

Orkney Field Club

Founded in 1959

Aim: To encourage the study and conservation of the natural and cultural heritage of the County



Orkney Field Club is a registered Scottish charity, No. SC 012459

Orkney Field Club promotes the enjoyment, study and conservation of local wildlife. The Club manages land for wildlife, responds to conservation policy issues, promotes biological recording and runs training events. OFC was a founding partner of the Wildlife Information and Records Centre, located in the Orkney Library & Archive, which holds records of Orkney species, sites, habitats etc in a database. This valuable data is available to all interested parties. Records are submitted to OBRC by a network of County Recorders who encourage everyone to participate in the collection of data.

Subscriptions (2016) are Adults £10, Family £15, Concessionary £6, Student £3.

Membership Secretary is Brian Ribbands, Queenamidda, Rendall, KW17 2PA, tel. 01856 751439 or email queenamidda@waitrose.com.

Walks and Talks. Club nights – normally illustrated talks – are usually held in Kirkwall on the third Friday of each month except in summer. Meetings are advertised on Radio Orkney, on the Club's website – www.orkneycommunities.co.uk/fieldclub and the Club's Facebook page – www.facebook.com/OrkneyFieldClub. Field meetings are held frequently, chiefly during the summer, at a wide range of locations, including the outer isles. Short notice meetings, taking advantage of natural events or favourable weather will be advertised via the Facebook page. Non-members are welcome to all events. For more information, please contact OFC Secretary, Jenny Taylor, email jenny@jtlarch.co.uk.

Newsletters are normally sent out to members three times per year and are also available on the Club's website. They give members news, information and a programme of events.

The Club's Bulletin – *The Orkney Naturalist* – is the main publication of the Orkney Field Club, and it is produced in spring each year. It is free to members. It contains a wide range of articles about Orkney's natural history and annual summaries of records from Orkney's County Recorders for various taxonomic groups of wildlife. For enquiries about the Bulletin, including guidelines for those wishing to submit articles, please contact the Editor, John Crossley by emailing flawsjohn@gmail.com.

Resources are made available to members, who have access to the Club's slide collection and a comprehensive range of reference books and other equipment, including microscopes. Contact the Orkney Wildlife Information and Records Centre for details – www.orkneylibrary.org.uk/obrc

Club Office Holders 2015-16

President:	Peter Slater	Secretary:	Jenny Taylor
Vice-president:	David Lea	Treasurer:	Brian Ribbands
Chair:	Penny Martin	Membership:	Brian Ribbands
Vice-chair:	John Crossley		Dick Matson
Other committee	Helen Aiton	Sydney Gauld	Dick Matson
members:	Alastair Forsyth	Marc Herridge	Graeme Walker
	Anne Gascoigne	Trevor Kay	Carol Weston

This year we have had some wonderful talks and outings with the Field Club. Notable was Martin Gray's talk on beach combing and the huge range of flotsam and jetsam he has discovered while "vaigan b' the shore": much of it bruck, but some interesting bruck. I had not realised how much of it would have travelled here on the Gulf Stream from the east coast of North America and the Caribbean. Another talk was in the excellent evening of short talks we had in February, when Jenni Kakkonen of the OIC Marine Environmental Unit told us of the many non-native marine species found in Orkney. Perhaps it was to be expected that, of the many monitoring sites they keep an eye on, the most productive were the marinas at Kirkwall and Stromness.

Someone once aptly described Orkney as the place where the land divides and the sea meets. Even if you are neither a diver nor a fisherman, the sea is an ever present and important part of our lives. Its moods are always changing yet, at the same time, they seem much as they were many years ago. It is hard to believe that the oceans of the world, covering as they do over two-thirds of its surface, are not constant and stable if all you do is stand and look at them. Alright, rubbish washes up on the shore, but nothing that a bit of bruck bagging will not cope with. The occasional spillage leads to an oil slick but not long later the water is crystal clear once more. What then is the problem?

I have recently been reading the book *Ocean of Life*, by Callum Roberts (Penguin, 2012). He is a marine biologist at York University and writes simply and clearly but with great authority about the history of our seas, their current state and what the future may hold. It is a very impressive book, but a pretty disquieting one. Bruck is the least of our problems (we should perhaps be glad that a lot of the plastic in the sea is caught up in the north Pacific gyre to form a huge raft twice the size of Texas!). Less obvious changes in the sea are its rise in temperature (1.25°C in the North Sea in the past 25 years), its rise in level (20cm or more since 1870; possibly 60cm more by 2100) and its fall in pH (0.1 since pre-industrial times, but accelerating). This last, in particular, may not seem great, but represents a 30% rise in acidity and, if continued as anticipated, will have a devastating effect on coral reefs and shelled animals by the end of the century. Add to these global effects those of pollution, by noxious chemicals and by sounds, and of overfishing, and one realises that, despite appearances, the seas are certainly not the same as they ever were.

These are just a few of the more striking points that Roberts makes, but are clearly a call for action. The book is not all gloom. He professes himself to be an optimist. He is, in particular, enthusiastic about marine protection areas and their capacity for regeneration, and for stocking surrounding areas with plants and animals that we have hit hard. While no answer to global change, these areas are, in a small way, an important management tool. When I wrote last year I was unhappy that our Islands Council was arguing strongly against extending them as proposed, on the grounds that they might conflict with its plans for development. I think everyone should read this book: buy two copies and give one to your Councillor.

A Deluge of Events

Anne Gascoigne

Mention of the year 2015 brings one thing to mind: RAIN! The adjectives cold, damp, waterlogged, dull, overcast and windy would also be there; so when I looked back over Orkney Field Club's activity for last year, it was surprising just how many events we hosted, and how we seemed to find favourable conditions for "doing". In this review, I have concentrated on activities wholly arranged by the Club and not made extensive lists of the species found or studied, since more detailed accounts will be found in reports for various taxonomic groups.

Weather over the Christmas-Hogmanay 2015 period was perhaps best described as 'changeable'. However, we chose a less-windy, less-rainy day for our New Year Ramble, and planned a circumnavigation of Glimps Holm. Everybody was pleasantly surprised that such a small island could yield such a variety of habitat and interest, as we explored sandy beach, rocky shoreline, heather and wetland. We saw a range of auk species afloat in Scapa Flow and noted how Fulmars were already staking a claim to cliff ledges. After our sociable walk some of the keen birders made a stop at St. Mary's Loch and found Whooper swans, a pair of Mergansers and witnessed an unexpected fly past by a Merlin.

Unfortunately, our evening talk for January did fall victim to stormy conditions. With two of our speakers coming from the "wrong" side of the Churchill Barriers we missed out on learning more about feral cats in Orkney. But a couple of weeks later we were warm and cosy at the Ayre Hotel for our "Non-Christmas Dinner". New Year diets were forgotten for the evening as we tucked in and enjoyed a good blether. Chairman Penny was served a particularly special starter plate bearing a "mermaid's purse" with seaweed garnish.

For February, we had a fascinating talk by Steve Sankey who compared the flora and fauna of Orkney with that of Western Iceland – a mere 717 miles away "or four days by Viking longship". Many bird and cetacean species were familiar, as were some of the montane plants, although the volcanic landscape proved very different from that of our own green isles.

March encouraged people to venture outdoors; be it joining an RSPB Bird Race team or tree planting with the Friends of Happy Valley. The Club evening talk for this month took us around Orkney to locate our rarest plants. Eric Meek was making a welcome return visit to Orkney and, along with John Crossley, he introduced us to specialities on the new *Orkney Rare Plant Register*. We scoured the hilltops of Hoy for Alpine Bearberry and Dwarf Cornel, then hopped along beaches to find Oysterplant and Orkney's lone Seakale specimen. The *Register* is available to download at http://bsbi.org.uk/Orkney_RPR_2015.pdf.

Marwick Bay was the location for Orkney Field Club's contribution to Bag the Bruck. A huge pile of rubbish was soon collected (picked, hefted or dragged!) and over lunch we all agreed it would be a fine day if marine litter was a thing of the past, and this event was no longer called for.



Keeping up the marine theme, we also arranged an afternoon of rockpooling at Houton when the light and tide were just right for finding Sea Hares *Aplysia* in very shallow water (wellies sufficient – no need for a snorkel). In early April we had a “Seaweed Safari”; collecting specimens from the Birsay shore then examining them in detail using the excellent laboratory facilities at Heriot-Watt University’s ICIT in Stromness. Again, we found and identified several species of Sea Hare. Dr. Joanne Porter of ICIT had not yet had enough of us, so a month later we arranged another workshop in Stromness, collected more marine algae (this time from the Point of Ness), researched, scrutinised and even tasted it. We would like to thank ICIT for offering their space and time to the Field Club.



May saw Orkney Nature Festival making its third appearance in the Orkney festival calendar. Whilst some Outer Isles and Hoy events were cancelled owing to foul weather, our afternoon expedition to Russadale was blessed with fine, calm conditions. We welcomed visitors from Tenerife, Holland and Suffolk (!) and together walked up along the peat track to the quarry, where we looked at lichens and sheltered plant colonies. Willow was then coming in to leaf, some early insects were spotted, we saw a Short-eared Owl, several Hen Harriers and even heard a Cuckoo!

Several years ago, some Field Club members attended a practical course run by British Divers Marine Life Rescue in how to respond to strandings of cetaceans. These skills were put to the test – and rewarded – with the successful refloating of a stranded Pilot whale at Dingieshowe on 10th June. One club member commented that although the “real thing” was much less manoeuvrable than the dummy one with which he had trained, he felt privileged to have been able to assist and that making eye contact with the whale was a very special moment.

Mid-month saw the formation of a specialist “Flora sub-group”, with the sole aim of recording plants. Our inaugural evening at Scapa coincided with a monsoon-like downpour. However, this did not deter participants who splashed off along the cliff path, studied diverse colouration within adjacent Red Campion plants and successfully located a sought-after colony of Early Purple orchids.

Toward the end of the month, seven members made for a weekend trip to Papa Westray; meeting up with host Julian Branscombe and staying overnight at the cosy Papay Hostel. We began with a botany session at Moclett Links, lunched by the sandy beach there and then walked along the Southeast coast to explore St. Tredwell’s Loch. Most folk then made for the Hostel, but one intrepid person went for a swim at the village pier.

After a filling supper (supplied and cooked for us by Julian), we took advantage of the summer evening light to journey up to St Boniface Kirk (for a mix of history and lichens) and then carried on along the West coast to the Knap of Howar and Holland Farm. We explored the horse-tramp building and granaries before heading home in the ‘grimleens’. We were joined on this expedition by a German visitor and had fun exchanging bird names in both languages. For some folk the evening ended here, others stayed up to join with Papay locals at the weekly ceilidh.

The next day dawned wet, but mid-morning saw us set off to explore Papay’s North Hill. A near gale-force wind had pushed the rain away but also deterred us from making a circuit of the RSPB reserve, so we opted instead for a quick visit to the ex-Coastguard lookout, then a sheltered ramble along the Northeast coast. After lunch we examined planticruets and low-lying pasture areas before ascending the cliff path and over a stile into *Primula scotica* habitat. We found a sunny ledge to have a second lunch and were watched by sentinel Arctic skuas



throughout. Atop Fowl Craig we said hello to the Great Auk memorial; erected by Junior Orkney Field Club members in 1988!

Before departing for the ferry home, we had another late lunch then toured the newly-restored Kelp Store building and walked along South Wick past where a Viking grave site had just been discovered in the dunes. On returning to Mainland Orkney, everyone acknowledged the weekend had been interesting and stimulating - and folk felt as if they had been "on holiday" for much longer than two days. We would very much like to undertake more of these extended trips to explore other Isles in greater depth, without the rush to catch a same-day ferry.

July was very damp! We altered the date for our visit to North Hoy several times, then struck lucky on a day which demanded sunhats and sunscreen. Taking in a lesser-visited area of coast overlooking Cava and Rysa Little the cliff scenery was spectacular, although rough heather made for challenging walking. Our main focus was on plants; with Aspen and Rowan to the fore and the discovery of a colony of tiny Lesser twayblade. Peregrines, Red-throated Divers and seals were also observed.

Botanising continued with the Flora sub-group meeting at a foggy Brodgar to look at ferns and to sniff out aromatic Holy Grass. The group met again two weeks later at the Scottish Wildlife Trusts' patch of ungrazed wet heath next to the Harray Road end, but excessive rain resulted in the area being far wetter than expected, so progress (even for wellie-wearers!) was slow. However, we did manage to cover most of the plot and recorded a good tally of bog plants. Undeterred by time constraints and this year's leaden weather, participants agreed the Flora Group should persevere in future seasons.

Mid-August saw Members heading off to yet another island – and enjoying yet another fortuitous hot, sunny day! We visited the Southeast corner of Shapinsay and walked around the coast from Haco's Ness to Crook. The scenery was really stunning; and a revelation for many of us who thought Shapinsay consisted of little more than Balfour village and Castle! We admired an extensive flush of Forget-me-Not which matched the bluest of blue skies above. We looked at pasture, maritime heath and roadside verges, and the route also gave us a chance to explore some archaeology around wonderfully-named Castle Bloody and at the Mor Stein.

After the walk some Members opted to return on an earlier ferry whilst the rest scoffed ice-creams before going up to the RSPB Mill Dam hide. There we watched a variety of waterfowl - and the Bremner's herd of Water Buffalo. These beasts were on a working holiday from their Deerness home, loaned to graze the difficult-to-manage wet slopes around Mill Loch.

Since Orkney Field Club has become a Scottish Incorporated Charitable Organisation (SCIO), we have changed our accounting year, and so the AGM has moved to September. This is also a month when many folk chose to go away, so the meeting was small in attendance and short in duration. The existing Committee was re-elected en bloc, with vacant places filled by Alastair Forsyth, Carol Weston and Helen Aiton.

During the year, the Club has supported Orkney Wildlife Records and Information Centre (OWRIC – formerly OBRC) in holding in-depth specialist courses. A hoverfly identification course took place in June, whilst September's study focussed on spiders. Such courses are open to the public and are opportunities for participants to gain knowledge of specific taxa; and to (hopefully) expand recording of these groups in Orkney.

A fair weather window in late September prompted another short-notice field trip. “Last-minute Hoy” comprised a walk through Berriedale and up to the high ridges of Cuilags where both species of Bearberry were located. Autumn colours were just beginning and the rain held off, making for an excellent (and practically midge-free) day out.



October is the best time for fungi, so we held another popular “Finstown Fungi Foray” looking for grassland species in the Old Kirkyard and woodland species at Binscarth. It was heartening to see several young families coming along, and the half-day format seems to suit otherwise-busy people. Thanks to Julian for leaving the shores of Papay to lead this event for us, and to Lee Johnson for identifying some particularly spectacular slime-moulds found on decaying timber.

Changing BST to GMT reminded us that “summer” was over (boo!) but heralded the first of our Club Nights (hooray!). Author Richard Clubley gave us an evening of images from uninhabited Scottish islands. We were introduced to Ailsa Craig, North Rona, St Kilda – and from Orkney waters Suleskerry, Cava and Swona. In most cases, Richard was alone apart from huge seabird colonies, and we had to admire his duggedness in reaching some of the more remote places.

Events followed in quick succession for November as Orkney Field Club hosted two talks and another field trip. The first indoor session was a briefing by SNH area manager Graham Neville and his team to outline what the organisation are doing to tackle the problem of Stoats in Orkney. The issue remains live (and very controversial), but it was good to get a cross-section of folk along to the meeting and to open up the discussion.

Our second talk of the month was an introduction to Dragon- and Damselflies in Orkney. Graeme Walker talked in a very entertaining manner about the eight species now resident in the islands and inspired us all to search for these creatures. Graeme showed us a wonderful sequence of photographs (taken over a two-hour timespan) of a dragonfly splitting out of its juvenile skin, withdrawing soft spindly legs from the old shell and its new wings extending and hardening. Some of us have seen (and collected) these ghostly, abandoned larva-casings or 'exuviae', and this is a good way of confirming that breeding has taken place.

The audience seemed particularly attracted by the idea that *Odonata* are relatively obliging to seek out; only flying on calm, sunny days and usually between 10.00am and 4.00pm, thus fitting in well with a lazy Sunday stroll. Pools on Hoy, at Hoxa, Russdale and the Crantit Trail are hotspots for dragonflies, and in future the Club hopes to hold more short-notice field trips when conditions look just right.

Yet again we pored over weather forecasts to find a suitable opportunity to take a walk along the South Parish coast to view Grey Seal pups. A Saturday late in November offered a few hours respite from gales and rain, so we met at Burwick and walked the short way towards Barth Head. The beaches were well-populated by mothers with pups at all stages; from furry newborns to moulting juveniles. We made use of cliff-top vegetation and lay down to watch, so minimising disturbance to the nurseries below. Our thoughts were with the youngsters as two days later Orkney was battered by Storm Abigail.

December brings an annual fun "Environmental Quiz", and although not an event Orkney Field Club has ever been (un)lucky enough to host, it is a contest where we have had a strong presence. The 2015 team (Anne, Penny, Graeme, Brian, Helen and David) came out top and we regained custody of the winner's trophy "Hamish" – a plush toy haggis in his own plastic wine glass! Winning means immunity from organising the evening, but we anticipate being invited to do battle again in 2016.

And so 2015 trickled away, and yes, despite it being the wettest summer for 60 years, we did manage to do rather a lot! The Walks and Talks Committee welcome ideas for future trips, workshops and speakers, and we are keen to reflect the wide range of Field Club members' interests. Our increased usage of e-mail and social media means we can advertise more spontaneous events – or last-minute changes to the published programme - and enables us to take advantage of elusive good conditions or new sightings. But whatever the weather, Orkney nature is fascinating, so it is on with the waterproof breeks, hats and wellies and get out there to explore it!

Foreword by John Crossley

Derek Ratcliffe was probably the most influential ecologist of his generation and the author of several books and numerous papers, most notably on birds and the vegetation of the British Isles. The paper that follows is in his incomparable description of the plant communities of Hoy, written for the Nature Conservancy (NC) in 1963, shortly after he co-authored, with Donald McVean, *Plant Communities of the Scottish Highlands*, a pioneering survey and classification of vegetation in the Highlands. He was Chief Scientist for the Nature Conservancy Council (NCC) from 1973 to 1989 and a powerful advocate for conservation, so much so that ultimately he became exceedingly unpopular with even more powerful landowning interests. A week after his retirement in 1989 the NCC was broken up by the Conservative Government into the various national agencies, including Scottish Natural Heritage. He died in 2005 and a book about him, *Nature's Conscience: The Life and Legacy of Derek Ratcliffe*, was published in 2015. Hence it seems appropriate in this year to publish his paper on the vegetation of Hoy.

The paper reproduced here, in slightly abridged form, was an internal report for the NC. It turned up recently among the legacy of the late Elaine Bullard, former Botanical Society of Britain and Ireland (BSBI) Vice-county Recorder for Orkney. It is a slightly defective photocopy of a typescript and I have been unable to trace the original.

In presenting it here I have added English names for vascular plants; up-dated vascular plant nomenclature to Stace (2010) and bryophytes to Hill *et al* (2008); added notes in order to clarify the somewhat arcane terminology of plant communities (now superseded by the National Vegetation Classification [Rodwell, 1991-2000]); and summarised the final section, which had some missing sentences.

References

- Hill, M.O., Blackstock, T. H., Long, D.G, Rothero G.P. 2008. *A checklist and census catalogue of British and Irish Bryophytes*. Middlewich, British Bryological Society
Rodwell, J.S. (ed.). 1991-2000. *British Plant Communities*, volumes 1-5. Cambridge
Stace, Clive A. 2010. *New Flora of the British Isles*, 3rd edition. Cambridge

Introduction

Orkney was not studied during the survey of Scottish vegetation carried out earlier, and a visit to Hoy was paid on 10 and 11 July 1963, in company with Miss N. J. Gordon and Dr W. J. Egging, to assess the worth of the northern part of the island as a possible Nature Reserve.

The area in question consists of Ward Hill, and the coastal stretch of moorland from Rackwick and Rora head to the Kame of Hoy and Cuilags. The whole of the area is composed of Old Red Sandstone, but this varies somewhat in lithology; for present purposes it may be divided into harder, non-calcareous and softer, calcareous types. The rock is exposed as inland crags chiefly on the north and north east face of Ward Hill, and in the stream-cut ravines, but these cliffs are

tiny compared with the immense range of coastal precipice which bounds the moorlands to the west for five miles and rises vertically to 1100 ft. at St. John's Head. Elsewhere the hillsides rise steeply from the low ground to the extensive plateau-lands on the watersheds.

