocuses**, is very important as the queen incubates the first batch of eggs herself. Once the first workers emerge, the queen remains in the nest. The last brood of the season results in new queens and males (drones) which disperse, mate and the new queens hibernate. All the workers and males die.

Some of the issues affecting our bumblebees were then discussed. Urban areas can be very important for some species of bumblebees, with gardens providing a varied source of flowers throughout the season. The presence of honey bees in an area, especially when in commercial numbers, can seriously affect local bumblebees by monopolising available food sources and climate change is likely to put on further pressure on local distributions.

To round off, Bob encouraged us all to plant our gardens with the types of flower which sustain bumblebees through the summer such as **clovers**, **mints**, **heathers** and **daisies**. The secret of success is to have a succession of flowers from March right through until August or September -

continuity is the key. Gardens have the highest density of bumblebee nests of any habitat so we were all encouraged to get involved and do our bit to help these important and well-loved insects.

Anne Reid

SOCIAL EVENING

19th February

It's always good fun when a group of Dundee Nats get together and no more so than at the annual social evening, an event of merriment and stovies. This year, at the Queen's Hotel, we even introduced our own version of the Generation Game.

As a 'warm-up', everyone took part in recognising animals from children's art work. Conversations could be overheard discussing whether a drawing was a cat or, perhaps, a rabbit when it was actually a kangaroo. It has to be said that the drawings had been done by very young children, so a great deal of imagination had to be applied, even once we knew the answer!

The arrival of Bruce MacForsythe resplendent in kilt and 'see you Jimmy' wig and hat, and looking suspiciously like Brian Allan, kicked off the first game. Two pairs of contestants, Jim and Margaret and Peter and Anne, watched while Kim's artist friend, Julie, demonstrated painting a scene of "tree on rock with bird". The pairs made a valiant effort to reproduce this and Margaret and Jim were judged to have finished slightly ahead.

The next challenge involved everyone in building a lighthouse using only jelly babies and spaghetti, the winning table being the one who built the tallest. Amazing feats of engineering were produced and the winning table managed a three tier lighthouse. The competition carried on until someone began to sabotage building by eating the jelly babies! (The secret of success is to use triangles for every part of the structure. Ed.)

Back to the Generation Game and one member of each team was shown a picture of an animal and had to make the noise of that animal. The second team member had to guess what the animal was. Not easy - what noise does a beaver make? At the end of the round Margaret and Jim went through to the next round.

Cuddly toys feature in the Generation Game and so the final round involved a memory test of a collection of cuddly toys. Jim and Margaret were given one minute to remember all the toy animals on the table, and each write down as many as they could remember. Jim was just victorious and was presented with the winner's trophy by Brian Ballinger.

All had a very enjoyable evening leaving two questions, what to do next year and why do Lorna, Kim and David have so many cuddly toys!?!

Lorna Ward



SCOTTISH PLANTS AT THE RBGE

Heather McHaffie - 23rd February

Heather McHaffie, Scottish Plants Officer at the Royal Botanic Gardens in Edinburgh, gave an interesting and lively talk about her team's work in the conservation of some rarer examples of the Scottish flora. Their work is guided by various international and national policies including the Global Strategy for Plant Conservation, the British Red Data Book, and the Scottish Biodiversity List and Species Action Framework. They collect seeds and cultivate plants and now have a new Scottish Plant House for this purpose. The RBGE aims to keep a high proportion of our endangered and vulnerable species in cultivation and sometimes uses seedlings to reinforce threatened populations in the wild.

The **small cow-wheat** (*Melampyrum sylvaticum*) is a hemi-parasite easily lost when woodland is felled. **Whorled Solomon's-seal** (*Polygonatum verticillatum*), a rare plant of Perthshire

gorges, has been planted in Glen Tilt to restore a vulnerable small population. The **northern hawksbeard** (*Crepis mollis*) has received attention in a site damaged by forestry in southern Scotland.

Pyramidal bugle (*Ajuga pyramidalis*) is a northern Scottish rarity which had been reduced to two plants on a Sutherland golf course. Seed has been collected from a Sutherland hill to address the situation. The **woolly willow** (*Salix lanata*) has also received attention in several places, including Corrie Fee. Mountain sites have been augmented.

The **Arran whitebeam** (*Sorbus* sp.) trees provide an interesting example of hybridisation, producing new species by crosses between **rowan** (*Sorbus aucuparia*) and **rock whitebeam** (*Sorbus rupicola*). Three new types have arisen including the unique **Catachol whitebeam** (*Sorbus pseudomeinichii*) where only one specimen appears to exist on the island. Berries and cuttings have been collected to cultivate and send to Botanic Gardens for preservation.

Heather studied the **alpine lady fern** (*Athyrium distentifolium*) for her PhD and described the loss of many plants at Glen Orchy during the milder winters of recent years when snow cover has been reduced. It will be interesting to see if the present cold spell has any effect. Another fern, the **oblong woodsia** (*Woodsia ilvensis*), was much reduced in its few mountain refuges by Victorian collectors. The team's work on population augmentation has met with variable success.

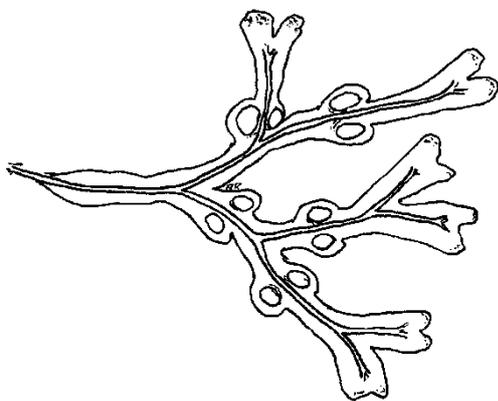
The final species in this fascinating review of rarer plants was **Martin's ramping fumitory** (*Fumaria reuteri*) which has been discovered in several places in Scotland since 2005, having previously only been known from much further south.

Brian Ballinger

BARNHILL

13th March

After such a snowy winter, we had finally had a couple of weeks of better weather and the day dawned sunny with the prospect of staying that way. Just over 20 people gathered at the east end of the Esplanade rock garden for our spring Saturday morning walk. This venue had been chosen partly for the benefit of those relying on public transport, being near the bus route, and around half our number arrived without cars - something of a record for the Nats - and two of these even walked down!



We set off along the beach towards Broughty Ferry looking for items of interest on the strand line. Large quantities of **dead man's fingers** had been washed up, though we had not had a recent storm - perhaps it floats for a long time until eventually coming ashore like the **whelk eggs** which we found. There was quite a lot of **bladder wrack** growing on the shore, though I had to go back later to confirm its identity - I had hoped that Jim would be there to help with identification but he was elsewhere! A range of the usual **shells** was also found from **cockles** to **periwinkles** via **tellins** and **limpets**, some in large numbers. We also noted the erosion of the dunes which had created a sand 'cliff' along part of the shore

with long trailing roots of **marram grass** hanging loose.

At the point where the dunes became lower we climbed up the small slope and crossed the Esplanade to return to our starting point via the Shiell Street local nature reserve. At the start of the path the **gorse** was in flower and Pat Gaff pointed out some of the finer points of gorse identification - the shape of the bracts is diagnostic. Because of the long, cold winter most of the plants had not yet started to grow, but the birds were indicating that spring might be around the corner. The **greenfinches** and **goldfinches** were singing in the treetops and **blackbird**, **house sparrow** and **great tit** were also seen. Near the small pond Stevie had found a **frog** with a spectacularly orange belly which she picked up to show everyone. All agreed that they had never seen anything like it locally. Brian Ballinger found the newly emerging leaves of the **meadow saxifrage** - one of the specialities of the site - and we all saw the leaves of **goldilocks** coming through the bare earth near the railway steps. At this point those who chose to walk to the Woodlands Hotel crossed the bridge and headed towards lunch!

The rest of us walked back through the rock garden having paused to examine a **hazel** bush closely. We admired the **catkins** and Anne pointed out the tiny red tufts of the female flowers which often go unnoticed. In the garden itself the **crocuses** were fully open in the sun and a **song thrush** retreated at our approach. A bed of ornamental **heathers** was in full flower and had attracted a queen **buff-tailed bumblebee**, the first most of us had seen this year. Nearby Gordon called us back to see a **red admiral butterfly**, newly emerged from hibernation as the temperature actually reached double figures for the first time, and a **drone fly** was seen on a **crocus**. There were **frogs** in some of the ponds and **spawn** had appeared since the recce the previous day.

As we returned to the cars there was a solitary **lesser black-backed gull** on one of the groynes on the shore and Gordon spotted four **red-breasted mergansers** out in the river. It really felt as if spring had arrived and we all happily headed up to the Woodlands for lunch which was much enjoyed by all.

Anne Reid

SUMMER OUTINGS

DEEP SEA WORLD

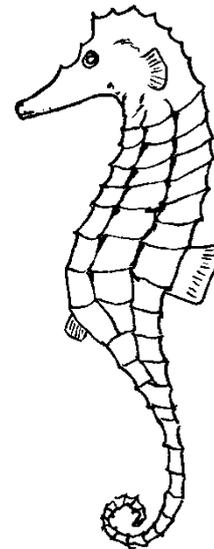
24th April

Unfortunately only 14 members booked for this proposed outing, too few to run the planned coach. After a few phone calls it was decided to go by car instead. We arrived at North Queensferry at 10am to find a rather anxious Kalene Douglas looking out for our bus to arrive, having travelled independently. She was relieved when she recognised Margaret and everyone filed excitedly into Deep Sea World.

We all had a great time. The **seahorses** kept us amused as a few of them were pregnant - the male carries the eggs in his pouch until they hatch. The **stonefish** was amazing and, yes, it did move. After a while wondering at all the fish and being well-tutored by the assistants, we made our way to the aquarium tunnel in time to see the **sharks** being fed. It was rather beautiful and the sharks gave a great display.

The whole morning passed very quickly and we then had a walk to the pub, where we sat outside in the sun with our 'pint' and ate our picnic lunch looking at the railway bridge. Our walk was short but most enjoyable and everyone had a very pleasant day.

Margaret McLaren



MONCREIFFE HILL

11th May

Thirteen members paid an evening visit to this Woodland Trust property near Perth. On the journey we admired the massed **cowslips** (*Primula veris*) by Dundee Riverside and fought our way through a cloudburst (including a significant amount of sleet! Ed.). However, after getting there the weather relented a little.

The hill is recorded as being sparsely wooded in 1783 but was subsequently bought and planted by the Forestry Commission and is now being slowly being restructured by the Woodland Trust to include a higher proportion of native species. Colin McLeod kindly brought some copies of historical maps.

A **comma butterfly** had been seen on an earlier visit but the weather was not well suited to butterflies. It was, however, ideal for **slugs** which were present in great profusion.

At the car park there was a bank liberally sprinkled with **wild strawberry** flowers (*Fragaria vesca*) and there was a little **barren strawberry** (*Potentilla sterilis*) further along. Plants present in considerable quantity included **dog's mercury** (*Mercurialis perennis*), **green alkanet** (*Pentaglottis sempervirens*) and **tuberous comfrey** (*Symphytum tuberosum*). Also quite frequent were **bugle**

(*Ajuga reptans*) and **wood sorrell** (*Oxalis acetosella*) amongst many others. As we approached the section above the M90 we refound the **stinking hellebore** (*Helleborus foetidus*) apparently doing quite well and still in flower, some little way from its previous site where it had been visible from the road. Nearby were the shrivelled remains of **common centaury** (*Centaureum erythraea*) from last year.

Roe deer jumped across the path on several occasions and were seen by Davie Stein amongst others. Jim Cook pointed out the roding **woodcock** flying overhead and Anne Reid was busy recording for the new bird atlas. **Chiffchaff**, **willow warbler** and various other species were noted.

Some of the more energetic people walked up the steep hill to visit the hill forts and admire the fine views over the surrounding countryside but many opted for the walk back along the lower path. A final bonus was a **pipistrelle bat** just as we were leaving.

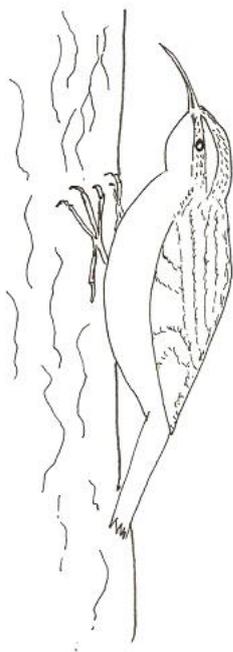
Brian Ballinger

FALKIRK WHEEL AND ANTONINE WALL

29th May

Twenty five members departed from Dundee on what can only be described as a “bouncy bus” en route to the Falkirk Wheel. The forecast for the day was not good and, for once, the forecasters got it right. However, undaunted we duly arrived at the Wheel where there are a number of walks to choose from. The outing was a departure from the norm, but, nonetheless, interesting.

The variety of walks on offer prior to our boat trip meant there was something for everybody and I departed, with a group, towards the Antonine Wall and Rough Castle Roman Fort.



On reaching the wooded area, we were rewarded by being able to watch, for quite a considerable time, four or five **treecreepers**. I gather it is unusual to see such a grouping. (These were possibly newly-fledged young. Ed.). At the further end of the fort, Pat Gaff enlightened me on how to distinguish the **Scottish bluebell** from the **Spanish** variety and Jim Cook was also on hand with lots of information on the building of the Wall. It was constructed by the Roman army on the orders of the Emperor Antoninus Pius and it runs for 37 miles from Bo’ness on the Forth to Old Kilpatrick on the Clyde. It consists of a turf rampart on a stone base. In front of the Fort was a ditch about 12m wide and approximately 4m deep. Spoil from the ditch was tipped out onto the north side to form an outer mound. The Fort gateway through the wall had defences to the north in the form of pits which would have contained concealed sharpened spikes, known to the Romans as *lilia*, their role being to break up any attack before it reached the wall itself.

One of the highlights of the walk was coming across **chicken in the woods**, some of which was harvested. I put a bid in for a daud. However, others wanted a daud as well so it was suggested we might only get a tickie. Then the question was asked as to how many tickies make a daud, (answers on a postcard)? In any event, food for free is always a treat and this was no exception when, later in the day, together with a little garlic, butter and free range eggs, I enjoyed my first chicken in the woods omelette.

