

President's Letter

Peter Slater

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Both individual County Recorders and the OWIARC hold details of recording schemes for a large assortment of flora and fauna. Many of the organisers welcome and help beginners, so why not 'take up' a species or a group to study and record?

One of the most marvellous experiences in nature must be that of a large seabird colony at the height of summer. I say experiences, rather than sights, as the sounds and smells add a lot to the impact. In Orkney, we have three of Scotland's 16 biggest colonies: on Copinsay, at the Noup on Westray and, most accessibly for most of us, on Marwick Head. I have to admit, however, that I have not been up Marwick Head for a year or two, largely because I have such wonderful memories of watching the birds there, largely guillemots and kittiwakes, that I do not want to be disappointed.

Cliff nesting is, in more than one way, a precarious business, and the way in which kittiwakes in particular cope with it is a classic case of adaptation. Unlike most other gulls they build nests, and these have deep cups. Their legs are short, so their centre of gravity is low, and they have strong sharp claws. All these features help them to cling on in what is a very dangerous place. But they don't solve all the problems, and a summer storm can wreak havoc. I remember as a boy in the 50s finding hundreds of young kittiwake corpses on the beach at Birsay and thinking some disaster must have befallen them. But it was probably just bad luck. As they often produce two chicks, the population could double in a year, and it will be stable as long as each pair produces on average two surviving chicks over the course of their long breeding lives. So the occasional disaster is no great problem. Indeed, as adults can live a long time, the number of breeding pairs can remain much the same even if they fail for several years in a row.

That is the good news, but what makes me reluctant to peer over the Marwick cliffs is the bad. For something much more dramatic has been happening to seabird numbers, and those of the kittiwake in particular, in recent years. The closest key seabird monitoring site to us is on Fair Isle, and here 19,340 kittiwake nests were counted in 1988; last year only 963 were found. The decline has been progressive and accelerating over this period, so we are not talking about a few bad years. While the causes are clearly complex, expert opinion is that food shortages as a result of rising sea temperatures are likely to be the prime factor.

Perhaps we should think of the kittiwake as the miner's canary of our age and heed its warning. Few now deny the reality of climate change and the danger that it poses. It is good that most of our national politicians are united in their determination to fight it, though it really does demand urgent international agreement and action, and this still proves elusive. But what of the local level? The recent opposition of some Councillors and others to extended marine protection areas does not bode well: while eagerly grasping the economic opportunities that renewable technology allows they seem reluctant to face up to the problems that have led these developments to be so necessary. Those of us concerned with the natural environment have to persist in making the case that long term heritage must far outweigh short-term economic advantage. In this we in the Field Club have an important role to play, for only by detailed knowledge of that heritage are we in a position to see how best to preserve it. The kittiwakes may be a particularly dramatic example, but only by keeping a close eye on as much of the natural world as we can will we be alert to changes that occur and what can be done about them.

An Eventful Year

Anne Gascoigne

It never ceases to amaze me what spectrum of interests and expertise we have within the Orkney Field Club. This finds outlet in the range of events which we host during the year; no mean achievement when you consider our relatively small membership, everyone's work and family commitments and the replete Orkney calendar into which we have to fit all this fun.

The programme is co-ordinated by a 'Walks and Talks' sub-committee and suggestions for events are appreciated, and offers (or contacts) for prospective speakers at winter Club nights especially welcome. We publicise events in *The Orcadian*, via BBC Radio Orkney, in our Newsletter, on our web-site and across social media platforms. All are open to everyone: members and non-members, Orkney residents and visitors from the Rest of the World.

Outdoor events reflect Orkney's natural calendar – bird migrations, the flowering of plants - and maximise available daylight. Summer events often attract visitors who would like to find out a bit more about Orkney's wildlife, and it is refreshing for local folk to meet up with people who are exploring our patch for the first time. It reminds us how blasé we can be about our 'everyday' species which, to many people, are rarities or lifetime firsts!

This résumé of the Orkney Field Club programme gives an insight into what we got up to in 2014. I have chosen mainly to use the common names for species found, since more detail will be found in the reports for individual taxonomic groups.

As always, it was difficult to predict a peaceable day for the New Year Ramble, so when we met in Holm on 2nd January - and immediately donned wet gear – the general feeling was perhaps we had chosen the wrong date? However, by the time we had walked half a mile the rain ceased, and for the rest of the day the only things we soaked up were slanting rays of sunshine and dramatic coastal views from Rose Ness. On the way home some of us made time to explore storm damage done to the road at Graemeshall and for a bit of waterfowl-watching over the adjacent Loch.

February can often be a dreich, downcast month, but for the last few years has been brightened by holding a 'Non-Christmas Dinner'. December offers too many opportunities to feast and socialise, so when folk are feeling a bit down (and the New Year diet has been abandoned!) a good meal and discussion can do wonders to raise members' spirits. After dinner, we made ourselves cosy and chatted in the Lynnfield's lounge until several folk received 'aurora alerts' on their mobile phones. And Wow! On the way home, I for one was treated to a lovely display of the Merry Dancers.

At the end of February, our Club Night talk was by John Crossley; who took us on an illustrated wander through Orkney's varied plant habitats. We started down along the Sanday shoreline and slowly ascended to Hoy's windswept mountain tops. For such a small geographic area, Orkney has a diverse environment, enabling the islands to support in excess of 900 plant species. This puts into perspective the scale of the task John has in updating the *County Flora* list.

The botanical theme continued for our March evening talk, presented by now non Orkney-based Eric Meek. The Botanical Society of the British Isles (BSBI) have been working to produce a new *UK Flora Atlas* and Eric was involved in seeking out and re-finding species records in some pretty inaccessible parts of the Highlands. However the weather was magnanimous as Eric's 'treasure hunt' took him through Speyside, to the Cairngorm plateau and the Morvern peninsula and we viewed exquisite slides of rarities including the One-flowered Wintergreen known as St. Olaf's Candlestick – very apt in view of Kirkwall's close connections with this Norwegian saint.

Orkney Recorders 2015

(Please see second half of table for contact information)

County Recorders can arrange species identification, either through their own knowledge or by access to the expertise of others; they feed information into local and national recording schemes; and they maintain Definitive Lists. A number of the latter are now available on the Field Club's website, <http://www.orkneycommunities.co.uk/FIELDCLUB/index.asp>. As the Reports in the Bulletin demonstrate, appropriate records of sightings are always welcome.

Algae – marine (seaweeds)	Prof. Martin Wilkinson
Algae – freshwater	Eileen Summers
Amphibians & reptiles	Chris Booth
Bats	Tim Dean
Beetles	Brian Ribbands
Birds	Jim Williams
Bumblebees, solitary bees, wasps & ants	John Crossley
Butterflies & moths	Sydney Gauld
Caddis flies (Trichoptera), mayflies (Ephemeroptera) & stoneflies (Plecoptera)	Ross Andrew
Centipedes & millipedes	Dave Musson
Cetaceans (whales, porpoise & dolphins)	Chris Booth
Cnidaria (sea anemones, jellyfish, hydroids, comb jellies and siphonophores)	Penny Martin
Crustacea (marine)	Anne Bignall
Dragonflies & damselflies	Dick Matson
Earthworms, leeches etc	VACANT
Echinodermata (sea urchins, starfish, etc)	VACANT
Fish	Chris Booth
Fungi (including slime moulds)	Julian Branscombe
Grasshoppers	Dick Matson
Isopods (Woodlice & relatives)	Dave Musson
Lichens	Roger Davies
Mammals (excepting bats & cetaceans)	Brian Ribbands
Molluscs (marine – sea slugs, cephalopods, shells etc)	Anne Bignall
Molluscs (terrestrial and freshwater – slugs and snails)	Dave Musson
Mosses, liverworts & hornworts	VACANT
Sawflies	Jenni Stockan
Spiders, pseudoscorpions & harvestmen	Edward Milner
Stoneworts	Effy Everiss
True bugs (Hemiptera)	Peter Kirby
True flies (Diptera): hoverflies (Syrphidae), parasitic flies (Tachinidae), flesh flies (Sarcophagidae) and blowflies (Calliphoridae)	Ross Andrew
Vascular plants	John Crossley

To assist with species identification the OWIARC holds a library of reference books and equipment including microscopes.

Strandings:

- 15th September One, which had been dead sometime, the Outer Holms of Ire, Sanday, length 2.4 metres
- 23rd October One, Rapness Westray, not fresh, length 3.3 metres

Unidentified cetaceans

A number of sightings were reported where identification could not be made with absolute certainty:

- From Billia Croo - Four on 23rd January, one on 4th February, four on 1st March, 3 on 28th April. In May, eight on 8th and one on 27th. Singles on 30th June and 16th July. Eight on 7th August and three on 27th. A single on 8th September, five on 3rd November and singles on 3rd and 24th December
- 5th July Four dolphin sp. Bur Wick, South Ronaldsay
- 18th August Four probable White-sided dolphins, North Ronaldsay
- 3rd September One whale sp. North Ronaldsay
- 3rd November One possible Humpback whale near No 1 single point mooring, Flotta.

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March also brought the Orkney Field Club AGM (although now the Club has been registered as a SCIO and our accounting year runs to September, future AGM's will move to autumn). Club business was kept to a minimum, and with members bringing food to share, the evening was really more of a social event. Anne Gascoigne devised a fiendish quiz with rounds of questions about Club history and Latin names for common species, which caused quite a bit of rivalry – and hilarity.

Our final Club Night for the 2013-14 season was a treat for the ears; with Club President Prof. Peter Slater sharing some recordings of birdsong. The St. Magnus Centre was soon ringing with the calls of Central American wrens, and Peter gave his captivated audience an insight into how birds vocalise their everyday domestic concerns – be it claims to territory or pillow-talk with their mate.

Outdoor activity for the early part of the year tends to be minimal. Joint events (with RSPB Local Members' Group) included the annual "Bird Race", and a visit to the Cottascarth reserve to watch Hen Harriers displaying or "sky dancing". With co-ordination by Outdoor Orkney, Orkney Field Club gets involved in the annual county-wide "Bag the Bruck", again concentrating our efforts on the West Mainland shore at Marwick. The amount of marine litter collected every year is astounding (and exasperating).

May brought the week-long Orkney Nature Festival, and an opportunity to collaborate with other organisations. Building on the successes of the inaugural festival in 2013, this year activities ranged from an exploration of urban biodiversity around Stromness to boat trips to small islands like Switha and Auskerry. We saw nature through the lens of a Victorian naturalist at Hobbister, got an insight into farmland wildlife, explored the wildflowers, birdlife and archaeology of Rousay and were welcomed to the monastic island of Papa Stronsay.

Orkney Field Club were hosts for a whole day of festival events around Yesnaby. Jenny Taylor led a linear walk from Black Craig to Yesnaby, along which the wonders of maritime heath including *Primula scotica* colonies and the nationally-rare *Chrysolina intermedia* beetle were pointed out. In the afternoon, participants had the chance to look at the habitat in more detail, with specialist guidance covering invertebrates, plants and birds. Dr John Flett Brown took the lead to interpret Yesnaby's unique geology, and there was plenty of interchange between all interest groups. Bookings for this event exceeded expectation (and were efficiently handled through the VisitOrkney system). This was a good showcase for Orkney Field Club, and attracted folk who had never attended one of our meetings before.

Lengthening days enabled us to hold some evening outdoor events. May, June and July are a wonderful time to familiarise ourselves with wildflowers, and so two memorable walks took members and guests on short rambles in easily-accessible locations. An area of unimproved grassland in Finstown was particularly colourful and outstanding with Orchid species, Common Twayblade and Moonwort. Our next visit was to Russadale, Orphir, which produced some 54 species of flowering plants, good views of a hunting Short-eared Owl and a wide range of invertebrates (beetles, hoverflies and ants). Both evenings offered a soft light ideal for close-up photography; and were too early in the season to be bothered by midgies.

We also had a full-day botanical expedition to Rousay to survey and rediscover some rarities around the Frotoft area. We ascended a beautiful green path above Yarso, rich in Stone Bramble, Foxgloves and ferns and observed a recently-fledged Stonechat brood. Our route took us beneath crags inhabited by nesting Fulmars, from which we kept a wary - and clean - distance. We enjoyed lunch-with-a-view and reached Blotchnie Field just before the weather closed in. Our

descent back to Trumland was fog-bound! Time for a cuppa and cake at Rousay Craft Hub before boarding the ferry home.

On another bright, sunny day we enjoyed a linear walk from Burwick to Sandwick (South Ronaldsay). Views across Scapa Flow and beyond to Sutherland's mountains were spectacular, and sun-block was needed during our clifftop lunch stop. This less-explored stretch of coastline is a stronghold of Sheep's-bit *Jasione montana* and we seemed to have chosen just the right time, with a profusion of beautiful jewel-blue plants in flower. En route, we met a couple of walkers from the South Parish who told us the history of nearby boat nousts used by Swona-folk when they came across to attend the Kirk; in turn we gave them a close-up view of a Garden Tiger moth caterpillar. A good example of sharing knowledge.



Photo: Anne Gascoigne

An RSPB joint event headed to Hoy in search of breeding Coal Tits – but also had time to look for dragon- and damselflies. 2014 seemed to be an exceptional year for *Odonata* species; the calm sunny weather proving enjoyable for humans too. However, wet and windy conditions forced the postponement of August's Moth Day until a later weekend. Traps were then set the previous night so that species could be identified the following day. This event always gives people a chance to get hands-on experience, and is ideal for families, maybe sparking an interest which will stay with children into their adult lives.

We had the company of a particularly knowledgeable young moth expert on our annual Berriedale (Hoy) picnic in September. We hadn't been long on the Rackwick path before we encountered a feisty Fox moth caterpillar and later in the day Brian Ribbands discovered a cluster of Vapourer moth eggs with the female's empty cocoon attached.

This was by far the wettest underfoot that anyone could ever remember, with the main track being very muddy and all surrounding ground waterlogged. Rackwick Burn itself was a raging torrent, making crossing a memorable challenge (even for inveterate wellie-wearers!) and preventing us from following the too-slippery route up to the waterfall. However, after lunch, we split into

Short-beaked Common Dolphin *Delphinus delphis* Uncommon

Four were seen west of North Hill, Papa Westray on 5th April. A school of 30 was in Warness Sound, Eday on 8th May and six were off Billia Croo, Stromness on 28th July

Strandings:

- 10th January One came ashore in Backaskail Bay Sanday and was refloated.. It was 1.5 metres in length.
- 4th March A very decayed specimen at Sower, Orphir
- 20th October One live stranded at Coplands Dock , Stromness and was refloated
- 29th October A female, freshly dead at Scapa, length 1.8 metres
- 12th December One freshly dead at Noust of Netherton, Stromness

Atlantic White-sided Dolphin *Lagenorhynchus acutus* Uncommon

In August five were off Billia Croo, Stromness on 8th and four were in Warness Sound, Eday on 12th. A school of 35 was seen off Billia Croo on 15th September

White-beaked Dolphin *Lagenorhynchus albirostris* Formerly common, now uncommon

No sightings this year.

Strandings :

- 27th March Three in an advanced state of decomposition Bay of Holland, Stronsay
- 12th December One, which had been dead a few days, at Skail, Sandwick. Length 1.42 metres

Killer Whale *Orcinus orca* Common April to July, uncommon at other times

The first report was of 3 east of Mull Head, Papa Westray on 16th April. In May three were off Bur Wick, South Ronaldsay on 9th, two off North Ronaldsay on 14th when there were five off Billia Croo with three there on 21st. A pod was seen close to Bur Wick on 24th, seven were off Marwick Head on 25th and four off Ness point, Stromness on 31st. June sightings were six off Billia Croo on 3rd, a male in Papay Sound on 20th and three including a juvenile in Watersound St Margaret's Hope on 28th. Two, including an adult male were off the Brough of Birsay on 9th July and five in Newark Bay Sanday on 27th. The only August sighting was of eight off Billia Croo on 26th. Then on 19th November, four, two of which were adult males, were seen crossing Scapa Flow and on 21st December a pod, including an adult male, was observed off Sandside Bay, Deerness.

Long-finned Pilot Whale *Globicephala melas* Formerly common, now uncommon

A herd of 27 was seen off Billia Croo, Stromness on 16th June and a single whale was off Harrabrough Head, South Ronaldsay on 7th July.

Risso's Dolphin *Grampus griseus* Common

Recorded throughout the year.

Eight were seen off Billia Croo on 30th January with four noted there on 14th February. Four were seen from this site on 30th April, one on 13th May and two on 26th June. On 30th June five were observed off Fowl Craig Papa Westray moving towards Mull Head. Then in July three were seen North east of Mull Head ,Papa Westray on 12th and four west of Mull Head on 22nd. The only August sighting was of four in Warness Sound, Eday on 8th. There were four off Billia Croo on 3rd September and eight on 10th, two were seen off North Ronaldsay on 22nd and seven on 23rd. Seven were observed off Billia Croo on 10th November, five on 26th December and one on 27th December.



Humpback Whale, Papa Westray (Solan Dodman)

Humpback Whale *Megaptera novaeangliae* Rare

Two were seen west of North Hill, Papa Westray on 11th November and two, presumably the same whales, were spotted east of Mull Head, Papa Westray on 18th November. This species was first recorded in Orkney waters in February 2001 and has occurred annually since 2003.

Minke Whale *Balaenoptera acutorostrata* Common

The first report was of one off Billia Croo, Stromness on 29th March followed by two seen from this site on 16th April. No more sightings until June when singles were seen from the Brough of Birsay on 8th and Billia Croo on 20th. In July singles were observed from Billia Croo on 1st and 7th with two present on 16th. One was off Marwick Head on 20th and one off Billia Croo on 28th. Then in September singles were seen off Yesnaby on 4th, Holm of Aikerness, Papa Westray on 11th, Billia Croo on 13th, Warness Sound, Eday on 16th, North Ronaldsay Firth on 19th and Billia Croo on 23rd. The only later sightings were from Billia Croo in October with singles on 12th and 16th.

Sperm Whale *Physeter macrocephalus* Uncommon

Four were observed off Billia Croo, Stromness on 1st July.

Harbour Porpoise *Phocoena phocoena* Common

Recorded every month.

Monthly distribution of sightings 2014 of Harbour Porpoise

J	F	M	A	M	J	J	A	S	O	N	D
3	4	4	5	8	5	11	5	21	14	9	5

Apart from a group of 15 seen in Gills Bay on 13th September all other sightings were of one to five animals with one being the number most frequently reported.

several groups: some folk going up to High Fea, others exploring around Segal Burn to look for Juniper seeds. John Crossley had enthused us about Kew Garden’s Millennium Seedbank project, and although finding ripe berries was difficult, we managed to harvest quite a few. It is exciting to think of Hoy Juniper DNA being preserved for posterity in this national collection.

Our final outdoor event for 2014 was another evening one; John Crossley invited members to his farm to illustrate how modern agriculture and nature conservation can go hand-in-hand. We saw his heritage crop of Black Oats *Avena strigosa*, learned how grazing regimes can encourage native plants and birds, and saw how he has planted various Willow species between paddocks, some growing more successfully than others. We were followed throughout by John’s lively herd of adolescent beef coos.

We started a new season of indoor talks with a one-off change of venue and day, so that we could book Dr. Andrew Brownlow and his team from the Scottish Marine Animal Strandings Scheme. Some of the slides were of a graphic, ‘forensic’ nature but we all learned such a lot about animal mortality and the protocols for dealing with both live and fatal strandings. Many folk from that audience are now actively recording and submitting sightings to the SMASS database, and knowledge gained from this talk was put into practice when a Blue shark was found washed up at Scapa a few weeks later.

We enjoyed another marine-themed talk by Dr Joanne Porter from Heriot-Watt University, with her images from dives around the wrecks of the German Fleet in Scapa Flow. This talk illustrated how protected status accorded to the marine archaeology has indirectly offered protection to natural ‘flora and fauna’ and has helped stabilise the surrounding seabed. An artificial reef system has developed, held together by beds of Horse mussels, and this in turn supports an active, colourful marine ecosystem.

In October, Field Club members were invited to a private tour of the collections at Stromness Museum, where many were amazed at the wealth (and quality) of the items stored. The Museum holds Robert Rendall’s shell collection as well as preserved bird and mammal specimens, wildflowers and geology. It made us think about changing attitudes to conservation and the fragile status of some previously-common Orkney species. We also discussed evolving ideas about museum display and interpretation.

This visit came about through Trustees of Stromness Museum undertaking a ‘viability study’ into their future, part of which would include promotion of natural history to the same level as social history. For the Field Club, a collaboration could be seen as ‘a return to our roots’. In 1959, Orkney Field Club originated as an offshoot from Orkney Natural History Society, which in turn was founded in 1837, with a view to “...the promoting of Natural Science by the support of a museum and by other means in its power”. Stromness Museum is an underused resource and the Field Club anticipates reviving this past connection, sharing knowledge and looking to a more collaborative future.

The final event of note was Orkney Field Club’s participation in the Christmas Quiz open to various organisations in Orkney who have some ‘environmental’ remit: Historic Scotland, RSPB, Orkney Islands Council, Heriot-Watt University to name a few. We were defending our title from 2013 – and ownership of ‘Hamish’, the winner’s trophy – and did not disgrace ourselves, finishing mid-field in a close contest.

At the time of writing this piece, we are into the second part of our Winter Talk season and making plans for the Summer Programme; including participation in the 2015 Orkney Nature Festival. This has been a somewhat personal look back to last year’s events. To fully appreciate our outings and talks, well, “... you really had to be there....” So come and join us!

BSBI Orkney Field Meeting 2014 *John Crossley and Eric Meek*

On a fine July morning, seventeen members of the Botanical Society of Britain and Ireland (BSBI), some from as far away as Kent, gathered for the first of four days of botanising in as many diverse habitats and islands as could be managed. This was to be mainly a recording meeting, focussing on interesting areas that have received little attention since the 'Atlas 2000' (Preston *et al*, 2002), and often for many years before that. On most days, we split into three groups to visit separate monads (1 km grid square) and tetrads (2 km square) but, on this first morning, we set out together for Yesnaby and one of Orkney's finest examples of maritime heathland. Here, the diminutive **Scottish Primrose** *Primula scotica* was in glorious full flower, with plenty of the even more diminutive **Frog Orchid** *Coeloglossum viride*. On a nearby headland, the Brough of Bigging, the **Eyebrights** *Euphrasia foulaensis*, *Euphrasia marshallii* and the hybrids between the two were also flowering nicely. The presence in the party of Chris Metherell and Fred Rumsey, both currently working on the forthcoming BSBI Handbook on Eyebrights, made for some interesting discussions.