The dwarf shrub heaths and scrub

Although the mean annual rainfall over these moorlands is only 45 ins., the vegetation of the area has a clear resemblance to that of the humid hill districts of the Western Highlands and Islands. The valley lying between Ward Hill and the western moorland has a range of vegetation very similar to that of the low-lying Torridonian Sandstone ground on Rhum. The flat bottom (Ford of Hoy) has typical Trichophoreto-Eriophoretum¹, with a good deal of *Sphagnum* (mainly *S. papillosum* and *S. capillifolium*), and local abundance of **Great Sundew** *Drosera anglica*. On drier moraine ground there are extensive areas of Trichophoreto-Callunetum², and a good deal of Mollinieto-Callunetum³, and only the steep, well-drained slopes have pure Callunetum vulgaris⁴ with no peat-forming associates. Steep shaded slopes with a north-east aspect, below the Howes of Quoyawa and above Berriedale, have good stands of Vaccineto-Callunetum hepaticum⁵, which I regard as an extremely oceanic type of vegetation depend on constantly high atmospheric humidity. On Quoyawa, the mixed hepatic mat beneath **Heather** *Calluna* is especially well developed⁶, with an abundance of *Herbertus aduncus*, *Pleurozia purpurea*, *Scapania gracilis*, *Bazzania tricrenata*, *Plagiochila spinulosa*, *Diplophyllum albicans* and, locally, the rarer species *Plagiochila carringtonii*. In some places, instead of the hepatics, *Sphagnum capillifolium* is dominant beneath the *Calluna* on shaded slopes as on the north-east slope of Cuilags.

The sheltered little glen of Berriedale has, besides its tiny mixed scrub wood of **Birch** *Betula pubescens*, **Aspen** *Populus tremula*, **Willow** *Salix cinerea* ssp. *oleifolia* and **Rowan** *Sorbus aucuparia*, a fairly rich collection of oceanic liverworts such as *Bazzania trilobata*, *B. tricrenata*, *Lepidozia pinnata*, *Plagiochila spinulosa*, *Herbertus aduncus* and *Nowellia curvifolia* (on rock instead of rotting logs). **Wilson's Filmy-fern** *Hymenophyllum* is abundant on the north facing side and one plant of **Hay-scented Buckler-fern** *Dryopteris aemula* was found, a new record for Hoy. Scrub of this type was probably once more widespread on the lower ground, especially in sheltered places, but has been eliminated elsewhere by human activities.

On more gentle north-east facing slopes above Grut Fea the moss *Rhacomitrium lanuginosum* becomes abundant and even co-dominant in a range of plant communities, this again being a feature of oceanic districts. Trichophoreto-Callunetum, Mollinieto-Callunetum, Calluneto-

¹ Wet blanket bog

² Wet heath with Deer-grass

³ Wet heath with Purple Moor-grass

⁴ Dry heather moor

⁵ Damp, high-altitude heath with abundant bryophytes

⁶ Note by JC: it is also well-developed 2 km northwest at Enegars, but Ratcliffe and his party must not have seen this.

Eriophoretum⁷ all show a *Rhacomitrium*-rich facies here, as does a mixed dwarf shrub community with *Calluna*, **Arctic Bearberry** *Arctostaphylos alpinus* and **Bearberry** *Arctostaphylos uva-ursi*; this last is identical with the Rhacomitretum-Callunetum⁸ widespread in the north-west Highlands. Yet it is remarkable that the abundance of *Rhacomitrium* soon gives way, at about 700 ft., to abundance of lichens, mainly over the moorland as a whole, but reaches dominance in a few places, as on top of the highest point of the cliffs at St. John's Head. The lichen heath here is a good (in completeness of lichen cover) as any other examples seen in Scotland generally, being found mainly in the East-Central Highlands, so that its juxtaposition with oceanic *Rhacomitrium* and hepatic-rich vegetation is especially surprising and difficult to understand. A similar abundance of lichen rich heath vegetation in essentially oceanic areas is found on the Scottish mainland in Sutherland, where it occupies large areas of moorlands which stretch back from Cape Wrath and Whiten Head. It is possible that proximity to the sea is connected in some way with this curious intermingling of vegetation types characteristic of contrasting climates.

The change from ordinary tall Callunetum to the prostrate, wind-clipped heather mat of exposed ground takes place at a remarkably low elevation on these Orkney hills compared with mainland of Scotland. The real dwarf Callunetum occurs as low as 500 ft. or even less, and is extensive on all dry, exposed ground up to the summits. There are extensive stands of the species-poor type, corresponding to Cladineto-Callunetum⁹ without much lichen, but a noteworthy feature of both hills is the occurrence of large patches of mixed dwarf shrub heath rich in *Arctostaphylos alpinus* and *A. uva-ursi* particularly, and also **Crowberry** *Empetrum nigrum*, **Bell Heather** *Erica cinerea* and **Least Willow** *Salix herbacea*. **Arctic Bearberry** *Arctostaphylos alpinus* is especially profuse and was fruiting well at only 500 ft. **Trailing Azalea** *Kalmia procumbens* is frequent in a few places, and here the community has identity with the Arctoeto-Callunetum¹⁰ of the Northern Highlands. **Dwarf Juniper** *Juniperus communis* ssp. *nana* and **Bog Bilberry** *Vaccinium uliginosum* are local members of this vegetation type and there is an abundance of lichens in places.

Vegetation of unstable ground

There is other evidence of a montane climate on the ground occupied by this kind of vegetation. Severe wind exposure has produced extensive ablation surfaces with bare, stony and gravelly expanses of soil supporting only the sparsest cover of plants. On sloping ground there are extensive systems of solifluction terraces, very well developed on both Ward Hill and Cuilgals, but often showing an oblique inclination across the slope, as do some examples of terraces on the Moine hills of the Scottish mainland. Perhaps because of the low clay content of the substratum, the terraces are not as perfectly developed as in some other districts of Scotland, but probably nowhere else are they so well developed at such low elevations. Each terrace is

⁷ A drier form of blanket bog, usually Heather-dominated

⁸ Dry heath with abundant Woolly Fringe-moss *Rhacomitrium lanuginosum*

⁹ Dry heath with *Cladonia* spp. and other lichens

¹⁰ Prostrate Heather-Alpine Bearberry heath

usually occupied by an outer strip of ablation surface, passing to the closed dwarf Callunetum towards the foot of the next bank above, the repetition zonation being due to a corresponding alternation of exposure and shelter. Apart from the varying degrees of reduction in plant cover, there is on the whole no particular vegetation or flora associated with the ablations and solifluction effects, most of the open vegetation being referable to the species-poor dwarf Callunetum, or mixed dwarf shrub heath. In one place near the top of ward Hill, however, a slightly richer area of substratum supports additional species such as **Alpine Bistort** *Polygonum viviparum*, **Moss Champion** *Silene acaulis*, **Sea Plantain** *Plantago maritima*, **Wild Thyme** *Thymus polytrichus* ssp. *britannicus* and **Mountain Everlasting** *Antennaria dioica*, and this community corresponds to the **Three-leaved Rush** *Juncus trifidus*-**Sheep's-fescue** *Festuca ovina* nodum¹¹ so widespread on ablation surfaces in the north-west Highlands.

Bogs and flushes

Damp ground on the gentler slopes and watershed has areas of shallow blanket-bog, often resembling the Calluneto-Eriphoretum of the Highlands (though lacking **Cloudberry** *Rubus chamaemorus*), but locally with a good deal of **Mat-grass** *Nardus stricta*, **Heath-rush** *Juncus squarrosus*, **Deer-grass** *Trichophorum germanicum* and **Common Sedge** *Carex nigra*. Both *Rhacomitrium*-rich and lichen-rich facies occur. *Sphagnum papillosum* and *S. capillifolium* are often abundant, and small patches of incipient bog, formed where there is local accumulation of surface water on otherwise dry ground, are composed almost entirely of the first species. As a transitional community between dwarf shrub heath and shallow blanket bog on higher ground, there are extensive areas of a Trichophoreto-Callunetum in which *Trichophorum* is usually non-tussocky, and lichen cover is often high.

Flushes are not common or well developed on the higher ground but they occur frequently and in some places extensively on the lower drift slopes at the foot of these hills. There are examples of the strongly basic, open type, corresponding to the low-level facies of Cariceto-Saxifragetum aizoidis¹²; these have much bare soil and gravel with patchy growths of **Black Bog-rush** *Schoenus nigricans*, **Yellow Saxifrage** *Saxifraga aizoides* and the mosses *Scorpidium scorpioides* and *Campyllum stellatum*. Often the flushes are fed from flush bogs dominated by *Schoenus*, and intermittent irrigation by enriched water on these gentle drift slopes has given rise to extensive grasslands, generally of the **Bent** *Agrostis*-**Sweet Vernal-grass** *Anthoxanthum*¹³ type, but often rich in herbs or flush bog species such as **Soft Rush** *Juncus effusus* and *Sphagna*.

Maritime vegetation

The strongly maritime influence extends beyond the halophytic growths (**Thrift** *Armeria maritima*, **Sea campion** *Silene maritima*, **Plantain** *Plantago* spp.) of the actual seaward cliffs and slopes to the higher ground, where the dwarf shrub heaths on top of the cliffs have a

¹¹ High-altitude, humid, moss-heath

¹² Montane and sub-montane base-rich flushes

¹³ Acid grassland

characteristic cushion-like growth, with rather open patches between, and a good deal of **Creeping Willow** *Salix repens*, **Crowberry** *Empetrum nigrum*, **Bell Heather** *Erica cinerea*, **Bearberry** *Arctostaphylos* and **Heath Spotted-orchid** *Dactylorhiza maculata*. This gives way locally to an abundance or even complete dominance of **Great Wood-rush** *Luzula sylvatica*, a feature often found on hills which lie right on the western sea-board. More indirectly reflecting proximity to the sea are the large stands of dominant and luxuriant **Common Sorrel** *Rumex acetosa* which occupy much of the heavily manured Great Black-backed Gull ground around the Loch of Stourdale and the Suifea Lochs. In this community there is a good deal of **Red Champion** *Silene dioica*, **Yorkshire Fog** *Holcus lanatus*, **Wavy hair-grass** *Deschampsia flexuosa* and **Sweet Vernal-grass** *Anthoxanthum odoratum*. It appeared that entry of *Holcus lanatus* and *Deschampsia flexuosa* in the dwarf shrub heaths marked the first effects of manuring by the gulls.

The montane flora

Montane species are well represented in the dwarf shrub heaths of the exposed ground, but since the soils here are leached and acidic, the associated flora is either calcifuge or indifferent. The contrasting highly calcareous rocks which outcrop on the north-east slopes of Ward Hill support a remarkably rich calcicolous montane flora, considering that the altitude is only about 700-1000 ft.; this again illustrates the depression of vegetation zones which occurs on the exposed northern and western coasts of Scotland and its islands. The outstanding floristic feature is the extreme profusion of **Alpine Saw-wort** *Saussurea alpina* which, area for area, grows more abundantly here than anywhere else seen by the writer. This plant grows as usual on steep rocks and ledges but is in great quantity on bare, soily and crumbly scree slopes and even in dwarf shrub heath adjoining the outcrops. **Yellow Saxifrage** *Saxifraga aizoides* is also very abundant on the crumbling slopes of calcareous sandy soil, and there is a good deal of **Purple Saxifrage** *S. oppositifolia*, **Roseroot** *Sedum rosea*, **Mountain Sorrel** *Oxyria digyna*, **Alpine Meadow-rue** *Thalictrum alpinum* and **Moss Champion** *Silene acaulis*. Some of the rarer plants were found, and the old record of **Myrtle-leaved Willow** *Salix myrsinites* was confirmed, there being two small bushes in the Glen of Greor. The Howes of Quoyawa proved to be the richest area, however, and a new plant for Orkney was found in Alpine **Meadow-grass** *Poa alpina*, which grew abundantly and finely at the head of two deep gullies. Here also there was a single clump of **Mountain Avens** *Dryas octopetala* (reported also from rocks to the west), a little **Alpine Bistort** *Polygonum viviparum* and **Hoary Whitlowgrass** *Draba incana* and about eleven tufts of **Holly-fern** *Polystichum lonchitis*. Interesting northern bryophytes included *Orthothecium rufescens*, *O. intricatum*, *Hypnum callichroun*, *Herbertus aduncus* and *Radula lindbergiana*. The bigger, damper ledges, and more stable slopes at the foot of the rocks had luxuriant growth of tall herbs (cf. Tall Herb nodum), such as **Common Sorrel** *Rumex acetosa*, **Water Avens** *Geum rivale*, **Meadow Buttercup** *Ranunculus acris*, **Wild Angelica** *Angelica sylvestris*, **Primrose** *Primula vulgaris*, **Red Champion** *Silene vulgaris*, **Goldenrod** *Solidago virgaurea*, **Great Wood-rush** *Luzula sylvatica* and **Broad-leaved Willowherb** *Epilobium montanum*, and ferns (**Broad Buckler-fern** *Dryopteris dilatata* and **Mountain Male-fern** *D. oreades*).

There is thus a fairly close resemblance to both open and closed communities of many basic cliffs on the Scottish mainland, though Ward Hill is not in any sense a second Ben Lawers. Some common montane species are notably absent on Hoy, e.g. **Alpine Lady's-mantle** *Alchemilla alpina*, **Spiked Wood-rush** *Luzula spicata*, **Three-leaved Rush** *Juncus trifidus* and **Mossy Saxifrage** *Saxifraga hypnoides*, illustrating the well-known phenomenon that island floras are usually poorer than those of larger adjoining land masses. The growth of these arctic-alpines at relatively low levels is to be explained in terms of the favourable temperature regime which obtains in this cool climate, and in the absence of competition from trees and shrubs, due to severe exposure to wind.

Changes in land use and vegetation

One interesting general feature is that although the area appears to have been managed along fairly conventional lines in the past, during the last few years there has been no burning of the vegetation or grazing by sheep. As a result, both ericaceous and grass-herb communities on the lower slopes have become relatively tall and dense. Some of the grazed-down tall herbs in richer grasslands, such as **Meadowsweet** *Filipendula ulmaria*, **Water Avens** *Geum rivale* and **Meadow Buttercup** *Ranunculus acris* are luxuriant, and there is a resemblance to the communities of ungrazed basic cliff ledges. The damage, however, has been done long ago, and original vegetation such as scrub has been eradicated so completely from the lower ground that it will not return without active intervention. Apart from the further slight increase in luxuriance on the lower slopes, the vegetation is not likely to change much more as a result of the continued freedom from grazing and burning.

Recommendations

(Summary by JC: The following section is incomplete in the copy I have, is probably a little out-dated in its perspective and now not of as much interest as the preceding descriptive sections. Ratcliffe considers the area to be of National Nature Reserve status because of its range of outstanding, mainly botanical, interests, but becomes equivocal when comparing the features individually to similar ones on established Reserves in other parts of Scotland, e.g. species-rich dwarf shrub heath on Beinn Eighe; lichen heath in the Cairngorms, wet heath and blanket bog on Rhum, the ablation-solifluction features on certain hills of the Scottish mainland and the sea cliffs and stacks of St Kilda.)

OWIARC Species Identification Workshops 2015

Lee Johnson and Sydney Gauld



Orkney Wildlife Information and Records Centre hosted three fascinating species identification workshops in 2015. We began in May with a well-attended Small Water Creatures course led by Dr Mark Young, looking for samples from the fresh water environment. We donned our wellies and met up at Harray Loch where we learned about the different habitats within the loch and had a go at catching specimens with a net, which generated lots of interesting wriggles to inspect. Next it was off to Happy Valley where we had a go at kick sampling in the burn then back to a room set up with microscopes at Orkney Library and Archive with teeming sample jars to identify what we had found. We all got the chance to see an interesting array of stonefly, blackfly and caddisfly larvae such as *Odontocerum albicorne* as well as leeches such as *Haemopsis sanguisuga* water beetles and fresh water snails such as *Theodoxus fluviatilis*.

In June we were lucky to have Roger Morris and Stuart Ball from the Hoverfly Recording Scheme in Orkney and they led a hoverfly identification workshop over two days at St Andrew's Community Centre. This was an indoor course using keys to identify pre-collected specimens under the microscope which was fortunate as the weather was terrible. However we did manage to have a quick look around the local area during a brief break in the showers and we found a few nice specimens including *Eristalis pertinax*, *Helophilus pendulus* and one or two *Syrphus* spp.



The weather held out for the spider identification course in September led by County Spider Recorder Edward Milner. After a quick talk at the Orkney Library and Archives in Kirkwall we headed off to Berstane Woods, Hobbister and Waulkmill to collect specimens.

After much grubbing around on hands and

knees we found some lovely arachnids including the harvestman *Nemastoma bimaculatum*, a lovely large female **Four Spot Orb Weaver** *Araneus quadratus* and a money spider *Drapetisca socialis*, often called the **Invisible Spider**, a first record for Orkney. Whilst Edward was here he also found *Oonops pulcher* at Toy Ness which is another first record for Orkney and *Walckenaeria acuminata* on Rousay, a strange looking spider because the male has eyes on a turret on its head.

Hopefully all three courses have educated and inspired the participants and we look forward to receiving lots of records at the OWIARC.

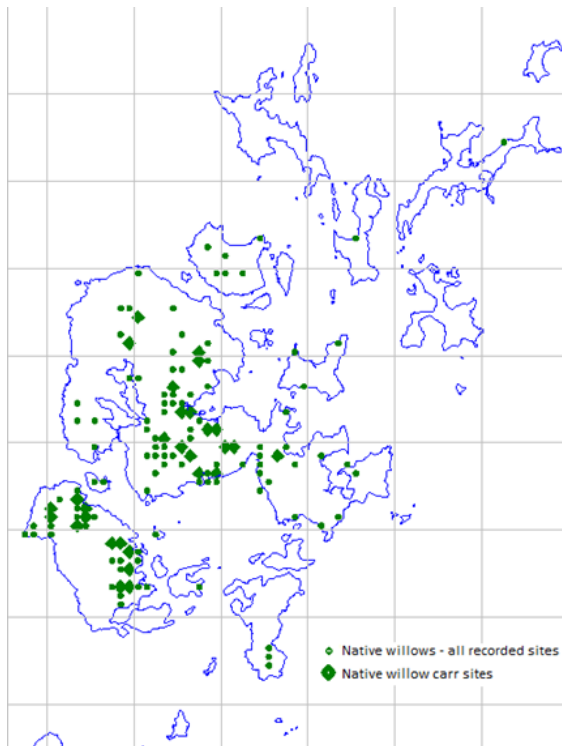


Our native willows

Jenny Taylor and John Crossley

Many people will be familiar with Orkney's native trees, namely Downy Birch, Rowan, Aspen and Hazel, but our native Willows are sometimes unrecognised and under-valued. On Mainland Orkney, apart from a few coastal Aspen, they are the only remainder of Orkney's native woodland cover.

The larger of the natives are **Grey Willow** *Salix cinerea*, **Eared Willow** *Salix aurita*, **Tea-leaved Willow** *Salix phylicifolia* and hybrids. Then there are the tiny **Dwarf Willow** *Salix herbacea*, found quite frequently on the windswept tops of the Hoy hills and also, but much more rarely, on some North Isles hills; and the common and widespread **Creeping Willow** *Salix repens*. Eared, Tea-leaved and Grey Willow can be found growing as individual plants and in small groups, but also forming extensive areas or 'carrs' consisting of one or more of the species. These areas are a subtle feature of the Orkney landscape, with their gently rolling outlines echoing the shapes of the hills. The map below shows the recorded distribution of the three larger species, at sites where they are believed to be of truly 'wild' origin, i.e. not planted.



It will be seen that the main centres of distribution are in Hoy/North Walls and the Orphir/Stenness/Firth area of Mainland. The habitat on Mainland, particularly of the larger groups is mainly lowland marshes and fens, with burn gullies, hillsides and even roadside banks supporting smaller groups and individual bushes. In Hoy and North Walls the larger groups are found in both hill gullies and marshes. Apart from making the obvious observation that these willows are more common in areas of less wind exposure and of land most resistant to

agricultural ‘improvement’, it is tempting to suggest that the Mainland concentration is a relic of a larger scrub ‘forest’ that survived longest in this area – but this is no more than speculation.

The identification of *Salix* species can be challenging, for they are great hybridisers. Additionally, plants growing in very exposed conditions or poor ground may exhibit a variety of forms. The fact that *Salix* are dioecious, with male and female flowers on separate plants, can also add to the difficulty. The three larger species and hybrids usually form multi-stemmed, spreading bushes from about 0.5 to 3 m in height. This is especially so when they grow in marshes. In gullies and on hillsides, especially in Hoy, they can be much more tree-like, up to 6 m in height and with one or a few stems.

Grey willow *Salix cinerea*

This is the most tree-like. Young twigs are grey and furry; the underside of the leaves have rust-coloured hairs when mature. Only one of its sub-species, *oleifolia* (called ‘Rusty Sallow’ in some books), is found in Orkney.