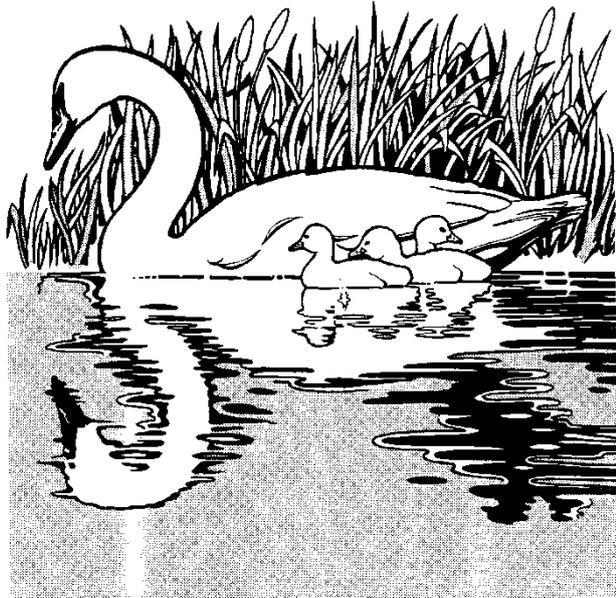
Our trip on the Wheel lasted for the best part of an hour accompanied by an informative video talk. Some 16 centuries after the Romans, work had started on the Forth and Clyde canal under the guidance of Yorkshire engineer John Smeaton. Like the Romans before him, Smeaton had chosen the route between the Forth and Clyde as the shortest distance between the two coasts. The canal was completed in 1790 and became a great commercial success. However, by the 1930s, the rise of road and rail transport led to its closure

The regeneration to connect the Forth and Clyde canal with the Union canal, previously connected by a series of 11 locks which had been filled in and built upon, and the building of a rotating boat lift was done at a cost of some £84 million. The opening had to be delayed due to vandalism, but it was eventually re-opened by the Queen in May 2002 as part of her Golden Jubilee celebrations.

In the afternoon, members scattered in various directions to explore some of the other walks in the area. I chose to walk along the Forth and Clyde canal where I was delighted to see **mallards** all with young, one brood of 12, another of 10, and a third having six and **swans** with **cygnets** gracing the waterway, always a charming sight. I was so taken with watching the bird life that I didn't really take note of the vast variety of wild flowers and grasses on the other side. Not that I could have identified them, yet. The operative word being "yet". This is a work in progress.

Our return home to Dundee was much improved as our driver had arranged for a replacement bus to be made available. We returned via the Crook of Devon to make the journeying circular in what gratefully turned out to be a much smoother run on a dry and bonnie evening.

Marjorie Gillan



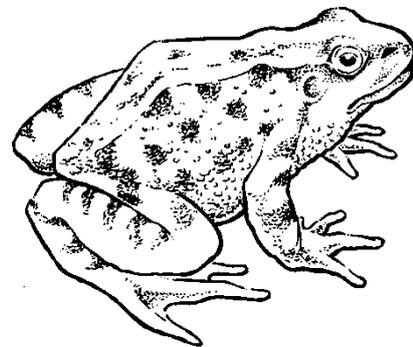
SPEYSIDE WEEKEND

4th - 6th June

We left Dundee on time but had been warned of a possible delay due to a service bus on fire on the A90 dual carriageway. Fortunately this was on the eastbound carriageway, not far beyond the Invergowrie roundabout, and only delayed us by about 30 minutes. We phoned ahead, for the second year running, to tell the hotel we would be slightly late for dinner.

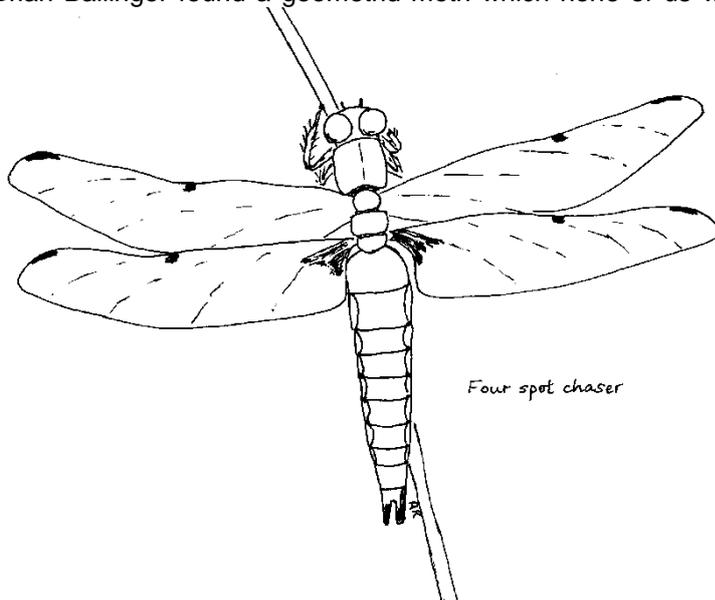
The first natural history of the journey was seen at the Broxden junction at Perth. **Oystercatchers** had nested in the gravel on the central reservation of the motorway just at the junction and we happened to be in the outside lane and got good views of the adults and two tiny chicks as we drew to a halt at the junction. Goodness only knows how or if the chicks managed to negotiate the traffic safely to good feeding grounds. A single **roe deer** was seen in a field north of Bankfoot, as predicted by our trusty driver, Ian, who knows the road well. North of Blair Atholl **red deer** were seen on the horizon.

Once settled in to the Balavil Hotel in Newtonmore and after a good, filling dinner many of the party elected to go for a short evening walk. Loch Imrich is literally a stone's throw from the hotel and made a good, gentle, after-dinner walk. The Loch itself is a kettle hole, formed when a block of ice was stranded after the last ice age and river deposits surrounded it and resulted in a natural pond when it melted. There were **goldeneye** and **mallard** on the water but it was rather late in the day for most other birds. David Lampard had brought **bat** detectors and, on our second circuit of the loch, we saw **pipistrelles** which the detector enabled us to split into **common** (at 45kHz) and **soprano pipistrelles** (55kHz). We also thought we detected **Daubenton's bats** flying low over the water but it was too dark to see them clearly in the gloom of the trees. As dusk fell Anne netted a **scalloped hazel moth** and we all commented on **chickweed wintergreen** and **wood anemone** in flower at the same time, mixed together under the trees. As we began to make our way back to the hotel a number of the local **frogs** appeared, usually very close to someone's foot, and some speculative photos were taken in almost total darkness with remarkable success! An early morning walk by Wynne Tennant added **heron** and **red squirrel** to the list for Loch Imrich.



In the morning we left at 9.15, sharp, for our visit to the RSPB Loch Garten reserve. Here we met ranger Ian Perks for a walk between Loch Garten itself and Loch Mallachie to the south. Ian regaled us with facts and figures about the reserve and explained some of the management techniques being used to keep and improve these nationally important remnants of the Caledonian Pine Forest. **Deer** numbers had been reduced to enable natural regeneration of the trees onto some of the adjacent moorland. As we heard about **capercaillie** conservation a **willow warbler** sang lustily nearby and there were **goldeneye**, **wigeon** and **greylag geese** on Loch Garten itself. A **water carpet moth** was netted nearby and **alderfly** and **mayfly** (*Ephemera danica*) were the most numerous insects. A single **large red damselfly** put in an appearance but **common heath moths** were more common than **butterflies**, though we did eventually see a single **green-veined white**. Near Loch Mallachie **goldcrest** were seen and heard high up in the trees and Stuart Mackenzie saw a **red squirrel**. **Crested tits** were elusive, though a nest site had been seen on the recce three weeks earlier, and the most common birds seen were **chaffinches**. After walking back to the main car park most chose to have a leisurely lunch on the shore of Loch Garten, to the accompaniment of more **willow warbler** song, and a solitary male **mallard** drifted past perhaps looking for crumbs. A few people also visited the osprey centre.

Our next destination was the Insh Marshes RSPB reserve which is deciduous woodland and heath on the slope overlooking the extensive marsh. The bus dropped us off at Tromie Bridge at the start of the walk and went on to the reserve car park where a space had been roped off specially for us - there is a bus bay, but it was not labelled as such so cars often blocked it. Once everyone had finished admiring the River Tromie from the rather narrow bridge we started walking through Tromie Meadow, initially alongside the river. The **bird cherries** were festooned with webs of the **small ermine moth**, *Yponomeuta padella*, which had stripped all the leaves from some of the trees. A **brown silver-line moth** was netted nearby and a dark-coloured **click beetle** was also seen. As we went uphill a **dor beetle** was rescued from the path and its wonderful purple underside much admired. Once up on the heathy area we saw a number of **dragonflies** which turned out to be **four-spot chasers** (not that anyone got a close look), a **green tiger beetle** put in an appearance and Brian Ballinger found a geometrid moth which none of us was able to identify but which turned out



Four spot chaser

(later) to be a **seraph moth**. Amongst the **heather** were the small yellow flower spikes of **petty whin**, *Genista anglica*, a local speciality which many of us had never seen before, and nearby the similarly small blue flowers of **common milkwort** nestled in the grass. There was **rockrose** in places but only two flowers were actually open so it was overlooked by most. David Lampard found a probable **narrow-bordered bee hawkmoth** but it flew off just as he pressed the shutter so he had no proof!

As the party neared the end of the walk we saw a single male **orange tip butterfly** and a **chaffinch**. Remarkably few birds

put in an appearance on the walk, too many Nats around for comfort! The brand new visitor centre and viewing platform was duly admired by all and some of the natural history of the marsh itself, far below, was spotted with binoculars. A **roe deer** and **heron** were seen, and displaying **curlews** and **peewits** were examples of the importance of the marsh for breeding waders. There was a **greylag goose** with **goslings** which were very hard to spot in the long grass and **willow warblers** sang lustily from all sides. **Marsh marigolds** and **cuckoo flower** were obvious close to the foot of the slope. Our bus driver, Ian, had been indulging his passion for photography and had excellent shots of a pregnant **roe deer**, another with a small **fawn** and a **heron**. He obligingly downloaded his photos onto a laptop computer, on the bus, so that all could admire them, both here and at our other stops - an extra dimension which let everyone see some of the things they had missed.

Since we were only a mile away and it was on our route, we stopped for a short time at Ruthven Barracks. This was mostly for its imposing site and a different view over Insh Marshes so

not everybody actually got out of the bus. Soon afterwards we returned to the hotel and a grand total of four people had the energy for a swim in the hotel pool.

We had been intending to have a walk in Newtonmore after dinner, but as we ate it got very dark and then there was thunder, lightning and heavy rain. As we watched the gutters overflowing past the dining room windows, a decision was taken to abandon the planned walk. Anne and David did go around Loch Imrich (again) once it finally stopped, but the most obvious wildlife was of the biting sort - the **midges** had come out.

It was raining again in the morning, but eased off by the time we were ready for our morning exploration. We got Ian to drop us off at the railway station in Newtonmore where we linked into part of the Wildcat Trail for the section which follows the banks of the Spey. After everyone had successfully negotiated the stiles on the access path we joined the route between the golf course and the river. A **chaffinch** feeding young and a **siskin** were seen in the bankside **alders** and plenty of large black **slugs** crossed our path - everything was very wet underfoot even though the rain held off. A heathy meadow showed promise for later in the season but only the **tormentil** was actually in flower after the late spring. Large numbers of **orchid** plants were found at the pre-flowering stage but none of us was quite sure what they were. Later on Lorna found a single spike of **early purple orchid** actually open, but it was not until two weeks after our return that we sorted out the others. Marjorie Tennant revisited Newtonmore and repeated the walk then reported (very excitedly) that all the mystery plants were **greater butterfly orchids!** (Photograph on page 20)

The river shingle further downstream had a wonderful mixture of very different plants including **mountain everlasting**, **alpine lady's mantle** and **mouse-ear hawkweed**. A large **sand martin** colony was obvious in the gravelly bank opposite and two **common sandpipers** became very agitated while we were at the river's edge, presumably nesting nearby. Once into the more wooded section Jean Palmer found what she thought was an interesting insect - it turned out to be another **narrow-bordered bee hawkmoth** and was captured on camera by several people this time, as proof. This was helped by the dull damp morning and it obligingly sat still on a convenient leaf while we snapped it. (Photograph on page 20) By this time the photographers were some way behind the rest of the party and had to hurry to catch up and just made it to the Highland Folk Museum as the rain came on again. Only a few had time to explore the fascinating exhibits of past lifestyles but many visited the cafe and shop before we headed down the A9 to our last stop.

We raced the rain to Pitlochry and though it was dry on arrival it soon caught up with us. Nats don't let a little water stop them - full waterproofs and umbrellas were produced and we had an excellent tour of the Explorers' Garden, beside the Festival Theatre, with Julia Corden and her volunteer assistant Gordon as our guides. We all gained insight into the origins of some of our garden plants and learned about the intrepid plant hunters who had brought them into cultivation. The blue **Himalayan poppies** looked particularly striking in the gloom but very few birds were seen. The Theatre provided a welcome opportunity for a cup of tea before we came back down the road to Dundee.

Anne Reid

LINN OF TUMMEL

12th June

We began our day in sunshine and once more admired the **northern marsh orchids** (*Dactylorhiza purpurella*) on the A9 just north of Perth. Having successfully negotiated the twisty road, we stopped at Queen's View by Loch Tummel. Many members enjoyed the large home-made scones at the cafe and the scenery was duly viewed and photographed.

The bus was then parked at Garry Bridge and our group of 32 set out on the NTS nature trail to Linn of Tummel. Along the flowery path by the River Garry the **wood cranesbill** (*Geranium sylvaticum*) was particularly prominent and a large-flowered grass was spotted by Pat Gaff and identified as **tall fescue** (*Festuca arundinacea*), after some deliberation.

David Lampard was busy noting invertebrates and these included **silver-ground carpet moth**, **bordered white moth**, **orange tip butterflies** and **garden chafers**. Only a few birds were in evidence here, but Gordon Maxwell pointed out a pair of **mergansers** and a **common sandpiper** and **dipper** were spotted. Dorothy and Gordon noted a **wood warbler**.

At lunch-time we sat in two groups, one at the monolith marking Queen Victoria's visit and one at the Linn, a waterfall before Loch Faskally's level was raised, and now rapids. Here we were

entertained by the spectacle of white water rafting and canoeing, and splashing and soakings in the foaming water. Nearby was a large patch of **wood melick** (*Melica uniflora*), surprisingly common on this site.

On the way back most members took the higher path, where **red squirrels** were detected and eaten **cones** found. On the whole this mainly plantation wood was less rewarding than the lower path until we descended to the burn and meadow.

Later in the afternoon the Garry footbridge was crossed to admire the **bird's-nest orchid** (*Neottia nidus-avis*) nearby on the bank, in a different place from sightings in previous years. A short walk downstream yielded a large population of **common wintergreen** (*Pyrola minor*), just coming into flower and there were fine views from the river bank.