Following a picnic lunch, we split into groups to record different monads nearby. One led by Eric Meek went to the area around Mousland, perhaps the most remote farm in Orkney, where extensive maritime heath is interspersed with rich flushes, visible from afar by the grey hue of **Black Bog-rush** *Schoenus nigricans*. **Round-leaved Sundew** *Drosera rotundifolia* and **Alpine Meadow-rue** *Thalictrum alpinum* were both present in abundance together with **Bog Pimpernel** *Anagallis tennella*, **Few-flowered Spike-rush** *Eleocharis quinqueflora*, **Grass-of-Parnassus** *Parnassia palustris*, **Knotted Pearlwort** *Sagina nodosa*, **Lesser Clubmoss** *Selaginella selaginoides* and twelve species of **Sedge** *Carex* spp. The other two groups covered similar territory, with further variety in the form of a reed swamp and the steep, rocky banks of the Burn of Sowadee. Here, one group found **Limestone Bedstraw** *Galium sternerii*, evidence of the highly calcareous nature of the local sandstone, but not, sadly, the local endemic **Hawkweed** *Hieracium sowadeense*, last recorded here in 1954 and probably not looked for since. Best find of the third group was the **Heath Spotted x Early Marsh Orchid** hybrid *Dactylorhiza x carnea*, only the second Orkney record.

The following day, an early start was made to catch the ferry to the island of Sanday at 0740. Meeting up with Rod Thorne, the Sanday Ranger, our first port of call was an arable field near Lady Village. Here, John Crossley was able to show visitors a rich array of arable weeds, including four of the six **Fumitory** species that occur in Orkney – **Common Fumitory** *F. officinalis*, **Common Ramping Fumitory** *F. muralis* ssp. *boraei*, **Purple Ramping Fumitory** *F. purpurea* and **Dense-flowered Fumitory** *F. densiflora* - as well as **Northern Knot-grass** *Polygonum boreale* and **Northern Dead-nettle** *Lamium confertum*. We then set off in separate groups for different parts of the island. All encountered flower-rich wet machair with **Grass-of-Parnassus** in great abundance, especially Julian Branscombe's party on the extensive level plain and fen at Whitemill Bay, where they also found much **Common Adder's-tongue** *Ophioglossum vulgatum*, prodigious quantities of **Northern Yellow-cress** *Rorippa islandica* in dried-out pools and **Curved Sedge** *Carex maritima*, the latter at a well-known site. **Pink Water-speedwell** *Veronica catenata*, previously known from only three other sites in Orkney and scarce in Scotland, was a good find. Eric Meek's group went to an almost unknown area, botanically

Parti-coloured Bat *Vespertilio murinus*

What we know

The Parti-coloured Bat occurs across Central and Western Europe and Asia. It occurs in mountains, steppes and forested areas although in Western Europe, it is commonly found in cities. Their rarity means that little is known about them, however we do know that they migrate with recorded movements of up to 850km. Few had been seen in Britain up until 2000; since then, possibly with more bat-awareness there have been one or two records per year and is considered to be the UK's most regular vagrant.

Orkney's first record came about in peculiar circumstances and maybe begs the question 'how many bats do we not hear about?' The finder of this bat had initially put the corpse in the dustbin and the dustcart was imminent. However the finder's father suggested she salvaged it while he made a very timely phone call. I visited the house on South Ronaldsay the next day (2nd February 2015) and was open-mouthed to be presented with a large, distinctively coloured and recently-deceased bat. Pipistrelles are no longer than the top joint of my thumb. This individual could be draped from the tip of my thumb and down past the ball and its wings, from tip to tip were almost a 12" ruler length.

At home references were consulted and it quickly became apparent that identification is only as good as the references you have. Initially I followed the Field Studies Council Guide which has keys to 16 bats and the route led me to Leisler's Bat. It looked almost right but I had doubts – pictures of Leisler's Bat failed to show the frosting on the upperside fur and the marked contrast in colour of the upperside and the underside. A visit to the Bat Conservation Trust website paid dividends and Parti-coloured Bat now came into the frame.

So what was it doing on South Ronaldsay? Being migratory it may have been on the move south in the autumn of 2014. Just as with bird migrants easterly winds may have pushed it across the North Sea. It found a safe locality to hibernate possibly within or alongside a chimney. Unfortunately the stove was lit in early February; the warmth woke the bat from its hibernation and it emerged but soon succumbed to South Ronaldsay's winter temperatures.

Full biometrics of the bat have been taken and this individual is considered to be a young male possibly born in 2014.



Parti-coloured Bat (Tim Dean)

Cattle *Bos taurus*

On 12th March 19 animals were counted on Swona including 2 calves. On 2nd August there were 18, comprising 13 cows, 2 bulls and 3 calves. This is slightly down on the previous year.

Many thanks to the following contributors of records:

C J & J Booth, A K & JH Johnson, A Leitch, A Forsyth, A Gascoigne, A McLennan, B Hourston, D Aiton, R Matson, E J Rosie, E Meek, E Everiss, G Walker, I Smith, J Bruce, J Taylor, J Crossley, K Thompson, K Thomas, L Campbell, L Johnson, L Shields, M Russell, P Martin, P Hollinrake, R Besant, R Merriman, T Dodman, S Brogan, S Williams, T Wooton, V McGill, also SNH staff and all who have reported stoats. Chris Booth again deserves special mention for numerous records of his own and others he has passed on to me. Apologies to anyone missed out.

Bat report 2014-2015

Tim Dean

Over the past twelve months, the Bat Recorder has been receiving records from the Bat Group as the group continues to survey areas in order to build up a picture of the status and distribution of bats in the county. All of the records refer to **Common Pipistrelles** *Pipistrellus pipistrellus* (the Pipistrelle species that calls at 45kHz) and the majority of these records relate to the parishes of Evie and Firth and the island of Hoy where small numbers, less than ten for each locality, have been recorded. Even smaller numbers (usually singles) have been recorded in St Ola, Stromness and St Margaret's Hope. In an Orkney context, Kirkwall has a great deal of 'bat potential' but remains an enigma. We are beginning to understand a little bit more about bats in Orkney but every report prompts further questions - Britain's most northerly residents are not only hardy, they are also remain something of a puzzle.

Along with the Common Pipistrelle reports, two records of other bat species were received... along with the corpses.

Nathusius' Pipistrelle *Pipistrellus nathusii*

What we know

Nathusius' pipistrelle is a rare bat in the UK, though records have increased in recent years. It is a migratory species, and most bats are encountered in autumn, although some do remain all year and breed in the UK. It is similar in appearance to, but slightly larger than the Common and Soprano Pipistrelles, and the fur on its back is longer, giving it a shaggy appearance. Nathusius' Pipistrelle was first recorded in Great Britain in the Shetland Islands in 1940 since the 1990s it has been known to breed in the UK. A small number of maternity colonies are known both in England and Northern Ireland. In continental Europe, Nathusius' Pipistrelle migrates south west across Europe in late autumn and winter before returning to eastern Europe the following spring.

Orkney's first record was of a live individual (which died a couple of days later) found on South Ronaldsay on 12th June 1995. The second record, this one from North Ronaldsay, was of a dead animal in June 2002 and was followed by a further two dead animals found in Burray and Sanday in the Septembers of 2006 and 2010. Intriguingly a recording of a Nathusius' Pipistrelle was made in Evie five days after the Sanday specimen was discovered. Orkney's sixth record refers to a moribund individual that was found on Eday in late March 2014.

speaking, around the machair loch and inland saltmarsh at the Loch of Westayre. This held some real surprises. The first of these was a stand of **Hedge Woundwort** *Stachys sylvatica*, an Orkney rarity. A non-flowering sedge, the identity of which was hotly debated until a single flowering stem was found, proved to be **Greater Pond Sedge** *Carex riparia* at only its fourth Orkney site and the northernmost in the British Isles. In saltmarsh by the loch, Fred Rumsey quickly spotted **Heslop-Harrison's Eyebright** *Euphrasia heslop-harrisonii*. The marshes and ditches also yielded **Brackish Water-crowfoot** *Ranunculus baudotii*, **Northern Yellow-cress** again and **Lesser Water-parsnip** *Berula erecta*. This last, another Orkney rarity and rather scarce in Scotland, was last recorded here in 1975 and was present in satisfactory abundance. An outstanding feature of the day was the quantity of **Marsh Fragrant-orchid** *Gymnadenia densiflora*, scores of spikes being found. The third group, led by John Crossley, went to another promising and better-known shallow loch, the Loch of Rummie, but were perhaps not quite as lucky. The loch held masses of bulky **Stonewort** *Chara* species, mainly the Nationally Rare **Rugged Stonewort** *Chara rudis*, and a **Fennel Pondweed** *Potamogeton pectinatus*-like pondweed which should have been *P. x suecicus* (*P. filiformis* x *pectinatus*), going by previous records, but this awaits expert determination. **Northern Marsh-orchid** *Dactylorhiza purpurella* and **Common Adder's-tongue** were common in the sedge-rich wetlands around the loch. Dry and unexciting-looking, sheep-grazed links nearby yielded plentiful **Arctic Eyebright** *Euphrasia arctica* and weeds of cultivation around rabbit-burrows, including **Long-headed Poppy** *Papaver dubium*.

Next day, the ferry from Stromness to the island of Hoy was filled with expectant botanists but the weather forecast was poor and it was decided not to risk ascending the higher hills. Instead, three lower-ground venues were chosen, wisely as it turned out because later in the day the heavens opened. Two groups were taken south by minibus, Eric Meek's disembarking at Lyrava Hill, an area of moorland with old wartime remains that have created areas of almost bare ground and very short vegetation, John Crossley's going on to gorge woodland at Pegal Bay. Both groups encountered **Great Sundew** *Drosera anglica* in blanket bog and **Hay-scented Buckler-fern** *Dryopteris aemula* either in its usual sea-cliff habitat on Hoy or, less typically, in a roadside ditch. John's party descended the gorge into a thicket of **Eared Willow** *Salix aurita*, **Grey Willow** *S. cinerea* and **Tea-leaved Willow** *S. phyllicifolia*, with a single stand of **Aspen** *Populus tremula* clinging to cliffs. However, the rock was acidic, the vegetation otherwise disappointing and the midges desperate, so a rapid exit was made. Flushes running into saltmarsh at the burn mouth were more interesting, with **Many-stalked Spike-rush** *Eleocharis multicaulis*, **Foula Eyebright** *Euphrasia foulaensis* and **Long-bracted Sedge** *Carex extensa*. At Lyrava, Eric's group soon found **Small Adder's-tongue** *Ophioglossum azoricum* at a known site, where over 100 shoots were located. Nearby were more than 50 plants of **Heath Cudweed** *Gnaphalium sylvaticum* also **Autumn Gentian** *Gentianella amarella* ssp. *septentrionalis* and **Field Gentian** *G. campestris*. Saltmarsh at the burn mouth produced several additions to the day's list but no surprises; then began a battle through long heather and **Purple Moor-grass** *Molinia caerulea* tussocks up the Lyrava Burn towards a site where **Bog Orchid** *Hammarbya paludosa* was believed to have grown in the 1920s. It was not found but the route back through a conifer plantation yielded a colony of over 50 spikes of **Lesser Twayblade** *Neottia cordata* within the wood itself. Brian Ribbands took the third group through mixed habitats near the Bu of Hoy,

which included a sandy bay, another gorge woodland on more calcareous sandstone, and heathland with rich flushes. Their list of 184 species was the longest of the entire meeting. With steady rain continuing, all groups beat a fairly early retreat to a café near the pier, which was already full of steaming hikers. Back on the Mainland, most of us were sufficiently dried off or equipped with enough spare clothes to enjoy a meal together at the Stromness Hotel.

Day four, fine weather again, and while Fred Rumsey and Chris Metherell went Eyebright hunting (mostly), the rest of us split into two groups. One went south with John Crossley to Sandwick Bay in South Ronaldsay, to cover a nicely varied area of farmland and coast. A mixed bag there included **Sheep's-bit** *Jasione montana* in full flower on the low cliffs; **Scots Lovage** *Ligusticum scoticum* in coastal rock crevices; many ferns along roadside banks, including **Scaly Male-fern** *Dryopteris affinis* agg. and **Lemon-scented Fern** *Oreopteris limbospermum*, the latter not common in Orkney; and **Bittersweet** *Solanum dulcamara*, a species hitherto regarded as an alien in Orkney but here in typical habitat and possibly native. Eric's party went east to the Mirkady area of Deerness, where heath, marsh, coastline and farmland contribute to a good diversity of plants. The Loch of Ouse produced masses of **Horned Pondweed** *Zannicellia palustris* as well as **Brackish Water-crowfoot** while the wetlands to its south held an enormous colony of **Northern Yellow-cress**. Having been warned when seeking permission from the land-owner that some of his cattle were 'a bit wild', these were given a wide berth of at least a field's width. However they bolted nevertheless, breaking through fences and gates in four different directions – 'a bit wild' indeed! After trying valiantly to help pick up the pieces, botanising was resumed, the track itself producing **Soft-brome** *Bromus hordaceus*, believe it or not decidedly scarce in the islands, while the coast produced a typical array of dune and littoral species including **Eelgrass** *Zostera marina* and the locally uncommon **Annual Sea-blite** *Suaeda maritima*. A walk around nearby tracks along the edge of arable fields produced, as well as many planted aliens, **Purple Ramping Fumitory**, **Northern Dead-nettle**, **Northern Knot-grass** and **Ivy-leaved Speedwell** *Veronica hederifolia*, the latter being another of those plants that visitors find hard to believe will appear in our forthcoming Rare Plants Register!

References

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This article is a slightly adapted version of that which appeared in the January 2015 edition of BSBI News.

Pygmy Shrew *Sorex minutus*

Six records is fewer than in 2013. Reported (as usual mostly dead) from Birsay, Stenness and Rendall in Mainland, in Rousay and South Ronaldsay. A feral cat was watched catching and eating a shrew, showing that cats will eat shrews if they are hungry enough.

Otter *Lutra lutra*

Records increased to 63 in 2014. Nineteen were of spraint or tracks, 9 found dead on roads and 35 live sightings. Twenty-two were single animals, 13 of 2 or more, the most being 5 together in the Loch of Harray. A family by the Brig O' Waithe was reported several times in the early part of the year. The increase suggests that otters are thriving in Orkney but it might just be that more folk are reporting them. The number of road casualties is worrying though. Some were young adults which are likely to be at greater risk as they wander in search of a vacant territory.

Stoat *Mustela erminea*

Another huge increase, more than double the number of records in 2013. Numbers were higher in every month except January. As in 2013 there was a big increase in July with reports of young animals then. As usual there have been fewer reports in the winter months than in the rest of the year but even these have increased, including a number of white 'ermine' stoats. Stoats have now been reported in every Mainland parish though there are still relatively few much north of the main Stromness to Finstown road or in the easternmost parts. They have also reappeared in South Ronaldsay after a gap of 2 years.

Common/Harbour Seal *Phoca vitulina*

Highest reported counts were of 67 at Birsay in March and 40 near Tingwall in July. No more than 10 were reported elsewhere, these in Rousay, Hoy, South Ronaldsay, Holm and the Loch of Stenness. Pups were seen at Birsay and Longhope.

Grey Seal *Halichoerus grypus*

More than twice as many reports as in 2013, due to reporting of dead seals, which has been neglected in the past. This happened to coincide with an exceptionally stormy winter which seems to have caused heavy mortality of grey seal pups. Many pups in the South Ronaldsay beach colonies are likely to have been washed away; those higher up on small islands will have been less vulnerable at this stage, but when they first go to sea rough weather might make it more difficult for them at what must be a hazardous stage of their lives. It will take several years of data to show what a normal level of mortality is, but this winter does seem to have been exceptional. Grey seals have been increasing for many years so heavy losses in one breeding season will just be a minor setback, unless such rough weather becomes more frequent. Some adult males were also reported dead in November and December; fighting and occupying territories with little opportunity to feed makes this a very stressful time for them.

Sixty-eight pups were counted between Burwick and Green Head on 5th November and 76 there on 24th November. Twenty-one dead pups were on Sandwick beach, South Ronaldsay, on 27th December and smaller numbers elsewhere.

Two females each with two pups suckling were seen on Auskerry. Grey seal twins are known but are extremely rare and it is probably impossible for a female to rear two pups as she does not feed but lives off her fat reserves while she is providing milk. I do not know whether one would allow a pup other than her own to suckle but it seems unlikely.

Before the breeding season the largest counts were at least 100 around Swona on 2nd August and 200 hauled out on a beach at the northeast end of Sanday on 25th September.

Mammal Report 2014

Brian Ribbands

A slight increase in records but as usual small mammals were very under-recorded. The lack of Orkney vole records is a particular concern as stoats continue to increase and spread rapidly. Please tell me if your cat brings in voles! It may not in future if stoats have an impact. A talk in early October by the folk who collect records of marine mammal strandings highlighted the fact that we do not report dead seals in Orkney, but since then we have been doing so. This happened to coincide with an exceptionally stormy winter so there were probably more dead seals than usual but it will take several years' data to show what is 'normal'.

Orkney Vole *Microtus arvalis orcadensis*

Only 7 records, so very under-recorded. Runs were noted at 3 sites in Rousay; voles seem to be widespread in that island. Runs were seen by the Peerie Sea in Kirkwall; the voles would have to have crossed several busy roads to get there. A vole brought in by a cat in Evie had at least 5 ticks.

Wood Mouse *Apodemus sylvaticus*

Reported from Kirkwall, Finstown, Harray and Rendall. Seen in gardens in daylight, sometimes attracted to bird food, mostly in summer, but also in February, March and November. Also caught in houses, most in autumn but also one in June, and the occasional cat kill. Under-recorded.

House Mouse *Mus domesticus*

Reported from Kirkwall, Finstown, Harray, South Ronaldsay and Egilsay. Most in houses but also a few in gardens.

Common Rat *Rattus norvegicus*

Reported from West Mainland and 2 places in South Ronaldsay so very under-recorded as usual. Most in gardens, some attracted to bird food.

Rabbit *Oryctolagus cuniculus*

Recorded this year from Mainland, Hoy, South Walls, South Ronaldsay and Swona. They remain widely but patchily distributed. Black rabbits were reported from South Ronaldsay, Rendall, Birsay and Harray. Other colour variations were seen on Swona including a very dark brown one and another marked with white.

Brown Hare *Lepus europaeus*

As usual recorded throughout East and West Mainland in most parishes from Birsay to Deerness. The maximum count in one place was 10. There were numerous records from January to May then in smaller numbers after harvest from August to December.

Mountain Hare *Lepus timidus*

As usual reported from Ward Hill, Sui Fea, Stourdale, Moor Fea, Rinnigill and Mel Fea, so mostly north of Rackwick, also one by the road at Lyrava Bay. Highest counts were of 10 in April at Stourdale and also 10 in May on Ward Hill. In April most were still white.

Hedgehog *Erinaceus europaeus*

Recorded from Mainland, Hoy, South Walls, South Ronaldsay and Sanday. The first report was one seen alive on 11th March. The last seen active was a young one nest-building on 3rd December but 2 were found fresh dead after this, the last on 19th. A hibernating hedgehog was found in a Costa garden on 23rd. There was an increase in records of live animals. Hedgehogs seem to have done well in 2014.

Plant notes

John Crossley

Juniper berries for the Millenium Seed Bank

OFC members and friends collected **Juniper** *Juniperus communis* berries for the Millenium Seed Bank during their autumn outing to Berriedale, Hoy in September. The prostrate bushes (subspecies *nana*) were loaded with mainly green, unripe berries, with some ripe, purple ones. Juniper berries take two years to ripen, so there are two generations on the one bush. The Millenium Seed Bank, based at Kew, aims to secure safe storage of the seeds of the world's plants. It already contains 60,000 species. Juniper has been a particular target species over the last two years because it has been afflicted by a disease, *Phytophthora austrocedri*, a fungus-like pathogen that affects the roots, causing die-back and death. The disease is known only from the British Isles and Argentina but is believed to have entered Argentina from elsewhere. It is prevalent in the Cairngorms and Perthshire, where Juniper is common. There was no sign of disease in the Hoy plants.

We collected on the southern slopes of the Cuilags, Hoy, where there are hundreds of bushes. Juniper is widespread in Hoy, but rarely abundant. There are a handful of bushes in scattered locations elsewhere in Orkney.



John Crossley

Problematic Adder's-tongues – help needed

Adder's-tongues are odd-looking little ferns that grow in damp grassland, heaths and dune slacks. There are two species in Orkney, **Common Adder's-tongue** *Ophioglossum vulgatum* and **Small Adder's-tongue** *O. azoricum*. The latter is Nationally Scarce. Orkney is one of its strongholds. As a general rule in the British Isles *O. azoricum* is the smaller of the two, with a slightly different leaf shape, but now DNA analysis is proving that the two species cannot reliably be separated simply by their appearance.

The longstanding, conventional method of distinguishing the two species goes as follows (descriptions adapted from Fitter & Fitter [in the *Plant Crib* 1998] and Stace [2010]).

O. vulgatum

Stems short, exceptionally to 30 cm, with a single, pointed, oval leaf and a single, green, fertile spike, both somewhat like Greater Plantain. Number of sporangia on each side of fertile spike 10-40. Barren shoots frequent.

O. azoricum

Stems much shorter, 3-8 cm, often 2-3 together, leaves narrower and more spreading. Number of sporangia 6-14. Barren shoots more numerous.

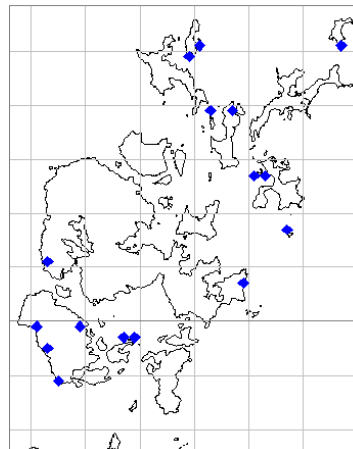
The difficulty arises with small plants in short vegetation in exposed places, where small *O. vulgatum* looks like *O. azoricum*. That includes most places where they have been found in Orkney. The one remaining near-certainty is that plants in wet hollows in sand dunes and links are *O. vulgatum*. In 2014 I sent five samples (collected by Effy Everiss, Brian Ribbands and me) off for DNA analysis. This proved that three previous identifications had been right and two wrong, with the errors involving previous identifications of both species.

Because *O. azoricum* is Nationally Scarce it is most desirable to find out which species are truly involved in the historic records. The map shows locations where *O. azoricum*, and the more debatable examples of *O. vulgatum*, have been recorded. I would be delighted if anyone planning a visit to any of these locations, many of which are remote and difficult to get to, could collect samples. I will give more details of exact location, where known, what to collect and how to preserve it, if you contact me.