(Photo J. Taylor)



(Photo J. Taylor)

Eared Willow *Salix aurita*

Rough, crinkly, greyish leaves with large auricles (‘ears’) at the base of the leaf stems distinguish this species. It grows in a variety of habitats and can be very short in stature on heaths and bogs.

Tea-leaved Willow *Salix phylicifolia*

Leaves are shiny and bright green above, twigs glossy.



(Photo J. Taylor)

The value of these willows for wildlife is tremendous. Great numbers of many different species of invertebrate (55 are listed for *S. cinerea* alone¹⁴) – aphids, leafhoppers, psyllids (plant lice) and the larvae of moths, beetles, sawflies and others feed in and on leaves and fruits. In spring, the male and female catkins are the major source of pollen and nectar in the countryside,



Creeping Willow, male's catkins (J. Crossley)

especially in the wilder parts of Orkney, the hills and moors, and are visited by flies, bees, moths, other winged insects and adult beetles. They provide food and shelter for birds, particularly species such as Reed Bunting, Sedge Warbler and Willow Warbler. Fungi grow in symbiosis with their root systems. Hence the use of the term 'scrub', with its derogatory overtones, which is sometimes used to describe groups of willows, is unfortunate. The terminology implicitly devalues what is an important and attractive element in the Orkney landscape and may even lead to its thoughtless destruction. Wet

woodlands or willow carr are the correct descriptions.

Many of these carrs have a degree of protection through their location in nationally or locally designated sites. Smaller groups and individual plants are at much greater risk of being lost. However, even some of the large areas are now under threat from the invasion of **Salmonberry** *Rubus spectabilis*, a problem that is increasing year by year and may have the potential to destroy some of these beautiful areas. The most easily seen example is the extensive, mostly Eared Willow carr, near Bridgend on the Old Finstown Road. From the road you can pick out, by colour difference, the intricate threading of the salmonberry within the whole stand.

¹⁴ *Ecological Flora of the British Isles*. <http://www.ecoflora.co.uk>

Because of their renowned hardiness and ability to thrive on wet ground, willows are widely planted in Orkney to provide shelter to gardens and land. Many different non-native species are used, even the various strains of those bred for biomass production and more ornamental plants like the North American **Hooker's Willow** *Salix hookeriana* (which seems to have picked up the incorrect local name of 'Balfour Willow' – there is a Balfour Willow but it is not this). Their popularity is no doubt due to the ease with which they grow from cuttings and speed of their upright growth, though the latter often results in tall, spindly or top-heavy plants that suffer badly from dieback, wind-rock and breakages in gales. These non-native willows normally require regular pruning to keep them bushy and stable. By contrast, our native willows form dense plants, with height balanced by spread and provide effective cover for birds and easy-care shelter. Tea-leaved Willow with its glossy leaves and shiny, sometimes vivid orange, stems is a highly attractive willow, worthy of any garden.



Willow carr, West Mainland. (J. Taylor)

The Orkney Woodland Project encouraged the use of native willows (usually Tea-leaved and Grey), grown from locally sourced cuttings, in the majority of the new woodlands. They were planted on more than 70 sites and have thrived in most situations, often outshining nearby non-native willow. However, woodland grant schemes are aimed at funding a diverse range of species and so the percentage of willows that can be used on any site is usually limited. It should surely be an ambition to plant some new and extensive Orkney willow carrs for the future.

Reference

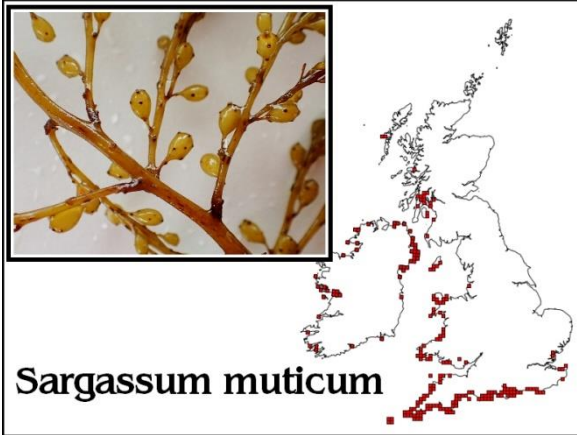
Meikle, R.D. 1984. *Willows and Poplars of Great Britain and Ireland*. BSBI Handbook No.4

Four significant finds

Derek Mayes

In 2015 I intensified my interest in Seaweeds and attended a very useful Field Club workshop under the tutelage of Joanne Porter at the ICIT labs in Stromness.

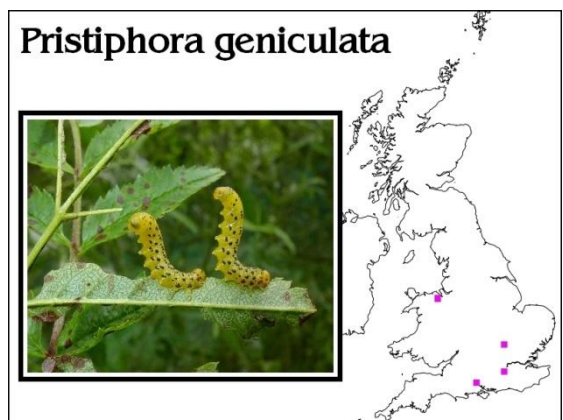
Not long afterwards, I found a piece of **Wireweed** *Sargassum muticum* on Warebeth beach.



This was the first record for Orkney. Found in the south of England in 1973, in Eire in 1995 it is gradually spreading northwards. The most northerly record before mine was from the Hebrides in 2013. It will be interesting to watch its progress along North Sea coasts (it is already present in Kristiansund, Norway, though probably carried by shipping, not currents).

I sent an email mail with pictures to Martin Wilkinson (the County Marine Algae Recorder) to have it confirmed and as it is an alien species reported it to Marine Services. I took my sample to Orkney Harbours building to meet Jenni Kakkonen, senior biologist. This seaweed can be a serious threat to general ecology and to marinas where, in favourable temperatures, it can flourish uncontrollably, clogging channels and berths.

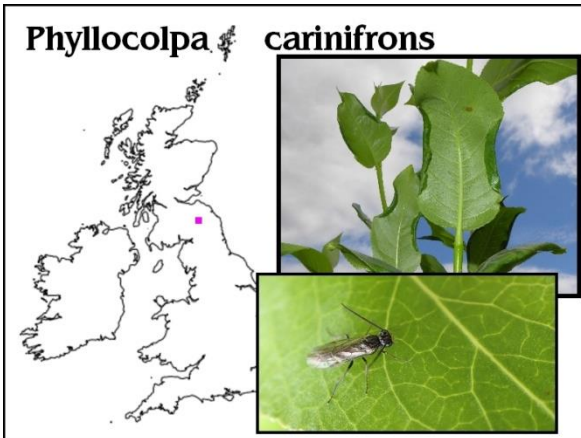
In 2014 I found, in my garden, sawfly larvae with yellow bodies and heads. Once again an email to the County Recorder (sawflies), Jenni Stockan quickly revealed its identity as **Mountain Ash Sawfly** *Pristiphora geniculata*. With only five other UK records it is much further north than one would expect. It has been present in my garden for at least two years.



A member of the Orkney Insects Facebook group had a very good find too: Mary Harris located the tiny **European Alder Leafminer** *Fenusa dohrnii* in Longhope – new for Orkney and the first record north of Golspie.



The **Leafminer** *Phyllocolpa carinifrons* has been present in my garden for possibly five years. In June and into July the leaf edges of **Bay Willow** *Salix pentandra* have been folded as in this picture. Again with Jenni Stockan’s help it was identified and found to be only the second record for the UK. The record now appears on an authoritative Dutch leafminer website: type ‘bladmineerders.nl Phyllocolpa carinifrons’ into a search engine to see the full record. It is also on the iSpot website. I would urge others to use this excellent site that connects experts with beginners and fellow enthusiasts.



It is really worthwhile sending records to County Recorders and the Orkney Wildlife Information & Records Centre. Not only are they very welcome there but you should get a dot on the National Biodiversity Network Gateway map, as seen in the illustrations here.

***Telmatogeton japonicus* (Diptera, Chironomidae), a first record for Orkney**
Lee Johnson

On 2nd November 2015 I was examining some fish farming pontoons that had been moored on the beach at Widewall Bay South Ronaldsay, (ND435916) when I observed tiny flies running about on the barnacles and algae which were attached to the bottom and sides of the pontoons. The specimens appeared to be quite weak or reluctant flyers preferring to dash about, bobbing up and down and mating in the sunlight whilst deftly dodging the splashing waves as the tide came in. I photographed them *in situ* (not an easy task as they very busy little beasts) and collected one to examine further. I keyed the specimen out to Chironomid but could get no further so I sent the pictures to Patrick Roper from the Chironomidae Study Group who identified it as a marine splash midge *Telmatogeton sp.* Patrick recommended I collect a few male and female samples and send them to Peter Langton who has written about this and related genera. Peter identified them as *Telmatogeton japonicus*. This species has previously been recorded in the British Isles from St Kilda (2010), Treaddur Bay near Holyhead, Anglesey (1999 & 2000), Kilkee in C. Clare, Ireland (2000) and Lamorna Bay, Cornwall (2013).

T. japonicus is thought to be an alien species in Europe introduced from the Pacific Ocean probably by shipping as the location of (mainly offshore) European records might suggest. It has also been found in Madeira, Iceland, Belgium, the Azores and the Baltic Sea. It is able to colonise man-made substrates that are exposed to the elements such as windfarms, buoys, seawalls and the hulls of ships. It is active all year round as it functions in a range of temperatures hence there is potential for this species to be found all around the shores of the British Isles. Although an alien species it is so far not thought to have a negative impact. In fact it may be a useful food source for birds during the winter when invertebrate activity is decreased. I have little doubt that further inspections of suitable man-made substrates would reveal more records of this species locally.

Thanks to Patrick Roper and Peter Langton.

References

- Murray, D. A. 2013. *Records of some marine Telmatogetoninae and Orthoclaadiinae (Diptera, Chironomidae) from Wales*. Dipterists Digest. 2013. 20, 130.
- Brodin, Y, & Andersson, M. H. 2009. *The marine splash midge Telmatogeton japonicus (Diptera; Chironomidae) - extreme and alien?* Biol.Invasions .2009. 11:1311-1317.



Pinned specimen of a female *Telmatogeton japonicus* (4mm wing length) photographed under a microscope (Lee Johnson)

Flight periods of dragonflies and damselflies in Orkney *Graeme Walker*

National (UK) and regional (County) atlases for Odonata usually contain details of the flight period for each species. Several leaflets produced for mainland Scotland also have this feature but, as is so often the case, things are different in Orkney. To address this phenological shortfall, the records for dragonflies and damselflies which breed in the county were number-crunched to provide a more accurate table of flight periods for the whole flight season.

Records were obtained for the years 1992 to 2015. Whilst these records have primarily been used to map the geographical spread of the Orcadian odonate assemblage, they also provide information which offers an opportunity to attempt the construction of a flight period table.

All of the records sat within the window of May to October. However, it is entirely possible, if somewhat improbable, that benign weather could influence earlier or later emergence dates outwith this period. Similarly, a prolonged spell of bad weather will drive a coach and horses through the most carefully-constructed piece of citizen science.

None of the species had a continuous set of records covering all the years between 1992 and 2015, although seven of the eight breeding species have been present for most of that time. The eighth species, Emerald Damselfly *Lestes sponsa*, was first recorded in Orkney during 2010. Additionally, a number of records did not contain sufficient information to allow an accurate assessment of date, either due to a lack of date, too vague a date or some quirk of Excel setting records to the 1st of January for a given year. These records had to be ignored, which will have affected the accuracy of the results, but as they were mainly from the earlier years of the dataset, it is hoped that the final table better reflects the current situation. The percentage of useable records for each species is shown below in the relevant species account.

Several other factors influenced the use of the records:

- The few records of vagrant individuals were ignored;
- If quantities weren't recorded, then the number of a species seen was assumed to be 1, as any less would not have generated a record in the first place;
- If the quantity recorded was merely denoted by '+', then the number of a species seen was assumed to be 2;
- If a letter was used to denote the quantity, as per standardised categories (A = 1, B = 2-5, C = 6-20, D = 21-100, E = 101-500, F > 500), then the lowest number in the category was assumed.

The flight period of each species is illustrated by a bar chart showing the number of flying adults which were recorded (vertical axis) per half month (horizontal axis) throughout the flight season in Orkney, for the years 1992 to 2015. The peak of the flight season corresponds to the period in which most adults are seen. The peak flight times offer the best opportunities to see flying adults at their breeding sites. Having said that, the bar charts are only an indication of past trends. Both climate change and local weather will have impacts on the phenology of these species, as will any changes to their habitat.

The various bar charts are summarised in a table of flight period for each species, which will be a useful addition to an identification guide for the Orkney dragonflies and damselflies.

For their invaluable help and sterling work in collating the data set, my huge thanks go to past Vice County Recorders Dick Matson and Keith Fairclough, as well as to the British Dragonfly Society's Scottish Recorder, Pat Batty. Indeed, I am grateful to anyone who has ever submitted an Odonata record for the archipelago, and I would encourage more of the same!

Damselflies

Emerald Damselfly *Lestes sponsa*

The newest member of our odonate assemblage, the Emerald Damselfly was first recorded in Orkney in 2010. The species has been seen in each subsequent year, with 2015 providing the most data.

There are 18 records in the database, 100% of which are useable. Altogether 143 flying individuals have been recorded during 2010-2015.

The flight season begins in late July, peaks in late August and ends in early September.

Large Red Damselfly *Pyrrosoma nymphula*

The Large Red Damselfly is usually the first species to emerge in Spring. With some records from 1994 and 1996, there is a continuous set of data from 2007 until the present time.

There are 293 records in the database, 69% of which are useable. Altogether, 618 flying individuals have been recorded between 1994 and 2015.

The flight season begins in early May, peaks in early July and ends in late August.

Common Blue Damselfly *Enallagma cyathigerum*

The Common Blue Damselfly is another early starter. With some records from 1994, there is a continuous set of data from 2007 until the present time.

There are 111 records in the database, 56% of which are useable. Altogether, 354 flying individuals have been recorded between 1994 and 2015.

The dataset for the Common Blue Damselfly contains a very early May record and a very late October record. It is possible that the former was a previous year's final instar larva that chose to enter diapause rather than emerge late in that year. Conversely, the latter may have been a larva that elected to emerge sooner rather than overwinter, perhaps due to a spell of good weather.

The flight season begins in early June, peaks through July and ends in late August.

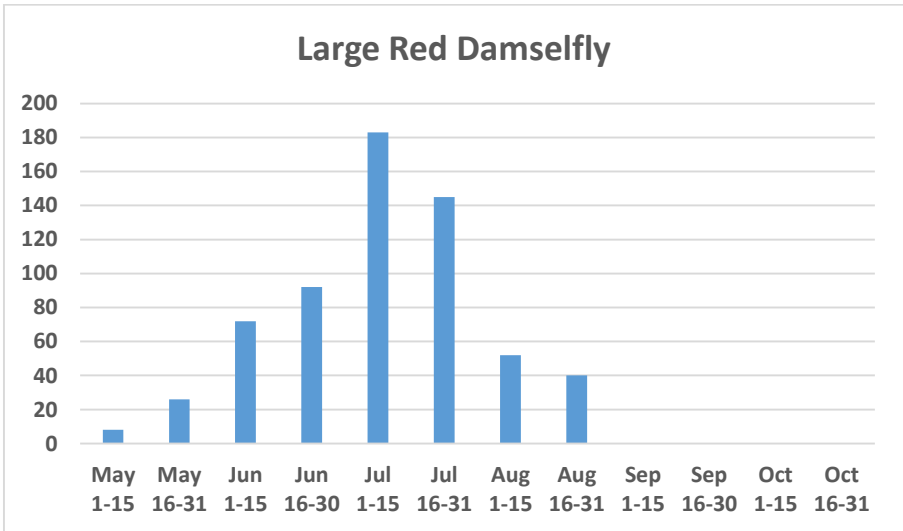
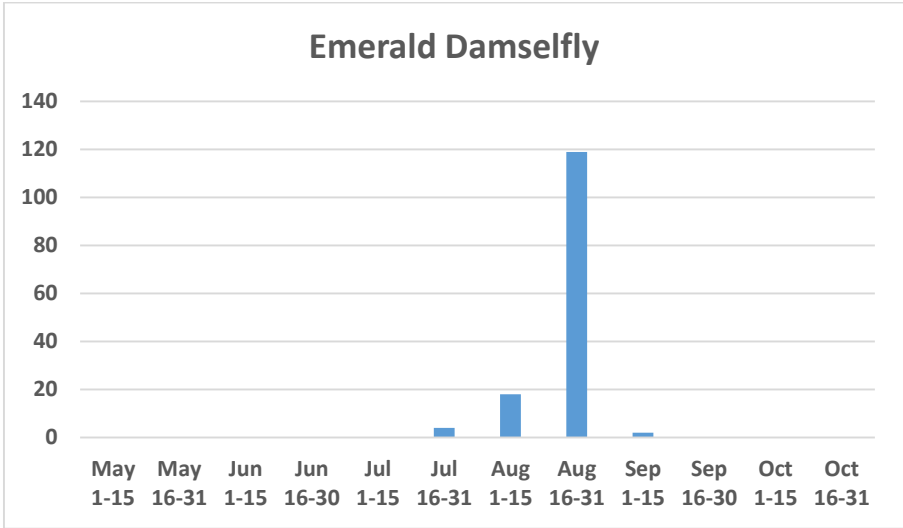
Blue-tailed Damselfly *Ischnura elegans*

The Blue-tailed Damselfly is our most abundant species. With some records from 1992 and 1996, there is a continuous set of data from 2007 onwards.

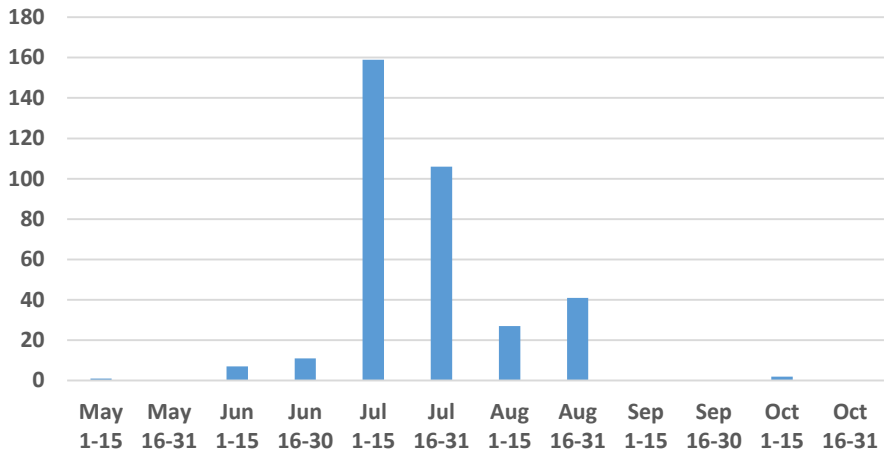
There are 196 records in the database, 83% of which are useable. Altogether, 934 flying individuals have been recorded between 1992 and 2015.

The flight season begins in late May, peaks in late July and ends in early September.

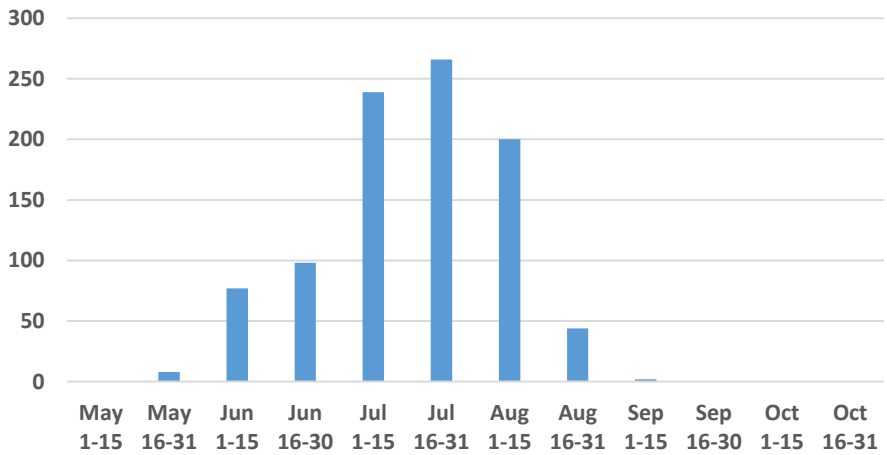
Bar charts of flight periods for Orkney damselflies



Common Blue Damselfly



Blue-tailed Damselfly



Dragonflies

Common Hawker *Aeshna juncea*

The Common Hawker is a dragonfly with a flight period that is later in the year. There is a continuous set of data from 2007 onwards.