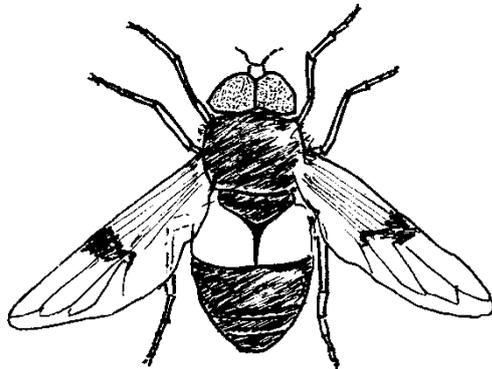
Brian Ballinger and Dorothy Fyffe

BALGAY HILL

22nd June

This evening walk was a joint venture with Westfest, the Dundee West End Festival, with the hope that local residents would join us to explore the natural history of their 'local patch'. In the end we had a total of 15 attending, only four of whom were not our own members. They were, however, genuinely interested and may even join the Nats. Davie admitted that he was there to revisit haunts where he had played as a lad and Wynne hinted at similar motives!

It was a glorious, warm summer evening which made a gentle ascent of the hill very pleasant. We looked at tree identification as we climbed, giving plenty of excuses for rests. Near the north gate, where we assembled, were good specimens of **deodar cedar** (*Cedrus deodarus*), **Douglas fir** (*Pseudotsuga menziesii*), **giant redwood** (*Sequoia sempervirens*) and **dawn redwood** (*Metasequoia glyptostroboides*). Many, if not most, of the trees on the hill were planted between fifty and a hundred years ago though the dawn redwood was only discovered in the 1940s in China and is considered one of the living fossils of the tree world.



Through the gaps between the trees we had glimpses of a sun-bathed Dundee and kept meeting local dog-walkers who were interested in what we were doing but also gave us various snippets of local information to complement the natural history. A few woodland birds put in brief appearances and someone located a **great spotted woodpecker's** nest. On the open area to the east of the Observatory we managed to find a few **bumblebees** on **raspberry** flowers and the

striking **hoverfly** *Volucella pellucens* was caught by Anne, admired and released.

Though we found nothing unexpected on our walk, we all revised our tree knowledge and just enjoyed being outdoors on such a perfect summer evening.

Anne Reid

LITTLE BALLO MARSH AND LAIRD'S LOCH, TULLYBACCART

3rd July

About 15 people turned out for this walk in Little Ballo including the youngest yet, only a few months old. After parking we made our way to Little Ballo marsh. We found **orchids** as soon as we turned off the road. The morning was spent looking at varieties of two orchids - **common spotted** and **early marsh**. The previous week on the recce we had seen a **butterfly orchid** after the weather had been dry for a while. A week later, with rain in between, the vegetation had grown and changed and the lone specimen had disappeared.

In the marsh a lot of wetland plants were on show including **bog asphodel**, **sundew** and **bogbean** as well as many **sedges** and **rushes**. We walked back up the road for lunch on the way to Laird's Loch with **small pearl-bordered fritillary** flying around. The walk took us around the Loch and over the dam, where we saw **blue-tailed** and **common blue damselflies**. Gordon and Davie took an alternative route, to Lundie crags, and were rewarded with sightings of the **ravens** and their fledged young.

David Lampard

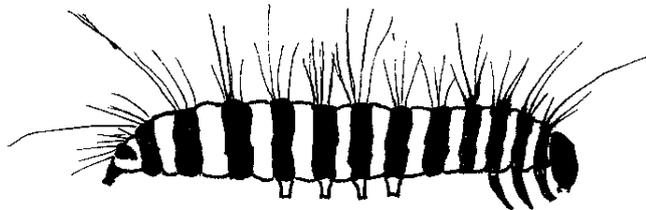
GOURDON TO JOHNHAVEN

17th July

We left Lindsay Street on time to head up the coast road. As we turned past the McManus Museum the bus slowed and crept to a halt. A broken accelerator cable was diagnosed by our driver who promptly phoned driver Ian (who was still in his bed) and requested a replacement bus ASAP. At this point a number of Nats headed for various parts of the city centre in pursuit of coffee, after a warning to return in half an hour. Ian moved swiftly and we left only 50 minutes later than planned. Our luck was in - mostly green traffic lights and no tractors - so we arrived in Gourdon less late than I had feared!

Even before we had walked down to Gourdon harbour the heavens opened and a synchronised donning of waterproofs took place in a line at the edge of the road. It was only a shower, however, and most of the rest of the day was sunny. **Heron**, **common sandpiper** and various **gulls** were seen in the harbour and the party then, as is customary, strung itself out along the shore path. There was plenty to see. Immediately beyond the last house was a large patch of **orchids**, past their best but still identifiable as **northern marsh orchids**, though there was some discussion as to whether they might be hybrids due to their size and vigour. **Agrimony** (*Agrimonia eupatorium*) was found beside the track and nearby we came upon the remains of a **bumblebee** nest which had been dug out, by **dog**, **fox** or **hedgehog**, with a few very confused bees crawling around. Only workers were present so we could call them **white-tailed bumblebees** but not be certain whether *Bombus lucorum* or *B. terrestris* - only the queens are reliably distinguishable. A **kestrel** hovered high above the slope of the raised beach, a young **stonechat** was perched on a fencepost and a **buzzard** was seen briefly overhead.

Any foray off the track disturbed large numbers of **six-spot burnet moths** from the serious business of feeding on nectar of **ragwort** and **knapweed** and Jim found an empty pupal case to show us. Not surprisingly, when a rain shower hit us the moths retreated to the undersides of the flower heads. We also examined all the



ragwort plants for caterpillar damage, hoping to find **cinnabar moth larvae**. On the whole stretch between Gourdon and Johnshaven only two places were found to have larvae, and then only in very small numbers.

As we looked for a suitable seaward facing spot for lunch Brian Williamson noticed **sandwich terns** carrying small **fish**. They were still feeding their fully fledged young but were on the move - I don't know where they nested, but it certainly was not on this stretch of the coast as I had explored it thoroughly earlier in the season. When the sun came out numbers of **ringlet** and **meadow brown butterflies** flitted about and Gordon saw a **green-veined white**.

While many contented themselves with staying on the shore path, some took the detour up the hill to Benholm Mill where tea and home baking seemed very popular. Marjorie Gillan led a small group from here up to visit the historic, old (now sadly redundant) church in the village and happily coincided with the local Minister who told them about the history of the church. Those of us bringing up the rear had no time for such detours! We finally arrived in Johnshaven to find some of the group enjoying ice creams and all in the vicinity of the bus. Stewart and Jean MacKenzie produced a piece of plant from the top of the beach for identification which turned out to be **sea kale** (*Crambe maritima*). This short-lived perennial is relatively uncommon so its presence was reported to the BSBI plant recorder for Kincardineshire and turned out to be a new site - the nearest known being at St

Cyrus. A special mention must be made of the fact that the MacKenzies could not remember exactly where they had found the plant, so they returned a couple of days later and got an exact grid reference - real dedication to natural history!

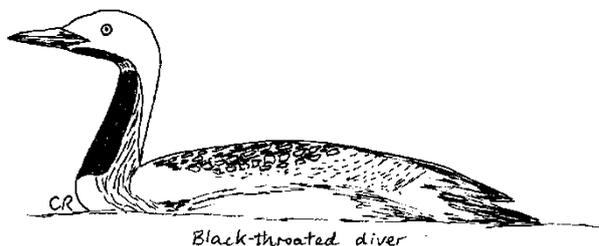
Anne Reid

LOCH MUICK

31st July

This long drive took us through Fettercairn and over the Cairn O'Mount. The approach to Glen Muick is through Ballater and along the long single-track road to the car park at the Spittal of Glen Muick. On the day we chose for the outing the car park was full. There were views of Broad Cairn, Capel Mounth and Lochnagar.

The day was overcast and windy so not very good for insects. A few intrepid members made a circuit around the loch while most walked at their own pace to the boat house and then back along the river, Some got to Glas allt Shiel.



Along the route were a number of conservation projects in progress initiated by the Balmoral Estate along the shores of the loch to help regenerate old **birch woodland** back to forest by excluding **deer**. The deer fences will have to stay in place for about ten years to protect the regrowth. Lunch was had by a few in the lee of the boathouse, which provided shelter from the chill breeze. There was a **sandpiper** on the shore and

divers on the loch. Those who made it to the shelter of Glas allt Shiel were found by the **midges**. Although overcast it did not start raining until the afternoon when many had made it back to the shelter of the information centre. The route home took us through Braemar and down Glenshee where we were treated to the sight of a magnificent **rainbow**.

David Lampard

BARRY BUDDON OPEN NATURE DAY

15th August

A large turnout of 75 members of the five local natural history groups, Dundee Naturalists' Society, RSPB, SOC, ADBC and the Scottish Wildlife Trust, were joined by members of Butterfly Conservation and enjoyed a spectacular day on the Barry Buddon Estate. The groups were welcomed by organiser Bob McCurley and he introduced Captain Tom Graham, Camp Commandant of Barry Buddon, who briefed them on the need for safety and precaution whilst on the camp, instructing them if they picked up any live unexploded bombs to quickly hand them over to Bob!

With the early morning fog lifting, warm, sunny weather promised a good "butterfly day" and we were not to be disappointed. The bird watchers during the course of the day clocked up a total of 71 species, four better than last year. The highlights were, a day-flying **long-eared owl** near the Barry Loch, both **great spotted** and **green woodpeckers**, a singing **chiffchaff**, **bullfinch** and **long-tailed tits**. A sea watch at Carnoustie Bay produced a very close-in **Arctic skua**.

The butterfly enthusiasts really had a field day with 14 species being recorded. Undoubtedly the highlights were four **small blues** and, the biggest surprise of the day, a **comma** which brought big smiles to many faces! (There was a row of photographers leaning over the roadside fence to record it. Ed.) This species is fast moving in a northerly direction. The overnight moth trapping exercise proved again most rewarding with a grand catch of 31 different species, a slight increase on last year. The moth which greatly impressed was the lovely **canary-shouldered thorn**, a real thing of beauty! Thanks go to Anne and David for their efficient demonstration and neatly labelled little bottles, viewed with interest by all present.

The Botanists, ably led by Jim Cook, had another rewarding day with findings of **adders tongue fern**, **twayblade** and **wild basil**, to name only a few of the fine specimens discovered. The Camp

Commandant and his staff were thanked by Bob for rendering every assistance to help ensure yet another very memorable Open Nature Day. Everyone left the estate with the thought, "Roll on next year"!

Bob McCurley

CARNOUSTIE

10th August

Perhaps the torrential showers earlier in the day put people off, but only six people turned up for our evening walk along the shore at Carnoustie, and that included the two leaders. The air was perfectly clear and the view to the south was stunning in the evening sunshine. With binoculars we could clearly see St Andrews and Fife Ness with the wind turbines of Dun Law, near Soutra on the A68, strung out on the horizon.

Having waited a while, in case anyone else turned up, we set off along the shore eastwards looking at the strandline and occasionally scanning the rocks for birdlife. Dorothy found a **cowrie**, one of her specialities, and Anne found several striped **agate** fragments. Stones with holes bored by **gribble** (a mollusc) proved a talking point and David pointed out smaller holes in the stones excavated by a **sponge**.

There was an autumnal feel to the bird life with a few **curlews** and **redshanks**, gatherings of **gulls** and a flock of **lapwings**. The Westhaven **shelduck** family was resting on the rocks but the maximum count we got was seven well grown young and two adults, much reduced from the 17 ducklings counted earlier in the year.

The original plan had been to continue up Craigmill Den but we had taken our time along the shore on such a pleasant evening and decided that it would be dark too soon to go on. Returning via some of the rocks on the lower shore, Stevie Smith found several small **green shore crabs** and a **velvet swimming crab**. Some of these, unusually, were moving about in full view and we speculated whether the falling dusk was tempting them out. There were certainly large numbers of **sand hoppers** all the way along the beach and at one point a group of **black headed gulls** were feeding on them. David initially had trouble identifying them in the failing light because they were already more or less in their winter plumage.

Back near the Coastguard Station we found several **silver-Y moths** and a **smoky wainscot moth** on the **knapeed** flowers above the shore and decided it was probably time to go home!

Anne Reid

REMEMBERING KIM

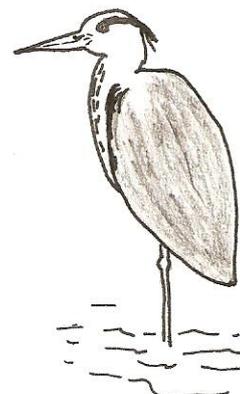
28th August

We were very sad on hearing of Kim's death and so a few of us decided to go a walk and remember her friendship and her love of photography, in place of the scheduled outing to Fife Ness which she was to have led.

We met at Dorothy Fyffe's house and she gave instructions for us to get to Powmouth. It was a lovely day and, as we walked along the River South Esk the **Himalayan balsam** was in full flower and the **bees** were buzzing around. The whole area had a warm glow and the sun shining on the water gave it a sparkle. A **heron** was looking for its lunch nearby. Then we met two fishermen and they, too, thought it was a beautiful afternoon and, if the heron had not already caught them, were hoping to catch a fish or two.

It really was very peaceful and a perfect place to reflect on Kim's happy face and the pleasure she had in her photography. It was a perfect way to remember someone.

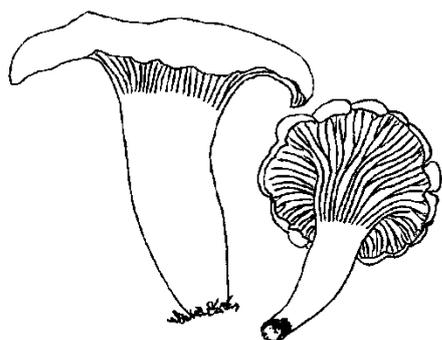
Margaret McLaren



KINSHALDY, TENTSMUIR

18th September

A procession of vehicles gradually assembled at Kinshaldy car park and disgorged their cargo of Nats and friends to a total of over 20 people for what was to be, predominantly, a fungal foray. Individuals were welcome to pursue their individual interests in addition! Other areas around Dundee had not been very productive fungi-wise, but we needn't have worried: Tentsmuir always comes up with the goods, and a good variety of species soon revealed themselves.