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Distribution of recorded *O. azoricum*

Amphibia Report

Chris Booth

Common Toad *Bufo bufo* Rare

As in 2013, reports were again confined to Hoy and the West Mainland. A minimum of 20 dead toads was found on the edge and in the pond, near the bridge at Rackwick, Hoy on 27th March.

There were another two found dead on the road nearby. Some of these toads appeared to have been partly eaten. There were at least 40 dead toads on 29th March, also one pair was seen laying spawn and there were a number of strands of spawn (LS). A minimum of 50 tadpoles were present in this pond on 1st May.

A toad found at Hundasaeter, Birsay on 28th July weighed 112 gms, the heaviest so far recorded in Orkney (AK&JHJ). The only other reports of toads were of one seen at the side of the Rackwick road on 30th August (EJR) and one at Hundasaeter on 10th September; it weighed 10 gms.

Common Frog *Rana temporaria* Fairly common

Over wintering tadpoles were reported from Scapa View, Orphir on 23rd February and some were present at this site in December (DM). The first spawn of the year was also found at Scapa View on 23rd February. Further reports of spawn were from Hundasaeter, Birsay on 1st March and then Dale, Costa on 5th March (REM). Spawning continued at Dale until 17th March when there were between 80 and 100 batches. First reported tadpoles were at Hundasaeter on 30th March.



There was a good breeding season on South Ronaldsay (JRLH) although some pools eventually dried up. Three newly emerged froglets were found by a pond at Queenamidda, Rendall on 11th July (JBR). This sighting was unexpected as Queenamidda is some distance from any known breeding sites. A larger frog was seen at Queenamidda on 1st September. Elsewhere two frogs found at Mousland, Stromness on 18th July (ERM) and a froglet seen at Russness, Sanday on 20th July (AF) were the first reports from these locations.

Acknowledgements

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A Forsyth (AF), JRL Hogarth (JRLH), AK&JH Johnson (AK&JHJ), RE Matson (REM), D Mayes (DM), ER Meek (ERM), JB Ribbands (JBR), EJ Rosie (EJR), L Shields (LS).

Fish Report 2014

Chris Booth

Details of some of the more interesting fish reported in 2014 are given below.

Basking shark *Cetorhinus maximus*

Only a few records this year. All reports were of single fish with sightings in Warness Sound, Eday on 12th June, off Billia Croo, Stromness on 21st July, Auskerry Sound on 31st August, Warness Sound 9th September and Lashy Sound, Sanday on 19th September.

Blue shark *Prionace glauca*

One found dead at Scapa on 4th November, length 1.6 metres.

Eel *Anguilla anguilla*

One was seen at Scows South Ronaldsay.

Herring *Clupea harengus*

Two Bay of Quoy, Hoy on 25th May.

Deal-fish *Trachipterus arcticus*

One was found stranded alive at The Bu, Orphir on 29th December.

Bull rout *Myoxocephalus scorpius*

Three were found washed up at Honeysgeo, South Ronaldsay on 12th October.

Lumpsucker *Cyclopterus lumpus*

One was found dead on the shore at the Fourth Barrier on 20th November.

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Nettle Clustercup Rust

Derek Mayes



Figure 1

The **Stinging Nettle** *Urtica dioica* is not a popular plant, yet it survives in many a corner of nearly all dry environments – and it does not mind a little salt-spray. It is commonly found on disturbed sites associated with historical settlements: it would be rare to find an old ruin without nettles.

It is a haven for a great number of insects, including leaf miners, butterfly and moth larvae, a huge range of spiders and a few pollen beetles. I have seen slugs and snails seemingly quite at home on the stems and leaves. It seems a pity it is so persecuted, because some of our most attractive butterflies – Peacock, Tortoiseshell and Red Admiral - use it to host their larvae.

It is, of course, a plant which everyone recognizes from childhood encounters! But it is also well known for being edible – the young leaves may be collected, simmered briefly and then eaten as a vegetable. Most grazing animals avoid nettles and for humans it is a hated plant, rooting tortuously deep and protecting itself with stiff, hypodermic, stinging hairs called *trichomes* (Figure 2), which are filled with a powerful mixture of formic acid, histamine and acetylcholine.

Some galls may be found on stinging nettles. A gall is any abnormal growth of plant tissue caused by a reaction of the plant to secretions by an organism within the tissue. Most frequently the organism is an insect, as in the case of the Oak Apple, which is caused by a small wasp. The cluster-cup gall is fungus-induced – to be more correct, rust-induced – but rusts are fungi, most often seen as powdery deposits on the underside of leaves.

For a short period from mid-June to mid-July (my observation) it is possible to find the fairly common but little recorded stem rust-fungus known as **Nettle Clustercup Rust** *Puccinia urticata*. It is a very obvious gall (Figure 3), yellow to orange, sometimes purple-tinted, on the surface of which are cups (*aecia*) (Figure 1), which eventually form tight clusters. Typically it occurs on the stems just below topmost leaves, thickening and distorting the stem, but it also infects the veins of leaves (Figure 4). It is rarely less than 1.5 cms and can be 8 cms long. Once one observed it is likely that others will be found nearby. I have noticed that even before the gall becomes visible, the infected nettle heads may wilt and later, when the gall begins to take on its final purplish colour, the stem contorts so much that sometimes it folds dramatically to the ground.

The gall usually begins as a firm and smooth yellow structure, looking sometimes like a caterpillar, distorting the stems of the plant. It becomes stiff and more orange with age and later may take on the purple hue. As it matures, it produces more cups and begins to express spores,



Figure 2



Figure 3



Figure 4



Figure 5

which in dry weather can be seen on the leaves below the gall. I have read that it doesn't always occur on the stem or leaf vein, but sometimes infects leaf-edge tissue and other parts, still forming the cluster-cups, though not always the banana shape. The spores appear to be expressed explosively, the results of which can be seen in Figure 5. They then may be transported on breezes and raindrops and even on invertebrates.



Figure 1: Peacock Moth (Sydney Gauld)



Figure 2: Welsh Wave (Mary Harris)

Mouse Moth *Amphipyra tragopoginis* (U): two taken by trap 9 September, Gerraquoy Farm, South Ronaldsay (SS&SS).

Large Wainscot *Rhizedra lutosa* (RI): 12 taken by trap; five between 3 and 28 September, Old Nisthouse, Harray (AF), one 16 and another 18 September, Bayview, Herston, South Ronaldsay (JMc&RMc), one 20 September, Smyril, Stenness (ERM), one 21 September, Gerraquoy Farm, South Ronaldsay (SS&SS), one 22 September and another 4 October, Cairston Road, Stromness (BS) and one 23 September, Berstane House, St Ola, (NC).

Red-line Quaker *Agrochola lota* (V): six taken by trap between 14 September and 4 October, Sea Cottage, Longhope, Hoy (MH).

Sword-grass *Xylena exsoleta* (I): one taken by trap 1 October, Berstane House, St Ola, (NC).

Red Sword-grass *Xylena vetusta* (R?): five taken by trap; one 16 September, Bayview, Herston, South Ronaldsay (JMc&RMc), one 19 September, Cairston Road, Stromness (BS) and three between 4 and 13 October, Berstane House, St Ola, (NC).

Satellite *Eupsilia transversa* (RI): two taken by trap; one 5 October and another 1 November, Berstane House, St Ola, (NC).

Black Rustic *Aporophyla nigra* (C?): one taken by trap 16 September, Bayview, Herston, South Ronaldsay (JMc&RMc).

Nutmeg *Discestra trifolii* (I): one found dead on a windowsill 25 July, St Catherine's House, Stronsay (JAD).

Broad-bordered Yellow Underwing *Noctua fimbriata* (V): one taken by trap 14 August, Berstane House, St Ola, (NC)

Great Brocade *Eurois occulta* (I) one taken by trap 29 July, Cairston Road, Stromness (BS).

Green Arches *Anaplectoides prasina* (V): two by trap; one 23 and another 24 July, Berstane House, St Ola (NC) and one taken by net 24 July, Hobbister, Orphir (NC).

Double Square-spot *Xestia triangulum* (U): four taken by trap; one 1 July, Sea Cottage, Longhope, Hoy (MH), two 11 July, Bayview, Herston, South Ronaldsay (JMc&RMc) and one 24 July, Eviedale, Evie (HC&IH).

Gothic *Naenia typica* (U): three taken by trap between 20 and 27 July, Cairston Road, Stromness (BS).

Thanks to all who supplied records.

Names used in the report above: B Adam (BA), K Bland (KB), CJ&J Booth (CJB&JB), L Campbell (LC), N Charlton (NC), H Cole (HC), J Crossley (JC), J A Davis (JAD), E Donaldson (ED), N Fairbairn, (NF), A Forsyth (AF), S V Gauld (SVG), M Harris (MH), I Hayes (IH), R I Lorimer (RIL), J&R McCutcheon (JMc&RMc), E R Meek (ERM), D & S Otter (DO&SO), B Ribbands (BR), Sami & Sara Sankey (SS&SS), B Simpson (BS), A Stanger (AS), I Summers (IS).

As can be seen in Figures 5 & 6 one should handle the gall carefully. The spores are very light and disperse at a touch or even when breathed on. The trichomes grow through the gall and are particularly stiff and pretty hostile. I found that surgical gloves did not protect me from them and I would advise avoiding breathing in the very light spores. It is a rewarding exercise to watch a gall's development – I did so over a three week period. I stored a developing one in a cupboard under a glass bowl (hidden from my wife). What appeared at first to be a simple, swollen extension of a stem became an expanding, complex, indeed beautiful, growth. Beginning as a very small smooth-skinned 'banana', it increased its size by half again and became a crater-



Figure 6

surfaced, spore-ejecting organism. Once it reached maturity and the spores had dispersed, it withered to an inconspicuous softened clump. I noticed later that another small, furry mould developed on the wilted surface.

I found this gall in several places in Orphir, an impressive display in sheep-grazed pasture in Burray, then on salt-laden clumps of nettles on Gairsay. Yet hitherto it had not been recorded as present in Orkney. I began my study too late to find it in all the locations where it might be expected, though it is so obvious and so interesting that readers here will surely see it on their walks in June and July and so should (please) report sightings to the Wildlife Information and Records Centre in Kirkwall.

More information on rusts

Named after their reddish colouration, Rusts are fungal pathogens of the order Pucciniales. They are considered by agriculturalists and horticulturists to be a serious threat to crops. They generally do not kill their host, only hold back growth and reduce production of grain or fruit making it unfit to process or eat.

There are well over 7,000 species of rust fungi in the World and it's likely that there are several hundred species in Orkney. I have, so far, located, though not identified, 8 individual rusts in my garden in Orphir but they are very difficult to separate without specialist knowledge and a microscope. Many occur as orange, through yellow to white powdery blemishes on undersides of leaves or stems of plants, shrubs and trees. Many species of willow are infected in Orkney and the orange leaf blemishes are simple to locate.

Though we may see one rust on one plant, many of them require two or more hosts to complete their reproductive cycle. *Puccini urticata* infects several sedge *Carex* species as well as nettles, forming dark blemishes rather than galls. The situation is highly complicated because other common rust species also infect sedges.

References and further reading

My research material is almost exclusively located on the World Wide Web but some additional material was given me by Alan Silverside (www.lastdragon.org), whose knowledge and interest in these things I find inspiring. I posted some material in the Open University's iSpot Website to receive the additional support I needed. I'd recommend iSpot to any Naturalist – there is a shortage of Orkney Observations in those pages.

Wilson, Malcolm and Henderson, D. M. 2011. *British Rust Fungi*. Cambridge: CUP. The definitive account, but a complex one and an expensive book

Excellent (and easier) reading can be found by searching for Pucciniales on the Internet – it should reveal the New Brunswick Museum's (nbm) short and very informative treatise (among many on obscure branches of the fungal kingdom), which I would recommend. A nice introduction to rusts on plants in Britain is at www.sewbrec.org.uk (quickest way to find is to search for 'sewbrec rusts').

All photos by the author

Small Phoenix *Ecliptopera silaceata* (R): four taken by trap; one 11 June, Queenamidda, Rendall (BR) and three between 3 Jul and 18 July, Berstane House, St Ola, (NC).

White-spotted Pug *Eupithecia tripunctaria* (V): one taken by trap 1 June, 34 High St, Kirkwall (CJB&JB).

Streak *Chesias legatella* (V): one taken by trap 29 September, Sea Cottage, Longhope, Hoy (MH).

Latticed Heath *Chiasmia clathrata* (V): one taken by trap 13 July, Gerraquoy Farm, South Ronaldsay (SS&SS). This is the second record for Latticed Heath, the first was 3 July 2006, Northolme, St Ola (BA).

Feathered Thorn *Colotois pennaria* (V): one taken by trap 27 October, Berstane House, St Ola, (NC). This is the second record for Feathered Thorn, the first record was 15 October 2011, Queenamidda, Rendall (BR).

Peppered Moth *Biston betularia* (V): two taken by trap; one 12 and another 21 June, Old Nisthouse, Harray (AF).

Bordered White *Bupalus piniaria* (R): two taken by trap; one 14 June, Sea Cottage, Longhope, Hoy (MH) and one 26 June, Queenamidda, Rendall (BR).

Straw Dot *Rivula sericealis* (V): five taken by trap; one 6 June, Gillbreck, South Ronaldsay (LC&NF), one 13 July, Gerraquoy Farm, South Ronaldsay (SS&SS), one 15 and another 16 July, Cairston Road, Stromness (BS) and one 15 July, Sea Cottage, Longhope, Hoy (MH).

Small Purple-barred *Phytometra viridaria* (U): one seen 27 May, Lyra Hill, North Walls (SVG). This is the second record for Small Purple-barred, the first was 17 June 2003, Nowt Bield, Hoy (KB).

Dewick's Plusia *Macdunnoughia confusa* (I): one found on the outside of trap 17 September, White Street, Kirkwall (AS). This is the second record for Dewick's Plusia in Orkney, and the fourth record for Dewick's Plusia in Scotland. The first Orkney record was 2 August 1969, Scorradaale, Orphir (RIL).

Gold Spangle *Autographa bractea* (R): three taken by trap; one 13 July, Sea Cottage, Longhope, Hoy (MH), one 18 and another 19 July, Cairston Road, Stromness (BS).

Lempke's Gold Spot *Plusia putnami gracilis* (U): six taken by trap; one 17 and another 20 July, Gerraquoy Farm, South Ronaldsay (SS&SS), and four between 19 and 27 July, Cairston Road, Stromness (BS).

Grey Dagger *Acronicta psi* (R): four larvae records; one 7 August, Quoyberstane, St Ola (SVG), one 23 Tankerness House Garden, Kirkwall (SVG), one 26 August Weyland Farm, St Ola (SVG) and one 31 August Herston, South Ronaldsay (JMc&RMc).

Grey/Dark Dagger agg *Acronicta tridens/psi*: 40 records for Grey/Dark Dagger were made at the following locations between 20 May and 2 August: High Street, Kirkwall; Berstane House, St Ola; Cairston Road, Stromness; Quoyberstane, St Ola and Sea Cottage, Longhope. As Grey and Dark Daggers cannot be separated except by genitalia examination, all adult records for these two moths are recorded as agg. (CJ&JB, NC, SVG, MH, SS&SS, BS).

Knot Grass *Acronicta rumicis* (V): one by trap 20 May, Cairston Road, Stromness (BS) and one seen 2 June, Sea Cottage, Longhope, Hoy (MH). These are the second and third records for Knot Grass in Orkney; the first was 31 May 2007, Northolme, St Ola (B Adam).

Codling Moth *Cydia pomonella* (U): one seen 23 June, Queenamidda, Rendall (BR). This is the second record for this moth in Orkney, the first being 12 July 2012, Surrigarth, Westray (DO&SO).

Clouded Yellow *Colias croceus* (V): one seen 12 June, Holm (ED).

Red Admiral *Vanessa atalanta* (I): seen between 25 May and 29 October across Orkney, with 316 individuals recorded.

Painted Lady *Cynthia cardui* (I): seen between 30 May and 5 September across South Isles and the Orkney Mainland, with 17 individuals recorded.

Peacock *Inachis io* (I): one 22 June, Cairston Road, Stromness (BS) and one 24 June, Old Nisthouse, Harray (AF).

Bee Moth *Aphomia sociella* (R): two taken by trap; one 25 July, Berstane House, St Ola, (NC, SS&SS) and one 27 July, Cairston Road, Stromness (BS).

Dioryctria abietella (V): two taken by trap; one 8 June, Cairston Road, Stromness (BS) and one 17 September, 34 High St, Kirkwall (CJB&JB).

Rusty-dot Pearl *Udea ferrugalis* (I): four taken by trap; one 13 September, Sea Cottage, Longhope, Hoy (MH), one 20 September, Smyril, Stenness (ERM), one 18 October and another 1 November, Berstane House, St Ola, (NC).

Mother of Pearl *Pleuroptya ruralis* (V): eight taken by trap and one seen in the field. One seen 9 June and six by trap between 25 and 28 July, Berstane House, St Ola, (NC, SS&SS) and two 17 July, Cairston Road, Stromness (BS).

Rush Veneer *Nomophila noctuella* (I): three taken by trap; one 30 August, Gerraquoy Farm, South Ronaldsay (SS&SS), one 18 September and another 18 October, Sea Cottage, Longhope, Hoy (MH).

Eudonia truncicolella (U): one taken by net 9 June, Sea Cottage, Longhope, Hoy (MH).

Fox Moth *Macrothylacia rubi* (R): 42 larvae seen between 3 September–10 October, North Walls and Hoy (BR, CJB&JB, IS). One adult seen 7 June, Burn of Ore, North Walls (MH, JC).

Humming-bird Hawk-moth *Macroglossum stellatarum* (I): one taken by trap 20 September, Smyril, Stenness (ERM).

Bedstraw Hawk-moth *Hyles gallii* (I): one taken by trap 13 July, Gerraquoy Farm, South Ronaldsay (SS&SS).

Small Fan-footed Wave *Idaea biselata* (V): seven taken by trap; four 25 July, Bayview, Herston, South Ronaldsay (JMc&RMc) and three 27 July, Berstane House, St Ola (NC).

Pine Carpet *Thera firmata* (R): two taken by trap; one 5 August, Berstane House, St Ola, (NC), and one 13 September, Sea Cottage, Longhope, Hoy (MH).

Spruce Carpet *Thera britannica* (U): four taken by trap between 29 September and 19 October, Berstane House, St Ola, (NC).

Barred Straw *Eulithis pyraliata* (R?): five taken by trap; one 13 July and another 20 July, Gerraquoy Farm, South Ronaldsay (SS&SS), one 21 July and another 27 July, Bayview, Herston, South Ronaldsay (JMc&RMc) and one 22 July, Gillbreck, South Ronaldsay (LC&NF).

Fungi in Binscarth Wood

Julian Branscombe and Derek Mayes



There are riches under the canopy of Binscarth Wood in autumn. The walk in through the field from Finstown starts any foray with a few fungi of grazed grassland – the odd waxcap *Hygrocybe* sp. or **Dung Roundhead** *Stropharia semiglobata*, but the main event starts once you get through the gate in the wonderful old wall, itself teeming with lichens and invertebrates.



In the wood your eyes need to be peeled to find gems amongst the leaf litter, around the bases of beech trees or on rotting wood. With its enchanting atmosphere, age and range of tree species, over 200 species of larger fungi have been found here. Without a doubt, many more remain to be detected.



Not far past the entrance, the right-hand side of the track is flanked by **Beech** *Fagus sylvatica*. Peer into the leaf litter to see the fruiting bodies of the **Deceiver** *Laccaria laccata*, the **Beech Milkcap** *Lactarius blennius* and perhaps the odd specimen of **Red Cracking Bolete** *Boletus chrysenteron* – the fungal partners of these fine trees.

Crossing the burn, we find a dense stand of that dreaded invader of Orkney woods, **Salmonberry** *Rubus spectabilis*, which may hide a superb display of more Beech-dependent fungi. The large yellow fungi, with their fragile granular flesh, will be **Geranium Brittle-gills** *Russula fellea*. Nearby, you may well see the **Mild Milkcap** *Lactarius subdulcis*.



Binscarth's fallen trunks yield the full set of the common *Xylaria* species. The matchstick-sized **Candlesnuff Fungus** *X. hypoxylon* is joined by both of its larger cousins, **Dead Man's Fingers** *X. polymorpha* and **Dead Moll's Fingers** *X. longipes*.

Lepidoptera report 2014

Sydney Gauld

2014 was a good year for Lepidoptera records with four new county records: **Cork Moth** *Nemapogon cloacella*, **Welsh Wave** *Venusia cambrica*, **Peacock Moth** *Macaria notata* and **Least Black Arches** *Nola confusalis*. There was also a fourth record for Scotland of **Dewick's Plusia** *Macdunnoughia confusa*.

7242 records were made in 2014, comprising 265 species at 137 locations.

Listed below in more detail are the four new species plus some of the more interesting records. The report this year is in the new order from 'Checklist of the Lepidoptera of the British Isles, 2013'.

In the following list the following abbreviations are used:

R - Resident; R? - Probably a Resident but not proven; RI - Resident + Immigrant; I - Immigrant; U - Status Uncertain; V - Vagrant; C? - Possible Colonist

New to Orkney

Cork Moth *Nemapogon cloacella* (V): one taken by trap 28 July, Queenamidda, Rendall (BR). The Cork moth is found throughout the British Isles up to Sutherland. It lives in woodland, where the larvae feed on bracket fungi. The moth is on the wing from May to September.

Welsh Wave *Venusia cambrica* (U): two taken by trap, one 7 July, Berstane House, St Ola, (NC) and another 13 July, Sea Cottage, Longhope, Hoy (MH). The Welsh Wave is found sparsely across the British Isles except in the south east of England where it has not been recorded. The larvae feed on Rowan and the adult is on the wing from June to August.

Peacock Moth *Macaria notata* (U): one at light door 14 June, Berstane House, St Ola, (NC). The Peacock Moth is found in southern England and Wales and sparsely across the Highlands of Scotland. The larvae feed on Birch and the adult is on the wing from May to July.

Least Black Arches *Nola confusalis* (U): five at light door and three taken by trap 15 May–2 July, Berstane House, St Ola, (NC). Least Black Arches is seen frequently in England but records become sparser the further north you come in Scotland. The larvae feed on various trees and bushes, and the adult is on the wing during May and June.

Other Sightings of Interest

Bird-cherry Ermine *Yponomeuta evonymella* (I): one taken by trap 28 July, Berstane House, St Ola, (NC).

Honeysuckle Moth *Ypsolopha dentella* (R): eight taken by trap between 15 and 31 August, 34 High St, Kirkwall (CJB&JB).