There are 137 records in the database, 62% of which are useable. Altogether, 154 flying individuals have been recorded between 2007 and 2015.

The flight season begins in late June, peaks in late July and can extend all the way into October.

Golden-ringed Dragonfly *Cordulegaster boltonii*

The Golden-ringed Dragonfly is our largest species and is strikingly marked in yellow and black, with green eyes. However, its preferred habitat is moorland streams, which aren't as accessible as ponds or pools, so there is a paucity of records for this species.

There are 31 records in the database, 55% of which are useable. Altogether, 18 flying individuals have been recorded between 2007 and 2015.

The flight season begins in late June, peaks in late July and ends in late August.

Four-spotted Chaser *Libellula quadrimaculata*

The Four-spotted Chaser is another poorly recorded dragonfly. However, this may well be because it is very limited in habitat in Orkney and consequently more difficult to find. It is the earliest of our dragonflies on the wing. It is hoped that increased recorder effort will be deployed in 2016, in an attempt to prove the Chaser's continued presence in Orkney.

There are only 12 records in the database, 58% of which are useable. Altogether, 11 flying individuals have been recorded in 2008, 2011, 2012 and 2015. With so few records, it is probably inappropriate to draw too many hard and fast conclusions about the flight period.

However, from the available data, the flight season begins in late May, peaks in late July and ends in early August. Anecdotal evidence would suggest that the peak of the flight period is in early July, but more records would be needed to confirm this.

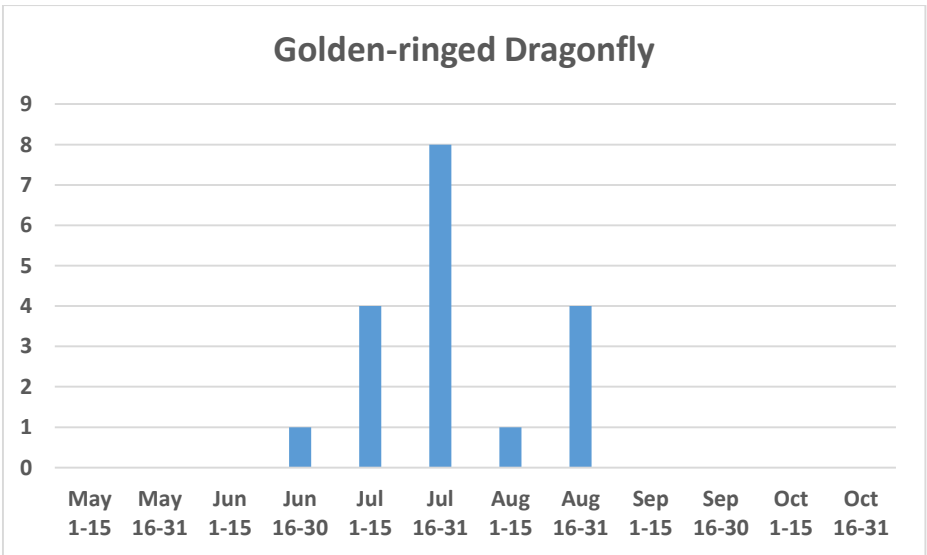
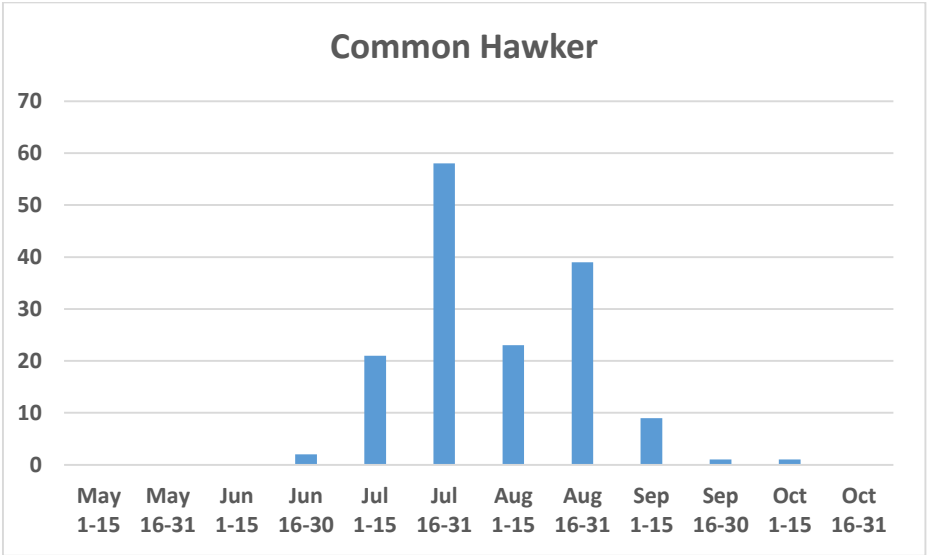
Black Darter *Sympetrum danae*

Our smallest dragonfly, the Black Darter has a flight period later in the year. It is also our most abundant dragonfly and there is a continuous set of data from 2006 onwards.

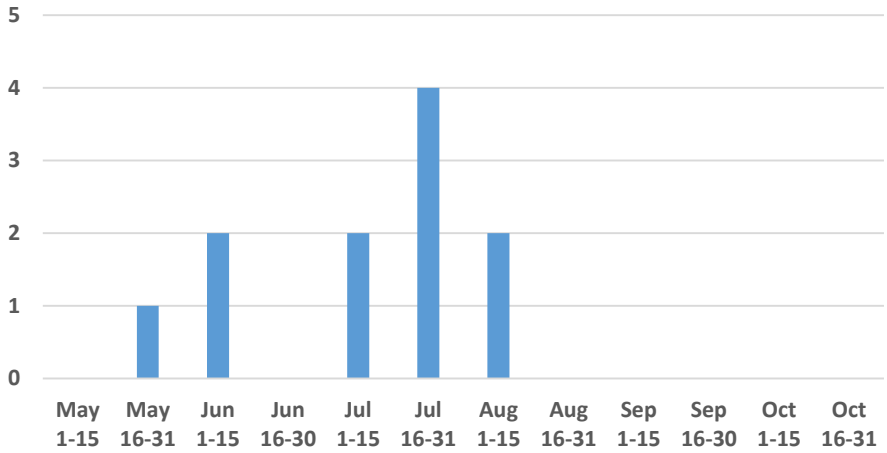
There are 144 records in the database, 72% of which are useable. Altogether, 494 flying individuals have been recorded between 2006 and 2015.

The flight season begins in early July, peaks in late August and ends in late October.

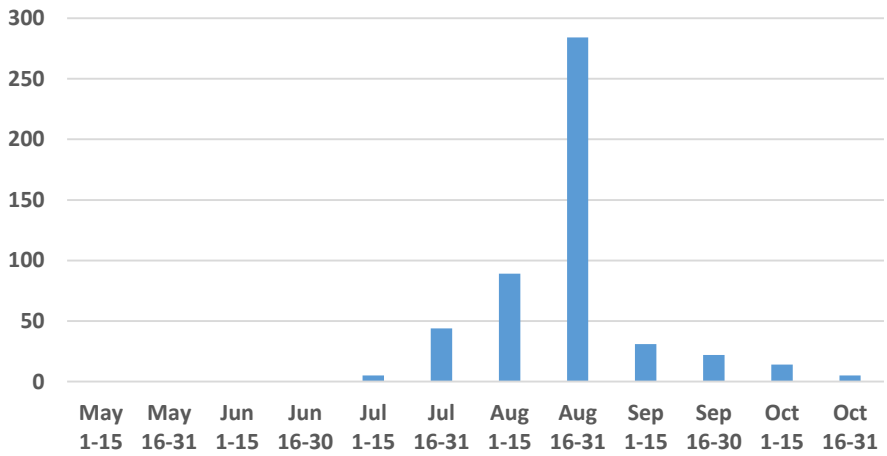
Bar charts of flight periods for dragonflies



Four-spotted Chaser



Black Darter



In conclusion, Table 1 shows the data from the individual bar charts summarised into a whole flight season, May to October. Please note, this is a guide only, as local circumstances will influence the emergence times and life span of the adult dragonflies and damselflies.

Common Name	Latin Name	May	Jun	Jul	Aug	Sep	Oct
Emerald Damselfly	<i>Lestes sponsa</i>						
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>						
Common Blue Damselfly	<i>Enallagma cyathigerum</i>						
Blue-tailed Damselfly	<i>Ischnura elegans</i>						
Common Hawker	<i>Aeshna juncea</i>						
Golden-ringed Dragonfly	<i>Cordulegaster boltonii</i>						
Four-spotted Chaser	<i>Libellula quadrimaculata</i>						
Black Darter	<i>Sympetrum danae</i>						

Table 1

Late July and early August are the few weeks when all of the eight breeding species present in Orkney might possibly be on the wing at the same time. The datasets for Golden-ringed Dragonfly and Four-spotted Chaser were very small, so there could well be inaccuracies in the interpretation of the records. Continued recording and future assessment of new data will help to refine the accuracy of Table 1.



Fig 1: Four-spotted Chaser
Libellula quadrimaculata

© Graeme Walker

Leaf miners

Derek Mayes

Too late in the season last year, I began to take an interest in leaf miners. These are the little grubs of moths and flies that live between the layers of leaves, creating distinctive tunnels or galleries as they feed. Their use of food plants is selective and is sometimes confined to one or two species.



The feeding tunnels left in the host plant vary in appearance. For instance, the **Nettle Leafminer** *Agromyza anthracina* produces 'blotch mines' (Picture 1), whereas the **Birch Leafminer** *Scolioneura betuleti* (Picture 2) excavates all the leaf tissue which then becomes a shadow of its former self.

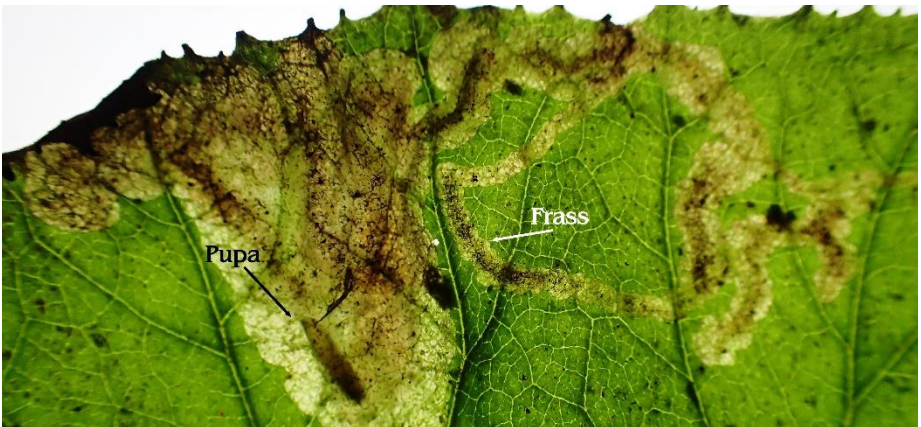


Some miners produce long winding tunnels and the **Sow-thistle** *Chromatomyia atricornis* ones (Picture 3) are particularly complex.

To identify leaf miners it is usually necessary first to identify the host plant, at least to genus and preferably to species. Some species, such as the **Bramble Leafminer** *Agromyza idaeiana*, are found in a wide variety of hosts, including **Tormentil** *Potentilla erecta*. However, more selective behaviour is usual: several species of leaf miners are confined to **Birch** *Betula* spp. and **Alder** *Alnus* spp. and there is evidence for selection of individual Alder species.



Above is the massive leaf of **Butterbur** *Petasites hybridus* showing mines and pupae of *Phytomyza spondylii* and right, smaller sections of the leaf. The leaf sections have been laid on an Android light table app (*Light Box* by *Barbecue Army*) and photographed.



The sections may be enlarged to reveal more detail. This is an important stage, because it often reveals the frass trail (excrement or other refuse left by the larvae), the patterns of which can be important clues to identity; you may need to know whether the mine crosses leaf veins, follows



them or avoids them altogether, perhaps staying near the leaf margin only. Small shadows may turn out to be the larvae or pupae of the species. The larvae themselves may be identifiable, though the process of excavating them is time-consuming – some are less than 3mm long. Once exposed, they may offer clues to identity. They can be returned to fresh leaves to complete their lives

The **Birch Leafminer** *Scolioneura betuleti* – a sawfly (left) - is very distinctive, with its colouration, strong markings and black legs.

Others are not so easy. Some, like the one on my garden *Nasturtium*, is an odd, leg-less maggot without a distinctive head, no abdominal legs nor thoracic prolegs and no chewing mouthparts (picture below). Many lack really distinctive marks or features and require microscopic examination. – Even then it's not always possible to be certain.



I had a great surprise in the first weeks in finding a **Birch Leafminer** larva in an Alder leaf, probably *Alnus viride*. It turned out to be the first UK confirmed case of this skip from one host species to another. In this case all the larvae I found had died or were on the brink of doing so. Perhaps the adult female fly had made a mistake.

I do not, at the time of writing, have a book about leaf miners. However, the web is very good. Type 'leaf miners' into any search engine to reveal several quality and professionally maintained sites including dedicated Facebook and Yahoo Groups. To get far, you will need a specimen to hand or good photos of the tunnels; even better, the culprit and the name of the host plant.

At the very close of the season, late October, I found this disused mine in a **Salmonberry** *Rubus spectabilis* leaf almost certainly of the very common and widespread **Rubus Leafminer** *Agromyza idaeiana* (picture below).



I will happy to receive photos or descriptions of mining activity (of the insect type!). My email is dejay.emme@yahoo.co.uk

All photographs by the author.

Thanks are due to:

Willem Ellis - <http://www.bladmineerders.nl/>

Murdo Macdonald – Highland Biological Recording Group

Brian Pitkin - <http://www.ukflymines.co.uk/>

Jenni Stockan – County Sawfly Recorder

In October 2015, a group of divers gathered on board MV Halton skippered by Bob Anderson, to go out and survey some of the key underwater marine sites of interest in Scapa Flow, Orkney. On the first morning of the trip the team headed out in calm sunny conditions to the west side of Hoy, for the first dive at Nipple Rock, a submerged rocky pinnacle site with impressive *Laminaria hyperborea* kelp forest on the top. Visibility here was in excess of 20m and a search was underway for the Priority Marine Species **European Spiny Lobster** *Palinurus elephas*.

On this occasion we did not find it but there were many other interesting creatures to be seen including the **White Cluster anemone** *Parazooanthus anguicomis*.



White Cluster-anemones

© Joanne Porter

In the afternoon we headed back in to Scapa Flow, and after waiting patiently for the tide to slacken off we were able to explore one of the classic block ship sites, the wreck of the Tabarka. Both the wreck and its surrounding environment were surveyed, and it wasn't until getting back and looking through close up macro shots that we realized we had found a strange type of worm from the family called Spintheridae, living in association with the sponge *Esperiosia fucorum*; this type of worm has not previously been recorded in Orkney. Many fish were seen swimming around about the wreck, including a large shoal of **Saithe** *Pollachius virens* on the way back to the surface. The good visibility conditions meant that it was rather like swimming around in an aquarium.



Spintheridae worms

© Joanne Porter

On that first day of our trip we had enjoyed the visibility of the block ships so much that we decided to go back again on the second day and try another one. This time we went to the Governardor Bories, a little bit further east down Burra Sound, but in close vicinity to Tabarka. This wreck site was dominated with large and well-developed clumps of the bryozoan *Securiflustra securifrons*. Under

the starboard side of the wreck were some very large **Common Lobster** *Hommarus gammarus*; one was even out and about foraging away from the wreck itself.

The sides of the wreck were covered in a colourful variety of anemone species including the **Elegant Anemone** *Sagartia elegans*, groups of the **Jewel Anemone** *Corynactis viridis* and also the occasional cup coral. In the



the afternoon we stayed in the western side of the flow and surveyed the Clestrain Hurdles; this site is an anti-submarine defence structure constructed during World War I to protect the British vessels at anchor. The site is notable for the amazing underwater visibility here, easily 20m plus. The ground is dominated by a mix of coarse shell gravel, large shell fragments and disarticulated shell valves, with pebbles and cobbles and

interspersed with the calcified pink twiggly algae known as maerl. On the western side of the hurdles, the maerl is more dominant and is present in the form of waves and troughs reflecting the strong tidal current experienced in this location. In the coarse shell gravel close in to the hurdles structure, experienced Seasearcher George Brown spotted an unusual type of anemone known as *Halcampa chrysanthellum*; the species is very small and has 12 chunky tentacles surrounding the disc. George was able to photograph various different colour morphs of the species, including one where two opposite tentacles were white and the others were all brown.

On day three we went to look for a **Horse Mussel** *Modiolus modiolus* bed at the south end of

Cava island, it turned out we weren't in quite the right location; however, interestingly we did happen upon some nests of the **Flame Shell** *Limaria hians*, which was a useful record in its own right. At this particular location there were also some large specimens of the spoon worm *Ammalosoma eddystonense*. These animals have a large greeny/grey-coloured, forked proboscis used to catch particles of sediment from the water column. Once



the grooves of the proboscis are filled with the food, it is withdrawn down into the sediment to where the body of the animal is, and the particles are digested. In the afternoon we went for a second dive at the Hurdles as the group had enjoyed it so much on the previous day. This time we dived on the Graemsay side of the structure, and the area was dominated by live maerl. There were several different types of crustaceans recorded including the **Wrinkled Swimming Crab** *Liocarcinus corrugatus* and the small **Bryer's Nut Crab** *Ebalia tumefacta*. Large colourful **Reticulated Dragonets** *Callionymus reticulatus* were frequent, along with the

smaller but equally colourful **Painted Gobies** *Pomatoschistus pictus* . Lots of the keyhole shaped siphons of *Ensis* razor clams could be seen poking out through the maerl gravel.



On day 4 the weather took a turn for the worse so we headed for the shelter of Gutter sound. Our first dive of the day was at the wreck of the Rinnigal Steam Pinnacle, a vessel that was used to carry dignitaries out to the larger vessels of the fleet during the war time. In the vicinity of this wreck is mixed ground with shelly gravel, sand and mud. In close proximity to the wreck Matt Dogget

spotted a **Little Cuttle** *Sepiolo atlantica* and Richard Shucksmith was able to photograph it exploring the seabed. Close in to the stern of the wreck were nests of the Flame Shell. The wreck itself was dominated by growths of hydroids, especially *Halecium halecinum*. The afternoon saw us moving further up the sound to follow up on a recent discovery of a mysterious metal block, discovered by local wreck finder and side scan sonar expert Kevin Heath. The block had been dived recently by our boat skipper Bob Anderson but no-one had previously done any kind of biological survey there, so we jumped in to have a look around. Almost immediately it became apparent that surrounding the block was a very densely constructed spongy 'mattress' of *Limaria hians* nests. Careful exploration revealed the presence of both adult and juvenile specimens, with juveniles being all white, compared to the colourful bright orange of the adults. The mattress structure stretched for quite a distance beyond the immediate vicinity of the metal block and the full extent of the *Limaria* bed is yet to be elucidated. We finished off the day with a dive at the wreck of the Karlsruhe, where members of the group were able to observe the rare **Fan Mussel** *Atrina fragilis* and also spent some time exploring the diversity associated with the Horse Mussel bed adjacent to the wreck.

On our final day of diving we went back to the Mystery block to try and discover a bit more about the extent of the *Limaria* 'mattress' we had observed earlier in the week. The group divided into 4 teams and were tasked with measuring the block itself, and then also using a tape measure and swimming out from each corner of the block, for between 30-50m, records were then gathered every 5m intervals and the *Limaria* status assessed. The densest coverage of *Limaria* was recorded in the range between 0 and 5m away from the wreck, thinner patchier nests were recorded beyond that to the end of the tape transects. Photographs were also taken to corroborate. In the afternoon, for our last dive we took a pot luck chance at the north end of Gutter sound, near to the island of Rysa Little and dropped in to a depth of 16m. Jim Anderson, our nudibranch expert was delighted to spot a rare sea slug *Lomanotus marmorata*, and so we finished the week on a high note. We also noted at this location there were some further dense mattresses of *Limaria hians*. All in all it was a varied and productive week, yielding a lot of new and useful records for Seasearch. The records will all be added to the National Biodiversity Network database for anyone to access.

Seeing RED

Derek Mayes

Marine algae – seaweeds - seem to be the poor cousins in botany; it may be that most naturalists feel they are too difficult to identify and that picture-books leave too many difficult questions.



But if you take a trip along the frontier of a rising tide on a sandy shore, you are likely to see some of examples of botany at it most decorative.