As always, many *Russula* sp. in their wide variety of colours reflecting the mixed stands of coniferous and deciduous trees were found. The edible *Boletus edulis* (**penny bun**) and *Cantharellus cibarius* (**chanterelle**) were in short supply, possibly due to the over-collecting of these commercially viable species. However, there were plenty of others for our group to record and study. The rabbit-mown fixed duneland was very productive of **puffballs** of various sizes, and the **alder carr** areas carried a wide selection including *Helvella lacunosa*, an almost black coloured and convoluted mushroom easily overlooked in the leaf litter. *Chroogomphus rutilus*, probably the largest **wax cap** type, was also fairly common in this area.

While all this fungal activity was going on, our Hon President, Gordon Corbet, had been poking around in the trees looking for invertebrates and had found a **coxcomb prominent moth** caterpillar (which he said he would feed up to see what emerges). He also found a number of **mite galls** and **blister galls**, some of these previously unrecorded in Fife. It is worth stressing here that Gordon is a mine of information on many areas of natural history and is most helpful in imparting his knowledge to others. I have details of his invertebrate finds so, if anyone is interested, please contact me.

All things must come to an end, and, as usual, the 'spoils' were laid out on the picnic table for all to see. Everyone I spoke to agreed that it had been a good day. The weather had been fine and some had even walked far enough to see (or at least hear) the **grey seals** on the Tay sandbanks.

Gordon Maxwell

MEMBERS' PHOTOGRAPHS



Narrow-bordered beehawkmoth, Speyside (Anne Reid)
See page 13



Greater butterfly orchid, Speyside (Anne Reid)



Small copper butterfly, see Interesting sightings, 4th September (Brian Allan)



Narrow-winged conehead at Earlshall Muir. A first for Scotland - see page 37 (Davie Stein)



Netted pug, 20th June 2010, Arbroath (Stevie Smith)

AUTUMN MEETINGS

ITALY, NORTH TO SOUTH

Brian Allan - 12th October

Brian opened the winter season of Nats lectures with a terrific account of his plant hunting travels in Italy over a number of years, much of the time in company with Sid Clarke, formerly photographer for Edinburgh Botanic Garden. His excellent slides, many of them composed of several images, are far too numerous to describe in any detail. As well as the visual quality, his usual ebullient and witty presentation style and vividly enthusiastic recounting of adventures and misadventures, enlivened the evening for us all.

He began with a brief description of Italy and its flora and started in the north with wonderful photographs of *Primula minima* and *P. tyrolensis*. In fact, *Primula* species are one of his and Sid's great interests and we were to see many more. But, being Brian, he couldn't resist photographs of **orchids** as well. Indeed, we were shown beautiful images, in the Dolomites, of the continental **fragrant orchid** (*Gymnadenia austriaca*) and the superbly shaped and coloured **slipper orchid** (*Cypripedium calceolus*) and other groups as well, including a wonderful yellow *Pulsatilla*, **alpine**



butterwort (*Pinguicula alpina*), beautiful **spring gentians** (*Gentiana verna*), **bird's-eye primrose** (*P. farinosa*) abundant in roadside verges, plus *Rhodothamnus chamaecistus*, **dwarf gentian** (*G. acaulis*), *Daphne cneorum*, *Crocus albiflorus* and many more.

The audience was treated to more **primulas**, firstly *P. spectabilis*, with the added bonus of a **fire salamander**, at Monte Caplone and *P. recumbariensis* on Monte Zavola. Slightly further south, at Passo di Campogrosso, were a pale lilac *Primula* hybrid and spectacular flowers of *P. spectabilis*. Nearby they found stunning visions of *Paeonia officinalis* flowers. Still in the north, around Lake Garda, were more **orchids** including *Gymnadenia conopsea*, with its long nectary spurs, and the short-spurred *G. odoratissima*, **monkey orchid** (*Orchis simia*), and *Cephalanthera*

longifolia. On Monte Alben were *P. glaucescens* and a farinose (floury), pale blue endemic species, *P. albenesis*. Even more memorable was Brian's account of a potentially serious fall by Sid Clarke on a precipitous slope - and his fortunate escape.

In the Maritime Alps the intrepid pair found *P. allionii*, with some huge clumps over the border in France, and *P. marginata* in both bud and flower. We also heard the tale about the few days stuck in their campervan by deep snow.

On the Tuscan coast, further south, the pair located *Crocus vernus* ssp. *neopolitanus*, our familiar **primrose**, *P. vulgaris*, and the blue *Hepatica nobilis*. We were treated to images of the widespread *Narcissus tazetta*, with white flowers one inch across, along with Brian's description of Sid's photographic techniques.

In a 2004 visit to the Apennines, they found the **elder-flowered orchid** (*Dactylorhiza sambucina*), an endemic primrose, *P. apenina*, *Daphne mezereum* and a superb *Caltha palustris* above the snow-line. At this point, we had an unscheduled break when the computer system decided to play up, but Anne and Brian managed to get it up and running again after a 15 minute pause.

The lecture restarted by taking us to the area just north of Naples, with images of beautiful *Iris lutescens*, a sub-species of the wonderful orchid, *Ophrys argolica* and *O. sphegodes* ssp. *passionis*. On the Amalfi coast, with its tortuous and hair-raising roads, were more orchids, *Dactylis provincialis* and *Anacamptis morio*, along with *Cyclamen repandum*. A visit to Capri yielded *Anemone hortensis*.

At Puglia were *Serapias apulica*, three **grape hyacinths**, *Muscari neglectum*, *M. commutatum* and *M. comosum*, plus two beautiful species of **anemone**, *A. blanda* and *A. apenina*. At Gargano were blue and yellow flowers of *Iris pseudopumila*, wonderful flowers of *I. revoluta*, the orchids, *Ophrys bertolonii* and *O. sphegodes*, and a **butterfly**, the **southern swallowtail**.

Brian ended his account by escorting us onto the island of Sicily, with the slightly-smoking cone of Mount Etna. Here were many memorable orchids, *Dactylorhiza markusii*, an *Anacamptis morio* sub-species, *Ophrys tenthredinifera* and the endemic *O. brancifortii*. Near Gela Castle was

Corleone village and we were entertained by an account of a rather nervous meal in the company of a group of the local Mafiosi! The pair lived to see another day, however, and they were able to enjoy yet more orchids, including *O. fusiflora*, *O. lunulata*, a huge flower-spike of *Neotinia intacta*, *O. papilionacea* and *O. fusca* ssp. *pallida*, a rare endemic. Although perhaps slightly punch-drunk from the huge variety of wonderful images, we all applauded the vote of thanks remark that it had been an excellent way to begin this year's programme!

Jim Cook

DEVELOPMENTS AT DUNDEE MUSEUM

David Lampard - 26th October

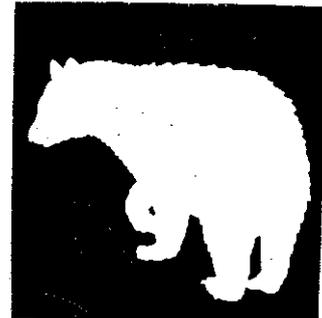
Our talk by Council member David Lampard on the fall and rise of the old Albert Institute was both interesting and informative. The new building, now called The McManus has been extensively renovated and David as curator was ably suited to explain the urgent need for this iconic structure to be saved. And saved it had to be, since the original Victorian building was slowly sinking into the marsh it was built on. The structure was built on large timber piles and, over the years, parts of the building had sunk while other areas had not, resulting in a series of uneven floors and other serious structural movements.

David then explained that, thanks to Lottery funding, the decision was taken to completely renovate the building, spending millions in the process. The logistics were frightening, as all the backroom staff had to be housed away from the main building. Luckily, the old Barrack Street building was still available and all the staff decamped to this partially mothballed building; very cramped to say the least. One find, whilst the renovation was ongoing, was three previously unseen lead covered wooden statues on the roof. These were restored and returned to the roof, but yet again unseen from ground level. Of course, the collections also had to be moved, which sounds easy, but moving a whale's skeleton and a heavy dugout canoe were no easy tasks. This coupled with the fact that the Barrack Street building and fittings also required modernization, was another major headache that was overcome.

Whilst all the staff were relocated and the collection stored safely, work to deliver the new and improved displays began. New display cabinets, together with some newly commissioned exhibits, were required. These ranged from a large bear to a tiny invertebrate. Many of the older items also required major refurbishment.

The outcome from all this work is that Dundee has once again a museum and art gallery of international acclaim and everyone who worked on the project deserves a hearty vote of thanks from the Tayside public.

Brian Allan



DUNDEE MUSEUM COLLECTIONS VISIT

6th November

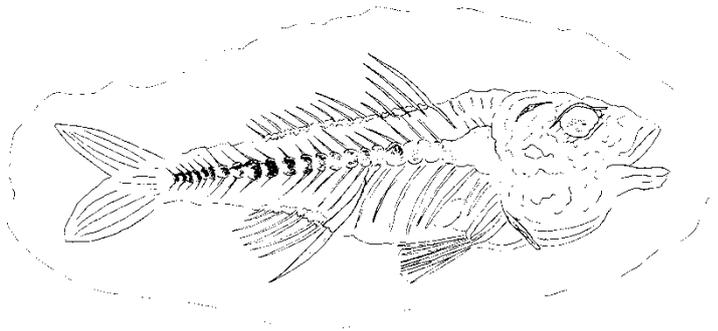
A total of 26 members arrived at 10.00am to be shown round the new Museums' Collections Unit by David Lampard and Julie Campbell, the natural history curators. The unit is housed in what most Nats know as the Barrack Street Museum, once the Ward Road library, which was the last Carnegie library to be built in Dundee and which opened in 1911. In 1973 when the library moved into the Wellgate the building became the natural history museum. It was closed in 1996 and mothballed until it was renovated in 2005 to become the collections unit.

The building has been made publicly accessible by the installation of a lift, and the old galleries are fitted out with new storage units, including roller racking that makes a more efficient use of the space. However the difficulties of converting old buildings can be seen by looking at the dead space where the walls meet at odd angles.

In a change to previous practice the collections are stored according to their content; this is so that the environment in each store can be controlled to keep it at the best relative humidity for the collections.

The whole of the collections had to be moved to Barrack Street before the recent work on the McManus building could start. During the move the opportunity was taken to audit and list the whole collection on computer. As a result there is now a catalogue of the collection which includes 39,000 natural history entries.

For safety reasons the group was split into two and tours started at opposite ends of the building. Starting in the basement, the first store contains mounted mammals and birds. These specimens are made to go on display and are stored according to species classification. Most of the collection is of UK species with some non-native mammals that reflect Dundee's status as a port with connections across the world. Amongst the birds are some of the only specimens collected by Shackleton's Antarctic expedition. Next was the freezer room where frozen animals are stored awaiting preparation as mounts or skins. This room also has a freezer capable of reaching -30°C used for treating pests.



The second basement store contains the geology and archaeology collections. The geology collection contains rocks, fossils and minerals. Fossils include locally important Devonian fish and invertebrates from sites such as Dura Den, Balruddery Den and other quarries in Angus. Of particular interest is a collection of fossils recently returned from the National Museum of Scotland containing fossils donated by Lord Kinnaird.

The collection includes eurypterids examined by Thomas Henry Huxley in the 19th Century. The mineral collections include agates, many collected from Angus.

There is more natural history stored on the first floor. There are mammal and bird study skins, skeletons, skulls, and bones which are used as reference collections. This store also contains the herbarium which includes the collection of Ursula Duncan and also many specimens collected by members of Dundee Naturalists' Society. There are also significant moss and lichen collections. Most specimens in the herbarium are from Scotland and in particular Angus, with comparative specimens from around the UK.

The final store area is in the rotunda of the building. This is intended to become a public study area and also houses the natural history library and the insect collection. The latter contains a range of different insect orders but there are more moths, butterflies and beetles than anything else. The insect collection incorporates Derek Robertson's extensive local collections.

One of the aims of the development of the collections unit is to allow people to come and carry out their own studies. Tables, computers and reference books can all be made available and visits can be made by appointment.

After the visit to the collections unit the group moved on to see the new galleries at the McManus. The new displays tell the story of Dundee from its beginning in the Devonian period to the present day which results in natural history content being spread throughout the galleries. The Devonian is represented by fossils of the varied fish and invertebrates that lived during this time. During this period life first emerged onto land and the displays contain fossils of *Kampecaris forfarensis*, and an ancestor of the millipedes and centipedes, and the earliest vascular plants. The centre point of this gallery is a case showing Scottish habitats as they were after the ice age, with major new specimens of brown bear, beaver, wolf and lynx, species that have since become extinct. In the next part of the gallery are species that are known to have been eaten by people at Morton Neolithic settlement, identified from bones from a midden excavated from the site.

At this point David and Julie were warmly thanked for such an informative tour of the collections and though some members continued through the other galleries, taking in the Tay whale and natural history specimens from abroad, others made their way directly to the new Museum Cafe to sample the fare.

David Lampard

SOME INTERESTING INHABITANTS OF SCOTLAND'S LAKES AND RIVERS

Peter Maitland - 9th November

An eminent fish biologist, Peter Maitland is Visiting Professor at Glasgow University, an independent ecologist and a sought-after lecturer. He came to broaden our knowledge of fresh water species and used four invertebrates and four fish as examples of the more interesting creatures to be found in Scottish waters.

Though only occupying 2% of its area, Scotland has 796 lochs, 2973 lochans, 950 rivers and 3957 burns according to a survey by Smith and Lyle (1979). The importance of these was recognised over 100 years ago when John Murray and Fred Pullar started on the bathymetric survey of the lochs of Scotland in 1897. By 1900 they had only surveyed 15 lochs but by 1910 a six volume work was published covering 562 fresh water bodies with an accuracy which has been confirmed by modern techniques.

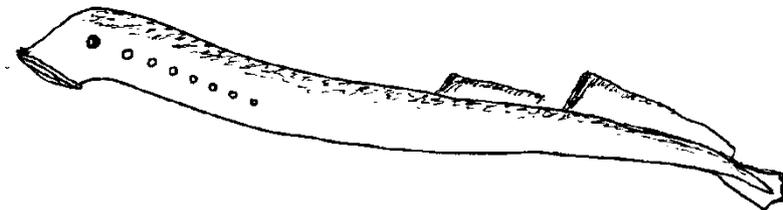
American signal crayfish, *Pacifastacus leniusculus*. This alien was introduced into England for farming, but escaped and is now a serious problem there, having out-competed the smaller, less-aggressive **white-clawed crayfish** which is native. Though the native species was never present in Scotland the American signal crayfish was first reported from Loch Ken in Galloway in 1995 and is spreading throughout the country, though by what means is unclear. It is easily trapped but removal of 100,000 over 10 years in Loch Ken has made no impact on the population there. Unfortunately it was discovered in the Dighty near Trottick Ponds in summer 2010 but we don't know how far it has spread.