Elachista atricomella (U): one taken by trap 29 May, Sea Cottage, Longhope, Hoy (MH). This is the third record for this moth; previous records are one 20 August 2000, Lochside, Harray (SVG) and one 9 August 2013, Cairston Road, Stromness (BS).

Twenty-plume Moth *Alucita hexadactyla* (U): 12 recorded, eight between 19 February and 27 August. Four taken by trap between 20 May and 7 June, all at 34 High St, Kirkwall (CJB&JB).

References

Booth, C.J. 1996. Symphyta: Sawflies. *Orkney Naturalist*, 1996: 55.

Sheppard, D. 1995. Provisional list of RDB sawflies (Hymenoptera: Symphyta) occurring in Scotland. In: Ravenscroft, N.O.M. *Priorities for invertebrate conservation in Scotland: a review*. Scottish Natural Heritage Review No. 39.

Stockan, J.A. (in press). Orkney sawflies (Hymenoptera): a rich island fauna? *Entomologists Gazette*.



Figure 1: The tiny leaf mining sawfly *Scolioneura betuleti* (photo by Derek Mayes).



Figure 2: Giant horntail or wood wasp, *Urocerus gigas*, in Binscarth (photo by Lee Johnson).

Many stumps are swathed with stout **Honey Fungus** *Armillaria mellea*, with other common wood rotters including the **Deer Shield** *Pluteus cervinus* and **Sulphur Tuft** *Hypholoma fasciculare*. In parts of the wood you can find dead wood which has been turned green by the brightly-coloured microscopic mycelium of the **Green Elfcup** *Chlorociboria aeruginascens*.



Other beauties to watch out for are the orange cups, fringed with long dark hairs, of the eyelash fungi from the Genus *Scutellinia*. These are typically found on logs lying in damp ground. These could be the **Common Eyelash** *Scutellinia scutellata* but several other species look more or less identical, and you need to get them under a microscope to work out which one it is for sure. They are all stunning, and have earned various nicknames like the Molly Eye-winker.

The little brown jobs – which often seem to be rotters, feeding off the fallen leaves and twigs – are well worth a much closer look. If you can identify them, you might find their names a delight. When you find *Tubaria conspersa* and admire the texture of this beautiful toadstool then you can see immediately why it has been given the official English name of the small brown **Felted Twiglet**. Others are sorely in need of a more memorable label. A common species in the wood is *Flammulaster granulatus*. Look closely at its small caps dotted with fine shiny granules and you'll agree this species deserves better – Dusted Coffee-gill might fit. Can anyone come up with something even more appropriate?

The commonest tree in the wood is the **Sycamore** *Acer pseudoplatanus*. Look out for two species on its trunks. A summer visit may reveal the stunningly patterned and surprisingly short-lived brackets of **Dryad's Saddle** *Polyporus squamosus*. From mid-autumn onwards, you can hope to find the well-named **Porcelain Fungus** *Oudemansiella mucida*, with its lustrous and sticky white caps.



The west end of the wood has a stand of conifers. These will have specialist fungi which act as a greatly enhanced root system for these pines and spruces, but the fungi involved seem to be very shy-fruiting, so they are seldom seen. Instead, the conifers provide variety on most Binscarth Wood forays thanks to the species which specialise in their dead wood, such as **Common Rustgill** *Gymnopilus penetrans* and **Plums and Custard** *Trichomolopsis rutilans*.



A surprise in autumn 2014 was to find a number of waxcaps *Hygrocybe* spp. and clubs *Clavulinopsis* spp. by the mossy banks of the burn which runs through the heart of the wood. These species are often thought of as characteristic grassland species, but it is not unknown for them to be found in woodland; their discovery adds yet another dimension to the fungal picture.

+Species	Status	Distribution
<i>Rhogogaster viridis</i>	Common	Sa, Ha, F
<i>Sciapteryx soror</i>	Rare	H
<i>Scolioneura betuleti</i>	New 2014	O, Sa
<i>Strombocerus delicatulus</i>	Rare	F
<i>Tenthredo arcuata</i>	Common	O, Sa, B, Ha, F, H
<i>Tenthredo atra</i>	Common	Sa, H, SR
<i>Tenthredo balteata</i>	Rare	H
<i>Tenthredo brevicornis</i>	Common	O, St, Sa, H
<i>Tenthredo colon</i>	Rare	H
<i>Tenthredo mesomela</i>	Rare	H
<i>Tenthredo moniliata</i>	Possibly endangered	Unknown
<i>Tenthredo obsolete</i>	Rare	F
<i>Tenthredo olivacea</i>	Rare	SH
<i>Tenthredo vespa</i>	Rare	Unknown
<i>Tenthredopsis coquebertii</i>	Common	F, K, H
<i>Tenthredopsis friesei</i>	Rare, pRDB3 ¹²	F
<i>Tenthredopsis nassata</i>	Common	O, St, B, E, Re, F, H

Table 2: Flight periods of commonly occurring sawfly species in Orkney.

Species	May	Jun	Jul	Aug	Sep
<i>Empria pallimacula</i>					
<i>Hemichroa crocea</i>					
<i>Craesus septentrionalis</i>					
<i>Nematus oligospilus</i>					
<i>Pachyprotasis rapae</i>					
<i>Dolerus aeneus</i>					
<i>Pachyprotasis rapae</i>					
<i>Rhogogaster viridis</i>					
<i>Tenthredo arcuata</i>					
<i>Tenthredo atra</i>					
<i>Tenthredo brevicornis</i>					
<i>Tenthredopsis coquebertii</i>					
<i>Tenthredopsis nassata</i>					

Acknowledgements

Thanks are due to Julian Branscombe, Derek Mayes, Brian Ribbands, Brian Hamill, Lee Johnson and John Crossley for additional records, and to Sydney Gauld for organising a sawfly training course which generated further records. Andrew Liston confirmed the identity of *Phyllocolpa carinifrons*.

Status, distribution and flight periods of sawflies in Orkney

Due to increased recorder effort, the status and distribution of sawflies in Orkney has become much better known in recent years (Table 1). However, there remains several species which are only known from a single date or location. Of the eight new species added to the list during 2014, all but *Phyllocolpa carinifrons* are likely to be fairly common and widespread. Most sawflies are present as adults during June and July in Orkney though some, such as *Dolerus* spp. emerge as early as March elsewhere. Sufficient information now also allows predictions of the flight times of selected species as a first step to understanding more about their phenology and ecology (Table 2).

Table 1: Revised status and known distribution of sawfly species found in Orkney.

Abbreviations are: O = Orphir, St = Stenness, Sa = Sandwick, B = Birsay, E = Evie, Re = Rendell, Ha = Harray, F = Firth, K = Kirkwall & St. Ola, H = Hoy, SR = South Ronaldsay, R = Rousay, SH, Sweyn Holm. ¹Sheppard, 1985

²Possibly only found in Orkney in UK context.

Species	Status	Distribution
<i>Sirex juvencus</i>	Non-resident	K
<i>Urocerus gigas</i>	Rare	F
<i>Cimbex femoratus</i>	Non-resident	K
<i>Allantus calceatus</i>	Rare	H
<i>Amauronematus histrio</i>	New 2014	Ha
<i>Ametastegia glabrata</i>	New 2014	O
<i>Craesus septentrionalis</i>	Common	O, St, Sa, H
<i>Dolerus aeneus</i>	Common	O, E, F, H
<i>Dolerus aericeps</i>	Rare	H
<i>Dolerus gonager</i>	Rare	B
<i>Dolerus nigratus</i>	Rare	B
<i>Dolerus varispinus</i>	New 2014	B
<i>Dolerus yukonensis</i>	Rare	F
<i>Empria pallimacula</i>	New 2014	Ha, R
<i>Hemichroa crocea</i>	Scarce	Sa
<i>Macrophya montana</i>	Rare	Unknown
<i>Monophadnus pallescens</i>	Rare	H
<i>Nematus ferrugineus</i>	Common	Sa, H
<i>Nematus incompletus</i>	Rare	B
<i>Nematus miliaris</i>	New 2014	Sa
<i>Nematus oligospilus</i>	Common	Sa, H
<i>Nematus pavidus</i>	Scarce	Sa
<i>Nematus ribesii</i>	Probably common	St
<i>Nematus stichi</i>	Rare, pRDB3 ¹	H
<i>Pachyprotasis rapae</i>	Common	E, F, H
<i>Phyllocolpa carinifrons</i>	New 2014	O
<i>Playcampus luridiventris</i>	Scarce	K, SR
<i>Pontania crassipes/herbaeae</i>	Rare	Unknown
<i>Pristiphora geniculata</i>	New 2014	O

An autumn visit to Binscarth Wood is an experience to treasure, whether your interest is in the joy of finding fungi and admiring their ephemeral beauty (regardless of what they might be called) or whether you are determined to name these tricky organisms. There is no better place to wonder at the hidden fundamentals of their role in the ecology of woodland.



Whilst the months of September to November will produce the longest species lists, it's never the wrong time to go there – even in the darkest depths of winter there are fungi to be found. And Binscarth Wood always offers delights which are rare in Orkney – tumbling water, stunning arboreal geometry, breezes sighing through the canopy, squeaking branches and creaking tree trunks.

(All photos by Derek Mayes)

Beware the Slime! It creeps, it slides, it feeds, it hides... *Lee Johnson*

I can't think of slime moulds without bringing to mind the 1950s science fiction film posters advertising movies about monstrous green slime enveloping towns and devouring all before it, hence the title of this article. However they are altogether less intimidating little organisms.

I first discovered the joys of slime moulds (myxomycetes) after coming across a mass of what looked like pink slug eggs on a fallen log whilst on a woodland walk. I took out my camera to photograph them and went home to pore over my books in order to ID them. I soon discovered that this was not as easy as it first seemed. After learning that they were in fact the fruiting bodies of slime mould, I resolved to learn more and discovered organisms with exciting common names such as Dog's Vomit and Wolf's Blood. I eventually managed to track down and purchase a copy of Bruce Ing's *Myxomycetes of Britain and Ireland* and I was hooked.

I was lucky enough to receive a BMS Small Grants Award enabling me to take part in a short five day FSC course taught by myxomycete expert Professor Bruce Ing. The course involved the study, collection, examination and identification of myxomycetes and covered such wonders as the use of moist chamber techniques in order to culture and study the minute species which live on the bark of trees.

However one doesn't need to indulge in 'Grow Your Own' myxomycetes, they can be found on a stroll through the woods or even on your garden lawn.

I am sure many of you have seen blobs of what looks like dog vomit in the grass? Well, that is likely to be the slime mould *Mucilago crustacea*. Not all species are as unattractive as this; in fact many are very beautiful and intricate.



Mucilago crustacea
recorded from South
Ronaldsay
(Lee Johnson)

So what are they?

Plasmodial slime moulds are generally studied by mycologists but they are not actually fungi; in fact they are members of the Kingdom *Protista*. Samples of myxomycete material have been found in amber dating back as far as 50 million years ago, although fossil records are very rare due to the delicate nature of the fruiting bodies. There are currently around 968 species of myxomycetes worldwide (1107 including varieties) with around 376 found in the UK, although new discoveries are made frequently.

Other records for 2014

A particularly exciting find was the re-discovery of *Urocerus gigas*. As the UK's largest sawfly, this is an impressive insect at around 4 cm in length. The toughened needle-like ovipositor of the female earns this group of sawflies the common name of horntails. They are also known as wood wasps as the larvae feed on decaying wood. Development on such a nutritionally-poor diet takes several years and the larvae also rely on fungal enzymes, introduced into the tree by the female sawfly along with the eggs, to help break down cellulose. This species has been found anecdotally since 1980 with three confirmed sightings in 1995 (Booth, 1996). The observation of a female ovipositing on pine trees *Pinus* sp. in Binscarth in September (Figure 2) confirms the presence and breeding status of this species in Orkney.

Though Sandwick remains the only known location for the **Striped Alder Sawfly** *Hemichroa crocea*, it does occur in high numbers. More than a hundred larvae were found on **Whitebeam** *Sorbus aria* during the last week of August. The **Birch Sawfly** *Craesus septentrionalis* was found in Orphir and Burray during the latter half of July. Two further gregarious species, *Nematus ferrugineus* and *N. pavidus*, were both found in Sandwick on Willow *Salix* sp. during early June and late August respectively. *N. ferrugineus* was also found for the first time in Stenness. Both are likely to be widespread.

Two female *Platycampus luridventris* were found sheltering from the rain on the underside of **Alder** *Alnus glutinosa* leaves at Muddisdale in mid-June. This species has only previously been recorded as larvae.

A single female *Nematus oligospilus* was found ovipositing on Willow *Salix* sp. in Sandwick in early June.

Tenthredopsis sawflies seemed to be particularly abundant in 2014. During the first half of June, males of *T. coquebertii* were found at the Loch of Wasdale and Muddisdale, while *T. nassata* was found at the Sands of Evie, the Bu in Orphir, and Rendell. The larvae of these sawflies feed on grasses and the adults are found in meadows and other grassy habitats. Another grass-feeding species *Dolerus aeneus* was found as adults in Evie, Sandwick, Orphir and Birsay either feeding on umbellifers or resting amongst grass.

The distinctive black and white sawfly *Pachyprotasis rapae* was last recorded in 1983. However, females were observed on umbellifers at the Sands of Evie and Loch of Wasdale during early June. The larvae feed on a range of low-growing plants.

Finally, an interesting finding was a mating couple of *Tenthredo olivacea* on Sweyn Holm in early July. This beautiful vivid green sawfly has only been recorded once before in 1952 and the location was unspecified.

Sawflies Report 2014

Jenni Stockan

A further eight new sawfly species for Orkney were found in 2014, bringing the total number of species recorded to 46. Of these eight species, one was also a new Scottish record. Thus, compared to other Scottish islands, Orkney seems to be particularly species-rich for sawflies (Stockan, *in press*). There is no doubt there are further species that remain to be added to this list. Records from 2014 also illustrate the diversity of species present from tiny leaf-mining sawflies to the UK's largest.

New species in 2014

Six larvae of the **Mountain-ash Sawfly** (*Pristiphora geniculata*) were found on **Rowan** *Sorbus aucuparia* in Orphir in mid-August. Not only was this a new species for Orkney but it was also the first time this species had been found in Scotland. This is surprising given the species' gregarious nature and status as a pest elsewhere.

Another gregarious species, *Nematus miliaris*, which feeds as larvae on **Sallow** (*Salix caprea*), was found in Sandwick in early June. An old record of '*Nematus capreae*' in Hoy in 1982 could also have been this species, though it more likely refers to *N. oligospilus*.

Both *Phyllocolpa carinifrons* and *Scolioneura betuleti* have more unique habits. *P. carinifrons* is a leaf-rolling sawfly. Larvae of this species were found within rolled leaves of *Salix pentandra* in Orphir during July. In the UK, it has only been recorded rarely and at just three locations. It is more usually found across subalpine regions of central and southern Europe. The characteristically patterned larvae of *S. betuleti* can be found in leaf mines on **Birch** *Betula* sp.. This species was found in Orphir and Sandwick in late August (Figure 1).

A solitary larva of *Amauronematus histrio* was taken from **Eared Willow** *Salix aurita* along the Peathill Road, Harray, in June and reared to adulthood. Larvae feed on a range of *Salix* species. Adults are orange and black but the colour pattern on the abdomen can vary considerably.

One female **Dock Sawfly** *Ametastegia glabrata* was found on umbellifers at the Bu, Orphir, in June. This red-legged black sawfly is associated with meadows. The larvae are polyphagous on a range of low growing plants such as *Chenopodium*, *Rumex*, *Viola* and *Polygonum*.

Dolerus varispinus is an all-black sawfly very similar to *Dolerus aeneus*. Adult females were recorded from Evie and Orphir, feeding on umbellifers in early June. The green larvae feed on grasses.

A record of *Empria pallimacula* resting on **Least Willow** *Salix herbacea* was not only the first adult sawfly of the year (mid-May) but the first sawfly for the island of Rousay. This species was also found on **Meadowsweet** *Filipendula ulmaria*, the larval foodplant, at the Lochside Viewpoint. At first glance this appears to be a *Dolerus*-like black sawfly. However, the use of a magnifying lens reveals conspicuous paired grey markings on the abdomen distinguishing it as the genus *Empria*. No other sawfly has this patterning.

They exist as invisible plasmodium for most of the time, feeding on yeast, fungal spores, algae and bacteria in soil, on litter, wood and even living plants. When the food source is used up, the slime mould migrates upwards and develops fruit bodies which are often elaborate and brightly coloured. This is the point when they are visible to the naked eye but they are very small (often less than 2mm tall) and it requires some patience to find them. Once the fruit bodies have started to spore, the structures which help to identify them become visible under the microscope, so this is the best stage to collect them for study; too early and they will collapse before these features have fully developed.



A member of the genus *Arcyria*, sporing on a rotten log (Lee Johnson)

Collecting them for identification generally involves harvesting them with the substrate they are growing on and placing them carefully in a matchbox or other suitable container. If they are at the sporing stage they can be dried in air, examined under a microscope and stored indefinitely. Gluing the substrate to the bottom of the matchbox enables safe transportation and storage. You can also collect the fruit bodies in the field and attempt to bring them to the sporing stage at home in a cool dry place.

It would be wonderful to get more slime mould records for Orkney (locations like Binscarth Woods are great places to look, especially on rotten logs) so if you do see any when you are out and about and would like to collect a sample, I would be more than happy to receive them and offer an identification. Photographs can be useful too. I can be contacted on lee_nestofvipers@hotmail.co.uk



A member of the genus *Stemonitis*, changing colour as it matures (Lee Johnson)

White-tailed Bumblebee - DNA results change the textbooks

As noted above in the entry for **Buff-tailed Bumblebee** *B. terrestris*, there are difficulties separating this species from the *Bombus lucorum* aggregate. However, in the case of males, difference in the colour of the hair on the face (black in *B. terrestris*, yellow in *B. lucorum sens. lat.*) was hitherto regarded as diagnostic (e.g. Prys-Jones & Corbet, 1991; Edwards & Jenner, 2009) – until some bees sent for DNA coding from Orkney upset the long-accepted view! This came about as a result of a purported male *B. terrestris*, quite properly identified by colour, being recorded in Kirkwall in August by a visiting expert. Not realising that the identification should have been conclusive, I queried the record, thinking it was probably a dark form of *B. cryptarum*, with which I thought I was familiar in Orkney. This caused some consternation in the bumblebee world, with the result I was asked to capture some of these dark Orkney bees for DNA coding.

It was the end of September, the weather was deteriorating and bumblebees becoming scarce, but I did manage to capture some males in South Ronaldsay, Hoy and Stromness. The results came back and to my relief I was not proved wrong: they were indeed black-faced *B. cryptarum*. The results were also interesting in separating *B. lucorum sens. strict* from *B. cryptarum* males on colour, *B. cryptarum* being consistently darker, in most cases very obviously. However this is not the accepted view in Britain as a whole and the sample was too small (11) to be conclusive.

Is it possible that Orkney *B. cryptarum* differ in colour from those in the rest of the country, and are distinct at some taxonomic level? Well, either that or there has been widespread misidentification of this species. One can be sure that more bees will be sent for DNA coding from other parts of the country in 2015.



References

Prys-Jones, Oliver E. & Corbet, Sarah A. 1991. *Bumblebees*. Slough: Richmond Publishing Company.

Edwards, Mike & Jenner, Martin. 2009. *Field Guide to the Bumblebees of Great Britain & Ireland*. Ocelli Ltd.

Solitary bees and wasps

Small-flecked Mining-bee *Andrena coitana*. (Rare)

This was recorded on two occasions from the known site at Queenamidda, Rendall. A single individual was seen on 10 July and three the following day. There were freshly excavated nest holes (JBR).

Tormentil Mining-bee *A tarsata* (Rare, UKBAP Priority Species)

A colony of what appeared to be bees of this species was found by the track up to Cuween Cairn, Firth, approx. HY365127 on 14 July, by Kevin West. His photos, though clear, are not quite sufficient to be sure which species of this large genus these bees were. Hitherto the only known breeding colonies of *A. tarsata* were in Hoy.

Mason Wasp *Ancistrocerus oviventris* (Widespread but uncommon)

There were three reports, two from Rendall and one from Stenness, between 10 and 29 July (JBR). The Rendall records, from Queenamidda, HY3720 were new for 10 km square.

Ants

Formica lemani, a black ant (Rare)

Several black ants were noticed on a steep grassy and rocky bank at Sandwick Bay, South Ronaldsay, ND43068923 on 27 April. One was captured for identification and sent to an expert for confirmation. On 2 May the nearby area was searched and more ants were found 130 m away at ND43198929. They were seen again on 21 July during a Botanical Society outing. There is no doubt that this is an established breeding population, new to the county. (JEC, det. M A Macdonald)

Myrmica ruginodis, a red ant (Widespread and common)

Though common, this species was reported on just two occasions, from Burn of Forse, North Walls and Sandwick Bay, South Ronaldsay (JEC & JBR).

Many thanks to all contributors:

Liz Anderson (LA), Trish Avis (TA), Chris Booth (CJB), Julian Branscombe (JB), Jenny Campbell (JC), Lindsay Campbell (LC), Richard Comont (RC), Grace Currie (GC), Sydney Gauld (SG), Mary Harris (MH), S. Holinrake, Lee Johnson (LJ), Phil Knot (PK), Andy Knight (AK), Alan Leitch (AL), Andy Mitchell (AM), Brian Ribbands (JBR), Eileen Summers (ES), Kaye Thomas and Kevin West.

Have you seen.....?

Rowan Crown

Derek Mayes

Rowan Crown *Gymnosporangium cornutum* is an obvious but infrequent fungus-induced gall (for more information on galls see article on the Nettle Cluster-cup Gall on page xx – ed.). *G. cornutum* is one of four established *Gymnosporangium* species in the UK. They are rusts and their life cycles alternate between different host plants, in this case between **Juniper** *Juniperus communis* and a range of rosaceous trees and shrubs. My 2014 record appears to be the first for Orkney and in Britain it has not hitherto been recorded anywhere north of Alness, Ross and Cromarty, yet is found well above the Arctic Circle in north Norway and Iceland. As it is spore-bearing it is likely to be seen more and more in the coming years, but it may just have been missed. So, the hunt is on!



Figure 1



Figure 2

It seems to appear in mid-July, at first as a pale-yellow blemish on a leaflet, rather like a bird dropping (Picture 1). Gradually, over a week or so, darker spots appear (Picture 2). Eventually the leaf and vein tissue begins to swell on the lower side, gradually to produce, over several weeks, a small spiky 'crown' (hence *cornutum*) of papillae (Pictures 3 & 4). I am told this sometimes appears on the berries too. Watching and photographing the development on two small trees in my garden, over a few precious weeks in the summer of 2014, was a special treat for me and I was able to observe the whole process to the point of spore dispersal.