Marine algae are a large and diverse group of simple organisms. Some are single-celled and others multi-celled. The largest and most complex algae are seaweeds. Like plants, they photo-synthesize and take their nutrients from their environment; traditionally they have been classified in the plant kingdom, but modern genetic studies indicate that they have complicated and

diverse evolutionary origins. Some (reds and greens) are closely related to plants while others (browns) are not. They can grow very fast and their abundant growth can clog channels, slipways and stretches of foreshore. They are collected all over the world for food and, in Orkney's past especially, for fertiliser.

One of the most prolific seaweed groups is the Fucoids – the brown wracks and kelps that litter our shores after a storm. They are as diverse as flowering plants, each with distinct features that allow identification. A good many seaweeds are green, either bright or dull, and they too have clear features, but identification is often not easy as, like mosses and lichens, they require very close inspection for a positive ID.



I have chosen a few of the red algae (Rhodophyta) to whet the appetite of anyone who wishes to start or perhaps pick up from where they left off.

Whilst they often grow in shallow rock-pools or not far from the upper shore, it is here, right near the tide's edge, that I suggest you might start. The small bright reds are often carried by the wavelets into sandy bays. They can provide hours of artistic or photographic pleasure and can usually be readily identified. It is best to avoid strandlines because these delicate algae may deteriorate quickly.

Do not collect too many different ones – say only three or four at a time, perhaps including a few examples of the same one. Place them in clean and clear seawater in a properly sealing plastic box, perhaps take photos and once home arrange them wet on a white board to study.



You will need plenty of clear paper and maybe some absorbent kitchen roll. Having laid them out you can begin the task of identification.



I would advise taking photos, because ID is probably easiest from the Internet and having a photo on the screen at the same times as descriptions and illustrations makes the process easier.

Take some notes and perhaps draw some of the features: branching, particularly, is a key element, but general shape and whether there are stems or veins in the fronds, or ragged edges, are all important.



It's important to try to locate the holdfast – the 'root' structure. This is often, though not always, a disc of flexible or stiff material similar to the main stem. Usually though, it is absent from the pieces left on the sand by the tide. But if you are going to study growing seaweeds then the attachment is often key. Many reds of the type we see here are epiphytic – i.e. attached to other seaweeds, or lithophytic – attached to rocks; some are attached to shells.



A clear and detailed view is needed, so a hand-lens is worth considering. There is no mistaking **Cockscomb** *Plocamium*. It has distinctive little branchlets along one side of main stems and tiny one-sided spiked 'twigs' (cock's combs) all pointing the same way.

References and further reading

One of the most useful books is the *Seasearch Guide to Seaweeds of Britain and Ireland* ISBN 978 0 948150 51 7. However I often use the internet (usually Google Images) to start my



search: for instance 'red seaweed with little combs' (try it) got the result I needed to begin a more extensive ramble through botanical descriptions of Cockscomb seaweed.

A classic, though dated, AIDGAP key (perhaps still the most useful one) can still be purchased second-hand. A digital version can be found at

http://fsj.field-studies-council.org/media/778980/aidgap_red_seaweeds.pdf

The beautiful *A Handbook of British Seaweeds* by Lily Newton, a hard-back, is also rather dated but is lovingly used by nearly everyone I contacted in my early study. It can only be found second hand, though there is a DVD version.

The definitive work is *Seaweeds of the British Isles*, in 12 volumes, published by the Natural History Museum's, but it is very expensive.



All photographs by the author.

2015 was a very busy year for plant hunting and recording. There were visits from national experts in particular species groups, several outings by the OFC flora group and U3A (University of the Third Age), visits to islands and much recording for the BSBI *Atlas 2020* project. This project covers the years 2000 to 2019 with the aim of achieving representative geographical coverage of the islands for publication of a new atlas of the British flora.

In May, John Richards, the national Dandelion *Taraxacum* expert and referee, with family and friends paid a visit to Orkney. He recorded 54 species of which 30 are new to Orkney. This reflects the large number of species of Dandelions in the British Isles (240 listed in the 1997 BSBI Handbook, and increased since), the extreme difficulties of identification and the lack of much recording in the county in the last 80 or so years. John was especially keen to see an Orkney endemic, *Taraxacum orcadense*, and *T. calophyllum*, which he did, the latter at its type locality (H. Halcro Johnston, 1927) at Bay of Creekland, Hoy HY2304. To cap that, one of his party found a new species altogether, to be named *T. claudiae* after the finder, on a grassy-rocky bank at St Margarets Hope ND448936.



Common Milkwort (J. Crossley)

A few days later the OFC Flora group set out in search of much more recognisable fare along the cliff tops from Scapa Beach to Lingro HY4308. We counted 117 **Early Purple Orchids** *Orchis mascula* (Locally Scarce) in flower and compiled a creditable list, for the early date in the season, of 108 other species. Next was the OFC outing to Papa Westray on the weekend of 13-15 June. Although not expressly a botanical outing, Papay was high on the roll of places needing recording before the year 2000 and I was compiling lists. Links of Moclett HY4949 is one of the botanical highlights of the island. **Scottish Primrose** *Primula scotica* (Nationally Scarce) was last recorded here, at its only non-heath site in Orkney, in 2004, but we could not find it and it does seem to have died out at this locality. The links have a fine array of lime-loving plants, including **Limestone Bedstraw** *Galium sternerii*, which was common, and **Common Milkwort** *Polygala vulgaris*, also **Common**

Twayblade *Neottia ovalis* at HY492499 and **Common Adder's-tongue** *Ophioglossum vulgatum* at HY49304994. The identity of the latter was later confirmed by DNA analysis; previously it had been recorded as both *O. vulgatum* and **Small Adder's-tongue** *O. azoricum*.

Brodgar was the venue for another Flora Group meeting a few days later. The very sweet-smelling **Holy Grass** *Hierochloa odorata* (Nationally Rare) was admired near the Ring of Brodgar, but the most surprising finds were **Cut-leaved Cranesbill** *Geranium dissectum* (Locally Scarce) and **Field Madder** *Sherardia arvensis* (Locally Scarce), the latter in some quantity, in neglected cultivated land at HY29391354. By contrast the next meeting took us into an area of wet heath with swamp and pools at the Harray road end HY3313, a nature reserve belonging to the Scottish Wildlife Trust. It was rough going, but yielded a list of 101 species typical of such an area. **Many-stemmed Spike-rush** *Eleocharis multicaulis* (Locally Scarce) and **Lesser Bladderwort** *Utricularia minus*, uncommon but not quite qualifying as Locally Scarce, were growing in a single pool at HY33721383.



Lesser Twayblade flower (J. Crossley)

The coast overlooking Scapa Flow on the east coast of Hoy - Bring Head and Candle of the Sale HY2701 – HY2800– were the venue for an OFC outing on 5 July. Relatively sheltered cliffs support remnant native tree cover, including **Grey Willow** *Salix cinerea* ssp. *oleifolia*, **Rowan** *Sorbus aucuparia*, **Honeysuckle** *Lonicera periclymenum* and some well-grown **Aspens** *Populus tremula*. **Hay-scented Buckler-fern** *Dryopteris aemula*, a species almost entirely restricted in Orkney to east Hoy and the Scapa Flow islands, was remarkably common here. In the wet heath and

blanket bog, the tiny and elusive orchid **Lesser Twayblade** *Neottia cordata* was quite plentiful under tall heather around HY268020, and both **Greater Sundew** *Drosera anglica* (IUCN Near Threatened) and **Round-leaved Sundew** *Drosera rotundifolia* were frequent around bog pools at HY271016. The hybrid between these two, **Obovate Sundew** *D. x obovata*, was with them, only the second Orkney record.

Later in July Tony Church, an expert on ferns, more especially the *Dryopteris* genus, was on holiday in Orkney and spent a day with Brian Ribbands and me helping us to find our way through the minefield of **Scaly Male -fern** *Dryopteris affinis* agg. taxonomy. This aggregate has changed shape a few times, reflecting the difficulties of identification and evolving concepts of species, sub-species and variety within the group. Four separate species are now recognised, of which three are known to occur in Orkney: **Golden-scaled Male-fern** *D. affinis*, **Borrer's Male-fern** *D. borneri* and **Narrow Male-fern** *D. cambrensis*. In Orkney *D. borneri* is widespread on neutral-to-acid substrates, while *D. cambrensis* is more local and appears to be confined to more acidic substrates. *D. affinis* was new to us and appears to be much less common than the others; single plants, one identified to ssp. *paleaceolobata*, were found at two sites.

A final outing of the Flora Group was planned for the end of August, to South Walls. Unfortunately the Houton ferry had broken down that morning, so we diverted to a walk around the Brinkies Brae-Innertown area near Stromness. Below Brinkies Brae at HY24990945 Jenny Taylor showed us a very small **Adder's-tongue** *Ophioglossum* sp. she had found a few days earlier, which later proved to be **Common Adder's-tongue** *O. vulgatum* once the DNA had been done. 123 species were recorded in the 1 km square HY2409, and a **Great Yellow Bumblebee** *Bombus distinguendus*. A bit further west at Lea Fea HY239097 is an unusually species-rich area of calcareous heath, where **Moonwort** *Botrychium lunaria* and **Field Gentian** *Gentianella campestris* (IUCN Vulnerable, UK BAP Priority) were common.

Selected records of note

More than 5,500 records were collected in 2015 so I have had to restrict entries in this report to new finds and re-finds of relative rarities. Lots of interesting observations have had to be omitted. All records of all species, rare or common, are gratefully received.

The terms given for status – ‘Nationally Rare’ etc. –of species in the following list correspond with those in the Orkney ‘Rare Plant Register’ (2015).

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.)

Fir Clubmoss *Huperzia selago* ssp. *arctica* (Nationally Rare), Hoy, Cuilags, HY20750357, 26 Sept 2015 (JEC, det. Fred Rumsey). This record of the arctic sub-species of *H. selago* is the first traceable one for the County, though it is said to occur in Orkney in Stace (2010).

Wilson's Filmy-fern *Hymenophyllum wilsonii* (IUCN Near Threatened, Locally Scarce), north side of Ward Hill, Rousay, HY38533004, 12 Aug 2015 (JEC & JBR): new for 10 km sq.

Black Spleenwort *Asplenium adiantum-nigrum* (Uncommon, but not quite Locally Scarce), three records on crags below Cruannie and Digro, east side of Kierfea Hill, Rousay, HY43003197, HY42983199, HY42923204, 22 Aug 2015 (JEC): updates for site and 10 km sq.

Brittle Bladder-fern *Cystopteris fragilis* (Locally Scarce), below Digro, Rousay, HY42893207 and two records on Kierfea Hill, Rousay, HY42173229 & HY42343219, 22 Aug 2015 (JEC): updates for 10 km sq. Valley of Uraday, Ward Hill, Rousay, HY38202992, 12 Aug 2015 (JEC & JBR): update for 10 km sq. North side Ward Hill, Rousay, HY38233035 12 Aug 2015 (JEC & JBR): update for 10 km sq.

Narrow Male-fern *Dryopteris cambrensis* (Locally Scarce but under-recorded), Lowertown, South Ronaldsay, ND44049402, 27 Sept 2015 (JEC, det. Tony Church): new for 10 km sq and island.

Golden-scaled Male-fern *Dryopteris affinis* (Locally Rare but under-recorded), above Netherhouse, Lyde Road, Firth, HY3688318519, 15 July 2015 (JBR, det. Tony Church): new for 10 km sq. *D. affinis* ssp. *palaecolobata*, two plants near North Flaws, South Ronaldsay, ND460858, 15 July 2015 (JEC, det. Tony Church): new for 10 km sq.

Hybrid Buckler-fern *Dryopteris x deweri* (*D. carthusiana* x *D. dilatata*) (Locally Rare) near Newhouse (Ocklester moss), Holm, HY52350267 and HY52350272, 28 July 2015 (JEC & JBR, det. Fred Rumsey): **new County Record**. Two **Narrow Buckler-fern** *D. carthusiana* plants were recorded here in 2014, a new County Record at the time. This year a proper search of the area was made and at least 75 plants were counted.



Long-headed Poppy (J. Crossley)

Long-headed Poppy *Papaver dubium* (Uncommon, but not quite Locally Scarce), near Sand Field, Sandwick, HY246198, 02 July 2015 (JEC): new for 10 km sq.

Roseroot *Sedum rosea* (Uncommon, but not quite Locally Scarce), Skipi Geo, Birsay, HY250286 15 July 2015 (TD): new for 10 km sq.

Perforate St John's-wort *Hypericum perforatum* (Locally Rare), Rinnigill campsite, North Walls, Hoy, ND31729341, 02 May 2015 (JEC & EE): second County Record. This species is

listed as native in the Orkney Rare Plant Register, with doubt expressed because the only known site was at Lyness dockyard, where it could have been inadvertently introduced in the course of wartime construction activity. With the second record now at another military site in North Walls, the balance tips in favour of introduction as the source.

Field Penny-cress *Thlaspi arvense* (Locally Scarce, Scottish Biodiversity List), Hüllion, Rousay, HY397280, 12/08/2015 (JEC & JBR): new for 10 km sq, island & North Isles.

Hybrid Sundew *Drosera x obovata* (Round-leaved Sundew *D. rotundifolia* x Great Sundew *D. anglica*) (Locally Rare), near Burn of the Sale, North Walls, Hoy, HY27170165, 05 July 2015 (OFC): second County Record, new site in same 10 km sq.

Spear-leaved Orache *Atriplex prostrata* (No particular national or local status for this species), near Hole o' Row, Sandwick, HY22641897, 21 Aug 2015. There are a number of previous records for this species, but strandline *Atriplex* species and hybrids are very difficult to identify and I have come to the conclusion that they are nearly all *A. glabriuscula* or possibly *A. glabriuscula* x *A. prostrata* and this is the first clear *A. prostrata* that I have seen. Other hybrids are possible.

Blinks *Montia fontana* ssp. *chondrosperma* (Locally Scarce), Watten, Egilsay, HY47763099, 09 June 2015 (JEC). New for 10 km sq, island & North Isles. The plant was found on a base-rich rock outcrop, which might indicate a habitat preference. Though *M. fontana* is an abundant species and its sub-species seldom looked for, it seems that any other than *M. fontana* ssp. *fontana* is genuinely unusual.

Cowslip *Primula veris* (Locally Scarce), Watten, Egilsay, HY47763101 and between Watten and Grugar, Egilsay, three sites around HY476309, 09 June 2015 (JEC): updates for sites and 10 km sq.

False Oxlip *Primula x polyantha* (*P. veris* x *vulgaris*) (Locally Rare), between car park and Broch of Gurness, HY38042682 and south of Point of Hellia, HY37962678, Aikerness, Evie, 23 May 2015 (JEC): update for sites and 10 km sq. Watten, Egilsay, two sites around HY477310, 09 June 2015 (JEC): update for sites and 10 km sq.

Yellow Pimpernel *Lysimachia nemorum* (Locally Rare),

burns on western side of Ramsdale, Orphir; three sites, with a large population along a burn from HY33490706 to HY33520705, 12 July 2015 (JEC): update for site and 10 km sq. where last recorded in 1963. Also near Newstead, Hoy, HY24070254, 20 Sept 2015 (JEC & JBR): re-find of a site remembered but not recorded by JBR from c.15 years previously, and probably an update for a site previously recorded in 1926 (but poorly located in the records). There may be other plants in this general area, from Burn of Quoys to Whaness Burn.



Yellow Pimpernel (J. Crossley)

Scottish Primrose *Primula scotica* (Nationally Scarce, Scottish Biodiversity List), near The Axe, South Walls, ND31078857, 26 May 2015 (BJ). In a shallow, eroded, damp silty clay depression: re-find of a site last recorded by Halcro Johnston in 1932, though seen some years ago by Donald Sutherland of Aithsdale, South Walls.

Primula scotica populations from Black Craig, Stromness in the south to Yesnaby, Sandwick in the north were quite intensively recorded by Jenny Taylor, with between 700 and 800 plants counted in at least 15 sites. One or two of these sites had not been recorded since the 1930s.



Bog Bilberry (J. Crossley)

Bog Bilberry *Vaccinium uliginosum* (Uncommon, but not quite Locally Scarce), by lochan east of Sui Fea, HY19300316; west of Back Saddles, Hoy, HY19870326 and HY19990327, 26 Sept 2015 (OFC): all new for 10 km sq. The plant at HY19300316, and possibly the others, may have been ssp. *microphyllum*, the northern European form; some plants in Shetland resemble this.

Serrated Wintergreen *Orthilia secunda* (Locally Rare), northwest of Blotchnie Field, Rousay, a large population extending over 45 x 10 m from HY41612927 to HY41652928, 30 July 2015 (JEC & JBR). In blanket bog with *Sphagnum* hummocks, two flowers seen. The only site recorded in the last 20 years or so was c. 250 m further west. This 2015 site probably represents the original one where the plant was discovered in 1963, then new to the County. There may be more plants in this general area.

Autumn Gentian *Gentianella amarella* ssp. *septentrionalis* (IUCN Near Threatened), Lamb Holm quarry, Holm, HY48500006, 25 July 2015 (JEC): new for 10 km sq. Bay of Skail, Sandwick, 21/08/2015 (JEC): new for 10 km sq.

Oysterplant *Mertensia maritima* (IUCN Near Threatened), Noust of Bigging, Sandwick, HY221157, 06 June 2015 (MG): update for 10 km sq. Oysterplant is rare on western coasts.

Green Field-speedwell *Veronica agrestis* (Locally Scarce), Bay of Skail, Sandwick, HY2319, 21 Aug 2015 (JEC): up-date for 10 km sq, where last recorded 1928.

Marshall's Eyebright *Euphrasia marshallii* (Nationally Rare, IUCN Endangered, UK BAP Priority, Scottish Biodiversity List, Locally Scarce), near Yettna Geo, Sandwick, around HY224187, HY224186, HY223185 and HY225183, 21 Aug 2015, locally frequent (JEC det. Chris Metherell): new sites within existing 10 km sq.

Alpine Saw-wort *Saussurea alpina* (Locally Rare), Kierfea Hill, Rousay, HY42423236, 22 Aug 2015 (JEC). This alpine is locally frequent in Hoy but until now was known from only one other place in Orkney, the summit of Kierfea Hill. 13 rosettes were found on rocks lower down the hill, not far above the public road.

Nipplewort *Lapsana communis* (Locally Rare), Whitehall village, Stronsay, HY65712838. 15 Aug 2015 (JEC). On weedy verge between and road and sea: new for 10 km and North Isles. The native status of this species in Orkney, elsewhere in Britain a common plant of waste ground, hedgerows and woods, must be in doubt, because of its apparently casual and erratic appearance. It is not regarded as native in Shetland.

Sowadee Hawkweed *Hieracium sowadeense* (Nationally Rare, IUCN Vulnerable), Burn of Sowadee, Sandwick, HY2316014517, 12 July 2015, eight plants counted (JEC): update for site and 10 km square, where last recorded 1925. An Orkney endemic, known only from this site and therefore Orkney's rarest plant species.

Lesser Water-parsnip *Berula erecta* (Locally Rare), Sutherland Burn, Burray, ND47719573, 31 July 2015 (JEC): update for site and 10 km square, where last recorded 1911.

Beaked Tasselweed *Ruppia maritima* (No particular national or local status for this species, but with only one Orkney record since 2000), Peedie Sea, Kirkwall, HY445109, 25 Sept 2015; Waulkmill Bay, Orphir, HY37450663, 08 Sept 2015; Dam of Hoxa, South Ronaldsay, ND426937111, 26 Aug 2015; Loch of Carness, St Ola, HY465136, 24 Aug 2015. (All JEC): all updates for 10 km sqs. Scockness lagoon, Rousay, HY451322, 22 Aug 2015 (JEC): new for 10 km sq.



Frog Orchid (J. Crossley)

Frog Orchid *Coeloglossum viride* (IUCN Vulnerable, UK BAP Priority), 41 site records in Sandwick-Stromness parishes, from Black Craig, Stromness in the south to Erens Geo, near Vestrafiold, Sandwick in the north, with counts of 250 at Black Craig, HY21871112, 11 Aug 2015 and 135 at Ramna Geo, HY22701740, 07 Aug 2015 (All JT): not updates for these 10 km sqs, but extraordinary numbers of sites and plants.

Unbranched Bur-reed *Sparganium emersum* (Locally Rare), Little Burn, between Muckle and Peerie Waters, Rousay, HY40082966, 12 Aug 2015 (JEC & JBR): update for one of only two sites in the County and 10 km sq. Previously recorded in 1986 but identity of *Sparganium* species had since become confused.

Bristle Club-rush *Isolepis setacea* (Uncommon, but not quite Locally Scarce and probably under-recorded), Spurness, Sanday, HY60663472, 08 July 2015 (JEC, AW & CW): new for 10 km sq, island and North Isles.

False Fox-sedge *Carex otrubae* (Locally Rare), west Scapa beach, St Ola, HY43680880, 24 July 2015 (JEC): second County Record and new for 10 km sq.