Tadpole shrimp, *Triops cancriformis*. This fascinating creature was first discovered in southern Scotland in 1908 by Professor Balfour Brown but then not refound until 1948. It is an ephemeral species which only hatches in flood conditions in the brackish marshes it inhabits. Development is very rapid with skins shed almost daily and, as the pool dries up it lays eggs and dies. These may remain dormant for many years making recording the species rather difficult.

Freshwater pearl mussel, *Margaritifera margaritifera*. Though found in calcium-poor waters the shell of the pearl mussel is calcium rich but its growth is very slow and individuals may live to 100 years old. This makes it very sensitive to disturbance and poaching so there is now a total ban on any kind of collecting or disturbance. The breeding cycle is complicated by the need for a fish host for the tiny larvae to carry them back upstream until they mature and drop off onto the substrate.

Medicinal leech, *Hirudo medicinalis*. This large greenish leech is the only mammal feeder of about 12 leech species found in Scotland and is found in only 13 sites as surveyed by Peter Maitland himself. The preferred habitat is small, shallow, weedy and warm pools where **cattle** feed in summer. In spring the medicinal leeches may feed on **amphibians** but this prey has so little blood that it usually dies after an attack. The related **horse leech**, which is brownish and stripy, feeds on **earthworms** and small larvae but is only found at two sites in Scotland on the west side. Leeches are now cultivated/farmed for medicinal use as the anticoagulant aids capillary re-growth after plastic surgery

Sea lamprey, *Petromyzon marinus*. There are three types of lamprey in Scotland, the sea lamprey, **river lamprey** (*Lampetra fluviatilis*) and **brook lamprey** (*L. planeri*). Sea and river lampreys feed by means of a sucker mouth, but the brook lamprey does not feed as an adult. Sea lampreys are up to 1m long and return to rivers where they spawn in groups. The larvae remain in burrows for four or five years. They may cause damage to fish and fisheries when present in large numbers.



Vendace, *Coregonus albula*. Known as the **fresh water herring**, the vendace is actually a member of the salmon family and is Britain's rarest fish. It was known from two lochs at Lochmaben but became extinct there in the 1970s. Some stock was taken from Bassenthwaite Lake in the Lake District and used to restock an upland loch in the Moffat Hills, Loch Skeen, where it is now well established. It has not been seen at Bassenthwaite for around 10 years so the 'rescue' seems well justified.

Powan, *Coregonus clupeoides*. This is related to the **vendace** but is generally larger and found only in Loch Lomond and Loch Eck. When threatened in Loch Lomond by the introduction of

ruffe, which eats powan eggs, some stock was removed and transferred to Loch Sloy where there is now a well-established population with a range of age classes.

Arctic char, *Salvelinus alpinus*. Another salmonid, the arctic char is relatively common and is found in about 100 lochs in Scotland. It behaves like **salmon** and **trout** but has become isolated in individual lochs and there are distinct differences between populations. At its most extreme, there are three types of char in Loch Rannoch which do not interbreed and may be an indication of speciation in action. Char are the most northerly found fresh water fish in Canada and Scandinavia and anglers prize them highly.

Sparling, *Osmerus eperlanus*. Also known as the **fresh smelt** or **cucumber smelt**, the sparling lives in the brackish water of estuaries and returns to rivers to spawn. It once supported a commercial fishery on the River Cree at Newton Stewart but this has now been stopped. On the east coast it is known to occur on the Forth and the Tay but not much is known about it here.

After all this information we truly felt we knew a lot more about the inhabitants of Scotland's lakes and rivers and certainly found them to be very interesting indeed. Peter was warmly thanked for broadening our knowledge of our native underwater natural history

Anne Reid

Smith, I and Lyle, A (1979): Distribution of Freshwaters in Great Britain. ITE, Edinburgh.

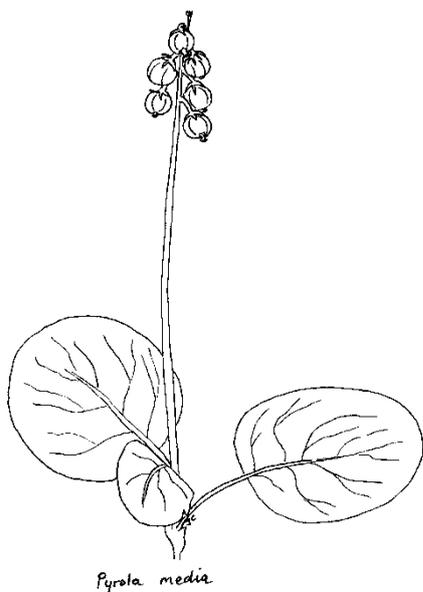
BOTANICAL EXCURSIONS IN MID-PERTSHIRE

Alastair Godfrey - 23rd November

Joint Meeting with Botanical Society of Scotland

Though his day job is Countryside Management Officer with Perth City Council, Alastair Godfrey is also the Chairman of the PSNS Botanical Section and is the BSBI plant recorder for Mid-Perthshire, vice-county 88. Until recently he was also on the Scottish Committee of the BSBI.

Alastair's responsibilities as plant recorder for Mid-Perthshire are shared with Jim McIntosh of BSBI as the area covered is very large. The vice-county system was set up by H C Watson in 1852 and has remained the basis for botanical, and other, recording ever since, despite numerous changes in administrative boundaries over the intervening years.



We were then told about some of the botanical responsibilities which Alastair has undertaken over the years. He has been involved in the Threatened Plants Project where a small number of species are chosen for study each year. This may involve checking old records and re-finding plants to assess their population and status. One such plant is **purple milk vetch** (*Astragalus danicus*) which is mostly coastal in Scotland but which also occurs on the River Garry in Mid-Perthshire.

As another example, the wintergreens of Mid-Perthshire have been studied. **Intermediate wintergreen** (*Pyrola media*) is found in deep **heather** under **pin**es on Tulach Hill, but when not flowering this is difficult to distinguish from **round-leaved wintergreen** (*P. rotundifolia*) as there is overlap in habitat in some places. **Common wintergreen** (*P. minor*) also occurs in the area.

The **field gentian** (*Gentianella campestris*) is fairly common in Perthshire but there is some loss of habitat and it appears to be declining. There is a subspecies of this *G. amarella* ssp *septentrionalis* which is only found near the lime kilns at Kinardochy on Alastair's patch. The true species also occurs nearby on more acidic soil.

This was a fascinating insight into the purely voluntary work which a vice-county recorder is prepared to undertake for the sake of our plants. We owe all such people our full support when they request assistance with field work or plant records.

Anne Reid

SPEYSIDE WEEKEND

Anne Reid - 7th December

At very short notice, Anne did a fine job producing a talk with slides of the Speyside weekend of June 2010. Comparisons were also made of the marked changes in appearance of the venues over the three weeks between the main recce and the actual weekend, after the cold spring. Unfortunately, the atrocious weather meant a poor turnout on the night, but those hardy souls who came enjoyed an excellent show. Please turn to the account of the weekend on page 13 for details.

Gordon Maxwell

(This was a replacement for Peter Ferns, SWT, who was prevented from travelling by the snow. Ed.)

CRETE - ISLAND OF CONTRASTS

Brian Allan - 8th December

This talk was the Dundee Naturalists' Society's contribution to the Wednesday afternoon lecture series and once more a double booking of Room T9 was averted at the last moment, the opera appreciation class being diverted to another venue. It was very fortunate that we had booked a local speaker as the snow was piled high, the motorways were closed and the train services were disrupted. And what better an antidote to the gloom outside than the colourful spring flowers of Crete.

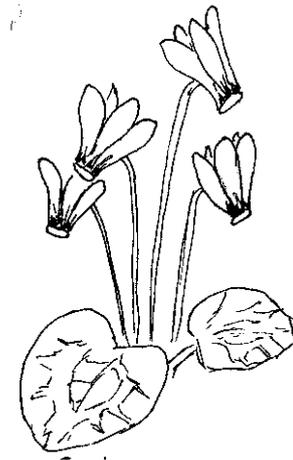
Brian Allan has been going to Crete for decades and leads holiday trips to the island, so few others are likely to know its flora as well. And what a magnificent flora it is, with many endemics and fine shows of flowers, in spite of the best efforts of the island's goats to eat them all.

Brian took us from east to west and from high to low ground, describing his heroic and often amusing struggles to locate rare species. Crete has a striking landscape with gorges, high plateaus and steep mountains. He also described a part of the history of our society, as many members have joined him on visits over the years and been infected by his enthusiasm. It was fascinating to see the pictures of some well-known Nats in their youthful prime (although we all remain young at heart) and to hear of their exploits.

Many different orchids grow on Crete and Brian keeps finding more species in spite of his deep knowledge of the subject. He illustrated and described the many beautiful *Ophrys* species (bee orchid and allies), which have recently been reclassified using DNA techniques. A few of the orchids are familiar from Scotland such as pyramidal orchid (*Anacamptis pyramidalis*), but most are not. There were, for example, *Orchis anatolica*, *O. quadripunctata*, *O. laxiflora* and *O. provincialis*. Brian showed pictures of the various tongue orchid (*Serapias*) species to be found on Crete.

Apart from the orchids Brian described his successful search for the five tulip species that grow here. And then there was the profusion of other genera, including *Anemone*, *Ranunculus*, *Iris*, *Aethionema*, *Arum*, *Anchusa*, *Linum*, *Campanula*, *Cyclamen*, *Chionodoxa* and many other plant groups.

It was not all flora however and we also saw other wildlife such as lizards and a griffon vulture, attractive towns and ancient sites. This beautifully illustrated talk gave a fine picture of this wonderful island and its flowers.



Brian Ballinger

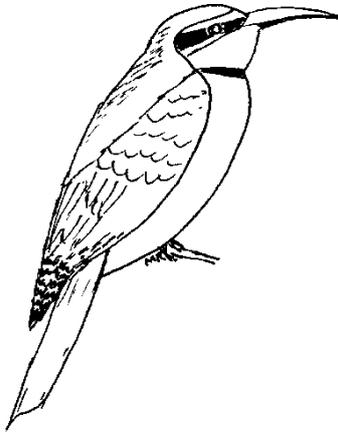
SPRING IN NORTH-WEST IRAN

Brian Ballinger - 21st December

This fascinating glimpse of the natural history of Iran gave us an eye-opening introduction to its diverse flora and fauna. The visit was made in late April to early May in 2009 when spring bulbs were at their best but, in their travels, Brian and Barbara came across a wide range of animal life too.

The trip started in Tehran, a polluted city of some 16 million inhabitants out of a national total of 75 million. The best thing about Tehran, according to Brian, was getting out of it! The shores of

the Caspian Sea appeared to be a long, dismal ribbon development, not helped by rain, but once the more mountainous areas were reached the plants came thick and fast. The flora has similarities with the Lake Van area of Turkey and many familiar genera were present, including various *Tulipa*, *Ranunculus*, *Gladiolus*, *Iris* and *Gagea* species. Such plants as *Iris reticulata* and *Pushkinia scilloides* which are garden plants here were seen in their natural habitat and there were a few plants, including *Gundelia tournefortii*, *Rindera lanata* and *Ixolyrium tartaricum* which were unfamiliar to most people present!



Moths were found most days, usually on hotel windows at breakfast time, and a few obliging birds posed on wires for long enough to enable photography including **green bee-eaters** and a **lesser grey shrike**. The group was shown what they were assured were **wolf** droppings and came across the Caspian subspecies of the **spur-thighed tortoise**. In addition to the moths there were a few **butterflies** and a **swallowtail butterfly** caterpillar was found. We were also shown an **oil beetle** and a **field cricket** (*Gryllus* sp.) to broaden the range.

After this tantalisingly short introduction to Iran everyone very much enjoyed the wide variety of savoury rolls and baking brought by members and accompanied by tea or coffee. The opportunity to socialise was made good use of. Those 33 hardy souls who had braved the still-snowy weather agreed that the effort had been well worth it.

Anne Reid

MEMBERS' ARTICLES

INTERESTING SIGHTINGS 2010

This compilation is intended to let people know what has been seen locally. All contributions are welcome. Each entry is followed by the initials of the recorder. The location of garden records for frequent contributors is noted on the list below.

Snow had fallen on 17th December 2009 and remained on the ground, UK wide, until well into the new year. This resulted in lots of **winter thrush** and **brambling** sightings, especially in gardens. At the end of the year heavy snow struck before the end of November and persisted until the end of December, resulting in extra interesting records of all sorts, including a **Siberian nutcracker** at Tayport. The wealth of winter records, at both ends of the year, rather outnumbers those from the summer - I trust this is because everyone was out enjoying their natural history and just didn't write it down!

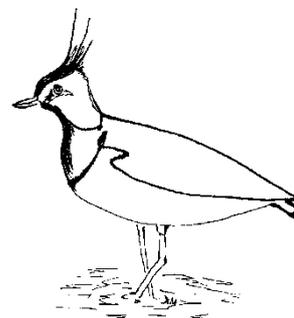
Brian Allan	BA	Monifieth
Jenny Allan	JA	
Brian Ballinger	BB	Dundee, West End
James Barbour/Helen Middleton	JB	Tayport
Jim Cook	JC	Broughty Ferry
Monica Edwards	ME	Invergowrie
Dorothy Fyffe	DF	Carnoustie
Marjorie Gillan	MG	Dundee, West End
Daphne McFarlane Smith	DMS	Broughty Ferry
Gordon Maxwell	GM	Dundee, Lochee area
Margaret Palin	MP	Broughty Ferry
Anne Reid	AR	Monifieth
Stevie Smith	SS	Arbroath
Brian Williamson	BW	Dundee, Law area



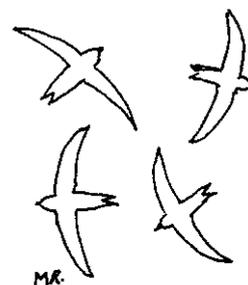
2nd January I had the delight this afternoon after sitting down with a cup of tea near the front window after returning from Templeton Woods to see about 10 **long-tailed tits** in the

hawthorn tree only 4m away. They didn't stay long, but then the male **blackcap** came to the lard again. BW.