Figure 3



Figure 4

I visited quite a lot of other Rowan trees but I found the gall in only two other locations. Anyone observing this gall is asked to report it to the Wildlife Information and Records Centre in Kirkwall.

Once again, there is much good information to be found on the Internet: searching for 'Rowan Crown'.



Figure 5

Further information

In addition to *Gymnosporangium cornutum* Juniper hosts *G. clavariiforme*. Both should be visible on the Juniper in the first half of the year. The alternate host for *G. clavariiforme* is **Hawthorn** *Crataegus monogyna*, with structures found on the underside of leaves and on berries (as in *G. cornutum*). The other two *Gymnosporangium* species, *G. confusum* (recorded in northern England) and *G. sabinae* (recorded in mid-Scotland), may occur on Juniper or Hawthorn and possibly also imported fruit trees *Pyrus* spp.

The little, upside-down, spiky crown structures of *G. cornutum* can be found in the summer and autumn months and are the main source of records (the yellow gelatinous blobs that may be found in the spring on juniper are less commonly recorded). Do check out the rowans – it's amazing what turns up when you know where to look! Checking the underside of hawthorn leaves can also be productive for *G. clavariiforme* - the structures are quite similar to *G. cornutum*.

(All photos by the author)

making a positive identification. Finally a male captured on 23 August, again in Kirkwall, by RC was identified as *B. terrestris*. However, this identification cannot now be certain either. Only the capture or high quality photograph of a queen will settle the matter.

Moss Carder Bee *B. muscorum* (Widespread but generally uncommon, except locally common in North Isles. UK Biodiversity Action Plan Priority Species)

16 sightings came from Birsay, Burray, Evie, Hoy, Kirkwall, Orphir, Rousay, Sanday, Stenness, South Ronaldsay and Swona (CJB, RC, JEC, JBR). This was more than usual. The earliest was on 14 May, a dead queen picked up during a Nature Festival walk at Faraclett, Rousay; the latest on 18 September, a torpid male at Moaness, Hoy (JEC and JBR).

Common Carder Bee *B. pascuorum* (Widespread and common, except absent some outer North Isles)

24 reports this year, more than usual for this dull-coloured and often overlooked species. Sightings were in Burray, Holm, Hoy, Kirkwall, Orphir, Rendall, Sanday and South Ronaldsay, from 7 April to 18 October (both dates Queenamidda, Rendall) (CJB, RC, JEC & JBR). The Sanday record (JEC) was the first for the island, which it has obviously now colonised. In the outer North Isles it was previously known only from Stronsay, where it was first recorded in 2000.

Barbut's Cuckoo Bee *B. barbutellus* (Rare, also rare in Scotland)

One female, North Flaws, South Ronaldsay, ND457856, 10 Aug (JEC). New for 10 km square and island.

Gypsy Cuckoo Bee *B. bohemicus* (Widespread but generally uncommon)

This was recorded on six occasions, from Burray, Hoy, Kirkwall, North Walls, Rendall and South Ronaldsay, between 7 May and 28 September (CJB, RC, JEC and JBR). Eight males at Moaness, Hoy on 28 September, all in a torpid state, clinging to flowers of Perennial Sowthistle *Sonchus arvensis*, were slightly unusual, but males can be locally quite numerous for short periods in late summer and autumn.

Social wasps

Common Wasp *Vespa vulgaris* (Local, can be common)

Four reports were from Kirkwall between 6 April and 23 October (CJB), and one from St Margaret's Hope (JEC). The 'Hope record involved at least 15 feeding on Fuchsia flowers.

Red Wasp *V. rufa* (Increasingly widespread but still uncommon)

Wasps of this species were reported on four occasions, from Rendall and South Ronaldsay, between 27 June and 25 August (LJ & JBR).

Norwegian Wasp *Dolichovespula norvegica* (Local and uncommon)

Just three reports, comprising two from Kirkwall (CJB) and one from Rendall (JBR) between 27 June and 25 August.

Tree Wasp *D. sylvestris* (Increasingly widespread, locally common)

Three reports, from Firth, Kirkwall and South Ronaldsay between 20 April and 19 July (CJB and JEC).

Heath Bumblebee *B. jonellus* (Widespread and locally common)

There just four reports, from Orphir, Stenness and South Ronaldsay, between 20 April (JEC) and 25 August (RC). As usual an under-reported species.

White-tailed Bumblebee *B. lucorum sens. lat.* (aggregate of *B. lucorum sens. strict.* and *B. cryptarum*) (Widespread and common)

This was reported on 30 occasions, from Birsay, Hoy, Kirkwall, Rendall, Rousay, South Ronaldsay and Swona (CJB, RC, JEC & JBR). Earliest date was 10 April in Kirkwall (CJB). It is usual to see the first individuals of this species in Kirkwall or Stromness, as they benefit from the towns' microclimate. Last date was 15 October in South Ronaldsay (JEC). Highest count was of 20 queens on 20 April at North Flaws, South Ronaldsay (JEC).

The two species which, in Orkney at least, comprise this aggregate (in the British Isles as whole there are three), *B. lucorum* and *B. cryptarum*, were recorded in August by a visiting expert from the Bumblebee Conservation Trust, but really one cannot be 100% certain of identity without DNA analysis. However, DNA sequencing was done on specimens captured elsewhere later in the year (see separate note), proving that both species are present, as was almost certain already. Sequencing carried out in 2009 had proved that *B. cryptarum* is widespread.

White-tailed Bumblebee *B. lucorum sens. strict.* (Distribution and status unclear, probably Mainland and linked South Isles only, where locally common (Hoy? Shapinsay?).

Two males, Herston, South Ronaldsay 5 October; one male Stromness 11 October (JEC, det. by DNA, Prof. Robert Paxton)

White-tailed Bumblebee *B. cryptarum* (Widespread and common)

Four males, 24 September, two females 3 October, North Flaws, South Ronaldsay; one male Moaness, Hoy 28 September; two males Herston, South Ronaldsay 5 October; and two males Stromness 11 October (JEC, det. by DNA, Prof Robert Paxton).

Buff-tailed Bumblebee *B. terrestris* (Unconfirmed)

There were three reports of bees that are likely to have been this species. However there are problems with distinguishing *B. terrestris* from the White-tailed Bumblebee *B. lucorum sens. lat.* by their colour patterns. There is no problem with queens: *B. terrestris* always have buff-coloured rather than white tails. *B. terrestris* workers on the other hand often have white tails, like *B. lucorum sens. lat.* Until very recently it was thought that males of these species could always be distinguished by the colour of the hair on the face (yellow = *B. lucorum sens. lat.*; black = *B. terrestris*) but this has now been disproved.

The first report was from Kirkwall on 25 March, where GC described a "very large bee with an orange tail". One cannot be sure what species this was, because *B. terrestris* has a buff, not orange tail, whilst the only other possible candidate, the Early Bumblebee *B. pratorum* (it is present on the north Caithness coast) does have an orange tail but is small. Then CJB saw single bees with light brown tails answering to the description of *B. terrestris* in Kirkwall on 10 and 13 June, but knowing the difficulties was cautious about



Have you seen.....?

Nettle Midge Gall

Derek Mayes

Few people take more than a passing interest in stinging nettles but they are an incredible resource for a number of organisms.



Nettle Midge Gall (*Desineura urticae*), sometimes known as the Nettle Pouch Gall, appears on the **Stinging Nettle** (*Urtica dioica*) [for more information on galls see article on Nettle Cluster-cup Gall on page 11 – Ed]. It is insect- rather than fungus-induced. I visited no nettle clump in Orkney during June and July 2014 (searching for *Puccinia urticata*) which was not playing host to some pretty interesting flies, moth and butterfly larvae, spiders, harvestmen, snails, slugs or beetles and, once I had discovered the galls of the Nettle Midge, I was hardly able to find a nettle clump without it.

The midge, a small, mosquito-like fly, is not at all easy to see but the gall is amazing and very obvious. It is the plant's response to the eggs inserted by the midge into the tissue of the nettle. By early August just about every nettle clump in Orkney is likely to be hosting the gall, in which up to seven pale grubs will be present. Looking at first like a simple pale blemish, it soon balloons (Figure 1) into a substantial hollow growth up to 8mm long as a very distinctive growth (pouch) on leaf veins or at the base of leaves on the thin stems, often with several galls in close proximity.

Eventually, after about 9-11 days (my observation), the gall hardens and begins to split along its length (Figure 2). When this begins, it is possible to prise it open, taking care with those fine,



Figure 2



Figure 3

stinging hairs (*trichomes*), to reveal the larvae of the midge (Figure 3).

I have not, knowingly, observed the midge, nor the pupal stage and that's what I'll be studying at the time this publication reaches you. One again the Internet is a source of very valuable information. More detail about this organism can be found by searching for *Desineura urticae*. Anyone observing this gall is asked to report the sighting direct to Wildlife Information and Records Centre in Kirkwall. Please include a date and location of the sighting.



Figure 4

All photos by the author

Bees, Wasps and Ants Report 2014

John Crossley

157 records of 18 species were received this year, in both respects an increase on last year and the year before. Also, more observers have been sending in records – 20 this year compared to ten in 2013. Facebook has played its part in that. There have been no obvious changes from previous years in abundance of the known species. There have been many more reports of **Great Yellow Bumblebee** *Bombus distinguendus*, but this is almost certainly due to the publicity this species has received (being easily recognisable and a Facebook star) rather than any real increase, for numbers of individuals reported have been consistently low. Other main events of the year have been the discovery of an ant species new to Orkney, *Formica lemani*, a **black ant** with no common name, and unconfirmed reports of a new bumblebee, **Buff-tailed Bumblebee** *Bombus terrestris*.

Bumblebees

Great Yellow Bumblebee *Bombus distinguendus* (Widespread but generally uncommon. UK Biodiversity Action Plan Priority Species)

There were 22 records, the earliest on 11 May on Brinkie's Brae, Stromness (JB). Other reports were from Birsay (CJB, JB, AL, & LA), Burray (RC), Copinsay (AL), Eday (JC), Firth (AL), Egilsay (AL), Kirkwall (CJB), Rousay (AL), Sanday (JEC), Sandwick (RC), Shapinsay (SH), St Andrews (ES), South Ronaldsay (JEC, LC & AM), South Walls (TA & MH), Stenness RC, AK & AL) and Westray (SG, PK & ES). The record from Fishing Geo, Rousay, HY365309 was new for 10 km square HY33 (northwest Rousay); the one from Rackwick, Westray, HY502424 was new for HY54 (southeast Westray). The Shapinsay record was only the second for the island and the first for 10 years. Records were of singles except four from North Culdigo, Egilsay (AL), eight from a field near Lady Village, Sanday (JEC) and five at Mount Pleasant, Stronsay (SG & ES). Last one seen was on 28 Sept at Greens, St Andrews (ES).

The only parish or island of any size with no record at all is North Ronaldsay – surely that can be rectified.

Garden Bumblebee *B. hortorum* (Widespread and common)

15 reports from Birsay, Burray, Orphir, Rendall, Rousay, South Ronaldsay, Stenness and Swona, between 5 May and 15 October (CJB, RC, JEC & JBR). The Swona record was the first for that island (JBR).

In the photo, note colour pattern compared to that of White-tailed Bumblebee *B. lucorum* agg. on page 67: the central area spanning thorax and abdomen is yellow, not black as in the latter species.



Garden Bumblebee (John Crossley)

On North Ronaldsay 2 insects were noted at Hooking Loch on 13th June. Records forwarded by AD show that this species was first reported in 2009 and every year since. The Lochs of Garso, Hooking and Brides seem to have thriving populations.

Emerald Damselfly *Lestes sponsa*

Lack of monitoring meant that only two records of this damselfly were received, but one was very significant as it proved that the species had spread southwards from North Hoy where it was first recorded in 2010. BK photographed a male and a female at the Wee Fea pool near Lyness on 5th August.

It was half expected that this insect might have made the sea crossing to Mainland Orkney but observers here have so far been unable to discover it.

Plans for 2015

Useful field trips in 2015 might include:

- A look at the Lochs of Griffyelt to determine the status there of Black Darter and Common Blue Damselfly;
- A visit to the pools in the upper reaches of the Burn of Ore and Heldale Water to discover whether the Emerald Damselfly has spread that far south on Hoy and a look at the Wee Fea pools to confirm breeding. This trip could be combined with a search for breeding areas of Four-spotted Chaser and Golden-ringed Dragonfly;
- A search of the Moss of Whitestanes for suspected, but as yet undiscovered, breeding sites of Four-spotted Chaser;
- A search of Mainland Orkney for breeding sites of Common Hawker and for specimens of Emerald Damselfly.

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SA Sat Amar, TA Trish Avis, CB Chris Booth, JB Julian Branscombe, BK Betty Kirkpatrick, AD Alison Duncan, PM Penny Martin, ERM Eric Meek, D Mus Dave Musson, BR Brian Ribbands, LS Lee Shields, JT Jenny Taylor, GW Graeme Walker, BW Barbara Watt and CW Chas Whatmore.

Large Willow Aphid – new to Orkney

John Crossley



Large Willow Aphid (John Crossley)

Over several days in mid-August I noticed a flurry of insect activity around willow bushes along my farm track at North Flaws, South Ronaldsay. Bumblebees, wasps (which I seldom see at all) and flies were busy about the leaves and stems of the bushes and on the ground below, and they appeared to be feeding on something. Eventually on 22 August I noticed groups of unusually large and odd-looking aphids on some of the willow stems, and realised that the other insects must have been feeding on honeydew produced by the aphids.

The insects turned out to be Large Willow Aphids *Tuberolachnus salignus*. This aphid is quite distinctive in size, colour and in the presence of a thorn-like process on the back of the abdomen, through which honeydew is ejected. Another aggregation of these insects was shown to me in Kirkwall on 1 September by Kevin Tait. There must have been others elsewhere. These records were the first for Orkney. There were many sightings in north and west Scotland in 2014, though previously there had just been a single record from Scotland and very few from the British Isles as a whole.

The life history of *T. salignus* is poorly known and quite mysterious. None have been recorded between mid-March and July; they are especially active, in the south, in frosty and snowy weather; and no males have ever been found. It is thought that they might become a pest of short-rotation willows for biomass.

Website reference

<http://www.nhm.ac.uk/nature-online/life/insects-spiders/common-bugs/aphid-watch/>

The Flapper Skate

Penny Martin

Skate are large bottom-dwelling species in the shark family. They are characterised by flattened bodies comprised of greatly enlarged pectoral fins and have a long, pointed snout. Orkney waters support the largest known species in the world, the **Flapper Skate** *Dipturus cf. intermedia*, which reaches lengths of around 2.5 meters. Previously named the **Common Skate** *Dipturus batis*, this is now considered to be two separate species, **Flapper Skate** *D. cf. intermedia* and **Blue Skate** *D. cf. flossada*. They have a large mouth with rows of small angular teeth and are formidable predators, feeding on flatfish, crustaceans, molluscs and other fish species on the bottom and in mid water.

The taxonomic picture is confusing. These skates were originally classified separately, but in 1926 an influential study recognised only one valid species, Common Skate *Dipturus batis*. This classification went unchallenged for 80 years. As a result, commercial catches have been recorded as Common Skate, with the result that catches of the smaller, more resilient Blue Skate have entirely masked the decline of the Flapper Skate.

A French research team, led by Samuel Iglesias from the Marine Biology Station in Concarneau spent over a year in the mid 2000's working with French fisheries studying and taking DNA samples from over 4000 skate that had been caught. Morphological differences such as eye colour, size at sexual maturity and teeth shape are distinct in the two separate skate species. There are also genetic differences in a particular stretch of the DNA. It has turned out that these species not as closely related as once was thought.

Since 2000, these skates (under the aggregate name of *D. batis*) have been on the International Union for the Conservation of Nature (IUCN) Red List of threatened species. The current status is 'Critically Endangered', the last classification before extinction.

Dan Wise from Orkney Skate Trust comments:

There is now little doubt that Orkney represents a significant if not the most significant breeding area for *Dipturus. cf. intermedia* over the species' entire geographical range.

Since 2006 the Orkney Skate Trust has been cataloguing all data regarding the species, then known as the Common Skate *D. batis*. We have collected significant levels of data ranging from skate sightings by divers to egg case records from local beaches. The level of data we now have allow us to more effectively draw conclusions on the level of skate activity in the area, with this year shown to be an exceptional one in terms of egg case landings on the northwest Orkney Mainland from Skail Bay to Evie Sands.

Until the winter of 2014-15 since recording began in 2006 there were over 1000 egg cases reported to the Orkney Skate Trust. Records in the recent winter stand at over 4600 individual skate egg cases, most probably of *D. cf. intermedia*. This huge increase in egg cases washing to shore is therefore a departure from the normal year and it is not yet fully understood why this should be. Certainly the level of effort attributed to egg case data collection by dedicated conservationists Penny Martin and Helen Aiton has been a contributing factor, but through my

was seen patrolling this stretch of track by other observers over a period of several days but no breeding activity was noted at the quarry pool. The last Mainland record for this species was on 16th August when BR found an insect hunting in the lee of willows at Queenamidda.

Four-spotted Chaser *Libellula quadrimaculat*

There were no records of this elusive and uncommon breeding species in 2014.

Common Blue Damselfly *Enallagma cyathigerum*

Only 2 records were submitted, both on Hoy. On 5th July, LS found 20 at the lochans at the base of the Knap of Trowie Glen (ND239996), typical habitat for this species in Orkney. The second record was of a single male at the Wee Fea pool (ND2994, new 1-km square) on 5th August (BK). No doubt the species would have been present at all the usual sites on Hoy. However on Mainland what was of some concern was that JT visited the known breeding pools at the Lochs of Griffyelt (HY4006) to the East of the Hobbister Reserve in favourable weather and could not find this species or specimens of the Black Darter.

Large Red Damselfly *Pyrrhosoma nymphula*

A very interesting record came from DMus at Herston, South Ronaldsay, the first for that island. He found larvae of this species under stones in his garden pond (ND4291). Then, on 21st July, he photographed a recently emerged fly nearby. His pond was only 2 years old and must have been colonised soon after construction. It will be interesting to see if other species are attracted to this pond.

Elsewhere the Large Red seems to be thriving, with 15 counted at Dale, Costa (HY3127) on 16th June (DM), 14 at Queenamidda on 9th July (BR) and 17 at the Howe Road pools (HY3316) on 24th July (BR, DM). On 5th July DM found a single insect on the side of the ditch which flows under the road below Stromness Reservoir. This ditch flows into the Stromness Loons. A search of this and some other ditches in the Loons the same day failed to reveal any more damselfly. However the ditches and pools there were heavily weeded and most had been trampled by cattle, nevertheless this is an area worth visiting in the future. The earliest 2014 sighting of this species was on 12th May at Queenamidda (BR).

Blue-tailed Damselfly *Ischnura elegans*

2014 was an excellent year for this versatile, wide-ranging damselfly. A possible new breeding site was discovered on 24th July, a roadside quarry pool 800m South of the Merkister Hotel (HY301183) where DM and BR counted 37 insects.

Elsewhere there were: 40+ at Dale, Costa on 11th June (DM); 15 in the marginal vegetation at the western end of Stromness Reservoir on 5th July (HY2310) (PM, JT, DM); 14 at Sinclair's Cottage, Orphir (HY3004) (new 1-km square) on 22nd July (SA, DM), and 20 at the Hoxa "Tapestry" pools also on 22nd July (GW). At the Loch of Ouse, Mirkady, East Mainland (HY548073), ERM found a single insect on 21st July (a new 1-km square).

Noted on North Hoy were 5 at a pool on the Moss of Whitestanes (ND222996) on 24th June (CB) and 2 at the Rackwick "toad" pools 25th July (CB). Elsewhere on the island a female was recorded at the Wee Fea pool near Lyness on 4th August (BK) and a male was seen at Cantick (ND3489, new 1-km square) on 27th July (TA).

In the North Isles, JB found a single insect on Sanday just to the West of the parking area at Whitemill Bay (HY684466) on 19th July. The Loch of the Riv is nearby and a blue-coloured damselfly was recorded here in 2004 but the observer was unsure of the species. This seems a promising area for damselflies and would be well worth visiting in the future.

Odonata Report for 2014

Dick Matson

Hoy has always been the main stronghold of Odonata in the County but it was very much under-recorded in 2014. Hearteningly, GW and DM made contact with two keen wildlife photographers, BK and TA, who live on Hoy, and GW retrieved some of the records they had posted on Facebook. One record of particular significance showed the half-expected southward spread on Hoy of Emerald Damselfly. In the future, BK and TA will be a valuable source of data from this under-recorded part of Hoy.

Also, we received records new to us dating back to 2009 from AD at the North Ronaldsay Bird Observatory of Blue-tailed Damselfly sightings on some of the island's lochs. Additionally, anecdotal records came to light of this species having been seen at the Loch of Garso on North Ronaldsay for many years before that.

In 2014, Odonata breeding in 8 new 1-km Orkney squares was noted and a new species for South Ronaldsay (Large Red Damselfly) was discovered.

Black Darter *Sympetrum danae*

This species was found at the usual breeding sites on Mainland Orkney except at the Lochs of Griffyelt in Orphir. There were good numbers at the Howe Road pools (HY3316) in Harray with 14 counted on 24th July (DM), 27 the same day at the Brookfield pools in Rendall (HY383194) and 32 at the Howe Road pools on 27th August (BR, DM). At the pools at Queenamidda, Rendall (HY3720) there appeared to be fewer than usual (BR).

On Hoy, BK noted 2 at the Whaness Burn pool (HY244027) on 19th July and a pair in tandem at a pool near the Wee Fea plantation on Hoy (ND2994) on 4th August (new 1-km square). Also at Wee Fea, TA photographed a male on 30th August and a female on 2nd Sept.

There were no reports of the insect colonising new sites on Mainland in spite of its rapid range expansion here in recent years. The earliest record for the species in 2014 was of a single insect at the Brookfield Pool in Rendall (HY383194) on 22nd July (BR).

Golden-ringed Dragonfly *Cordulegaster boltonii*

No reports of this magnificent insect were forthcoming from Hoy, due entirely to lack of monitoring. Bizarrely the only record was of an insect photographed on a wall at Scapa Beach, Kirkwall (HY4308) on 8th July by BW. There have been no breeding records for this species on Mainland Orkney and this insect is thought to have emanated from Hoy.