Stiff Sedge *Carex bigelowii* (Locally Scarce), southwest of Blotchnie Fiold summit, Rousay, HY4169528863, 30 July 2015 (JEC & JBR). One small patch, the only record for Rousay. Presumably the site of 1987 find where location details had been lost: update for 10 km sq.

Plicate Sweet-grass *Glyceria notata* (Locally Rare but probably under-recorded), Bay of Skail, Sandwick, HY23631940, 21 Aug 2015 (JEC): new for 10 km sq.

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.)

Common Vetch *Vicia sativa* ssp. *segetalis* (Established¹⁵), crossroads by school, Egilsay, HY46843012, 09 June 2015 (JEC): one of three recorded sites in the County for the species, the first time this sub-species has been identified. Europe

Crimson Clover *Trifolium incarnatum* ssp. *incarnatum* (Casual), Liddel, South Ronaldsay, ND45908362, 11 Sept 2015 (DG). New County Record. Formerly cultivated as fodder. S. Europe.

Chinese Bramble *Rubus tricolor* (Established), below Highland Park Distillery, St Ola, HY44920970, 11 Aug 2015 (JEC). On burn bank, growing very vigorously and fruiting. A potentially invasive species. New County Record. China.

Mind-your-own-business *Soleirolia soleirolii* (Casual), by Scott & Millers car park, Kirkwall, HY4491111, 01 Dec 2015 (JEC). In cracks between pavement and wall. Grew from seed so might establish. Second County Record, last in North Ronaldsay in 1960. W. Mediterranean islands.

Meadow Crane's-bill *Geranium pratense* (Established), Kierfea Hill, Rousay, HY42453245, 22 Aug 2015 (JEC). Well-established in Council quarry. Second County Record, last in quarry in Sandwick in 1991. A British native, absent from north Scotland.

American Willowherb *Epilobium ciliatum* (Established), Crantit Burn, St Ola, HY44690977, 03 Sept 2015 (JEC): second County Record, last in 2014. Along sides of ditch. N. America.

Evening Primrose *Oenothera* agg. (Casual), Queen Street, Kirkwall, HY4511111, 27 Sept 2015 (TD): new County Record. Americas.



Bladder Campion (J. Crossley)

Bladder Campion *Silene vulgaris* (Established), near Kier Field, Sandwick, HY24321843 and HY24421833, 02 July 2015 (JEC). Two well-established patches. Last Orkney record was in Sanday in 1963, where not seen since, the only other records being at or near the Kier Field site in 1921 and 1882. Are these plants descendants of those or a more recent introduction? A British native, absent from north Scotland.

¹⁵ The terms used to describe the status of non-native plants are:

Established – present in the wild for at least 5 years and spreading vegetatively or reproducing effectively by seed;

Surviving - present in the wild for at least 5 years but not spreading vegetatively or reproducing effectively by seed;

Casual – present briefly, i.e. for less than 5 years, or intermittently;

Planted – planted in a 'wild' situation but not established.

Broad-leaved Ragwort *Senecio sarracenicus* (Established), Golf Course, Hatston, St Ola, HY43361178, 10 Sept 2015 (DG): new County Record. Europe.

Irish Ivy (cultivated form) *Hedera 'Hibernica'* (Surviving, possibly planted), Berriedale, Hoy, HY20180139, 21 Sept 2014 (JEC det. Alison Sutherland and Hugh McAllister). A single plant grows in Berriedale, where it has been recorded since 1884, presumably the same plant. The species and variety was identified from material collected by BJ in 2014 and grown on in 2015, but the experts appear to be struggling with this one and there is talk of DNA analysis. It might be the native form of Irish Ivy *H. hibernica*; even so, it would be an introduction. Second County Record 'in the wild'. Cultivated origin.

Bread Wheat *Triticum aestivum* (Casual), northeast side of 4th Barrier, Burray, 05 Aug 2015, (TD). A very odd occurrence on a sandy beach: wheat seed does not survive immersion in sea water for long. It must have been a throw-out, perhaps with poultry feed or bird seed. New County Record. Southwest Asia.

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'Ones to look for'

For some years I have produced a list of rare and scarce plants and the places where they have been recorded in the past but not seen since at least the year 2000. This is so the records can be up-dated for the forthcoming 2020 Atlas of the British Flora. It is also very interesting and useful to know in a local context. The oldest of the previous records go back 80-100 years or even more in a few cases. It is possible to re-find even these very early ones – three were found in 2015. I can provide this list to anyone who wants it – there are bound to be some near you.

33 records of 10 species were collected in Orkney in 2015.

The most frequently seen species was *Mucilago crustacea* which was reported from South Ronaldsay, Kirkwall, Stromness and Lyness, Hoy. This common species is usually seen on grass and has been described as resembling dog vomit or pale scrambled egg.

Several common species were recorded at Berstane Woods including *Reticularia lycoperdon*, *Arcyria denudata* and *Stemonitopsis typhina*, all on fallen trees and well rotten logs. *Lycogala terrestris* was also recorded in the woods; this species hasn't been found in Orkney before as far as I am aware.

Three species were found at Olav's Wood. *Mucilago crustacea* on grass, *Stemonitis fusca* on a rotten log and *Leocarpus fragilis* on conifer needles. *Leocarpus fragilis* was also recorded at Smoogro, Twatt and Longhope. This very common species is thought to be cosmopolitan.



Metatrichia floriformis (left) and *Physarum cinereum*

(Lee Johnson)

Binscarth Woods produced records of *Arcyria denudata*, *Trichia scabra* (more common in the south but has been recorded in Orkney previously) *Physarum cinereum* on living plant stems and *Metatrichia floriformis* on well-rotted fallen **Wych Elm** *Ulmus glabra*. *M. floriformis* used to be considered rare but following a rapid expansion is now thought to be common and probably cosmopolitan.

Thank you to Nancy Charlton, Anne Gascoigne, Bob Simpson, Johnny Rosie, Derek Mayes and Mary Harris for submitting records.

The OFC fungi foray to Binscarth Wood in October 2015 was successful in finding a wide range of species, reflecting the wood's rich diversity. It was a great day for seeing a wide range of wildlife, from the fantastic range of slime moulds on a damp rotting log to the small but beautiful barkfly *Amphigerontia bifasciata* which was spotted sitting on a toadstool.

Lee Johnson provided records of over 50 fungi species for 2015, including rarities like **Dune Cup** *Peziza ammophila*, known in Orkney from just the one site, Barrier No. 4, between Burray and South Ronaldsay. This followed on from her 2014 records which included two earthtongue species which she'd confirmed under the microscope.

Another great contributor to our local knowledge of fungi is Derek Mayes. He has been spending considerable time as well as his photographic talent on rusts and fungus-induced plant galls. He has also worked hard to get our records of **Nettle Clustercup Rust** *Puccinia urticata* onto the National Biodiversity Network database.

In 2014, we were blessed by another visit from expert Liz Holden, who could come to the county as part of the RSPB Scotland 'Enjoy Wild Orkney' project. She didn't identify as much as she could, as much of her time was spent helping with identifications and teaching mycological techniques.

Having said that, we did end up with a list of nearly 100 species from her three days in the county. They included the second Scottish record of a tiny mushroom called *Hymenoscyphus salicellus* from a twig at Binscarth Wood, and the fifth Scottish record of **Dune Inkcup** *Coprinopsis ammophilae* from Barrier No. 4. These were other new species for the county too, and the Orkney list is now in much need of revision due to new finds and taxonomic changes.

I now live on Papa Westray. I've barely begun to scratch the surface with the fungi found here. Papa Westray's North Hill is rich in species from genera such as *Russula*, *Cortinarius* and *Hebeloma*. These all have an ectomycorrhizal relationship with the **Creeping Willow** *Salix repens* on this great expanse of maritime heath.

I have been very pleased to find a number of interesting species on the island such as **Honey Waxcap** *Hygrocybe reidii*. The find of **Fool's Funnel** *Clitocybe rivulosa* was poignant – the neat, fleshy specimens looked like they would fry up nicely – but to eat this would be seriously dangerous. This is a sharp reminder of the fallacy held by some who earnestly (and foolishly) believe that Orkney has no poisonous species.

Please look out for fungi, and I'd particularly appreciate it if you could send me a list of records at the end of the year. Do email me if you think I could help with identifications, but be warned that fungus ID is very difficult, especially from descriptions and photos!

A nice selection of Orkney's many mollusc species were reported this year.

Throughout 2015 Lee Johnson recorded a good variety of shells on shorelines in South Ronaldsay - the Ayre of Cara, Scows and Honey's Geo, as well as Ness Point in Stromness. Among those found were the **Humpback Scallop** *Talochlamys pusio* and **Variiegated Scallop** *Chlamys varia* as well as live molluscs found in the intertidal zone such as the sea slug *Facelina bostoniensis*.

This year snorkelling at Houton provided a variety of sea slug records from the intertidal area. *Okenia elegans*, *Cuthona Nana* and *Geitodoris planata* were the more unusual of those present. A dead specimen of *Pleuobranthus membranaceous* was also found here, whilst three live animals were recorded by Penny Martin while diving on the SMS Bremse near Swanbister Bay. A single record of the sea slug *Aigres punctilucens* was noted at Barrier 1. Divers have one of the best opportunities to see living molluscs and more records from divers and snorkellers would undoubtedly provide many excellent additions to Orkney's records.

Molluscs contain some of the most beautiful and interesting marine species and high on the list must surely be the cephalopods. Common in sandy areas is the diminutive **Little Cuttle** *Sepiola atlantica*. This was seen frequently at Barrier 2 over the summer and is undoubtedly present in numerous sandy areas around Orkney but can be easily overlooked due to their small size. Lindsey Taylor spotted the 1-2 cm long animal pictured eating a brown shrimp.



Little Cuttle *Sepiola atlantica* feeding

(Lindsey Taylor)

There are undoubtedly beachcombers, snorkelers and divers out there who come across many other species during the course of the year. It would be great to receive more for the Orkney Wildlife Information and Records Centre - whether they are unusual finds or on-going records from a particular area.

After the cool wet summer of 2014 it was hoped that the weather gods would favour us in 2015, but this was not to be. The poor summer weather had a negative effect on both Odonata sightings and indeed the number of people searching for them. We can only wait and see whether two years of unfavourable breeding conditions have impacted on Orkney's Odonata populations, particularly of the scarcer species such as the Four-spotted Chaser Dragonfly, and the Golden-ringed Dragonfly.

Black Darter *Sympetrum danae*

Black Darters were first noted by BR on 9th August at a pool near the Wee Fea plantation west of Lyness on Hoy – the earliest date for the species in 2014 being 19th July. Also at this or a nearby pool GW counted 50 specimens on 16th August. Other records of particular note were of a female at a pool at Cairn Hill near Heldale Water (only the second record for the 1km square) (TA) and a male at Peerie Water on Rousay on 28th August (ERM) (again the second record for the 1km square). Although many of the usual sites for this species were not recorded, it seems that those that were showed reasonable levels of productivity.

Common Hawker *Aeshna juncea*

A teneral (newly emerged) male noted by BR at Queenamidda Rendall on 13th July was the first recorded in 2015 (9th July the earliest date in 2014). This suggests that one or more of the Queenamidda pools may be viable breeding sites. An unusual blue female was successfully rescued from a bird-ringer's mist-net at Queenamidda on 31st July! All other records were from usual areas of Hoy. On Mainland Orkney, where this hawkler is only just hanging on as a breeding species, the Queenamidda pools and the Quarry pool in Russadale, Stenness, need careful monitoring. At the Russadale pool in 2011, larvae were found by a well-known entomologist and occasional sightings have been made in the valley since then.

Four-spotted Chaser *Libellula quadrimaculata*

BR had the only record of 2015, this at the usual breeding site near the Burn of Rinnigill, Hoy, on 16th July (no records for 2014). Here he found four adults and an exuvia. Almost certainly this species breeds at other sites in the North of Hoy, but tracking them down is a challenge we have yet to meet.

Golden-ringed Dragonfly *Cordulegaster boltonii*

There were no Orkney records of this magnificent running-water species in 2015 and none for Hoy in 2014. However it is a difficult dragonfly to get to grips with. In favourable weather, in its search for insect-prey it zooms up and down narrow burns where the banks are often steep-sided, clad in tall heather or willow scrub and boulder-strewn. It can easily be mistaken for a Common Hawker. Possibly the best chance of getting a reasonable view of it is to sit by a bridge or in an unvegetated spot and wait patiently for it to appear and hopefully settle. Once seen, it is worth watching the same area for a while as it tends to use the same stretch of burn for some time to hunt for its prey.

Large Red Damselfly *Pyrrosoma nymphula*

GuW had the first sighting of 2015 on 14th June at the garden pond of a house in Hillside Road, Stromness (12th May in 2014 – a more typical date for this early emerging species). BR recorded a teneral insect at the Water of the Wicks, Hoy (HY288003) on 5th July – a new 1km square. At a garden pond in Nether Corston, Mainland, (HY32171849) JW recorded seven on

15th July – again a new 1km square. On 26th July GW had several insects mainly in ditches near Heathery Howes, a few km south of the airport. At one of these sites (HY483066) GW noted ten insects, a good number for this species.

Common Blue Damselfly *Enallagma cyathigerum*

The earliest record for this damsel was 16th July at Rackwick by BR (5th July in 2014). In Orkney, this species tends to be found in more remote areas with most records coming from acidic moorland pools on Hoy. Thus we tend to get the impression that this insect is fairly scarce. In fact, where it does occur it can be quite prolific, as demonstrated by BR's record of 60 near the Rinnigill Burn, Hoy, on 16th July. The only 2015 record outwith Hoy was of three males at the Loch of Scockness on Rousay on 22nd August noted by JC.

Blue-tailed Damselfly *Ischnura elegans*

The first recorded were four at Dale, Costa, on 15th June by DM (7th June in 2014). Notable sightings were: 50 at the quarry pool south of the Merkister Hotel (HY301183) by DM on 5th July; 30 at the Hoxa reservoir (ND414938) by GW also on 5th July and 60 at Quoyorally, South Ronaldsay, (HY460861) on 6th August by JC. This versatile species seems to be holding its own.

Emerald Damselfly *Lestes sponsa*

Lack of recording meant that there was no evidence of a range expansion of this damsel since its arrival on Hoy in 2010. The earliest sighting was on 9th August by BR (19th July in 2014). There were seven records, all from previously occupied sites on Hoy, the most notable at one of the Wee Fea pools where GW counted 25 On 16th August.

Plans for 2016

Lack of suitably warm weather and lack of manpower meant that our objectives for 2015 were not achieved and they remain valid for 2016:

- . To explore the pools in the upper reaches of the Burn of Ore and Heldale Water to discover whether the Emerald Damsel has spread Southwards on Hoy and to search for as yet unrecorded breeding sites for the Four-spotted Chaser and the Golden-ringed Dragonfly.
- . To search the Moss of Whitestanes for previously unrecorded breeding sites of the Four-spotted Chaser.
- . To search likely habitat on Mainland Orkney for as yet undiscovered breeding sites of the Common Hawker.
- . To visit the Lochs of Griffyelt in Orphir to determine whether they are still breeding sites for the Black Darter and Common Blue Damselfly, none having been recorded there in 2014 and 2015.

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SG Sydney Gauld	DM Dick Matson	GuW Gudula Walker
MH Mary Harris	ERM Eric Meek	GW Graeme Walker
JW John Wetherall		

112 records of 47 species were reported in Orkney in 2015. This is more than usual thanks to a few more active recorders. There was no systematic recording by visiting experts so these are mostly casual records.

There were four new Orkney species in 2015: *Aphidecta oblitterata*, *Cantharis nigricans*, *Ocys quinquestriatus*, and *Phyllobius pomaceus*. There were several records of the first two; both are likely to be relatively recent colonists now breeding. The others could easily have been overlooked in the past. **Harlequin Ladybirds** *Harmonia axyridis* reappeared after a gap of several years but there were no reports of **10-spot Ladybird** *Adalia 10-punctata* this year.

Carabus glabratus was found for the first time since 1982. One was found dead on the hill above Berriedale, Hoy in September. The only previous record was from the nearby Burn of Segal. This large black ground beetle seems to be an upland specialist.

Elaphrus cupreus was found by the Finstown Ouse in April, following a Birsay record in 2014, which was the first Orkney record since 1983.

Ocys quinquestriatus new for Orkney, was caught in a sticky trap placed in 2013 and removed in 2015, in Tankerness House museum. It occurs in cellars and on walls, also on rocky coasts. It is very local and very scarce in Britain.

Catops nigricans was found on a freshly dug potato in Rendall. There seems to be only one previous Orkney record, in 2006.

Dor beetle *Geotrupes stercorarius* was found twice in Sanday, after one in Burray in 2013. It seems possible that it may have bred there. This very large and conspicuous dung beetle should be relatively easy to re-find.

Dalopius marginatus is a distinctively-coloured click beetle; one was photographed at Waulkmill in Orphir. There were 3 records in 2011 but only one before that.

Cantharis nigricans, new for Orkney, multiple specimens were found at two sites. Both sites are conifer plantations, one in East Mainland and the other in South Ronaldsay. It must surely have bred at these sites. It is a fairly large and distinctive soldier beetle so seems unlikely to have been overlooked for long and most likely is a recent colonist.

Rhagonycha lignosa, another soldier beetle, was found at the same South Ronaldsay site as the previous species. There is only one previous record, from Stenness in 2011.

Harlequin ladybird *Harmonia axyridis* has reappeared, the last record having been in 2010. There were at least 4 reports this year, including one of several found when folk were unpacking after moving to Orkney from south. This species hibernates in crevices, often in houses, so is likely to be transported like this whenever it is hibernating. The same applies to some other ladybird species.

Larch ladybird *Aphidecta oblitterate*, new for Orkney, found in numbers at 2 widely separated sites in conifer plantations, in late September and early October. It must be breeding here and possibly in other plantations. It has almost unmarked light brown elytra, so may not be recognised as a ladybird, but one site is at Binscarth, Firth where it is unlikely to have been overlooked for long. Though usually associated with larches it does occur on other conifers. The

nationally rare *Chrysolina latecincta* (*C. intermedia*) was recorded only twice, in April and May, in the usual area around 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.

Green dock beetle *Gastrophysa viridula* was found on a new island for this species, Sanday. It is widespread and often abundant in Mainland and the south isles but until now in the north isles it has only been known from Rousay and one site in Eday.

Otiorhynchus porcatus was photographed in Firth; there is one previous record from Orphir in 2011.

Black marram weevil *Otiorhynchus atroapterus* was found on the beach by number 4 barrier. It was recorded at this site in 2011, and at 2 other sites in 2013.

Phyllobius viridicollis was found in Burray; there are old records from Hoy and South Walls, most recently in 1979. It and the next species are weevils usually associated with nettles.

Phyllobius pomaceus, new for Orkney. It was found in South Ronaldsay.

Euophryum confine was recorded for the first time since 2005. Like *Ocys quinquestriatus* it was caught in a sticky trap placed in 2013 and removed in 2015, in Tankerness House museum. It is a weevil associated with dead (often damp) wood. It has been introduced from New Zealand and is now common throughout most of Britain. It is small and likely to be overlooked.

Many thanks to all contributors:

C & A Weston, C Clark, L Johnson, L Shields, R Andrew, C J Booth, J Branscombe, D Mayes, L Campbell, G Walker, J Crossley, M Harris, N Charlton, S Otter and S Gauld. Apologies to anyone missed out.

Species List for 2015	Records	Status
<i>Dytiscus semisulcatus</i>	1	
<i>Carabus arvensis</i>	1	
<i>Carabus glabratus</i>	1	
<i>Carabus problematicus</i>	1	
<i>Cychrus caraboides</i>	1	
<i>Leistus terminatus</i>	1	
<i>Nebria brevicollis</i>	1	
<i>Cicindela campestris</i>	1	Green Tiger Beetle
<i>Loricera pilicornis</i>	1	
<i>Elaphrus cupreus</i>	1	
<i>Brosicus cephalotes</i>	1	
<i>Ocys quinquestriatus</i>	1	
<i>Pterostichus niger</i>	5	
<i>Calathus fuscipes</i>	1	
<i>Calathus melanocephalus</i>	2	
<i>Catops nigricans</i>	1	
<i>Silpha atrata</i>	7	

<i>Nicrophorus humator</i>		3	
<i>Nicrophorus investigator</i>		6	
<i>Nicrophorus vespilloides</i>		1	
<i>Philonthus laminatus</i>		1	
<i>Staphylinus erythropterus</i>		4	
<i>Ocyopus olens</i>	Devil's Coach-horse	6	
<i>Creophilus maxillosus</i>		1	
<i>Geotrupes stercorarius</i>		2	
<i>Aphodius depressus</i>		2	
<i>Aphodius rufipes</i>		2	
<i>Aphodius rufus</i>		1	
<i>Ctenicera cuprea</i>		1	
<i>Hemicrepidius hirtus</i>		1	
<i>Dalopius marginatus</i>		1	
<i>Cantharis nigricans</i>		4	
<i>Rhagonycha lignosa</i>		1	
<i>Anobium punctatum</i>	Woodworm	2	
<i>Brachypterus urticae</i>		2	
<i>Harmonia axyridis</i>	Harlequin Ladybird	3	
<i>Aphidecta oblitterata</i>	Larch Ladybird	5	
<i>Chrysolina intermedia/latecincta</i>		2	RDB2
<i>Chrysolina staphylaea</i>		3	
<i>Gastrophysa viridula</i>	Green Dock Beetle	20	
<i>Otiorhynchus porcatus</i>		1	
<i>Otiorhynchus sulcatus</i>	Vine Weevil	2	
<i>Otiorhynchus atroapterus</i>	Black Marram Weevil	2	
<i>Phyllobius viridicollis</i>		1	
<i>Phyllobius pomaceus</i>		1	
<i>Euophryum confine</i>		1	

327 records of 21 species were received this year. This is many more records than usual and reflects a great increase in recording activity. The total number of species recorded shows a slight increase over 2014 but has greatly increased over a 15-year period: as recently as 1999-2001, when recent recording of bees, ants and wasps began in earnest, only 14 species were recorded.