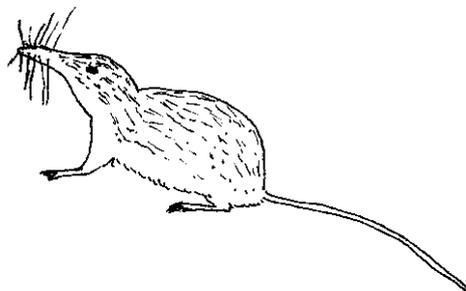
- 4th January** A **fox**, a **brambling** and a female **blackcap** in the garden here in Dundee all within 5 minutes of each other. BB.
- 4th January** Snow brings **redwings**, a **fieldfare** and a **blackbird** gorging on berries of *Cotoneaster* cv. 'Cornubia' in Law Street. BW.
- 7th January** Whilst walking around a field of seed cabbages at SCRI, Invergowrie (at -3°C) I was surprised to see a flock of about 300 **linnets** alarmed by an over-flying **buzzard**. BW.
- 8th January** While on the phone, I was looking out of the window at our snowy garden and was astonished to see a **fox** strolling across and then a second one! Their russet coats glowed in the sunshine against the white snow - a memorable image! DMS.
- 9th January** I, too, had a single **brambling** in the garden - the last one was nearly 20 years ago, again in snowy conditions. A single **fieldfare** also appeared and stayed around until the apples I had put out were finished. AR.
- 9th January** On a south facing slope under trees on Infirmary Brae, Dundee about 12 **redwings** were turning leaf litter under melting snow looking for food while a **buzzard** watched them closely from a branch above. The severe weather also brought 12 bird species to our garden. BW.
- 12th January** A pair of **peregrines** chased a singled-out **black-tailed godwit** at Guardbridge. Despite repeated attacks the godwit out-maneuvred the peregrines and they gave up after about 4 minutes of pursuit. GM.
- 14th January** Two **brambings** came to eat seed alongside **chaffinches**. I heard that a dead **roe deer** had been seen on Camphill Road, Broughty Ferry. DMS.
- 16th January** The first **snowdrops** of the year were out in flower, rather later than in previous years but not surprising, given the very cold weather and deep snow we've been experiencing for much of December and early January this winter. JC
- 16th January** Snow gone at last - originally fell on December 17th. DMS.
- 18th January** On the foreshore at St Andrews there was a fine deposition of sea life after recent heavy seas. This included hundreds of **brittle stars**, **common starfish**, one **sea mouse**, numerous and large **shore crabs**, **hermit crabs** and **fiddler crabs**, many still alive. There were some small **flatfish** among the **kelp** and a very good variety of **shells** large and small. **Sanderlings** and **turnstone** on the beach. A sunny day with a cold breeze. GM.
- 23rd January** A **fox moth caterpillar** on the clifftop path at Arbroath on a cold day with ice on the path. This species hibernates as a caterpillar then forms a cocoon in spring with the moths emerging in May. It must have been disturbed. GM.
- 27th January** When Forfar Loch became ice-free it attracted a wide range of ducks, most notably a female **smew**, along with the usual crowd, **goldeneye**, **wigeon**, **pochard**, **mallard**, **teal**, **tufted duck**, **gosander** and **shoveler**. BW.
- 28th January** Our front lawn in Adelaide Terrace, Dundee provided a soft spot for a **fox** to sleep for 2 hours in the afternoon! BW.
- 3rd February** A male **great tit** was broadcasting its territorial call lustily from the trees at the edge of Caird Park near the college at lunchtime, the first definite calls I've heard this year. JC.
- 4th February** A walk along the Tay Estuary from Tayport on a rising tide was most rewarding. **Grey plovers** with their 'black armpits' and **bar-tailed godwits** on the water's edge were a delight, but also the **dunlin**, **lapwing**, **red-breasted merganser**, **eider**, **mallard**, **wigeon**, **shelduck** and other birds on show. BW.
- 8th February** A mild night and a **robin** was singing lustily close by. **Blackbirds** not heard singing in the early morning until early March - and no **thrushes**. JC.
- 9th February** Warm sun resulted in a **small tortoiseshell** 'coming to life' in a south-facing room. Felt it was too early for it to survive outside so put it in a jar in the fridge. It was still after an hour so I then put the jar in the north-facing chilly porch. DMS.
- 12th February** A flock of **goldfinches** singing in a tree in The Howff, Meadowside. BW.
- 14th February** I finally worked out that the strange screeching noise in my trees was a large, green **parrot**. It had been there all the previous afternoon, but well hidden. It was reported to the Police, but nobody seemed to have lost one. Still around on 3rd March. Seen again 25th April. MP.



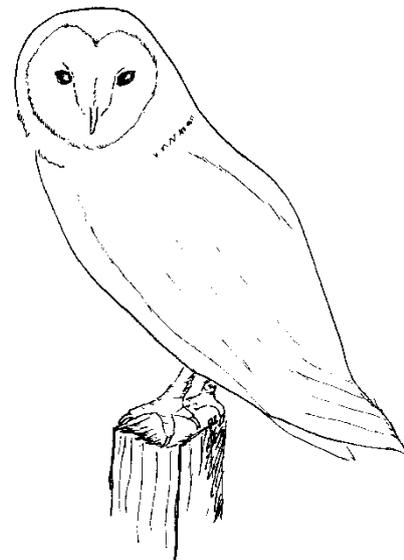
- 15th February** Close encounter at high tide on Balgove Bay, St. Andrews with 18 **brent geese** and six **pintail ducks**. BW.
- 21st February** A **song thrush** singing towards east end of Camphill Road. A sign of spring, at last? DMS.
- 26th February** As a **buzzard** sat on a grassy bank opposite the Eden Estuary hide, three cock **pheasants** walked past it and one sat only 2yds away. After a few minutes the buzzard flew off, obviously not interested in easy take-away meals. GM.
- 2nd March** Sea watching at Red Castle, Lunan Bay brought **long-tailed ducks**, **red throated diver**, **common scoter**, **red-breasted merganser**, **fulmar**, **razorbill** and other seabirds. BW.
- 7th March** Near Mill Dam, Dunkeld we saw seven **crossbills** on **birch**, two male and five female. The loch was frozen, with water on top of the ice though the temperature was about 8°C. GM.
- 10th March** From Ruddons Point, Fife, on a cold sunny morning saw **long-tailed duck**, **surf scoter**, **velvet scoter**, **common scoter**, **Slavonian grebe**, **great-crested grebe**, **goosander** and **razorbill** in Largo Bay, and back at the car park we were entertained by **tree sparrows**, **yellowhammers** and **reed bunting**. BW.
- 21st March** A **sparrowhawk** flew across the Kingsway, while we waited for the lights to change at the Forfar road cross-roads. A **thrush** singing lustily in Carsegowndiemuir quarry on arrival; also **skylarks** and a few **lapwings** and a **buzzard** heard mewing. A **tawny owl** called later from Wilstead's wood. JC.
- 23rd March** On a dropping tide at the Eden Estuary watched **black-tailed godwit** (some now in summer russet plumage), **common** and **spotted redshank**, **dunlin**, pairs of **shoveler** and **pintail ducks** and all the usual estuary feeders. BW.
- 25th March** When I was walking along Shaftesbury Road at 3pm today a **fox** calmly trotted past me on the pavement going in the opposite direction. BB.
- 29th March** Exploring the woods at High Valleyfield Woodland Park, Newmills, Fife I was delighted to find **butterbur** and **snowdrops** in profusion. There were also about 50 **siskins** feeding on mature larches. BW.
- 29th March** Heard two **chiffchaffs** at Morton Lochs, my first migrants of the year. I hope the weather for the next few days is not as bad as forecast - snow expected! (From the hide log book I saw that someone else had heard one there the previous week.) AR.
- 1st April** The male and female **blackcaps** that have visited our garden all winter are still coming to feed on a block of lard hung amongst the wild **cherry trees**. BW.
- 3rd April** Four **bullfinches** in the garden pecking the buds on the **plum tree**. BB.
- 7th April** At Moncrieffe Hill near Perth we saw a **comma butterfly** resting on vegetation by the path. BB.
- 10th April** Warm sunny day so released a **peacock butterfly** fluttering in our shed and also released the **small tortoiseshell** from its jar in our porch. DMS.
- 11th April** I had just come in from gardening and looked out of the patio windows to see a **heron** land on the grass nearby. If it was planning to investigate the pond it would have been disappointed as there are no **fish** or **frogs**, but it saw me and did not linger. MP.
- 18th April** A **jay** in the trees at the top of Adelaide Place, Dundee. BW.
- 22nd April** Two **ospreys** seen doing a lot of flying together near Loch Meallbrodden. Unsure whether display or territorial flight. Also saw a **red kite** near Fowlis Wester turning on A85. MG.
- 22nd April** At Montreathmont Forest, Polmood, saw a **goshawk** fly overhead. BW.
- 23rd April** When I got up this morning there was a **heron** in the garden pond eating **frogs**. BB.
- 30th April** My first **swifts** of the year flying high over Balgay Hill in the sunshine after a warm week. (I didn't see any more for two weeks!) AR.
- 5th May** Saw a **hedgehog** in the garden in the late evening; the first one this year. JC.
- 7th May** Dundee Botanic Garden in sunshine gave my first sighting of **orange tip butterfly**, and also **small white** and **peacock**. BW.
- 17th May** A warm sunny walk along North Inch, Perth by the River Tay gave summer visitors a good showing with **whitethroat**, **willow warbler**, **swift**, **sand martin**, **swallow**, and also **blackbird**, **dunnock**, **starling**, and **coal tit** recorded. BW.



- 25th May** On an evening walk, near the railway footbridge at Balmossie, I spotted a **sparrowhawk** being chased by two very vocal **sand martins**. I have seen them mobbed by many other species but this was a first. AR.
- 25th May** I had perfect viewing conditions to learn the difference between **whimbrel**, with their mid-crown pale stripe and pale supercilium, compared to adjacent **curlews** feeding on the shore at Montrose Basin SWT Centre. BW.
- 29th May** I woke at 4.30am to hear my resident **crows**, nesting nearby, making a dreadful fuss. There was a **fox** in the garden and the crows did not approve of it competing for their food. DF.
- 29th May** Walking the path around the east side of Loch of Kinnordy for the first time, I was pleased to view **reed bunting**, **spotted flycatcher**, **whitethroat**, **willow warbler**, **yellowhammer**, **goldfinch** and **house martin**. BW.
- 6th June** A pair of **ospreys** attempted to nest on a **Scots pine** at Balgavies Loch. They were subsequently pushed off by a pair of **greylag geese** which successfully reared chicks on the nest. GM.
- 6th June** A **rook** flew off from near our bird table - a 'first' for our garden in 27 years. DMS.
- 16th June** Walks around Tarfside, Glen Esk gave several delights including six **crossbill** juveniles feeding on **Scots pine** by the river, a pair of **grey wagtails**, **wheatear**, **mistle thrush**, **curlew**, **willow warbler** and **redstart**. BW.
- 21st June** A visit to the Loch Ruthven RSPB Reserve near Inverness was the highlight of my summer when we saw a pair of **Slavonian grebes** in the reed bed close to the hide. The female carried four striped chicks under her wings on her back and was visited regularly by the male bringing food. A pair of **little grebes** also dived constantly and **willow warblers** sang in the birches. BW.
- 24th June** Came home late and caught a glimpse of a **fox** flicking across the garden. JC.
- 30th June** Not far south of Montrose we were surprised to see what could only have been a **polecat** (or **polecat ferret**) run safely across the A92 in front of us. There were too many pale patches on the head for it to have been anything else. Anyone else seen one in Angus? AR.
- 30th June** The dragonfly *Libellula quadrimaculata* (**four-spot chaser**) seen near the Swamp Hide at Loch of Kinnordy and two **ospreys** fishing at the east end of the loch.. GM.
- 2nd July** While golfing at Drumoig, saw a **carriion crow** pecking at wee black things. On looking closer, I realised there were 100 or so tiny wizened **frogs** scattered over the green. DMS. (Possibly **toads**, usually blacker than frogs. Ed.)
- 18th July** A **hummingbird hawkmoth** seen on **valerian** in the garden at 9pm. ME.
- 24th July** Three **peacock butterflies** at the same time in the garden, dotting around a variety of flowers. JC.
- 2nd August** Four **long-tailed tit** juveniles came to our feeders, also two juvenile **coal tits**. BW.
- 3rd August** At the Eden Estuary hide on a falling tide it was good to see some waders still in summer plumage, especially the **knot**, **dunlin** and **black-tailed godwit**. We also had good views of two **ospreys**, **common sandpiper**, **goosander** and the **kingfisher** who works this stretch of the River Eden. BW.
- 5th August** While doing my 'butterfly transect' near Kinshaldy, saw a gathering of about 90 **swallows** which were flying about and then settled in a dead alder tree - possibly ready to migrate already. DMS.
- 13th August** On the circular walk at Laird's Loch found a very tame **common shrew** on a forestry path. It allowed a very close approach, eventually crawling up my trouser leg! After it finally emerged it carried on with its business, apparently unconcerned. GM.
- 27th August** Saw a **comma** butterfly nectaring on **ragwort** near the Ice House, Kinshaldy - my first-ever in Scotland! DMS.
- 30th August** On a glorious sunny day a **comma butterfly** was feeding on the **echinacea** in the garden. ME.
- 4th September** A **small copper butterfly** flitting around the garden this morning. Also, as expected, **small tortoiseshells**, **peacocks** and **red admirals**. BA.
- 8th September** We rarely see one **goldcrest** in the garden but today there were three in the **crab-apple** tree. DMS.