Common Hawker *Aeshna juncea*

This species was very much under-recorded in 2014. Hoy records were of a single insect at the Rackwick "toad" pools on 9th July (JT) a second there on 28th July (CB), a male at Bu Hill (HY230046) on 20th July (BR), a male at the Pegal Burn on 24th (ND2997) (CW), an insect at Mel Fea (ND216977) on 1st August (LS) (new 1-km square), one at Back Saddles (HY199033) on 2nd August (LS), a female ovipositing at the Wee Fea pool on 4th August (BK), and a single male there the next day; finally at the Rackwick "toad" pools on 31st were a pair ovipositing with a single male also present (BK).

This species is strangely scarce on Mainland Orkney although there are many apparently suitable breeding sites here. BR found a female exuvia at one of his Queenamidda pools on 11th July (the fly may have emerged many days earlier). At a pool high up in the Stenness hills at Langa Skeo (HY318096) BR noted a single male on 22nd July (new 1-km square); also on 22nd July GW saw a male acting territorially just down the track from the Russadale pools (HY332100). This insect

own 'standardised' knowledge over the years it is clear that the change is certainly due to more than just increased effort.

Research will continue into possible reasons why there have been greater levels of egg cases washing ashore on the northwest beaches when compared to previous years, including those with frequent westerly gales. If you have data on skate and ray egg cases for Orkney please let us know at mail@orkneyskatetrust.org.uk or find us on Facebook and the web.



Orkney Bat Review 2013-14

Effy Everiss & Tim Dean

The Bat Group has been fairly busy over the past two years monitoring the known sites in the County. We try to visit each site at least once in the season. Bats are fickle and we often get no activity even in established areas in perfect conditions... frustrating! So bat watches are usually very last minute and the weather charts are scrutinised carefully days before... even then the local micro-climate has to be taken into account. The ever-changing wind direction and speed is important too and watches often do not go as planned!

The weather in 2013 was on the whole poor with many watches cancelled or the weather changing just as we arrived on site at dusk. In 2014, however, the conditions for bats were excellent and as a result it was far more rewarding. Progress is slow and we are very gradually building up a picture of bat activity throughout the year. There has been little work in the past to compare with our current data.

In 2013 there was only one dusk to dawn survey carried out, not by the bat group but by a private individual. In 2014 however we managed two, one on Mainland and the other on Hoy. These surveys have so far been the most productive as the behaviour of the bats, especially at dawn which gives us a real opportunity to monitor numbers and locate roosting sites.

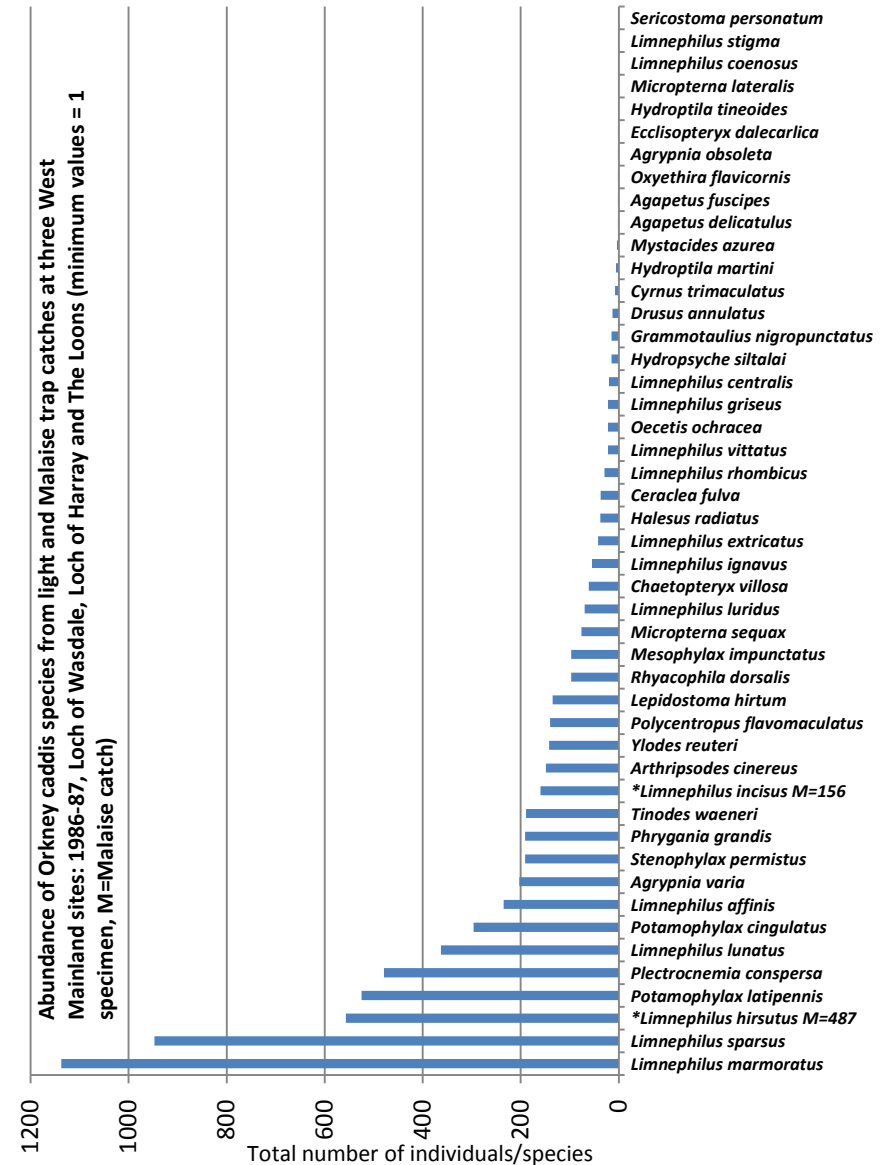
In both years we made several visits to Binscarth in very good batting conditions in order to once again catch lekking activity in the woods. However the bat activity was disappointingly sparse and no lekking was picked up... usually more obvious on recordings as you get a characteristic blip on the sonograph.

In 2013 we carried out two watches in St Margaret's Hope for the first time. We managed to monitor one bat very late on, well past emergence time, in fact we were packing up to go home! It arrived from the west, suggesting that it was roosting outside the village. It then hunted throughout the town. We repeated the trip in 2014 but did not get any bat activity. It would be good if someone living in the Hope or nearby could monitor the area regularly as bats are seen there on occasion. Tim would welcome any records.

When I started looking at the Orkney bats five years ago I would regularly get five or more bats flying in the Finstown area around the Community Garden and elsewhere but now we only seem to have 2-3 on a regular basis. Whether this is a real decline in numbers, it is not possible to establish. The other reliable site for bat activity in Finstown is Binscarth Woods but there again we can visit in perfect conditions and get absolutely nothing. The local bats may disperse quite widely in the summer especially when we have a spell of warm calm weather. There is a peak of activity both in early summer and the autumn... probably migratory and vagrant bats boosting the local population... but the numbers are still low... rarely reaching double figures. It takes a long time and many visits to a site to get a picture of bat activity. We have a long way to go!

Once again many thanks to the members of the Bat Group who turn up clutching their detectors with enthusiasm at all times of the night and to the numerous landowners who allow access to their properties and keep a watchful eye over their nocturnal tenants.

Please send all your bat sightings to Tim Dean.



Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>Mystacides longicornis</i> (Linnaeus) ?	JDW<'85 AG'03 RHA 14 ECP-C'68-71 AJ'75-'77	Grouse Wing ?May-Sep	? W Mainland, Rousay 5	Ponds, lochs, v slow- flowing rivers, mud or fine sand bottom	Local in Sco where few records, common throughout Britain
<i>Oecetis ochracea</i> (Curtis) A22	JDW<'85 RHA '86-'87 ECP-C'68-71 AJ'75-'77 MP'79	Longhorn Sedge Late Jul- Aug	W Mainland, Rousay 5	Ponds, lochs, v slow rivers muddy bottom	Common throughout Britain attracted to light
<i>Triaenodes bicolor</i> (Curtis) ?	JDW<'85	Bicolor Sedge ?Jun-Sep	? W	Ponds, lochs, slow rivers, wet fen	Common throughout most of Britain
<i>Ylodes conspersus</i> (= <i>Triaenodes conspersa</i>) (Rambur) ?	JDW<'85	?July-Sep	? W	Medium to large rivers	Southern England & Midlands. Suspect record
<i>Ylodes</i> (= <i>Triaenodes</i>) <i>reuteri</i> (McLachlan) A144	JDW<'85 RHA '86-'87 PK '11 AG'03 MP'79	Mid-Jul- early Sep MW, 2 nd wk Aug	West Mainland 1 (later catches at light suggest wider distrib req confirmation with larval records	Coastal marshes, lochs, brackish water	RDB 2. Orkney, (locally abundant), E Anglia, E Yorks, Thames marshes. Vulnerable
<i>Ylodes</i> (= <i>Triaenodes</i>) <i>simulans</i> (Tjeder) ?	JDW<'85	? Jul	? W	Medium to large mod flowing rivers	RDB 3. SW England, Wales, 1 Sco rec, Perthshire. Suspect record

Plant Report 2014

John Crossley

The highlight of the botanical year was the BSBI field meeting held here in July, described elsewhere in this Bulletin. Nearly 1800 plant records were made in the course of the four days. Thanks to the presence of some very expert botanists, some critical species, especially **Eyebrights** *Euphrasia* species, were more than usually well recorded – not that these did not cause some difficulties even for the experts! During the rest of the year, over 3000 other records were received from 21 people. These included a comprehensive set gathered around the shores of Longhope Bay over two years by Effy Everiss.

There were two local BSBI members' outings this year, to the Hunchaquooy area of Birsay (north of the Loch of Hundland) and to Stronsay. The Hunchaquooy tetrad HY22Y encompasses mire and wet heath, part of the Loch of Hundland and surrounding farmland. It has not been systematically recorded before but had some interesting previous records, notably **Bog Bilberry** *Vaccinium uliginosum*, a decidedly unusual plant on Orkney Mainland. This was located (at HY28782769), but the find of the day was **Lesser Tussock Sedge** *Carex diandra* (Locally Scarce), new for 10 km square (at HY29052748). Another noteworthy plant, on a road verge, among a day's total of 146 species was **Slender Lady's-mantle** *Alchemilla filicaulis* ssp. *filicaulis* (at HY290272). This taxon and the other *A. filicaulis* subspecies, *vestita*, are more often found as small plants on calcareous hillsides. Subspecies have seldom been recorded, but they may be more frequent on roadside verges than has been thought. *A. filicaulis* ssp. *filicaulis* may be confused with **Smooth Lady's-mantle** *A. glabra*.

In Stronsay, we first visited the Millgrip area on the west side of the Rothiesholm peninsular and then the coast west of Housebay, including the Sand of the Crook and Lea Shun loch. Most of Rothiesholm is composed of acidic Eday beds of the Old Red Sandstone and as a result has a restricted flora, but the Millgrip area (tetrad HY62B) is on Rousay flags and the diversity is much greater. This is most obvious on the steep, grassy and sedge-rich slopes at Scaval (HY 610226), overlooking the Stronsay Firth, where **Downy Oat-grass** *Avenula pubescens* (new for 10 km square and island) was a notable find. The Sand of the Crook is a typical North Isles arcing sandy bay, lying between the two rocky headlands of Langa Mae and Tor Ness (tetrad HY62Q). **Oysterplant** *Mertensia maritima* (Nationally Scarce) used to grow here, but not anymore, unless at the far western end of the Sand which we did not reach. The hinterland of sandy links here is heavily grazed and not exciting botanically, but the dune ridge along the shore and its landward slope into calcareous marsh at Lea Shun are much better. A large stand of a tall, slender, but non-flowering sedge in the loch margin was puzzling, but was later identified as a form of **Common Sedge** *Carex nigra*. It is surprising that this species has not in the past been split into a number of forms. There was plenty of a **Burdock** *Arctium* sp. on the dunes, rather a Stronsay speciality. **Lesser Burdock** *A. minus* is the species that has for many years been recorded from similar habitat in parts of Orkney, but the latest thinking is that plants in north Scotland are much not likely to be, indeed may all be, the very similar **Wood Burdock** *A. nemorosum*. On later close examination a Stronsay specimen was confirmed as *A. nemorosum*.



Wood Burdock (John Crossley)

Two other botanical outings in the OFC programme, to Frotoft/Blotchnie Fiold, Rousay (HY42D and E) and Stenaday, Finstown (HY3513), are described elsewhere in this Bulletin. Just to add to that account, this area of Rousay was chosen because it needed re-recording after many years and was likely to be rich in species on calcareous, south-facing slopes. It was a delight, until the rain set in. 158 species were recorded altogether, including several uncommon ones. A post-script to the day's total was a sedge collected on blanket bog between High Brae of Camps and Blotchnie Fiold, which proved on later examination to be *Carex x decolorans*, the hybrid between **Common Sedge** *C. nigra* and **Stiff Sedge** *C. bigelowii*, only the second record for Orkney of this nationally scarce hybrid. Unfortunately the rain and descending cloud prevented a search for one of its parents, *C. bigelowii*, also recorded here only once, in 1987. The meadow at Finstown, venue for the other OFC outing, must be the finest lowland, species-rich meadow in Orkney. Nowhere else is one likely to find hundreds of flowering spikes of **Common Twayblade** *Neottia ovata* and at least 50 fronds of **Moonwort** *Botrychium lunaria*. On the downside, the alien species **Garden Lady's-mantle** *A. mollis* has taken a hold here, forming dense patches, and could spread over much of the area.

Records of note

Natives and archaeophytes

(An archaeophyte is a plant species which is not native to a geographical region, but which was an introduced species in 'ancient' times [in practice, before 1500], rather than being a modern introduction.)

Small Adder's-tongue *Ophioglossum azoricum* (Nationally Scarce), northwest of outfall of Burn of Forse, North Walls, ND22209421 (JEC, det Markus Ruhsam by DNA analysis). New site within 10 km square. See separate note on *Ophioglossum* species and DNA.

Shore Horsetail *Equisetum x litorale* (*E. arvense x fluviatile*) (Locally Scarce), Sandwick, South Ronaldsay, ND432893, 21/07/2014 (BSBI). New for 10 km square.

Black Spleenwort *Asplenium adiantum-nigrum* (Uncommon, but not quite Locally Scarce), Hoxa, South Ronaldsay, ND41739339, 05/11/2014 (JEC). New for 10 km square and island.

Wall-rue *Asplenium ruta-muraria* (Locally Scarce), Lyrawa Bay, North Walls, Hoy (on the road bridge), ND29Z, 20/07/2014 (BSBI). New for 10 km square.

Hay-scented Buckler-fern *Dryopteris aemula* (Locally Scarce)

1. Lyrawa, North Walls, ND29Z, 20/07/2014 (BSBI);
2. Pegal Bay, North Walls, ND29879779, 20/07/2014 (BSBI). Both new sites. Both updates for same 10 km square.
3. Longhope, South Walls, on shore at Custom House, ND305908, 16/08/2014 (EE). New site, previously recorded only from Scapa Flow islands in that 10 km square.

Narrow Buckler-Fern *Dryopteris carthusiana* (Locally Rare) near Newhouse (Ocklester moss), Holm, HY5230802547, 07/08/2014 (JEC, det. Fred Rumsey). **New County Record.**

Dense-flowered Fumitory *Fumaria densiflora* (Locally Scarce), Waston Road, Burray, ND47089573, 21/09/2014 (JEC). New for 10 km square and island.

Parsley Piert *Aphanes arvensis* (Locally Scarce), Muddisdale, Kirkwall, HY434109 22/07/2014 (JEC, conf. Mike Wilcox). New for 10 km square.

Wood-sorrel *Oxalis acetosella* (Locally Scarce), Pegal Bay, North Walls, ND29869775, 20/07/2014 (BSBI). New for 10 km square.

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
Family Leptoceridae (case building larvae, adults with very long antennae, twice length forewing, most day flying, not attracted to light)					
<i>Athripsodes aterrimus</i> (Stephens)					
A2	JDW<'85 PK '11 AG'03 LK'13	?May-Sep	West Mainland 1	Ponds, lochs, slow rivers, loch outlets	Common throughout Britain
<i>Athripsodes cinereus</i> (Curtis) Brown Silverhorns					
A2	JDW<'85 RHA '86-87 PK '11 AG'03 LK'13 MP'79	Last wk Jul-end Aug MW, last wk Aug	West Mainland 3	Stony or coarse sandy burns, stony loch shores	Common throughout Britain attracted to light
<i>Ceraclea (=Athripsodes) annulicornis</i> (Stephens)					
?	JDW<'85	?May-Aug	West Mainland 3	Stony rivers & large burns, stony loch shores in Sco	Common throughout Britain
<i>(Ceraclea fulva (=Athripsodes fulvus) (Rambur)</i>					
A37 L	JDW<'85 RHA '86-87 SEPA '10 AG'03 LK'13 MP'79	Mid-Jul- mid Aug	West Mainland 2	Stony lochs, large ponds, slow large burns (larva feeds on fw sponge)	Common throughout Britain, attracted to light
<i>Ceraclea nigronervosa (=Athripsodes nigronervosus) (Retzius)</i>					
? L	JDW<'85 RHA '86-87 AJ'75-'77	?May-Jul	? Rousay, West Mainland 3	Stony burns, rivers, loch shores (larva feeds on fw sponge)	Common throughout Britain
<i>Mystacides azurea</i> (Linnaeus) Black Silverhorns					
A2 L	JDW<'85 RHA '86-87 CEH '01 SEPA '10 AG'03 LK'13 MP'79	?May-Sep	West Mainland 3	Burns, rivers, large ponds, lochs	Common throughout Britain

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
Family Sericostomatidae (Case building larvae, case curved, made of sand grains)					
<i>Sericostoma personatum</i> (Spence) Welshman's Button					
A192	McLachlan JDW <'85 RHA '86-'87 PK '11 ECP-C'68-'71	Large Cinnamon Sedge Early May- end May, then mid Jun-mid Sep MW, 1 st wk Aug (summer diapause)	West Mainland, N Hoy, Burray 7	Ditches, small slow streams may dry up in summer, flowing marshes	Common throughout Britain
Family Beraeidae (Case building larvae, in moss and dead leaves in springs, in roots marginal vegetation burns)					
* <i>Beraea maurus</i> (Curtis)					
A11	SG/KB '97 CEH '01 SEPA '07 PK '11	?May-Aug	West Mainland, nr Kirkwall, N Hoy 8	Permanent oozes and trickles, springs, Fens	Common throughout Britain
* <i>Beraeodes minutus</i> (Linnaeus)					
L	SEPA '07	?May-Jul	West Mainland 1	Exposed roots marginal plants mineral bottom	Local throughout Britain
Family Odontoceridae (Case building larvae, case curved, made of sand grains, end closed with pebble)					
* <i>Odontocerum albicorne</i> (Scopoli) Silver Sedge					
A8?	CEH '01	?May-Sep	West	Stony burns	Common
L	SEPA '07 PK '11		Mainland, N Hoy 3	& rivers	throughout Britain (day flyer, not attracted to light)

Hybrid Dock *Rumex x pratensis* (*R. crispus* x *obtusifolius*) (Locally Scarce)

1. Westayre Loch, Sanday, HY7244, 19/07/2014 (BSBI det. Fred Rumsey). New for 10 km square and island;
2. Sandside 1 km square, Graemsay, HY2606, 22/07/2014 (GVD). New for 10 km square and island;
3. Manse (Burra House), Hoy, HY238039 (BSBI det. Chris Metherell), 20/07/2014. New for 10 km square and island.

Frosted Orache *Atriplex laciniata* (Uncommon, but now not quite Locally Scarce)

1. Loch of Brue/Loch of Rummie 1 km square, Sanday, HY7544, 19/07/2014 (BSBI). New for 10 km square;
2. Brough, South Ronaldsay, ND451830, 06/08/2014 (JC). New for 10 km square.

Drosera x obovata (**Round-leaved Sundew** *D. rotundifolia* x **Great Sundew** *D. anglica*) (Locally Rare).

Rackwick path southwest of Sandy Loch, Hoy, HY21580270, 06/08/2014 (JEC & JBR, conf. Fred Rumsey). **New County Record**. This hybrid is likely to occur elsewhere in Hoy and has probably been overlooked.

*Drosera x obovata* (John Crossley)

Glasswort *Salicornia europaea* agg. (Locally Scarce), Colli Ness, Sanday, HY6842, 15/08/2014 (JEC). New for 10 km square.

Scottish Primrose *Primula scotica*

(Nationally Scarce), coast northeast of Skatequoy, Rousay, HY39463465 and nearby at HY39483465, 24/05/2014 (JEC). A few non-flowering plants in each case. Re-discovery of a site reported for the first time in 1993 by an RSPB warden.

Hybrid Eyebright *Euphrasia arctica* x *heslop-harrisonii* (Locally Rare), Westayre Loch, Sanday, HY72414427, 19/07/2014 (BSBI, det. Fred Rumsey). New for 10 km square and island, and 2nd County record).

Foula Eyebright *Euphrasia foulaensis* (Nationally Scarce)

1. Pegal Bay, North Walls, ND29669771, 20/07/2014 (BSBI). New for 10 km square;
2. Colli Ness, Sanday, HY684425, 15/08/2014 (JEC). New for 10 km square;
3. Westayre Loch, Sanday, HY72414427, 19/07/2014 (BSBI). New for 10 km square;
4. Creara Head, South Ronaldsay, ND43138502, 25/07/2014 (JEC). New site and update for 10 km square.

Hybrid Eyebright *Euphrasia x difformis* (*E. arctica* x *micrantha*) (Locally Rare), near Breck of Linkquoy, Sandwick, HY23251555, 18/07/2014 (BSBI, det. Fred Rumsey). 2nd County record and new for 10 km square.

Hybrid Eyebright *Euphrasia x electa* (*E. micrantha x scottica*) (Locally Rare), near Breck of Linkquooy, Sandwick, HY23251555, 18/07/2014 (BSBI, det. Fred Rumsey). **New County record**, but very difficult to identify and almost certainly overlooked in the past

Heslop-Harrison's Eyebright *Euphrasia heslop-harrisonii* (Nationally Rare, Locally Scarce), Westayre Loch, Sanday, HY72414427, 19/07/2014 (BSBI, det. Fred Rumsey). New for 10 km square and island.

Hedge Woundwort *Stachys sylvatica* (Locally Scarce), Seater, Sanday, HY72074417, 19/07/2014 (BSBI). New for 10 km square and island.

Common Ivy *Hedera helix* (Locally Rare), Craigs of Berstane, St Ola, HY47340959, 10/11/2014 (JEC, det. Alison Rutherford). Recorded in the past but not previously determined to species by referee. A specimen from a plant growing in Berriedale, Hoy, HY20180139 and known since 1884, was sent to the referee but remains undetermined for the present. It probably is *H. helix*. See entry under *H. 'Hibernica'* in next section.