In 2015, the **Buff-tailed Bumblebee** *B terrestris* was confirmed as a new breeding species in Orkney; the solitary bee **Common Colletes** *Colletes succinctus* was re-discovered after a gap of 77 years; and one, possibly two, new colonies of the rare solitary bee **Tormentil Mining-bee** *Andrena tarsata* were discovered. The terrible weather that lasted into July might be expected to have been hard on bumblebees but there is no evidence of this so far. There were some good counts of the Orkney signature species **Great Yellow Bumblebee** *Bombus distinguendus*. The unusually settled autumn weather will have been favourable to all species in the late stages of their breeding cycles.

Bumblebees

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

There were 41 records. The earliest by far were a series of sightings of two to three queens at Skipi Geo, near Honeysgoe, South Ronaldsay between 9 May and 24 May (JC). They were feeding on **Ground Ivy** *Glechoma hederacea*, a plant not native to Orkney and a garden throw-out on the grassy cliffs there. They were filmed by the BBC Springwatch team, but, disappointingly, were not shown on TV. Other sightings were from Burray (JC & LJ), Birsay (TD & RM), Copinsay (RSPB), Egilsay (AL & RSPB), Kirkwall (CJB), Evie (JC), Rousay (JC), Sandwick (MG), South Ronaldsay (JC & LJ), South Walls (MH), Stenness (RSPB) and Stromness (JC). Highest counts, by far, were from Egilsay (14 on 28 Aug) and Copinsay (15 on 30 Aug). These counts and others from these islands were obtained from transect recording conducted by RSPB in June, July and August. Transect recording of bumblebees very often fails to locate less common species that may in fact be present in the general area, mainly because of bumblebees' wide-ranging and opportunistic foraging behaviour, so these results strongly suggest healthy populations in these islands. That is less surprising for Egilsay, with its variety and extent of flower-rich habitats, than for Copinsay, which one would expect to provide limited forage and a small or even precarious population of these bees. They were not the first records for Copinsay though.

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

35 reports came from Burray, Copinsay, Egilsay, Firth, Kirkwall, Papa Westray, Rendall, Shapinsay, South Ronaldsay, Stenness and Stronsay, between 9 May and 21 October (CJB, JC, LJ, JBR and RSPB). There was a count of 41 at Brodgar, Stenness on 27 August and of 200+ at North Flaws, South Ronaldsay on 22 Aug. The high count at North Flaws was mainly of males feeding exclusively on Fuchsia. These bushes are often alive in late summer and autumn with long-tongued species such as *B. hortorum* and *B. pascuorum*, which can reach into the deep corollas of the flowers for nectar; the short-tongued *B. lucorum* agg. may also feed on them but only by biting directly into the nectary.

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

There were nine reports, from Burray, Hoy, Papa Westray, Shapinsay, South Ronaldsay, South Walls and Stennes (CJB, JC, MH and RSPB), between 18 May and 8 Oct. Highest count was of 10 at Mill Dam, Shapinsay. Better recorded in 2015 than usual and the record for Papa Westray was new for the island and 10 km square.

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

This was reported on 75 occasions, from Burray, Copinsay, Egilsay, Firth, Hoy, Kirkwall, Orphir, Rendall, Shapinsay, South Ronaldsay, St Ola and Stronsay (CJB, JEC, LC, LJ, JBR and RSPB). Earliest date was 16 April and the latest 13 Oct, both at North Flaws, South Ronaldsay. Highest count was of 28 at Brodgar, Stennes.

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

Recorded from Hill of Dwarmo, Evie on 28 Aug and North Flaws, South Ronaldsay on 4 Oct, both single males (JEC). The Evie record was new for 10 km square.

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

Recorded from Papa Westray on 13 June and South Ronaldsay on 21 Oct and 2 Nov (JC), all queens. 21 Nov was the last date for any bumblebee sighting in 2015.

Buff-tailed Bumblebee *B. terrestris* (Apparently becoming widespread on Mainland and linked South Isles but still uncommon)

Until this year the presence of this species was unconfirmed, though strongly suspected. The first confirmed record was near Longhope, South Walls, on 16 May where a queen was photographed by Mary Harris. Then single individuals were seen on six occasions between 4 June and 6 July in Kirkwall (CJB). Further records were from Firth on 30 July (LJ) and in South Ronaldsay on three dates in September (LJ). It is likely that this species will spread rapidly throughout Orkney.

Unidentified **White-tailed/Buff-tailed Bumblebee** *B. lucorum* agg./*B. terrestris*

Recorded in Burray, Holm, Hoy, Kirkwall, Orphir, South Ronaldsay and Stromness (LJ). Until this year it was possible to record all White-tailed Bumblebees as *B. lucorum* agg. or one of its segregates. However, with *B. terrestris* now present and most workers and males having white or off-white tails there is a problem with recording these species separately. Queens are easily distinguished, but it will be wise in future to record all but the most well marked males and females as *lucorum* agg./*terrestris*. For the time being though, I will continue to record *B. lucorum* agg. or one of its segregates, in the outer isles until such time as *B. terrestris* is found there.

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

33 sightings came from Burray, Deerness, Egilsay, Hoy, Orphir, Papa Westray, South Ronaldsay and Stronsay (CJB, JEC, LJ and RSPB). Earliest and latest dates were 23 May and 4 Oct, both at North Flaws, South Ronaldsay. Highest count was of six queens near Cott, Egilsay.

Common Carder Bee *B. pascuorum* (Widespread and common)

57 reports this year, from Burray, Firth, Harray, Orphir, Kirkwall, Papa Westray, Rendall, South Ronaldsay and St Ola (CJB, JEC and LJ), from 10 April to 21 October (both dates North Flaws, South Ronaldsay). The Papa Westray record, of 20 individuals near Holland House (JEC), was the first for the island, which it has obviously now colonised. Last year the species was recorded for the first time in Sanday, so its colonisation of the North Isles, starting with Stronsay in the

year 2000, must be complete or nearly so. Highest count was of 40 at North Flaws, South Ronaldsay on 13 Oct.

Unidentified **Carder Bee** *B. muscorum/pascuorum*

Recorded in Birsay, Copinsay, Egilsay, Firth, Shapinsay and Stenness (RSPB).

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

One female, Hill of Dwarmo, Evie on 28 Aug (JEC).

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

Singles were recorded on five occasions, from Burray, Rendall, South Ronaldsay and Stenness (JEC, LJ, JBR and RSPB) between 18 May and 8 Oct.

Social wasps

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

Fifteen reports of one-to-two individuals were from Firth, Kirkwall and South Ronaldsay (CJB, SG and LJ) between 13 Aug and 24 October.

Red Wasp *V. rufa* (Widespread)

One-to-two wasps of this species were reported on 14 occasions, from Orphir, Rendall, South Ronaldsay and St Ola between 18 May and 10 Oct (JEC, LJ & JBR).

Norwegian Wasp *Dolichovespula norvegica* (Local)

Six reports of one-to-two individuals were from Kirkwall (CJB) and Queenamidda, Rendall (JBR) between 10 Aug and 6 Oct. A nest was found at Queenamidda.

Tree Wasp *D. sylvestris* (Widespread, locally common)

A single individual was at Hestily, South Ronaldsay on 2 July (LJ).

Solitary bees and wasps

Mason Wasp *Ancistrocerus oviiventris* (Widespread but uncommon)

A single record was from Burwick, South Ronaldsay on 27 Aug (LJ).

Mason Wasp *Ancistrocerus scoticus* (Widespread but uncommon)

There were three reports of single individuals, at Westshore, Burray (BH), Griffyelt cliffs, Orphir (SG) and Burwick, South Ronaldsay (LJ) between 5 July and 27 Aug.

Tormentil Mining-bee *Andrena tarsata* (Rare, also Nationally Scarce and UKBAP Priority Species)

There were three definite records of this species and one probable. The colony of solitary bees discovered last year at the Cuween Cairn, Firth by Kevin West was proven to be this species, from a specimen taken on 15 July. There were at least 100 nest holes. This was the first proven breeding site for this species on mainland Orkney until another was discovered, also in July, at Hobbister, Orphir by Colin Campbell, a visiting RSPB staff member. Elsewhere, 10 bees were counted at the known colony at Rackwick on 2 July (JBR) and another breeding aggregation, probably of this *Andrena* species, was discovered at the Whaness Burn bridge on 2 July (JBR).



Common Colletes (Mary Harris)

Common Colletes *Colletes succinctus*

A large nesting aggregation was discovered at Rackwick shore, Hoy on 10 Sept by Mary Harris. There were “hundreds” of bees on a south-facing slope. There is one previous record from Orkney, from Rackwick in 1938! *C. succinctus* is a fairly common moorland species throughout the UK, feeding mainly on heather. It emerges late in the summer and often goes unnoticed. It is said that colonies can be spectacular, when on some days thousands of bees are active in dense colonies.

Cuckoo or Ruby-tailed wasp *Chrysis impressa*.

Eight individuals were recorded at Griffyelt cliffs, Orphir, HY4006 on 2 Aug (SG). New County Record. *C. impressa* belongs to the *C. ignita* aggregate, the component species of which are very difficult to identify. The identification of a specimen taken was the result of a joint effort by SG and LJ, and was confirmed by Paolo Rosa (Italy) and Villu Soon of the University of Tartu (Estonia). It is not unlikely that other *C. ignita* agg. recorded in previous years belong to this species, though the only other previously identified species was *C. rutiliventris*.

Unidentified Cuckoo-wasp.

There was an intriguing report of a possible *Trichrysis cyanea* on Fara by Andrew Upton, who had a good close-up view of the insect. This wasp is bright metallic green all over and should be unmistakable. However, *T. cyanea* has a southern distribution in the British Isles, with just a single Scottish record from Perth and Kinross, and in these circumstances a specimen would be required for confirmation of identity.

Ants

Myrmica ruginodis, a red ant (Widespread and common)

There were six records, from Burray, Deerness, Hoy, Orphir, Rousay, Shapinsay and South Ronaldsay (JEC, AG, LJ, JBR and OFC). Most of these were nests. The records for Burray, Deerness and Shapinsay were new for these islands/parishes and 10 km squares

Many thanks to all contributors:

Chris Booth (CJB), Colin Campbell, Lindsay Campbell (LC), Anne Gascoigne (AG), Sydney Gauld (SG), Martin Gray (MG), Mary Harris (MH), Lee Johnson (LJ), Alan Leitch (AL), Dick Matson (RM), Brian Ribbands (JBR), Tim Dean (TD), Andrew Upton, Kevin West, Orkney Field Club (OFC) and RSPB.

2015 was another good year for recording with two new county records: *Hedya atropunctana* and *Acrobasis advenella*. Also mentioned in this report is a new county record from 2014, **Pale Brindled Beauty** *Phigalia pilosaria*.

5160 records were made during 2015, this being 2082 records less than 2014. The 5160 records for 2015 comprised 241 species recorded from 134 locations.

Listed below in more detail are the three new species plus some of the more interesting species records.

The following abbreviations are used:

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

New to Orkney 2015

Hedya atropunctana (U): one taken by trap 1 July Gillbreck, South Ronaldsay (LC & NF). *H. atropunctana* is found predominately in the north of England and across Scotland. The larvae feeds on such plants as Bog Myrtle and Willow in damp areas, with the adult being on the wing in the north during June and July.



Hedya atropunctana (L. Campbell)

Acrobasis advenella (U) : one found in the field 8 August Berstane House, St Ola, (NC). *A. advenella* is found throughout the British Isles up to southern Sutherland and has also been recorded from Shetland. The larvae feed on hawthorn with adults on the wing during July and August.



New to Orkney 2014

Pale Brindled Beauty *Phigalia pilosaria* (U): one found in the field 1 February 2014 Berstane House, St Ola, (NC); 17 were taken by trap between 10 and 23 February 2015 at the same location. Pale Brindled Beauty is common throughout the British Isles with sightings thinning out in the north of Scotland up to Caithness. The larvae feed on Oak, Hawthorn, Blackthorn and various other deciduous trees, adults being on the wing from late December to March.



Other sightings of interest 2015

Spindle Ermine *Yponomeuta cagnagella* (I): two taken by trap; one 9 August Sea Cottage, Longhope, Hoy (MH) and one 19 August Cairston Road, Stromness (BS).

Honeysuckle Moth *Ypsolopha dentella* (R): one taken by trap 27 September 34 High St, Kirkwall (CJ & JB).

Twenty-plume *Alucita hexadactyla* (R): seven recorded; five seen in the field and one taken by trap between 3 January and 1 July 34 High St, Kirkwall (CJ & JB) and one seen in the field 28 April Smyril, Stenness (ERM).

Red Admiral *Vanessa atalanta* (I): seen across Orkney from 1 July to 31 October.

Painted Lady *Cynthia cardui* (I): 53 seen between 18 April and 24 September.

The Peacock *Inachis io* (I): three recorded; one 27 August Picky Sports Fields, Kirkwall (SVG), one 27 September Herston, South Ronaldsay (J & RMc) and one 4 October Sea Cottage, Longhope, Hoy (MH).

Bee Moth *Aphomia sociella* (R): two; one seen in the field 21 July Queenamidda, Rendall (BR) and one taken by trap 22 August 34 High St, Kirkwall (CJ & JB).

Rusty-dot Pearl *Udea ferrugalis* (I): three taken by trap; two 21 August and one 13 September Sea Cottage, Longhope, Hoy (MH) and one 11 October Berstane House, St Ola, (NC).

Udea olivalis (V?): 426 taken in various traps across Orkney from 20 June to 9 September. The highest catch was 26 on 25 August, Cairston Road, Stromness (B Simpson).

Mother of Pearl *Pleuroptya ruralis* (V): three taken by trap on the 13 August; two Berstane House, St Ola, (NC) and one Sea Cottage, Longhope, Hoy (MH).

Rush Veneer *Nomophila noctuella* (I): eight taken by trap; three between 23 September and 17 October, Berstane House, St Ola, (NC), one 30 September Queenamidda, Rendall (BR), one 4 October Cairston Road, Stromness (BS) and three between 9 October and 17 October, Sea Cottage, Longhope, Hoy (MH).

Eudonia lineola (U): two taken by trap 22 August Gillbreck, South Ronaldsay (LC & NF).

Brown China-mark *Elophila nymphaeata* (V?): two records; one seen in the field 22 July Queenamidda, Rendall (BR) and one taken by trap 11 August Sea Cottage, Longhope, Hoy (MH).

Fox Moth *Macrothylacia rubi* (R): 20 larvae seen at various locations across Hoy between 10 and 30 September, and one seen at Stanger Head, Flotta, 18 September.

Poplar Hawk-moth *Laothoe populi* (R): 152 records; one pupa found 17 April Mearon, Birsay (VD). 141 adults were taken mostly by trap with some being seen in the field between 9 June and 25 July across the Mainland and South Isles. 10 larvae seen on 7 September in Harray and two in Rendall, one 21 September and the other 5 October.

Convolvulus Hawk-moth *Agrius convolvuli* (I): three records; one taken by trap 1 September Berstane House, St Ola, (NC), two seen in the field, the first 16 September Herston, South Ronaldsay (J & RMcC) and second 21 September Harray (MH).

Death's-head Hawk-moth *Acherontia atropos* (I): one seen on 15 July Shapinsay (Recorder unknown).

Humming-bird Hawk-moth *Macroglossum stellatarum* (I): nine seen in the field all singles; on 8 June Cairston Road, Stromness (BS), 18 June Voy, Sandwick (MG), 3 July Marwick Bay, Birsay (AH), 17 July Mearon, Birsay (VD), 17 July Inganess area St Ola (WR), 21 July Stromness (JR), 24 July The Willows, Finstown (AL), 14 September St Margaret's Hope (MT) and 16 October Herston, South Ronaldsay (J & R McC).

Bedstraw Hawk-moth *Hyles gallii* (I): two taken by trap; one 21 August Sea Cottage, Longhope, Hoy (MH) and the other 22 August Telegraph Cottage, Sanday (A & CW).

Small Fan-foot Wave *Idaea biselata* (V): two taken by trap; one 3 August Bayview, Herston, South Ronaldsay (J & R McC) and the other 13 August 34 High St, Kirkwall (CJ & JB).

Pine Carpet *Thera firmata* (R): two taken by trap; one 21 August Queenamidda, Rendall (BR), and the other 10 October Berstane House, St Ola, (NC).

Spruce Carpet *Thera britannica* (V): 10 taken by trap; one 6 July Queenamidda, Rendall (BR), eight between 7 September and 5 November Berstane House, St Ola, (NC) and one 18 October Cairston Road, Stromness (BS).

Barred Straw *Eulithis pyraliata* (C?): three taken by trap; one 10 August Berstane House, St Ola, (NC), one 13 August Sea Cottage, Longhope, Hoy and the other 17 August at the same location (MH).

Small Phoenix *Ecliptopera silaceata* (C?): one taken by trap 6 July Queenamidda, Rendall (BR).

White-spotted Pug *Eupithecia tripunctaria* (V): one taken by trap 12 June Cairston Road, Stromness (BS).

The Streak *Chesias legatella* (V): one taken by trap 10 October Sea Cottage, Longhope, Hoy (MH).

Bordered White *Bupalus piniaria* (R): two seen in the field; one 2 July Hestily, South Ronaldsay (LJ) and the other 13 July Queenamidda, Rendall (BR).

Straw Dot *Rivula sericealis* (V) one taken by trap 6 August Quoyberstane, St Ola (SVG).

Pinion-streaked Snout *Schrankia costaestrigalis* (R?): 14 taken by trap; one 5 July and one 26 July Bayview, Herston, South Ronaldsay (J & R McC), four between 25 July and 21 August Queenamidda, Rendall (BR), four between 4 – 24 August Sea Cottage, Longhope, Hoy (MH), one 6 August and one 22 August Berstane House, St Ola, (NC), one 7 August Gillbreck, South Ronaldsay (LC&NF) and one 12 August Cairston Road, Stromness (BS).

Lempke's Gold Spot *Plusia putnami putnami* (U): one taken by trap 17 August Sea Cottage, Longhope, Hoy (MH).

Large Wainscot *Rhizedra lutosa* (RI): one taken by trap 19 October Telegraph Cottage, Sanday (A & CW).

Light Arches *Apamea lithoxylaea* (U): 28 taken by trap; one 26 July Sea Cottage, Longhope, Hoy (MH), 11 between 30 July and 21 August Cairston Road, Stromness (BS), one 30 July Vagaland, Stromness (PS), 13 between 6 and 29 August Quoyberstane, St Ola (SVG), one 13 August 34 High St, Kirkwall (CJ & JB) and one 18 August Berstane House, St Ola, (NC).

Rosy Minor *Litoligia literosa* (R?): two taken by trap; one 28 August Berstane House, St Ola, (NC) and the other 25 August Cairston Road, Stromness (BS).

Red-line Quaker *Agrochola lota* (V): 13 taken by trap; 10 between 27 September and 17 October Sea Cottage, Longhope, Hoy (MH) and three between 30 September and 10 October Bayview, Herston, South Ronaldsay (J & RMcC).

Yellow-line Quaker *Agrochola macilenta* (V): two taken by trap; one 26 September Berstane House, St Ola, (NC) and the other 16 October Sea Cottage, Longhope, Hoy (MH).

Red Sword-grass *Xylena vetusta* (R?): one taken by trap 19 October Berstane House, St Ola, (NC).

The Satellite *Eupsilia transversa* (RI): one taken by trap 21 August Quoyberstane, St Ola (SVG).