- 15th September** Saw a **fox** in the neighbour's garden, setting off his security light and then trotting calmly into Dawson Park. JC.
- 30th September** On a walk at Balkello Community Woodland, on the only sunny day of the week, we heard a **chiffchaff** singing in the trees. Other, less unexpected, sightings included **roe deer** and **raven**. AR.
- 2nd October** Several **butterflies** sunning themselves on the house wall in the morning. The closest ones were **small tortoiseshells** but the others were too high up to see properly, and I couldn't be sure. JC.
- 10th October** Saw my last garden **peacock** and **red admiral** of the year. Not had large numbers of butterflies this year, the maximum number of any species being three individuals. DMS.
- 14th October** First winter migrants, three **redwings**, in the garden on the **rowan** trees. The high number of **blackbirds** present suggested that many of them were 'incomers' too. MP.
- 24 October:** On the Dronley to Auchterhouse Railway Path the **blackbirds** were busy stripping hawthorn berries, a **jay** overflew the meadow by Dronley Woods and **tree sparrows** (12), **yellowhammer**, **goldfinch** and **chaffinch** were feeding amongst the wild rose thickets beside the track. BW.
- 28th October** 15 **waxwings** in a tree about 100yds from my back door. Then a further two sightings of up to 60 birds. Also five **long-tailed tits** on my small **apple** tree 6ft from the door. First time here for both birds. GM.
- 31st October** A **small tortoiseshell** feeding on **Bowles mauve wallflower** on a lovely sunny day. ME.
- 7th November** Flock of 20 **fieldfares** at Carsegowniemuir Quarry. Three skeins of about 400 **geese** came across, flying high and heading north-west, perhaps towards Montrose Basin. A short while later, a skein of about 200 geese were seen heading in almost a reciprocal path, in the direction of Forfar Loch. Then, after a half hour or so, another big skein, of about 200 - 300 geese, flying low, definitely **pink feet**, headed due west. Where were all these geese going and why so much activity in different directions? JC.
- 15th November** Over 50 **waxwings** and a **fieldfare** were feeding on **Sorbus** berries, and **blackbirds** were stocking up on **holly** berries. BW.
- 16th November** Returning from an Angus and Dundee Bird Club meeting at about 10pm, I saw a **barn owl** on a post, then quartering a field lit by street lamps, beside the Barry bypass. DMS.
- 21st November** 30 **waxwings** in the garden today. BB.
- 22nd November** Fifty or so **waxwings** on a tree by Balgillo Road - possibly there to feed on the row of small **rowans**, laden with berries, across the road. DMS.
- 24th November** A **treecreeper** was feeding on a tree trunk on Dalkeith Road, Dundee. BW.
- 24th November** First snow of the winter fell during the evening - about 1cm. DMS.
- 27th November** A female **blackcap** appeared in the garden, followed the next day by a male. They both stayed for several days. SS.
- 27th November** Over 70 **waxwings** returned to Adelaide Place, Dundee, this year to gorge on **Sorbus** berries. BW.
- 28th November** Snow and hail overnight accompanied by thunder and lightning - MOST unusual in winter time! There was more in the late morning and, apparently, the wind turbines at Michelin were being struck by the lightning (featured on YouTube!). Record numbers of birds in our garden - 20 **chaffinches**, 12 **goldfinches**, three **greenfinches**, two **blackbirds**, two **blue tits**, a **dunnock**, a **robin**, two **wood pigeons** and, unusually for us, a **great-spotted woodpecker**. DMS.
- 30th November** Looked out late and could see a line of footprints from what was, perhaps, a **fox** in the snow across the back garden. JC.
- 1st December** While walking back along the river front from shopping in Monifieth, in the snow, we saw a **crow** chasing a **barn owl**. This was mid-morning so the poor owl was presumably very hungry. AR.
- 2nd December** More footprints across the garden. It had to be a **fox** - toenails were visible in one print - and also the track went more or less straight across the garden and then up and over the fence to next door. The

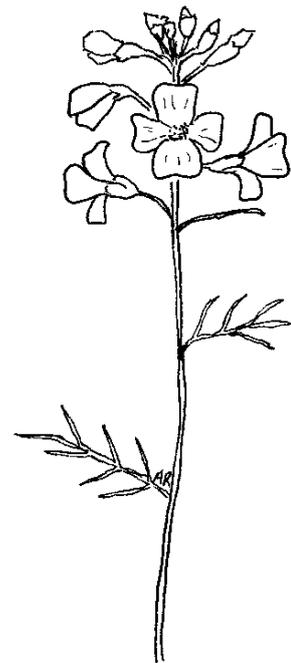


- tracks were not of a **cat** and what **dog** could or would do that? JC.
- 2nd December** A **blue tit** seen clinging to an icicle hanging from our eaves to take melt water from the tip. BW.
- 2nd December** Between the blizzards, a **brambling** appeared with the 'usual' **chaffinches**. Now have at least a foot of snow. DMS.
- 5th December** A **brambling** in the garden, in the snow. BB.
- 5th December** An unusual visitor to the garden, a **woodcock** - desperately looking for suitable food and probing the ground under the trees where there was no snow. DF.
- 6th December** Having seen a single **brambling** in the garden for four days, today there were six! Also, for only the second time in 27 years, **yellowhammers** - a stunningly bright male and two females. DMS.
- 8th December** On the way in to Brian's afternoon lecture, we saw a **treecreeper** in front of the University Tower Building. JA.
- 8th December** A **Siberian nutcracker** appeared in our Tayport garden. Thought it was a young overgrown **starling** at first but the colours were wrong. Inevitably, by the time I had got the camera, for proof, it had vanished. JB.
- 9th December** Two **blackcaps** (male and female) taking lard from feeders in our garden on The Law. BW.
- 9th December** The continuing snowy weather brought two **tree sparrows** and a **fieldfare** to the garden. ME.
- 12th December** A female **brambling** visited our garden for the first time. BW.
- 12th December** During a day of wardening for RSPB at Loch of Kinnordy, I was sorry to see two **mute swans** dead on the ice but fortunate to have close view of five **goosanders** diving/emerging in the small patch of open water near the Swamp Hide. DMS.
- 13th December** Looked out at about 8.30 pm and then again at around 10 pm - and there were **fox** footprints right past the back door where there had been none earlier. I hadn't realised just how often the fox must be doing his rounds! JC.
- 20th December** Somewhat taken aback to see a **sparrowhawk** on top of the snow on my car! It 'glared' around and then flew off. About an hour later it flew through past the bird feeders but I don't think it caught anything. DMS.
- 21st December** A walk in The Law woods, on a bitterly cold day, gave **long-tailed tits**, **bullfinch**, **brambling**, **redpolls** in the birch trees, **goldfinch** feeding on larches and other woodland birds. BW.
- 24th December** Woke very early, at around 4.30 am, on a frosty morning to hear a **robin** singing. Surely a little early for spring! (Especially with all the snow. Ed.) JC.

ENCOUNTERS WITH NATURE

Out of the many encounters with our natural world this year, I thought I would like to share just a few thoughts. On returning from our first break of the year in spring, I was devastated to discover that vandals had set light to and burned an extensive piece of ground in St Vigeans Den, my local "Breathing Space". This is part of Arbroath's Millennium forest, so it is a relatively young, very mixed plantation which has developed really well in the last couple of years. The land affected unfortunately was the main butterfly area, a clearing which grows delights including **ladies' smock** beloved by **orange tips**, **bird's foot trefoil**, **vetches** and **clovers** attracting **common blues**, all three **whites** as well as **ringlets**, **peacocks**, **red admirals**, **painter ladies**, **meadow browns** and **small tortoiseshells**. Numerous **moths**, day flying and nocturnal, are to be found here too. Hopefully 2011 will see my local patch recover from the destruction of habitat, as species numbers were noticeably down this year.

Further along the path between two **hawthorns** was an unidentified and very welcome **orchid** and then a large spread of **creeping thistle**, which I am hopeful will attract the increasing **commas** in this area. I have been lucky enough to see three of these in Angus this year; one at Barry Buddon, one at Crombie Park and a



very co-operative and photogenic one at Reekie Linn car park, Glen Isla. I also took the opportunity recently to check out the butterfly hibernation site at Lunan Bay to see perchance if any **commas** had decided to while away the winter here, but no such luck. Only several dozen **small tortoiseshells** and a **herald moth** were in residence.

Further afield, our second break of the year took us once more to Dorset, where I was able to set up various traps for **moths**. Amongst the many species attracted into the light trap, the rare **dingy mocha** delighted us with her presence. While the red wine and sugar sponge apparently attracted nothing by night (not until 0300hrs at any rate), it was visited daily by a **comma butterfly** and also a **median wasp** (*Dolichovespula media*) - recognised by the darker bars on its body, and by the yellow "7"s on its shoulders. The molasses and beer mixture on a sponge, however, not only attracted three **old ladies** and a **herald moth**, but a **harvestman** and an as yet unidentified **spider**, all imbibing - very intriguing behaviour and most entertaining.

Stevie Smith

PEREGRINE FALCONS AT 'SEABIRD CITY'

Scanning by telescope the vast occupied ledges and crannies of the south cliff at the Fowlsheugh RSPB Reserve south of Stonehaven in late May, I was thrilled to spot a **peregrine falcon** crouched on a grassy ledge. This raptor was sitting, apparently unnoticed, only a few feet from nesting **fulmars** above and below its ledge, and with thousands of **guillemots**, **razorbills** and **kittiwakes** in the near vicinity. Looking across the bay I could clearly see its sharp, yellow hooked bill, yellow-rimmed eyes and the smart, black, moustache-like plumage on its face. Later that morning we returned to have another look and were delighted to discover that this peregrine was the proud parent of a single **chick** that stayed beneath the wings of the parent most of the time. Then the other parent put in a stunning aerial display around the crags causing alarm and distress to **gulls** and **auks** while seeking lunch for his family.



Fowlsheugh is certainly a most stunning reserve at this time year when every available crevice is occupied by nesting birds and the rocks are covered in flowering **thrift** (*Armeria maritima*), **sea campion** (*Silene maritima*) and white daisy-like **sea mayweed** (*Tripleurospermum maritima*). The vertical cliffs, cut from eroded sedimentary rocks containing large pebbles and boulders, make perfect nest sites for **guillemot**, **razorbill** and **kittiwakes**, whereas the **fulmars** select the grassy tussocks high on the cliff (often just a few feet below the footpath) and **herring gulls** like the more gentle slopes

of lower rocks above the waves. Only one **puffin** poked his head out of a burrow during that visit. On the half-submerged rocks offshore below the cliffs a dozen black, glossy **shags** were engaged in mating behaviour with their handsome crests displayed.

Brian Williamson

BOB'S BIRD YEAR HIGHLIGHTS

January Forfar Loch excelled with a **black-throated diver** and a female **smew** between 18th and 23rd.

February A **white-tailed sea eagle** briefly visited the Lurgies, Montrose Basin and a **bittern** showed well at Loch of Kinnordy.

March The first **osprey** of the year arrived back at Loch of the Lowes on 23rd, and an early **wheatear** was found on Arbroath Cliffs on 22nd.

April Loch of Balgavies was graced with a visit from a **great white egret** on 7th. Not to be outdone Loch of Kinnordy held four **common cranes** on 14th.

May A rare spring passage migrant the **red-necked phalarope** stopped off at Auchindorie Pool, near Kirriemuir, on 15th heading north.

June The tern raft at Montrose Basin held 181 **common tern** on 20th.

July A surprise **little egret** was at Montrose Basin on 27th and at Kinnordy **gadwall** produced three broods.

August A rare passage **roseate tern** dropped by Lunan Bay and three **dotterel** were found on an Angus Munro. Barry Buddon Open day excelled with a day flying **long-eared owl** and a **butterfly**, rare but increasing north of the border, the **comma**, was also recorded on the day.

September A **honey buzzard**, a rare passage raptor, passed through Montrose Basin on 1st heading south. The first **geese** of the autumn/winter season arrived on Sept. 14th and numbers built up to 30,000 by the 28th. A rare passage corncrake was seen at Cliffturn Gully, Arbroath on 28th.

October On 1st a new all-time record count of 60,060 **pink-footed geese** were recorded on Montrose Basin and, nearby at Rossie, a **Ross's goose**, a first for Angus, was discovered on 4th in company with **pinkfeet**. A **red-backed shrike** was at Castlesea Bay, Auchmithie on 1st with a **great grey shrike** at Montreathmont Forest on 6th.

November An unprecedented record number of 1516 **waxwings** (an invasion year) were recorded in the county from 20 sites between 2nd, and 24th.

December At Elliot reed bed area near Arbroath an amazing sight of two day-flying **barn owls** were recorded on 3rd, one was seen to be carrying in its talons an unfortunate **stonechat**. Cold extreme weather brought in to the county an amazing total of 45 **woodcock** from various sites. Another outstanding year

Bob McCurley

MORTON LOCHS AND TENTSMUIR 2010

It has been a really great year for observations on the reserves with some wonderful records of brilliant species, some of which look ordinary but may be firsts for the area.

At Tentsmuir Point, and in the forest, three **white-tailed sea eagles** were observed during part of February into March and one stayed around for almost two months. Two **grey partridge** were observed on the Great Slack on 17th March, and there were regular, almost daily, observations of **grey seals** but fewer of **common seals** in February and March. Only one **common seal pup** was recorded this year.

At Morton Lochs 17 **greylag geese** were present for some time in March. **Kingfishers** have been seen throughout the year. **Badgers** have been observed around the Morton area and the clan is moving out from their huge sett to other sites around Morton including the south loch margins. **Otters** are seen on a regular basis, again throughout the year, and we think that there were three young again, supported by visitor observations in the log book. On 28th November, downstream at Garpit Farm, the lady who was tending her horse had a young **otter pup** follow her for an hour, squealing all the while.



In the autumn 2,500 **pinkfoot geese** were seen on Tentsmuir Point in early November for about a week. Both a **hobby** and a **marsh harrier** put in single appearances at Morton in October and there was a count of 330 **teal** on the Lochs on 24th October, with 13 **crossbills** also recorded on that day. Come and visit sometime, there is always something exciting to see.

Tom Cunningham

Note: We plan to have an evening outing to Morton Lochs on 21st June 2011. See syllabus for details. Ed.

ADDERS AND OSPREYS AT LOCH LEE

The walk along Loch Lee to the Shank of Inchgrundle in Glen Esk on a warm, sunny day in July turned rather exciting when my son David jumped in surprise at the sight of an **adder** beating a quick retreat under large stones lining the path to Inchgrundle Farm at the north end of the loch. The snake's head peeped out from under the stones after a few minutes. Then quiet walking along the path revealed that it was an adders' tryst site for we found two pairs of adults entwined a few yards along the track in the grass. Their black triangular markings along the back were splendid. A few yards away there were two **toads** hiding in the grass by the track.

This north end of the loch is colonised by **reeds** broken by several watercourses. We watched **sand martins** and **swallows** darting above the water, families of **wheatears** flying from fence posts to the meadows, and an **osprey** circling in the sky at the south end of the loch. A climb through the **larches** to the higher ground of the Shank of Inchgrundle gave fine views of a small flock of **mistle thrushes** in the **heather** and a herd of about forty **red deer** on the hill.

The loch-side track provided plenty of interest too, with **wild thyme**, **wood sage**, **self heal**, **yellow saxifrage** and **bog asphodel**, **rock rose**, **water crowfoot** and **bird's foot trefoil**. **Common blue**, **small tortoiseshell**, **small heath** and **meadow brown butterflies** were flitting by. Back amongst the **birches** and **grasses** near Invermark Castle we found **chimney sweeper moths**, juvenile **pied wagtails** and a **spotted flycatcher**.

Brian Williamson

BAD NEWS FOR THE DIGHTY

On the 29th & 30th May 2010 a 'Bioblitz' Day was held at Trottick Ponds Nature Reserve to record the variety of species of all kinds in the area.