Wood Burdock *Arctium nemorosum*, Glead, Sanday, HY751462, 14/07/2014 (JC). Only the second confirmed Vice-county record, though as noted above, not particularly uncommon but previously misidentified as *A. minus*.

Sea Aster *Aster tripolium* (was Locally Scarce but with several new recent records no longer qualifies), Longhope Bay, South and North Walls, ND28, ND29 & ND39, July 2013 – Sept 2014 (EE). New for ND28 10 km square, updates for ND 29 & ND39.

Lesser Water-parsnip *Berula erecta* (Locally Rare), Westayre Loch Sanday, HY7244, 19/07/2014 (BSBI). Update for 10 km square and island.

Northern Marsh-orchid/Heath Spotted-orchid hybrid *Dactylorhiza x carnea* (Locally Rare), Cruland, Sandwick, HY237152, 18/07/2014 (BSBI, det. Fred Rumsey). Second Orkney record, confirming an earlier find at same site in 1989.

Branched Bur-reed *Sparganium erectum* subsp. *neglectum*, Loch of Kirbister, Orphir, HY36930730, 29/08/2014 (JEC). First County record for the subspecies, though almost certainly the usual one for Orkney. There are three other subspecies, two of which may well occur here.

Slender Spike-rush *Eleocharis uniglumis* (Locally Scarce), Common Ground near Fea, South Walls, ND302896, 11/06/2014 (EE, JEC & MH). New for 10 km square.

Many-stalked Spike-rush *Eleocharis multicaulis* (Locally Scarce)

1. Pegal Bay, North Walls, ND29669771, 20/07/2014 (BSBI). New site and update for 10 km square;

2. Black Craig, Stromness, HY2210, 23/08/2014, (EE & party). New site, update for 10 km square.

Greater Pond-sedge *Carex riparia* (Locally Scarce), near Seater, Westayre Loch, Sanday, HY72114419, 19/07/2014 (BSBI). New for 10 km square.

Long-bracted Sedge *Carex extensa* (Locally Scarce), Pegal Bay, North Walls, ND29699773, 20/07/2014 (BSBI). Update for 10 km square.

Northern Saltmarsh-grass *Puccinellia distans* subsp. *borealis* (Nationally Scarce), on rock outcrop between the two Holms of Ire, Sanday, HY6446, 15/08/2014 (JEC). Update for 10 km square.

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>Mesophylax impunctatus</i> McLachlan					
A97	JDW<'85 RHA '86-'87 ECP-C'68-'71 AJ'75-'77 MP'79	End Jun-early Aug MW, end Jul	West Mainland 3	Margins of permanent medium to large lochs	Sco N of Forth/Clyde line, England Lake Dist, 1 tarn in Yorks
* <i>Micropterna lateralis</i> (Stephens)					
A4	RHA '86-'87	?Apr-Sep (summer diapause)	West Mainland 3	Ditches and small burns on moorland, may not comp dry up	Common throughout Britain
<i>Micropterna</i> (= <i>Stenophylax</i>) <i>sequax</i> McLachlan					
A77 L	JDW<'85 RHA '86-'87 CEH '01 SEPA '07 PK '11	End Jun-end Aug MW, 3 rd wk Jul	West Mainland 5	Small burns that can dry up in summer, often with mineral bottom	Common throughout Britain
<i>Potamophylax cingulatus</i> (Stephens)					
A304 L	JDW<'85 RHA '86-'87 CEH '01 SEPA '07 PK '11 ECP-C'68-'71	End Jun-end Aug MW, 3 rd wk Jul	West Mainland, N Hoy 7	Stony small burns & rivers	Common throughout Britain
<i>Potamophylax latipennis</i> (Curtis)					
A525	JDW<'85 RHA '86-'87 AG'03 LK'13 MP'79	Mid Jul-end Aug MW, 2 nd wk Aug	West Mainland, N Hoy 4	Stony burns, rivers & lake shores	Common throughout Britain
<i>Potamophylax rotundipennis</i> (Brauer)					
?	JDW<'85	?Aug-Sep	?	Streams & small rivers with sandy bottom	Local throughout Britain, Regionally Notable in Sco. Suspect record

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>*Limnephilus rhombicus</i> (Linnaeus)					
A31 L	RHA '86-'87 CEH '01 SEPA '07 PK '11	Early Jun- end Jul (Sco, end May-end Sep, summer diapause)	West Mainland, N Hoy 4	Ponds, lochs, marshes, pools, margins of burns & rivers	Common throughout Britain
<i>Limnephilus sparsus</i> Curtis					
A1077	JDW<'85 RHA '86-'87 PK '11 ECP-C'68-'71 AJ'75-'77 MP'79	Late May- end Sep MW, 1 st wk Aug (summer diapause)	West Mainland, N Hoy, Burray 7	Temp puddles (hoof prints in wet fields!), grassy marshes may dry up in summer	Common throughout Britain
<i>Limnephilus stigma</i> Curtis					
A3	JDW<'85 RHA '86-'87	?Aug-end Sep	West Mainland, N Hoy 2	Grassy marshes, rushy margins of upland lochans & ponds	Common throughout Britain, not SE
<i>*Limnephilus vittatus</i> (Fabricius)					
A22 L	RHA '86-'87 SEPA '07 PK '11 ECP-C'68-'71 AJ'75-'77	?May-late Oct (summer diapause), Orkney, end Jun- end Aug	West Mainland, N Hoy 6	Bare, mineral- bottomed pools, ponds, marshes, ditches	Common throughout Britain
<i>*Halesus digitatus</i> (Schrank)					
L1	PK '11	?Aug-Nov	West Mainland 1	Small rocky burns & rivers	Common throughout Britain. Record subsequently withdrawn
<i>*Halesus radiatus</i> (Curtis) The Caperer					
A38 L	RHA '86-'87 SEPA '07 ECP-C'68-'71	?Jul-Nov, Orkney, end Jun- early Sep	West Mainland, N Hoy 5	Rocky burns, rivers, loch shores	Common throughout Britain

Non-natives – neophytes and casuals

(A neophyte is a plant species which is not native to a geographical region and was introduced in 'modern' times [in practice, after 1500] and has become established. A casual is a non-native that has not become established.)

New Zealand Pigweed, *Crassula helmsii* (Established), pool at foot of Pullan, Stenness, HY308114, 15/09/2014 (ERM). First County record of this invasive and destructive alien 'in the wild' (formerly, it was inadvertently introduced to a pond at Stenness school and another in Harray). SEPA has been informed and at time of writing is deciding how to destroy it. Origin Australia and New Zealand.

Navelwort *Umbilicus rupestris* (Planted), Stromness, HY2609, 16/07/2014 (BS) and near Longhope, South Walls, ND3090 (TA). Growing in gaps in stone walls, planted, possibly spreading. New County record. Native in British Isles, common in the west as far north as the Isle of Mull.

Lucerne *Medicago sativa* subsp. *sativa* (Established?), School Road, Burray, ND47109570, 21/09/2014 (YB, conf. JEC). 2nd County record and almost certainly the first properly 'in the wild' (thriving on a roadside verge, not a crop relict) and new for 10 km square. Mediterranean.

Two-spined Acaena *Acaena ovalifolia* (Established), Heddle quarry, Finstown, Firth, HY35831300, 17/06/2014 (JEC det. Fred Rumsey). New County record. An alien, well-established at this site, which can be invasive into semi-natural grassland and heath. S. America.

Petty Spurge *Euphorbia peplus* (Established), St Margaret's Hope, South Ronaldsay, ND44849348, 29/09/2014 (JEC). 3rd County record and new for 10 km square. An established garden weed at this site. Archaeophyte in southern British Isles.

Hybrid Willow *Salix x meyeriana* (*S. euxina* x *alba* x *pentandra*) (Planted), North Flaws, South Ronaldsay, ND457856, 20/08/2014 (JEC det. I. Belyaeva). This attractive willow, with large, shiny, toothed leaves, has been widely planted but is not common in the County. Apparently it has not been identified before. Cultivated origin.

Weld *Reseda luteola* (Established), Lyness, North Walls, ND305942, 19/07/2014 (JH). Only known site in County. Confirms a record from this vicinity in 2000 and proves the species is established. Native to British Isles as far north as Inverness.

American Willowherb *Epilobium ciliatum* (Established), Mucklehouse, Sandwick, S. Ronaldsay, ND43588909, 21/07/2014 (BSBI det. Geoffrey Kitchener). New County record. Probably there is *more of this species, which is common in the south and scattered in northern Scotland including Shetland, in Orkney*. Easily overlooked, it took a southern botanist to spot it. N. America.

Caucasian Crosswort *Phuopsis stylosa* (Established?), Jib Park, Finstown, HY364134, 08/05/2014 (JM). New County record. It is not clear as yet whether this garden species survives for long in the wild, but it does spread from where it was put. Other plants grow on the banks of the Papdale Burn by Glue's Garden Centre, Kirkwall. New County record. Western Asia and Caucasus.



Weld (Barry Jones)

Wood Forget-me-not *Myosotis sylvatica* (Established), Redland Road, Firth, HY363152, 19/05/2014 (ERM). New County record. Native to British Isles as far north as Inverness.

Ivy-leaved Toadflax *Cymbalaria muralis* (Established), Stromness, HY2508, 11/05/2014 (JEC & DM). 2nd County record and new for 10 km square. S. Europe.

Common Figwort *Scrophularia nodosa* (Established? Casual?), Bedrock, Harray, HY32441596, 10/08/2014 (RG). 2nd County record (last in 1928). New for 10 km square. Native in British Isles except Northern and Western Isles.

Irish Ivy *Hedera 'Hibernica'* (Established but not reproducing), Hamars of Syradale, Firth, HY35201597, 23/11/2014 (JEC det. Alison Sutherland). New County record 'in the wild'. See 'Plant Notes'.

Perennial Cornflower *Centaurea montana* (Established?), Little Ayr, Longhope Bay, Hoy, ND306918, 08/09/2014 (EE). Probably a garden throw-out, may well persist. New County record. C. & S. Europe.

Mutton-bird Sedge *Carex trifida* (Casual), Little Ayr, Longhope Bay, Hoy, ND306918, 08/09/2014 (EE). A common garden sedge, here probably a throw-out. There are no reports of this species persisting in the wild in the British Isles, but Orkney might be to its liking. New County record. Antarctic perimeter islands, New Zealand and Chile.

Bristle Oat, Black Oat *Avena strigosa* (Casual), Queena, Hestwall, Sandwick, HY259167, 16/09/2014 (JEC). An ancient crop variety, rarely seen nowadays, as a contaminant of cereal crops. Spain?

Other interesting records

Lousewort *Pedicularis sylvatica*.

White-flowered Lousewort has been catching people's attention. There were two reports:

1. Lyrawa Hill, North Walls, ND284998, 27/05/2014 (SG);
2. Track to Cuween Hill from Firth Hall, Finstown, HY36141282, 03/07/2014 (JM).

Spring Squill *Scilla verna*. What is it about Spring Squill and ancient monuments? This normally seaside species was plentiful on South Knowe, Brodgar, Stenness, HY294132, 04/06/2014 (KB) and has been recorded from Maeshowe in recent years.

Serrated Wintergreen *Orthilia secunda*. Well known at its single site in Orkney, on the north side of Blotchnie Fiold, Rousay, HY41382914, rarely flowering but this year seen to do so.

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>*Limnephilus hirsutus</i> (Pictet)					
A557 (Malaise, 1 site 487)	RHA '86-'87 ECP-C'68-'71 AJ'75-'77	Late Jun-early Sep MW, last wk Jul	West Mainland 3	Small muddy trickles & ditches, on bare clay	Common throughout Britain
<i>*Limnephilus ignavus</i> McLachlan					
A55	RHA '86-'87 ECP-C'68-'71	?Mid July-Oct (Orkney early Aug-end Sep)	West Mainland, N Hoy 4	Ditches & flowing marshes, edges of fens & bogs	Throughout Britain, only common in north
<i>Limnephilus incisus</i> Curtis					
A160 (Malaise, 1 site 156)	JDW<'85 RHA '86-'87 AJ'75-'77 MP'79	End May-1 st wk Sep	West Mainland 5	Marshy areas, can dry up in summer, not acid water, fens	Common throughout Britain
<i>*Limnephilus lunatus</i> Curtis					
A363 L	RHA '86-'87 CEH '01 SEPA '07 LK'13 ECP-C'68-'71 MP'79	Cinnamon Sedge Mid July-1 st wk Oct MW, 2 nd wk Aug	West Mainland, N Hoy 6	Permanent water, burns, rivers, ponds, lochs, marshes	Common throughout Britain
<i>Limnephilus luridus</i> Curtis					
A70	JDW<'85 RHA '86-'87 PK '11 ECP-C'68-'71 AJ'75-'77	Early Jun-early Sep	West Mainland, N Hoy 5	Acid waters, puddles, pools, ditches on bogs & moorland	Common throughout Britain
<i>Limnephilus marmoratus</i> Curtis					
A1140 L	JDW<'85 RHA '86-'87 SEPA '07 PK '11 LK'13 ECP-C'68-'71 AJ'75-'77	Cinnamon Sedge Early Jun-early Oct MW, 2 nd wk Aug (summer diapause)	West Mainland, N Hoy 8	Ponds, lochs, ditches, pools, prefers less rich waterbodies	Common throughout Britain (commonest caddis at light in Orkney)
<i>Limnephilus politus</i> McLachlan					
?	JDW<'85 'putative, one specimen only'	?Aug-Oct	?	Ponds, lochs	Notable in Sco (rec S Sco only) common in England

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>Limnephilus affinis</i> Curtis A235	JDW<'85 RHA '86-'87 PK '11 ECP-C'68-'71 MP'79	Early Jun- end Sep MW, 2 nd wk Aug (summer diapause)	West Mainland, N Hoy, Burray 7	Still or slow flowing ponds, pools, ditches. Withstands salinity & pollution	Common throughout Britain
* <i>Limnephilus centralis</i> Curtis A20	RHA '86-'87	?Early Jun- end Sep (Orkney, Jul-Aug)	West Mainland, N Hoy 4	Small upland trickles and burns, temp ditches, pools	Common throughout Britain
* <i>Limnephilus coenosus</i> Curtis A1	RHA '86-'87	?Jul-Oct	West Mainland 1	Permanent small pools on moorland and bogs	Common in Sco, N Eng & Wales
* <i>Limnephilus elegans</i> Curtis A4	RHA '08-'09	?May-Jul (Orkney, early-end Jun)	West Mainland 1	Raised bogs and some fens	Local throughout Britain due to habitat reqs
<i>Limnephilus extricatus</i> Curtis A42 L	JDW<'85 RHA '86-'87 SEPA '07 LK'13 ECP-C'68-'71	?Mid-Jun- early Aug (Orkney Jun-Sep)	West Mainland, 5	Permanently slow-flowing water, ditches, burns, rivers	Common throughout Britain
<i>Limnephilus flavicornis</i> (Fabricius) ? L	JDW<'85 SEPA '07 IDW	?May-Jul the Aug- Oct (summer diapause)	West Mainland, Rousay 2	Ponds, lochs, ditches, pools, prefers richer waters	Common throughout Britain but local in Sco and uplands
<i>Limnephilus griseus</i> (Linnaeus) A22	JDW<'85 RHA '86-'87 ECP-C'68-'71	?End Jul- early Oct (Orkney mid Jun- end Aug, summer diapause)	West Mainland, N Hoy 6	Acid waters, temp pools, tiny Sphagnum- filled pools on hill tops	Common throughout Britain



Lousewort (Sydney Gault)

Serrated Wintergreen
(Brian Ribbands)

Reference

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Many thanks to all contributors:

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Cnidaria Report 2014

Penny Martin

2014 was a very different year for Cnidaria compared to the bumper year of 2013 but several species of jellyfish were seen on most occasions when snorkelling and diving. I am certain that there are many more jellyfish in Orkney waters than are reported. This year, many more true jellyfish such as Moon Jellies up to 20 cm diameter and large Lion's Mane Jellyfish were seen, both in the water and washed up on beaches.

Lion's Mane Jellyfish *Cyanea capillata*

Large Lion's Mane Jellyfish were the most frequently reported jellyfish species. They were found dead on beaches and alive in the water at various depths by divers and snorkellers throughout Orkney, from April to November. Colours ranged from pale yellow to deep brown; several were reported to be up to 50 cm diameter with tentacles at least 3 m long.

In April they were seen at Houton, Orphir; in June at Stromness and Evie; in July at Evie, off Scapa Pier, in Scapa Flow and north of Kirkwall at various depths (seen while diving). In August they were reported from Bay of Holland, Stronsay; 2nd Barrier; Deerness; and Sands of Wright, South Ronaldsay. In November two were seen in Echna Bay, Burray.

Blue Lion's Mane Jellyfish *Cyanea lamarckii*

This vivid blue/purple jellyfish is closely related to the Lion's Mane *C. capillata* and was seen in June and July. We first started seeing them in June in Stromness; in July several were seen while diving in Scapa Flow and 100's were washed up at Yesnaby, Sandwick.

Moon Jellies *Aurelia aurita*

Many scyphistoma (early, sessile life stage) seen on the wrecks in Scapa Flow and other Orkney waters; many also on the underside of the blocks at the Barriers. In April, tiny, immature jellyfish called ephyra (next stage after scyphistoma) were seen by the fishing pier at 2nd Barrier. In May, hundreds of larger ones up to 15 cm diameter were seen by 2nd and 4th Barriers and Southwick Bay, South Ronaldsay. In June and July, large Moon Jellies up to about 20 cm in diameter were seen in Stromness, Finstown Bay, 4th Barrier and Echna Bay, Burray.

Crystal Jellyfish *Aequorea forskalea*

Only three of these clear jellyfish were reported this year, washed up on the beach at Bay of Carness, St Ola.

Cross Jellyfish *Staurophora mertensii*, *Clytia hemisphaerica*, *Cosmetira pilosella*

There are several different species of these small transparent hydromedusae with white crosses, which look very similar and are not easy to tell apart when underwater. In April, thousands were seen at 2nd Barrier; The Lash, Orphir; and Houton, Orphir. In May, many were seen at Sandwick, South Ronaldsay and by 4th Barrier. In June, some were at 2nd Barrier.

Brain Jelly *Neoturris pileata*

Not as many of these strange little hydromedusae were seen this year. In May, five were at Sandwick, South Ronaldsay and seven at Houton, Orphir.

Clapper Hydromedusa *Sarsia tubulosa*

Very few were seen in 2014.

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat (Larval)	Status (Britain)
<i>Family Limnephilidae</i> (Case making larvae, the largest caddis family in Britain, flight period affected by latitude, strong flyers, majority attracted to light)					
<i>Drusus annulatus</i> (Stephens)					
A13	JDW<'85	?May-Sep	West	Stony burns	Common
L	RHA '86-'87 CEH '01 SEPA '07 ECP-C'68-'71		Mainland 9	and rivers	throughout Britain
<i>*Eclisopteryx dalecarlica</i> (= <i>guttulata</i>) Kolenati					
A2	RHA '86-'87	?May-Sep	N Hoy	Fast flowing	Common in
L	CEH '01		1	larger burns and rivers, forms day- flying swarms	upland Britain
<i>Chaetopteryx villosa</i> (Fabricius)					
A61	JDW<'85	Early Sep- early Dec	West	Small stony	Common
L	RHA '86-'87 CEH '01		Mainland 2	burns, rivers, lochans	throughout Britain
<i>*Anabolia nervosa</i> (Curtis) Brown Sedge					
A3	RHA 99	?Late Aug- end Oct	West	Large burns,	Common
L	SEPA '07 LK '13		Mainland, N Hoy 3	rivers, mineral part bottom, with backflows	throughout Britain
<i>Glyphotaelius pellucidus</i> (Retzius) Mottled Sedge					
?	JDW<'85	?Jun-Sep	?	Ditches, slow burns, ponds, loch margins with deciduous tree leaves or reed leaves	Common throughout Britain but few records in Scotland
<i>*Grammotaulius nigropunctatus</i> (Retzius)					
A15	RHA '86-'87 ECP-C'68-'71	Mid May- early Sep (summer diapause)	West Mainland, N Hoy 4	Seasonal ponds, marshes, ditches, loch margins amongst reeds	Common throughout Britain

Orkney caddis species list with ecological notes

The list follows the order of Barnard and Ross (2012). Some name changes have been introduced since 1985, where this applies, the previous name used is placed afterwards within brackets. In the light of current knowledge, five previously published species records are now viewed as suspect, as corroborated by the national Caddis Recording Scheme organiser, Dr Ian Wallace. All of these are included in the current list with appropriate comment. The previously published list in 1985 from Mr J Walker contained 48 species, more likely to be 43. Since then, 31 additional species have been recorded, with one recent record withdrawn by the surveyor, making a total of 73 from Orkney compared to the 196 known for Great Britain. Angler's names are given, where known, after the scientific name. Details for each species are given under the following column headings:

Specimens	Survey	Flight period	Distribut'n and number of sites	Habitat	Status (Britain)
(Number, A=adult. L=larva. *=recorded prior to 1985 list but omitted, or recorded since 1985. ?=not known. Malaise=flight intercept trap)	(In date order: JDW=Walker RHA=Andrew CS=Countryside Survey SEPA survey CEH survey PK=Kirby SG/KB=S Gauld, confirmed K Bland IDW=Wallace AG=Godfrey LK=Knight (Pre 1985, BRC: ECP-C=Pelham-Clinton AJ=Joyce MP=Palmer)	(?=not known for Orkney, British range given) MW=median week in Orkney	?=not known	(Larval)	Local=in more than 100, 10km ² but uncommon. Notable=in fewer than 100, 10km ² . RDB=Red Data Book. RDB2=Vulnerable (may be in danger of extinction in event of habitat change); RDB3= Rare (small, at risk, populations)

Sea Gooseberries *Pleurobrachia pileus*

Not so many seen as in 2013; these were early in the year from April at Houton and The Lash, Orphir; in May and June at Sandwick, South Ronaldsay and around the Barriers.

Bolinopsis infundibulum

This comb jelly was seen in smaller numbers in April, May and June at Houton, Scapa Flow and South Ronaldsay.

Stalked Jellyfish, *Haliclystus auricula*, *Haliclystus octoradialis*, *Lucernariopsis campanulata*.