As it turned out the Biodiversity of the locality was absolutely amazing and one of the early finds was this claw from an **American signal crayfish** in the nearby Dighty Burn. There was a lot of speculation as to where this had come from but the general consensus was that it was not good news. There was, however, no indication that there was a population living in the Dighty.

On 23rd September while at Trottick in my official capacity as senior Community Safety Warden, I was stopped by two brothers. They had noticed the camera and asked if I photographed the wildlife. They then took this wee monster out of a bag, saying "We've been fishing these out of here for a year, maybe three or four a week, they're pretty good on the barbie." I later learned that this was an average size for the ones they catch (about 3-4 inches), but that they had seen bigger, which had scuttled away before they caught them. Looking on the internet I note that **signal crayfish** can grow to 6-7 inches. So there we have irrefutable evidence of a colony of this invasive species living on our doorstep. We now need to see to what extent they have colonised the burn and that, I believe, can only be done by trapping.



Art Sangster
Photos by Art Sangster

THE SHORT-WINGED CONEHEAD

(*Conocephalus dorsalis*)

8th August

Davie Stein and I headed for Earlsall Muir on one of our regular Sunday forays, to see what might turn up. Previous visits had revealed a goodly variety of wildlife including **seals** on the Eden Estuary, a good selection of **butterflies**, a fair number of **birds** both on and offshore and various **flowers** too numerous to mention. A good variety of **seashells** are also to be found on the sandbars at the appropriate state of the tide. However, what impressed us was the wealth of **insect** life, especially on the established duneland. The weather was mainly fine and we recorded many species. After a good break for a late lunch we set off for home having enjoyed a fine day.

But the day was not yet over. As we approached the end of the reserve area I noticed what I took to be a rather bright green **grasshopper**. It was on the ground and, on closer inspection (it made no attempt to fly off), it became even more interesting. The most obvious feature was the very long antennae, reaching back as long as the body (grasshopper antennae are shorter and thicker). At this point Davie obliged by lying down and took a nice shot with his compact digital camera (saving my knee joints into the bargain!). We were both sure we had something unusual and, on getting home, we checked the relevant books to discover it was a **bush cricket**. In none of the books could we see reference to bush crickets in Scotland.

It then seemed natural to contact someone more knowledgeable than ourselves. Our Hon President, Gordon Corbet seemed an obvious choice with his wide knowledge of invertebrates on the Fife coast. Gordon was most helpful and confirmed that there were no records of crickets in his area. He took it further and on a trip to Edinburgh confirmed from the authorities there that they had no records for Scotland up to 2006. A further correspondence from Mr Peter Sutton, the recorder for the group, said that there were no records of our species, *Conocephalus dorsalis*, the **short-winged conehead**, north of a line from the Humber to Morecambe Bay.

Gordon Maxwell

Note: An article was published in British Wildlife Magazine, dated October 2010, which mentioned Gordon, Davie and the Nats - all good publicity for them and for us. Davie's colour photo appears on page 21. Ed.

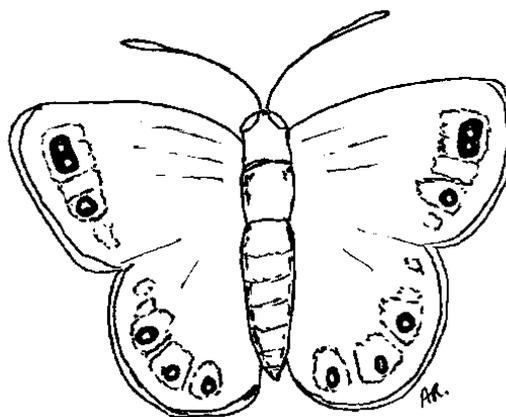
SCOTCH ARGUS

13th August

This year we have spent most of our summer walking from our caravan which is based in Killin. We climbed Beinn Udlaidh above Glen Orchy; and, as we started our hike through 1.5km. of open woodland before the ascent, I noticed rather a lot of **Scotch argus butterflies**, so I decided to count them. The open woods were carpeted in lush **grasses**, which I believe the caterpillar feeds on, **purple moorgrass** in particular. There were also rather a lot of the butterflies flitting alongside the burn, which we had to skirt for a short distance. My total before I started climbing was an impressive 169!

This particular mountain is famous for its line of **quartz** rock which is visible from the main road (A82) above Loch Tulla. We had a perfect day despite the **midges**.

Joy Cammack



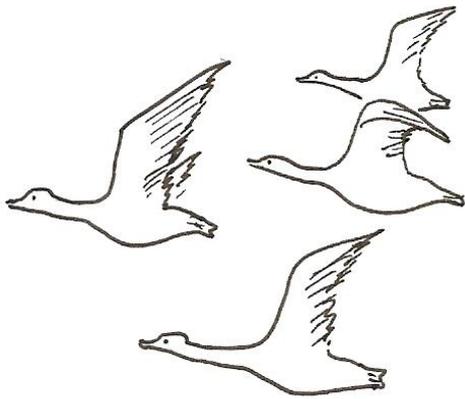
WILDLIFE SPECTACULAR

3rd October

The Courier had printed a report from the SWT ranger of huge numbers of geese flying in and out of Montrose Basin, a spectacle that was just too good to miss.

We arrived at about 5 pm, just as the light was starting to fade and went down to the water's edge near the Visitors' Centre to have a good look around. There were small flocks of **waders** poking around on the shoreline but no **geese** could be seen or heard. However, it was a calm evening, with only a few light breezes to ruffle the water's surface and scattered clouds against the grey-blue sky and we remained hopeful of good sightings of the geese.

After a short stay we moved round to the north side of the basin, at Happyhillock, beside the old church. Small flocks of **ducks** on the water dotted the dark water, mostly **mallards** but also some **wigeon** and a few **teal**, although they were a bit too far away to be certain. And then, coming in from the west, arrowed the first few large skeins of geese. We watched, engrossed, while they wiffled down towards the water and settled directly in front of us, although well out over the basin, calling all the while.



Then Dorothy muttered "Here's another large skein - and another". "And there are more over in the distance!" echoed Margaret. Skein after skein drew in from the north and north-west, with four or five in sight at any one time for over half an hour. It was amazing and spectacular. We could hear them coming from about a mile or so away, with faint calls in the distance gradually getting louder as they started to circle round to settle on the water. So far as we could hear and see in the half light, they were all **pink feet** and they settled into three large rafts of closely-packed birds. Once on the water, the geese gradually calmed down and quietened.

However, some temporary excitement disturbed the rafts and, for a short time, the numbers rising into the air were enough to block the view of latticework of the railway bridge in the distance. The air was literally black with flying, wheeling birds and the noise was tremendous, with a tremendous cacophony of calls. Seeing the numbers involved, it wasn't difficult to believe the reports of 60,000 or even more birds.

We moved round to the 'shore' just under the railway bridge over the narrow channel at Ferryden to obtain closer views but they weren't any clearer because the light was fading dramatically. Reluctantly we decided it was time for a hot and very welcome fish supper. It had been a tremendous and wonderful evening, a sight to be recommended to everyone for next year - a real wild goose chase to indulge in!

Jim Cook

A RUST FUNGUS ON PURGING FLAX AN INTERESTING EVOLUTIONARY STORY

During the visit to St. Cyrus in summer 2009, Pat Gaff pointed out a clump of **purging flax** (*Linum catharticum*). Then I noticed that one plant in the clump was affected by a **rust** and remembered that this was the fungus that c.50 years ago opened a very important chapter in plant disease research and epidemiology, namely the work of Flor (1956) who formulated his concept of a "gene-for-gene" relationship between host and pathogen that drives the evolution of new races of the fungus that overcome disease resistance genes evolved by the host plant - biological warfare in action. By the 1950s Flor had identified 179 races of this rust on **cultivated flax**, mostly in N. America. This theory has been strongly validated over the years and now is understood to function in most host-parasite systems.

The rust on **purging flax** is called *Melampsora lini* and it produces orange pustules (**uredinia**) containing **urediniospores** on the stems of the plant that later become reddish brown then black and shining in autumn as the **telia**, containing **teliospores**, develop. The **cultivated flax**

(*Linum usitatissimum*), or other species in the plant genus, can be infected by spores from purging flax. There are even different 'races' of the fungus on different hosts.

Rusts constantly adapt to new rust-resistant plant varieties by evolving into new races or strains. Rusts do this by changing their 'avirulence (Avr) genes' to evade the plant's defences. The avirulence gene effectively labels the rust as an intruder so that the plant can turn on its rust resistance defence mechanisms to prevent the rust infection. With the recent discovery of the structure of the avirulence gene in flax rust, the CSIRO Plant Industry team lead by Dr Peter Dodds in Australia now hopes to determine what else the gene does and how the plant recognises it so they can breed more durable plant resistance to rust diseases. Already they have discovered that the Avr gene encodes a small protein that is secreted into the plant cell.

The fascinating question in the evolution of rusts is 'How did a parasitic fungus with five spore stages arise and affect so many plant families?' Leppik (1953) introduced the idea of a "hologenetic ladder" to explain how rusts could have evolved with host plant groups by shifting their spore states to newly emerged, ecologically prosperous groups of plants. He used the genus *Melampsora* as an example: early forms, probably with a single spore type, affected **ferns**, and then later types had spore stages on **ferns** and **conifers**. Then *Melampsora* species evolved that attacked **larches** and **willows** and/or **poplars**. Later another group of rusts in this genus moved new spore stages to span both willows and poplars with advanced hosts like **orchids**, **alliums** and **saxifrages**. There are some highly evolved rusts that now produce most spore types only on the saxifrages, such as *M. vernalis* that infects *Saxifraga granulata*.

For more information see "The Rust Fungi" (1982) by Eds K.J. Scott & A.K. Chakravorty, Academic Press, and "*Melampsora lini*" (1965) by G.F. Laundon & J. M. Waterston C.M.I. Descriptions of Pathogenic Fungi and bacteria No. 51, Commonwealth Agricultural Bureaux.

Brian Williamson

CANADA GEESE

24th October

A visit to one of best SWT reserves in Angus, Lintrathen Loch, showed that local populations of **geese** and **ducks** were thriving. The new bird hide allowed good views of large numbers of **mallard**, **wigeon**, and **tufted ducks** with some **pochards** and few **teal** on the water. One or two **little grebe** and numbers of **coot** and **moorhen** could be seen dotted around the fringes of the loch and its reed beds, but the highlight was the geese. As dusk came on, large flights of **geese** came over the distant hills and planed in to the far end of the loch. Although they were a little difficult to see, it was estimated that there were between 400 to 500 birds and they were all **Canada geese**. The conditions here obviously suit them.



Jim Cook

SNOW SURPRISES

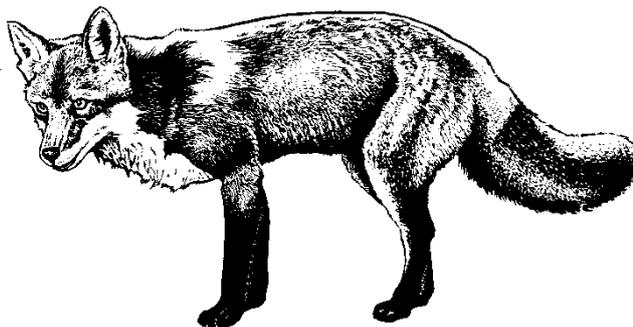
It started to snow on 24th November, a Wednesday, and then after a couple of days of respite got going again at the weekend. We cleared our paths on Sunday and hoped that would be the end of it. Not so. Every day for the next week we had more snowfall, often several significant showers in a day and I cleared and re-cleared the paths and put out plenty of food and water for the birds, daily. Transport ground to a halt, particularly the trains, though the trusty number 73 bus from Arbroath to Ninewells (via Carnoustie and Monifieth) kept running throughout, even though the timetable went out of the window.

All week my bird table was busy. Many more **chaffinches** than usual appeared. The highest count was 20 at one time, but I'm sure that was an underestimate. At the beginning of the week all my resident birds seemed to be feeding together, though mostly in similar numbers to the usual. I

was quite disappointed that no rarities put in an appearance. On Saturday 4th December that changed. A male **brambling** was seen feeding amongst the chaffinches - always a good bird to record. Viewed from above, out of the window, the black stripes on its head came as a surprise to us since we see bramblings so infrequently and rarely at close quarters.

On Sunday morning I opened the curtains to four **long-tailed tits** on the peanuts - they hadn't visited for a couple of months and always make me smile. Though not a particularly rare bird everyone seems more than pleased to see and record these charming acrobats - perhaps it is the 'cute' factor which makes them noteworthy. The day got better when I got a glimpse of another **brambling**, probably a female this time. At lunch-time Colin looked out to see what was about and suddenly exclaimed "There's a **woodcock** under the hedge!" It shyly vanished behind a tree before I could see it but re-emerged and worked along under the hedge in plain view, its camouflage not designed for snow. We saw it again, briefly, as darkness fell, and again in the morning when it was foraging near the back door but flew off, startled.

Yet another fall of snow on Monday morning brought another garden first, **fox** footprints. They were following the same route as our neighbour's **cat**. I just wondered whether this was chance or a very hungry fox! There are known to be foxes locally around the Dighty but, even in previous snow I have never seen evidence of them visiting our garden. The most interesting thing about fox prints, if recent and in 'good' snow, is how much hair there is on the underside of their feet.



The most noticeable aspect of the bad weather was the number of bird species visiting the garden. In a normal week at this time of year I would expect around 15 different species in a week. In the three weeks when the snow was at its worst the poor, desperate birds all seemed to be in my garden with more than 20 species each of these weeks. The first **yellowhammer** for a number of years was the most unusual in addition to those mentioned above.

Anne Reid

Note: There were many more unusual sightings due to the snow. Some of these are to be found in the Interesting Sightings section on pages 28 - 33. Ed.

GARDEN BLACKCAPS

Bob McCurley is looking at records of winter blackcaps in Tayside and would be very happy to hear of any which visit your garden. He has received nearly 50 sightings for the winter of 2010-11 but would like as many as possible. Please send any records to Bob McCurley lunanbay2@btinternet.com Thank you.

Anne Reid

BIRD ATLAS 2007-11 (BTO, SOC, BWI)

The national Bird Atlas 2007-11 is about to enter its final breeding season of recording in 2011. There are still gaps in the records of breeding birds in our area, even of quite common species. If you see any evidence that a bird is breeding, either in your garden or in the wider countryside, please write it down. We need the species, date, place (preferably grid reference) and what the bird was doing, e.g. nest building, feeding young, sounding agitated near a probable nest site. Even birds singing territorially can be a useful record, particularly for the less common species. Any records or queries to myself or to Anne Reid. Thank you.

Bruce Lynch
b_lynch1@sky.com