We had an interesting year with stalked jellyfish. We were contacted in April by Dr Allen Collins from The Smithsonian Institute in USA asking if we would send some specimens of *Haliclystus auricula* for DNA analysis so it could be compared with *Haliclystus octoradialis*. No results are available yet. More information and photos on www.staumedusae.co.uk. *Haliclystus octoradialis* and *H. auricula* were both seen in large numbers in April and May at 2nd Barrier and Sandwick, South Ronaldsay. About 50 *Lucernariopsis campanulata* were seen at 2nd Barrier in October.



Haliclystus auricula (Penny Martin)

Land Molluscs Report 2014

Dave Musson

There have been no new records of land mollusc species brought to my knowledge in 2014. However, the year has had its share of surprises for me as County Recorder.

The taxonomy has been undergoing an overhaul. This is due to genetic sequencing leading to some revisions of the classification. Thus I was surprised to see a slug which I have always believed to be *Limax tenellus* named as *Malacolimax tenellus* in a scientific journal. Moreover this slug (with the common name of **Lemon Slug**) was described as “a rare slug usually associated with ancient woodland”. I was somewhat puzzled as the slug I believed to be this species is common in Orkney where there are very few trees. A look at my photos and a study of other literature put my mind at rest. My slug identification skills are not at fault here. *L. tenellus* has now indeed becomes *M. tenellus* and despite there being no trees the species has a strong Orkney population.

The slug genus of *Limax* gave me another surprise when, on close examination, my resident colony of what I had taken to be **Leopard Slugs** *L. maximus*, turned out to be an unusually coloured group of **Green Cellar Slugs** *L. maculatus*. I now think that many county records of *L. maximus* could well turn out to be *L. maculatus*; thus the former could be less common in Orkney than previously thought.

Another species of *Limax*, this time the **Ash Black Slug** *L. cinereoniger* - also common in Orkney - is now recognised as the largest slug in the world. Orcadian species are of a dark or even light brown colour despite their common name.

Clearly there is more than enough work to be done in Orkney for anyone wishing to take extra interest in our Land Molluscs.



Orkney caddis species

*=recorded prior to 1985 published list but not included

^=recorded since 1985 published list

●=suspect record

■=withdrawn by surveyor

Rhyacophilidae

**Rhyacophila dorsalis*

Glossosomatidae

Agapetus delicatulus
Agapetus fuscipes

Hydroptilidae

^*Agraylea multipunctata*
^*Hydroptila martini*
Hydroptila tineoides
**Oxyethira flavicornis*

Philopotamidae

**Philopotamus montanus*
^*Wormaldia occipitalis*

Polycentropodidae

Cyrnus flavidus
Cyrnus trimaculatus
Holocentropus picicornis
Plectrocnemia conspersa
^*Plectrocnemia geniculata*
Polycentropus flavomaculatus
^*Polycentropus kingi*

Psychomyiidae

Psychomyia fragilis●
^*Tinodes maclachlani*
Tinodes maculicornis●
Tinodes waeneri

Hydropsychidae

^*Hydropsyche instabilis*
Hydropsyche pellucidula
^*Hydropsyche siltalai*

Phryganeidae

Agrypnia varia
^*Agrypnia obsoleta*
Phrygania grandis

Goeridae

Silo pallipes

Lepidostomatidae

^*Crunoecia irrorata*
Lepidostoma hirtum

Apataniidae

^*Apatania wallengreni*

Limnephilidae

Drusus annulatus
^*Ecclisopteryx dalecarlica*
Chaetopteryx villosa
^*Anabolia nervosa*
Glyptotaelius pellucidus
**Grammotaulius nigropunctatus*
Limnephilus affinis
^*Limnephilus centralis*
^*Limnephilus coenosus*
^*Limnephilus elegans*
Limnephilus extricatus
Limnephilus flavicornis
Limnephilus griseus
**Limnephilus hirsutus*
**Limnephilus ignavus*
Limnephilus incisus
**Limnephilus lunatus*
Limnephilus luridus
Limnephilus marmoratus
Limnephilus politus
^*Limnephilus rhombicus*

Limnephilus sparsus

Limnephilus stigma

**Limnephilus vittatus*

^*Halesus digitatus*■

**Halesus radiatus*

Mesophylax impunctatus

^*Micropterna lateralis*

Micropterna sequax

Potamophylax cingulatus

Potamophylax latipennis

Potamophylax rotundipennis●

Stenophylax permistus

Sericostomatidae

Sericostoma personatum

Beraeidae

^*Beraea maurus*

^*Beraeodes minutus*

Odontoceridae

^*Odontocerum albicorne*

Leptoceridae

Athripsodes aterrimus

Athripsodes cinereus

Ceraclea annulicornis

Ceraclea fulva

Ceraclea nigronevosa

Mystacides azurea

Mystacides longicornis

Oecetis ochracea

Triaenodes bicolor

Ylodes conspersus●

Ylodes reuteri

Ylodes simulans

Additions and corrections to Part One of this article

In the light of the recently obtained National Caddis Recording Scheme data for Orkney, some additions are required for the species previously listed in part one of this article as follows:

Rhyacophila dorsalis, ECP-C '68-'71, AJ '75-'77, sites 8; *Agapetus fuscipes*, MP '79, AG '03, LK '13, N Hoy, sites 5; *Agraylea multipunctata*, LK '13, W Mainland, sites 2; *Philopotamus montanus*, ECP-C '68-'71, sites 6; *Cyrnus trimaculatus*, AJ '75-'77, SEPA '10, AG '03; *Holocentropus picicornis*, delete W Mainland distribution as no record known; *Plectrocnemia conspersa*, ECP-C '68-'71, sites 8; *Plectrocnemia geniculata*, sites 1; *Polcentropus flavomaculatus*, AJ '75-'77, MP '79, AG '03, LK '13; *Tinodes waeneri*, AJ '75-'77, MP '79, AG '03, LK '13, sites 8; *Hydropsyche pellucidula*, CEH '01; *Hydropsyche siltalai*, sites 7; *Agrypnia varia*, AJ '75-'77, sites 6; *Phrygania grandis*, ECP-C '68-'71, AJ '75-'77, sites 6; *Lepidostoma hirtum*, AJ '75-'77, LK '13, sites 6.

The caption for the photograph in the first part of this article should read, 'Male Great Red Sedge'.

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Isopods (Woodlice & relatives) Report 2014

Dave Musson

From my view as County Isopod Recorder, 2014 was good year for this group. Two "Spot the Species" articles in the magazine 'Living Orkney' produced new records of **Common Striped Woodlouse** *Oniscus asellus*, **Rosy Woodlouse** *Androniscus dentiger* and **Painted Woodlouse** *Porcellio spinicornis*. None of these are rare but all records from new locations are very welcome.

I was surprised to discover that in some areas of Deerness the **Painted Woodlouse** appears to take over from the usually much more numerous **Common Rough Woodlouse** *Porcellio scaber* as the most abundant species. In my experience this is unprecedented. I don't know the reason but it may be related to soil PH.

The latest bulletin of The British Myriapod and Isopod Group includes an article by an authoritative source about the **Water Hognouse** or **Water Slater** *Asellus aquaticus*, oddly referring to it as a "woodlouse". Belonging to the family Asellidae these are not strictly woodlice but I will include them here as they are the only two British representatives of this Isopod family. The article was describing the discovery of this species in two locations in Caithness, these being by far the most northerly known locations for the species. This was a surprise to me as there is flourishing colony of this species in my garden pond. They have been there for at least three years. I may have accidentally introduced them with water plants from outwith Orkney, although most of the plants in the pond came from locations within Orkney. It is difficult to believe that these are the only *A. aquaticus* in Orkney.

The total number of woodlouse species in Orkney has now risen to 10. British isopod specialists tell me that a tiny white species -*Haplophthalmus danicus*- is certain to be here somewhere. That would bring the total to 11. There are of course many marine isopods but that is a subject for another recorder.



Asellus aquaticus (Dave Musson)

BEETLE REPORT 2014

Brian Ribbands

81 records of 29 species were reported in Orkney in 2014. As in 2012 and 2013, there was no systematic recording by visiting experts so these are mostly casual records of relatively conspicuous species, though there was some trapping.

There was one new Orkney species in 2014 and another that was new in 2013 was found again in 2014. Three species were recorded for the first time since the 1980s.

Green Tiger Beetle *Cicindela campestris* was reported only once, from the usual area near Rackwick in Hoy, on 10th June.

Notiophilus germinyi was found on a peat track in Evie, probably the first Orkney record since 1985.

Elaphrus cupreus seems to be the first Orkney record since 1983. It was found in a Birsay wetland.

Sexton Beetle *Nicrophorus investigator* was as usual one of the most frequent beetle species recorded, 14 times between 15th July and 19th September, mostly from moth traps. The larger all black *N. humator* was reported 5 times, in April, May, August and September.

Deleaster dichrous is the one new Orkney species. It is a distinctive rove beetle, about 7mm. long, orange-brown with a black head and abdomen. It was attracted to a light in Birsay and could turn up in moth traps. It is widespread but very local and has Nationally Notable (B) status.

Devil's Coach Horse *Ocyopus olens* was recorded 6 times in 2014, in Kirkwall, Stromness, South Ronaldsay and Swona. It seems to be found mainly on the shore and in built-up areas.

Brown Chafer *Serica brunnea* was found once, in South Ronaldsay. It seems to be turning up mostly on or near sandy beaches and dunes.

Denticollis linearis was a new species for Orkney in 2013. It is a very distinctive black and orange click beetle and unlikely to have been overlooked, so may be colonising Orkney. A male appeared on my tea flask in Rousay, then demonstrated its ability to fly when I was trying to photograph it. This suggests that it could be capable of reaching Orkney unaided. Males are mainly orange and narrower than the female found last year in Orphir.

The nationally rare *Chrysolina intermedia* was recorded on 5 occasions between the exceptionally early date of 28th February and 16th May, in the usual area between Black Craig and Yesnaby. Over the years, this beetle has had several name changes, causing some confusion. Now it has been changed again, back to *C. latecincta*, one of its former names.

The related *Chrysolina staphylaea* was found nearby on rocks at Yesnaby on 16th May.

Green Dock Beetle *Gastrophysa viridula* was recorded again on Swona, also in Hoy, West Mainland and Rousay. As usual at most sites, the beetles were on broad-leaved dock *Rumex obtusifolius* but also on Rhubarb at two sites.



Photo: *Limnephilus elegans*, recently recorded for Orkney, an uncommon species due to the larval habitat requirements. This photograph is of a specimen from the Netherlands, courtesy of Ger Klaus.

Addendum

The additional Orkney records obtained from the National Caddis Recording Scheme, courtesy of the organiser Dr I D Wallace, have been obtained over many years from museum collections and from the literature. They help fill a number of curious gaps in the previously published list of J D Walker, such as the very common species *Limnephilus lunatus*, which had been previously recorded on a number of occasions, but had been omitted or the records not known. No additional species are present in the Recording Scheme records but they do show that of the 30 species recorded since the 1985 list, 9 had been previously recorded, namely; *Rhyacophila dorsalis*, *Oxyethira flavicornis*, *Philopotamus montanus*, *Grammotaulius nigropunctatus*, *Limnephilus hirsutus*, *L ignavus*, *L lunatus*, *L vittatus* and *Halesus radiatus*. Many additional sites and dates are included for the species in the National Scheme database, including some with no known information from the previous list, such as the Grouse Wing, *Mystacides longicornis*. (Details of the earlier records in italics can be seen under each relevant species listed and includes work undertaken by the eminent entomologist E C Pelham Clinton and the very active recorder, A Joyce. The 1979 survey of Harray Loch by M Palmer is of particular note as it included the first records of the only Orkney RDB2 caddis species, *Ylodes reuteri*. Older larval records pre-1977 have not been included due to the unreliability of identification keys prior to 1981, see Discussion, above).

There are discrepancies between the National Caddis Recording Scheme species list for Orkney and the National Biodiversity Network Gateway (Web access) species list for Orkney. The Recording Scheme does not include records for nine species, with the same number missing from the Gateway list, but not the same species! Both lists contain some known errors. Perhaps this is inevitable with records coming from many sources, however, for the time being at least, the species list in this article should be taken as the most complete.

(As a result of seeing some of the difficulties encountered when voucher specimens for species records are not available, I have decided to give a reference collection of Orkney caddis specimens in alcohol to the Hunterian (Zoology) Museum, Glasgow University, where they can be conserved and made available for future reference, courtesy of Geoffrey Hancock, Entomology Department Curator).

populations, notwithstanding the possibility of accidental introductions along with imported aquatic plants. All previously published recorded species for Orkney, as far as is known, have been included.

Discussion

I have taken the previously published 1985 species list of Mr J.D. Walker as my starting point and only dealt with the development of historical records prior to this from 1968, having seen the database of the caddis National Recording Scheme Orkney records. (Dr I.D. Wallace has communicated 5 additional previously unrecorded and unpublished species records from Orkney for which he has records from the recording scheme database, but the exact status of these awaits clarification so they have not been included here). Details of the individual biological records for all the species listed can, or will shortly, be found at the website of the National Biodiversity Network or from the Orkney Biodiversity Records Centre, by request.

There is a lack of long-term data about distribution and relative abundance. A repeat thirty years after of the simple survey methodology used in my 1986-87 survey to investigate the possible variance of median week in the flight period of species, especially those known here to be at the edge of their British range, could indicate possible habitat quality or climate change. The importance of caddis both as habitat quality indicators and as contributors to the health of the Orkney wild brown trout sport fishery should not be underestimated.

In any species list compiled from a number of sources there are bound to be errors, please contact me if any are noted. Reliable identification keys for caddis have only been available from 1973 for adults (Macan), from 1981 for caseless larvae (Edington and Hildrew) and from 1990 for the case-bearing larvae (Wallace, Wallace and Philipson). Since these were published, errors have been corrected and the nomenclature continues to change. The publication of a new identification key for adults (Barnard and Ross) has brought the situation up to date and should enable many more people to record caddis flies.

Micro caddis, of the family Hydroptilidae, remain badly under-recorded. The larvae cannot be identified to species and are often recorded to genus only. The adults require special treatment and observation under relatively high magnification to be identified.

Bias in recording may often occur, either through partial sampling due to methods used or used over incomplete date ranges. Many habitats, areas and whole islands remain unexplored. New and developing sampling techniques await application.

Records are always welcome. As a practical suggestion to recorders given in my previous OFC Bulletin article (Andrew, 2013), specimens should preferably be preserved in isopropyl alcohol, available from chemists, which has been diluted to about 80% with distilled water (four parts alcohol to one part water), rather than using the alcohol neat which tends to make specimens very brittle. Alternatively, vodka may be used, if available.

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Heather Beetle *Lochmaea suturalis* was recorded only in Rousay in 2014, near a site where it had been seen the previous year.

Vine Weevil *Otiorhynchus sulcatus* was reported from Stromness and Orphir. The related *Otiorhynchus arcticus* was found at Yesnaby, the first Orkney record since 1980.

Many thanks to all contributors:

A Forsyth, S Sankey, R Simpson, I Hutcheon, P Martin, L Hogarth, L Johnson, L Shields, R Andrew, C & J Booth, J Branscombe, D Mayes, L Campbell. Apologies to anyone missed out.

Species List for 2014	Records	Status
<i>Ilybius fuliginosus</i>	2	
<i>Carabus arvensis</i>	1	
<i>Carabus problematicus</i>	3	
<i>Leistus terminatus</i>	1	
<i>Nebria salina</i>	1	
<i>Notiophilus biguttatus</i>	3	
<i>Notiophilus germinyi</i>	1	
<i>Cicindela campestris</i>	Green Tiger Beetle	1
<i>Elaphrus cupreus</i>		1
<i>Pterostichus niger</i>		2
<i>Curtonotus aulicus</i>		2
<i>Silpha atrata</i>		1
<i>Nicrophorus humator</i>		5
<i>Nicrophorus investigator</i>		14
<i>Deleaster dichrous</i>		1 Nb
<i>Staphylinus erythropterus</i>		5
<i>Ocyopus olens</i>	Devil's Coach Horse	6
<i>Aphodius depressus</i>		2
<i>Aphodius rufipes</i>		2
<i>Aphodius rufus</i>		2
<i>Serica brunnea</i>	Brown Chafer	1
<i>Denticollis linearis</i>		1
<i>Hemicrepidius hirtus</i>		1
<i>Chrysolina intermedia/latecincta</i>		5 RDB2
<i>Chrysolina staphylaea</i>		1
<i>Gastrophysa viridula</i>	Green Dock Beetle	10
<i>Lochmaea suturalis</i>	Heather Beetle	1
<i>Otiorhynchus arcticus</i>		1
<i>Otiorhynchus sulcatus</i>	Vine Weevil	4

Orkney caddis (Trichoptera) species list with ecological notes: Part 2 (Final)

Ross H Andrew

Introduction

The last Orkney caddis species list was published thirty years ago (Walker, J.D., in Berry, R.J. 1985 *The Natural History of Orkney*). Since then, as a result of previously recorded species now known not to have been included in the list together with a number of continuing surveys, 30 additional species have been recorded. The present list is, as far as is known, complete to date. It will be of interest to freshwater ecologists, for whom caddis are one of the important indicators for water quality monitoring, as well as fly fishermen and naturalists. Caddis are a conspicuous component of freshwater invertebrate life and are a highly significant part of the food of wild brown trout as larvae, swimming pupae and winged adults.

There are now 73 caddis species known in Orkney, from a total of 196 for Great Britain. This compares with 74 species recorded from Caithness, which has additional habitats not present in Orkney including rivers and extensive dubh lochans in the blanket bog of the Flow Country with their characteristic and, in some cases, special caddis fauna.

Ecological notes

Relative abundance: numbers of specimens recorded for each species are shown if known. Where adults (=A) are indicated, these have nearly all been attracted to light and voucher specimens are available from my own survey, RHA 1986-87, or subsequent, L=larva record. Numbers of adults can be taken as a measure of relative abundance for those species attracted to light, but this must be viewed with caution. Different species show varying degrees of attraction to light, this may also vary according to the stage of the adult life history. Those species not attracted to light are shown only in very small numbers, however, this is no indication of their relative abundance, some are widespread and very abundant. Records for larvae are known for only 33 of the 73 species listed.

(The bar chart showing abundance of Orkney caddis species from my 1986-87 survey is included to show the preponderance of *Limnephilus marmoratus* and *L. sparsus* at light; even though these light traps were situated immediately by the water bodies this is a pattern to be expected wherever caddis are trapped at light, particularly for *L. marmoratus*. Note that 87% of *L. hirsutus* and 97% of *L. incisus* were caught in Malaise flight intercept traps, despite being relatively abundant both species appear to show little attraction to light).

Survey: I have first listed six surveys from 1986-2011, showing the first date encountered for each species by each survey. It is assumed Mr J.D. Walker (JDW) is for adults only, as is R.H. Andrew (RHA). Countryside Survey (CS), Scottish Environmental Protection Agency (SEPA) and the Centre for Ecology and Hydrology (CEH) surveys are for larvae. SEPA surveys are only from lochs and burns where these form regular monitoring sites or suspected pollution incidents. Dr Kirby's (PK) survey was for adults and larvae. (For more information on the background to these surveys, including sampling methods, see Andrew, 2013). SG/KB and IDW relate to individual species identifications.

Since being made aware of some 720 Orkney caddis records from the National Caddis Recording Scheme which includes many historical records and two more recent Site Condition Monitoring Surveys from Harray Loch (see Addendum), I have added three older surveys; E.C. Pelham-Clinton 1968-71, adults only (ECP-C) unpublished, A. Joyce 1975-77, adults only considered (AJ) unpublished and M. Palmer 1979-80, adults only (MP), Harray Loch for the former Nature

Conservancy Council. The two more recent Harray Loch surveys for Scottish Natural Heritage are; A. Godfrey 2003, adults only (AG) and L. Knight 2013, larvae only (LK).

Flight period (including median week and summer diapause): where this is not known for Orkney, the '?' symbol is used, followed by the known flight period for Britain. Where light trapping has taken place over the whole of the flight period and where at least 50 adults have been caught (RHA survey), the full Orkney flight period is shown. For many species, especially from the family Limnephilidae, this information is unique. This is due to the fact that flight period for these species is strongly affected by latitude and has not previously been obtained for Orkney. The same species tend to peak in number earlier in Scotland than in Wales and Northern England and these earlier than in Southern England. One measure of flight period is the median week (shown as MW), thought to be a better measure of the mid-point than the average when highly skewed distributions occur. 'It has been shown that in many species in Britain the median week for flight periods becomes progressively later from north to south' (Crichton, 1988). Not surprisingly, perhaps, Orkney limnephilids often exhibit an earlier median week than amalgamated records from Scotland for the same species and with shorter flight periods overall. One side effect of this is that those species having a summer diapause show this to a markedly lesser degree, or not at all, in Orkney compared to Southern England. (The summer diapause is a period of total inactivity after emergence by adults which is then followed by mating and egg laying in the late summer or early autumn. It is thought to be a survival strategy for caddis living in temporary water bodies, such as ditches or small pools, which can dry up in the summer).

Distribution: this is shown for broad areas and number of sites, as currently known. It also reflects the frequency species are met up with but only indicates where sampling has been undertaken to date. The true distribution in Orkney for nearly all species remains unknown, most common species will occur wherever there is suitable habitat. In addition, caddis caught at light traps can fly considerable distances from their breeding site. As can be identified from known larval habitat, 25% of species from light traps are often not from the site being investigated (Wallace, 1991). The only way of establishing breeding sites with certainty is to find and identify larvae or to use floating emergence cages for adults. Recent surveys and monitoring, recording caddis larvae at some lochs and burns by SEPA, have increased the known number of breeding sites but these will be restricted in number and to standardised sampling techniques and therefore habitats.

Habitat: for these summaries I have borrowed extensively from published sources (Wallace, 1991 and Barnard and Ross, 2012), which summarise preferred habitat encountered throughout Britain.

Status: as reflected from the results of the caddis National Recording Scheme database of the Biological Records Centre, organiser Dr I.D. Wallace. *Ylodes reuteri* is the only species known from Orkney considered rare and under threat with Red Data Book 2 status (in view of possible future changes to the status of Harray Loch). Light trapping results indicate that this species may well have breeding sites other than Harray Loch, where originally found, but this needs to be confirmed from larval records. (This species can be abundant during its relatively short flight period at Harray Loch). There are four nationally local (*sensu* Wallace, 1991) species found in Orkney, of which only *Limnephilus elegans* could be considered to be under any local threat if the raised bog site at which it is found was to be altered (considered unlikely). *Limnephilus politus* is considered to be regionally notable in Scotland but its true status in Orkney remains to be discovered. With regard to suspect records, this has been indicated where considered appropriate for five previously recorded species. However, it should be noted that some species are migratory, in which case it is almost impossible to know what may turn up and even establish breeding