The Nutmeg *Anarta trifolii* (I(T)): two taken by trap 24 August Sea Cottage, Longhope, Hoy (MH).

Dark Sword-grass *Agrotis ipsilon* (I): 12 taken by trap; three between 24 August and 16 September Sea Cottage, Longhope, Hoy (MH), one 30 August and one 13 October Cairston Road, Stromness (BS), six between 16 September and 3 November Berstane House, St Ola, (NC) and one 19 October Telegraph Cottage, Sanday (A & CW).

Broad-bordered Yellow Underwing *Noctua fimbriata* (V): two taken by trap; one 9 August Sea Cottage, Longhope, Hoy (MH) and the other 14 August Cairston Road, Stromness (BS).

Great Brocade *Eurois occulta* (I): 21 taken by trap; three between 6 – 21 August Sea Cottage, Longhope, Hoy (MH), seven between 18 August and 23 September Berstane House, St Ola, (NC), seven between 20 – 31 August Cairston Road, Stromness (BS) and two 22 August Cuppar, Evie (H & DA).

Double Square-spot *Xestia triangulum* (U): one taken by trap 8 August Cairston Road, Stromness (BS).

The Gothic *Naenia typica* (R): one taken by trap 6 August Mill, Finstown (NC).

My thanks to all who supplied records.

Names used in the report above: Helen & D Aiton (H & DA), Chris J & Jean Booth (CJ & JB), Lindsay Campbell & Norman Fairbairn (LC & NF), Nancy Charlton (NC), Vera Dyson (VD), Sydney V Gauld (SVG), Martin Gray (MG), Mary Harris (MH), Alan Harrison (AH), Lee Johnson (LJ), Alan Leitch (AL), Eric R Meek (ERM), R & J McCutcheon (J & RMcC), Walter Ramage (WR), Brian Ribbands (BR), Jeanne Rose (JR), Bob Simpson (BS), Peter Slater (PS), Martin Tutner (MT) and Adrian & Carol Weston (A & CW).

The publication of Britain's Hoverflies by Stuart Ball and Roger Morris in 2013 changed the landscape with regard to the identification of this attractive family of insects (*Syrphidae*). Especially so with the recent improvements in reasonably priced digital cameras with a macro capability allowing detailed, sharp photographs of these flies.

At the beginning of June this year Stuart Ball and Roger Morris came to Orkney and ran a weekend course on the identification of hoverflies. The course encouraged a number of people in the county to take more of an interest in the *Syrphidae*.

Whilst Stuart and Roger were in the county they discovered a new species for Orkney, *Parasyrphus nigratarsis* which was found at two locations on Mainland, at Nether Scapa on 5th June and at Langskaill Plantation on 7th June. Roger commented on this discovery that, "I would suspect *P. nigratarsis* will prove to be much more widespread but wonder if it has moved north through climate change"

The discovery of *P. nigratarsis* proved to be the first of four new species added to the Orkney list this year. On 13th August Lee Johnston found both *Myathropa florea* and *Syrphus torvus* at Berstane Woods. Whilst the *Myathropa* is a fairly straightforward identification, Berstane Woods is rare habitat type for Orkney and the species may not have been searched for there previously. *S. torvus* on the other hand is a quite tricky identification, requiring fine eye hairs to be seen; this species may easily have been overlooked in the past and may have a more widespread distribution in the county.



Syrphus torvus or *S. vitripennis*

(Alastair Forsyth)

On 29th September Lee Johnston again “struck gold” with the discovery of an *Eristalinus* species at Scows on South Ronaldsay. There are just two species of *Eristalinus* occurring in the UK; both could reasonably be found here in Orkney, and whilst these hoverflies are distinctive as a genus, both species have pale eyes spotted with brown, so separating the two requires careful examination. Fortunately high quality photographs showed the eyes to completely lack any hairs and so the identification of *Eristalinus aeneus* could be confirmed.



Eristalinus aeneus

(Lee Johnson)

As I write a number of observers have photographs and specimens that still require detailed examination and so a final list of species for 2015 may not be confirmed for some weeks yet. Amongst these are a number of *Syrphus* spp which require microscopic examination for identification and may yet yield more records of *S. torvus*. During the year there were five further records of *Chrysotoxum arcuatum*, a species which seems to be genuinely uncommon across the county. This is quite a distinctive species so unlikely to have been greatly overlooked. Two of these records were at the Rendall site where it has been consistently recorded since its initial discovery in 2013. Two records were at a new West Mainland site for the species, at Hobbister. However, the fifth individual found on Hoy, near Lyness, on 11th August by Mary Harris is on a new island for this species. Other less frequent species found during the year included a few records of *Helophilus hybridus*, easily overlooked amongst the hordes of *H. pendulus*; two records of *Platycheirus granditarsus* and two records of *Volucella pellucens*. Out of the ordinary was an extraordinarily dark specimen of *Episyrphus balteatus* photographed on 20th September near Lyness, Hoy by Mary Harris.



Episyrphus balteatus (dark form)

(Mary Harris)

Next season is already being anticipated with enthusiasm. If you are interested in seeing and identifying hoverflies and would like some advice and help please get in touch via my email address: badseawatcher@gmail.com . If you would like help with identification of any hoverflies seen in Orkney please email the photographs to me at the above address with date seen, and an OS map reference (or at least a good description of the location), information about the plant species it was on, or behaviour of the insect, would also be much appreciated, but it is not essential.

Species to be looking out for next year would include: *Platycheirus rosarum*, *Chrysotoxum bicinctum*, *Eupeodes latifasciatus* and *Cheilisia pagana*. Good hunting!

References: Ball S. and Morris R. Britain's Hoverflies (2nd edition, 2015, Princeton University Press).

Fish Report 2015

Chris Booth

Basking Shark *Cetorhinus maximus*

Slightly more reports than in 2014. The first sighting was of one Warness Sound, Eday on 8th May (MC). Singles were recorded off Billia Croo, Stromness on 19th May; 8th June; 21st July and two were there on 27th July. In August singles were seen off Billia Croo on 2nd (EMEC) and North Ronaldsay on 6th (KFW). September sightings were of one off Billia Croo on 1st and one off the Muckle Green Holm on 11th (DO).

Cuckoo Ray *Raja naevus*

One was found dead near Horse Geo, Sanday on 29th March (BS&RT).

Eel *Anguilla anguilla*

Two were caught near Durkadale bridge in a SEPA survey on 29th July.

Minnow *Phoxinus phoxinus*

25 were found in Burn of Hillside and 8 at Durkadale Bridge in a SEPA survey on 29th July.

Stone loach *Barbatula barbatulas*

A SEPA survey on 29th July found 62 in Burn of Hillside and 57 at Durkadale bridge.

Deal Fish *Trachipterus arcticus*

One was found dead at Sand of Wright South Ronaldsay on 22nd January (LJ).

Three-spined Stickleback *Gasterosteus aculeatus*

There were 10 at Durkadale bridge and 2 Burn of Hillside during a SEPA survey on 29th July.

Short-spined Sea Scorpion *Myoxocephalus scorpius*

On 12th January one was found, following a storm, on a lawn at Scows St Margaret's Hope (LJ).

Lumpsucker *Cyclopterus lumpus*

One near St Peters Kirk South Ronaldsay on 16th March (LJ).

Butterfish *Phollis gunnellus*

Four were found at Scows, St Margaret's Hope on 18th February (LJ).

Shanny *Lipophrys pholis*

An adult male at Scows, St Margaret's Hope on 19th March (LJ).

Acknowledgements

I am very grateful to the following for their records:

M Cockram (MC), EMEC, L Johnson(LJ), C Long ,North Ronaldsay Bird Observatory, D Omand (DO), B Singer (BS), SEPA, R Thorne (RT), K F Woodbridge (KFW).

Over the past twelve months the Bat Recorder has been receiving frequent records from the Bat Group and infrequent records from interested individuals whose lives have been briefly interrupted by a moment of bat serendipity. Watches undertaken by the Bat Group covered the period from 17th April to 18th October and it’s clear that bat records possibly reflect observer activity as much as bat activity. Few watches were undertaken in the thick of winter, when a very high degree of motivation is required as well as thermal underwear, yet we do know that bats will fly at temperatures as low as 3 degrees Centigrade. Similarly, there was a dearth of watches during the height of summer, a period which demands from the bat observer an extra keen willingness to embrace insomnia. Many of our intended summer watches were compromised by rather unnecessary cold, wet and windy weather.

26 bat records were received between 2nd February and 18th October 2015, involving a minimum of 97 bat sightings. Records were received from Auskerry, Copinsay, Evie, Firth, Hoy, Rendall, St Ola and South Ronaldsay. The vast majority, as to be expected, refer to **Common Pipistrelles** *Pipistrellus pipistrellus*). This is the Pipistrelle species that calls at 45 kHz and is also known as either the ‘45 Pip’ or the ‘Bandit Pipistrelle’. However, two other species were also recorded, both of them well known for their migratory proclivities – **Nathusius’ Pipistrelle** *Pipistrellus nathusii* and the **Parti-coloured Bat** *Vespertilio murinus*. The latter, which at the time was hot news, having been found on 1st February 2015, was included in full colour for the 2015 issue of the Orkney Naturalist – it was too good a story to remain under wraps for twelve months. More of the Nathusius’ Pipistrelle records later.

Bats by month

	Feb	Apr	May	June	July	Aug	Sep	Oct	Dec	Total
Records	2	1	6	1	1	3	7	4	1	26
Bat ‘sightings’	2	2	33	13	1	3	31	11	1	97

Bats by parish and island

	Auskerry	Copinsay	Evie	Firth	Hoy	Rendall	St Ola	South Ronaldsay	Total
Records	1	1	1	9	10	1	2	1	26
Bat ‘sightings’	1	1	1	46	44	1	2	1	97

As ever, the majority of the sightings of Common Pipistrelles were centred upon Firth and Hoy. In Firth, the wooded corridor from Heddle Hill to Binscarth is arguably the key feeding, breeding and roosting site on Orkney Mainland. There is a good understanding of the bats’

feeding areas and individuals are regularly observed at a number of locations within this wooded corridor. However, despite frequent watches there are still many gaps in our knowledge as to the whereabouts of roosting and breeding sites. The maximum count of individuals in the Heddle Hill and Binscarth complex was 13 on both 30th May and 19th June 2015. On Hoy, both ends of the island have populations of Common Pipistrelles. A maximum of five individuals were recorded at the south end on 5th May 2015 and a maximum of 12 individuals at the north end on 4th September.

Elsewhere, there were sightings, likely of Common Pipistrelles, in Gorseness, Rendall; Evie village and Berstane, St Ola. Orkney's two 'big' centres of population, Kirkwall and Stromness, continue to puzzle and perplex. Both centres appear to have ample 'bat-friendly' locations but evidence of regular activity, despite numerous watches, has been unforthcoming.

The two *Nathusius*' Pipistrelles, constituting the 7th and 8th records for Orkney, were found in the east of the county. On 26th August a live animal was found on Auskerry and on 12th December a long-deceased individual was recovered from the Copinsay farmhouse. Both occurrences reinforce a pattern of generally eastern distribution which is seemingly consistent for all eight of Orkney's records. Given that these animals are making their way across the North Sea, eastern landfall seems most likely. 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 *P. nathusii* 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.

Orkney records of *Nathusius*' Pipistrelle

1	1995	12 th June	Lythes	South Ronaldsay	live
2	2002	7 th June	Od Kirk	North Ronaldsay	dead
3	2006	26 th September	Northfield	Burray	dead
4	2010	21 st September	Lady village	Sanday	dead
5	2010	25 th September	Woodwick	Evie	live recording
6	2014	28 th March	Mill croft	Eday	moribund
7	2015	26 th August		Auskerry	live
8	2015	12 th December	Farm house	Copinsay	long dead

Thank you to everyone who has contributed records. My grateful thanks to Pauline Barber, Chris Booth, Nancy Charlton Fiona Driver, Effy Everiss, Sidney Foubister, Elspeth Groat, Alan Leitch, Teresa Probert, Neil Redgate, Brian Ribbands, Malcolm Russell, Carol Thompson, Tim Wootton, Roger Whitworth, Sue Whitworth.

An increase in records but as usual the small mammals are hopelessly under-recorded, with a few notable exceptions. This is particularly unfortunate as without recording them it will be difficult to detect the real impact of ever-increasing stoat numbers. Equally as unwelcome as stoats was a rat on Swona; if there are more they are likely to have a severe impact on some of the breeding seabirds on that island.

Orkney Vole *Microtus arvalis orcadensis*

13 records is a slight improvement but still very under-recorded. Runs were noted in Rousay and Sanday, as well as several sites in Mainland including by the Peerie Sea in Kirkwall; they seem to be well established there. Other records came from Burray and South Ronaldsay. One black vole was brought in by a cat in Harray, but much more unusual was a white one, apparently a true albino, found in Evie in February. Has one ever been found before?

Wood Mouse *Apodemus sylvaticus*

Reported from Kirkwall, Sandwick and Evie in Mainland, also South Ronaldsay and Papay. This species seems to have arrived on that last island sometime between 1994 and 1998 but is reported now as about five times commoner than house mouse in one house there. Occasionally seen in daylight but most records are of mice caught in houses, and the occasional cat kill. Fewer records than in 2014.

House Mouse *Mus domesticus*

Reported from Kirkwall, Orphir, two sites in South Ronaldsay, and Papay, where much scarcer than wood mouse. Most in houses but also a few in gardens. Very under-recorded.

Common Rat *Rattus norvegicus*

Reported from two sites in Mainland and four in South Ronaldsay, so very under-recorded as usual. Much more seriously, one was seen on Swona for the first time on 1 August. How it got there is a mystery but if there are more they are a serious threat to some of the seabirds nesting on the island, particularly the puffins, tysties and storm petrels.

Rabbit *Oryctolagus cuniculus*

An increase in records and several folk reported an increase in numbers. Recorded this year from Mainland, Hoy, South Walls, Burray, South Ronaldsay, Sanday and Papay. Black rabbits were reported from Evie, Rendall, Holm and Sanday.

Brown Hare *Lepus europaeus*

Recorded in Birsay, Sandwick, Evie, Rendall, Firth, Orphir, St Ola and Deerness. The maximum count in one place was seven. Probably stable, and very widespread throughout Mainland.

Mountain Hare *Lepus timidus*

Reported in Hoy from Ward Hill, Sui Fea, Stourdale and Moor Fea, so as usual mostly north of the Rackwick road valley, but also one at Binga Fea near Heldale. Highest counts were of 10 in March on Ward Hill and nine in September around Sui Fea.

Hedgehog *Erinaceus europaeus*

Recorded only from Mainland and Burray in 2015. The first report was a road casualty in Birsay on 11th February. The last was seen active on 3rd December in Rendall. At two sites hedgehogs were photographed at night by automatic 'trail cameras'. There were 17 records, nine of road casualties, compared to 30 records in 2014.

Pygmy Shrew *Sorex minutus*

15 records is much more than in 2014. Reported (as usual mostly dead) from Evie, Sandwick, Orphir and Rendall in Mainland, in Burray and three sites in South Ronaldsay. Live shrews were seen at four sites.

Otter *Lutra lutra*

Records declined to 37, from 63 in 2014. I doubt that this represents a real decline in numbers. Nine records were of spraint, nine animals found dead on roads (same as in 2014) and one drowned in a creel. In March one was caught on a 'trail camera', feeding on frogs at a pond in Evie. Adults with cubs were reported from two sites in January. Records were very widespread in Mainland, also in Hoy, South Walls, Shapinsay, Rousay, Westray, Papay and three widely separated sites in Sanday.

Stoat *Mustela erminea*

Yet again numbers reported are roughly double the previous year, to 493, of which 54 were dead. Record numbers were reported in every month except March. As usual the peak was in July and August. Distribution is still concentrated on and south of the Kirkwall to Stromness road, in Orphir, Holm and Tankerness, but there has been a big increase in Stenness and Harray indicating a northward spread in the west, and eastward in Holm. Beyond there is a scatter of records throughout Mainland, Burray and South Ronaldsay.

Common/Harbour Seal *Phoca vitulina*

Highest reported counts were 38 on the Stromness holms in September and 40 at Birsay in October. No more than 20 were reported elsewhere, in Papay, Hoy, South Ronaldsay, Holm of Houton, Deerness and the Loch of Stenness.

Six were reported dead though some of another 14 unidentified seals may have been this species. One in Sanday in November had 'corkscrew' injuries. Most of the others were at Scapa in December.

Grey Seal *Halichoerus grypus*

South Ronaldsay pup counts on the west side were 29 between Burwick and Green Head on 26th October and 80 there on 7th November. Many of these are unlikely to have survived the gales a few days later. On the east side 132 pups were counted between Lay Taing and Windwick on 21st November. Elsewhere at least one pup was at the base of the Old Man of Hoy on 7th October. The largest non-breeding haul-outs reported were 40 Papay, 30 Swona and also 30 on the skerries in Burra Sound off Hoy.

70 were reported dead and most of 14 unidentified dead seals are likely to have been this species. The majority were found in January and December. One had been shot near a fish farm and 21 had 'corkscrew' injuries, also one of those unidentified. Most of these were at Scapa or in Sanday, and most in December.

Cattle *Bos taurus*

On 1st August 23 animals were counted on Swona including four calves but a few may have been missed as there were 26 on 7th November - 19 cows, two bulls and five calves. This is the highest number for some time.

Many thanks to the following contributors of records:

C J Booth, A K & JH Johnson, A Gascoigne, B & J Wright, B Hamill, C Corse, C Kennedy, C Weston, C Casely, D Aiton, D Gray, D Mager, R Matson, E J Rosie, E Cooper, E Green, E Meek, E Pawley, F Holmes, G Brough, J Halcro-Johnston, J Cooper, J Taylor, J Leitch, J

Budge, J Crossley, J Harrison, J Branscombe, K Bichan, K Thompson, K Beaton, K Flett L Campbell, L Reid, L Johnson, L Shields, L Hogarth, L Rosie, M Sinclair, P Wetton, P Oswald, R Baker, R Holmes, S Otter, S Spence, S West, T Dodman, S Williams, T Russel, V Clementson and V Whitworth, also Scottish Marine Mammal Strandings Scheme, local RSPB and SNH staff and all who have reported stoats to SNH. Apologies to anyone missed out.

Amphibia Report 2015

Chris Booth

Palmate Newt *Triturus helveticus* Rare, fairly recent introduction.

Between 20 and 30 adult newts were seen in a pool at Harrabrough South Ronaldsay on 1st May (GA).

Common Toad *Bufo bufo* Rare

There were 17 toads in the pond near the bridge at Rackwick, Hoy on 21st March and 200 tadpoles were counted in this pond on 3rd May (LS). On 27th March 12 toads were found squashed on the road near a breeding site at Braebuster, Hoy (LS).

At Hundasaeter, Birsay ten toads were recorded between 26th June and 14th September (AK&JHJ). They ranged in size from 2 gms in weight and 44 mms in length to 40 gms and 68.1 mms. Single toads were seen in Berriedale, Hoy and on the Rackwick road on 26th September (CW).

Common Frog *Rana temporaria* Fairly common

Three adult frogs were seen at Hundasaeter Birsay on 18th February (AK&JHJ). On this date the first spawn was found at Scapa View, Orphir (DM), which is the earliest date so far recorded in Orkney. There were 6 batches of spawn there on 21st February. Elsewhere spawn was found at Hundasaeter Birsay on 24th February; Rinnibar, South Ronaldsay on 1st March (JRLH) with 26 batches on 4th; Upper Brechan, Sanday on 4th March (ES&RT); Ronaldsvoe, South Ronaldsay on 5th (CH) and Dale, Costa on 6th March (REM). At Dale there were 20 batches by 8th, when an **Otter** *Lutra lutra* was caught on camera eating a frog. Eventually there were 120 batches of spawn at this site.

Spawn was noted at Skaill, Eday on 12th with far more than in previous years (MC). Spawn was also reported at Banks, South Ronaldsay on 13th March (HM) and Sunnybank, Deerness on 18th March (PW).

Over wintering tadpoles were found at Scapa View and Hundasaeter with newly hatched tadpoles at Hundasaeter on 28th March.

Adult frogs were reported from new sites at Sandygill, Orphir on 23rd August (EJR) and Hestily, South Ronaldsay on 24th September (LJ).

My grateful thanks to the following for their records: G Anderton (GA), M Cockram (MC), C Hills (CH), JRL Hogarth (JRLH), AK&JH Johnson (AK&JHJ), L Johnson (L J), R E Matson (REM), D Mayes (DM), H Mowat (HM), E J Rosie (EJR), L Shields (LS), E Sichel (ES), R Thorne (RT), C West (CW) and P Wilson (PW).



Humpback whales in Scapa Flow (Craig Taylor)

Humpback whale *Megaptera novaeangliae* Rare

On the 18th October one was watched as it moved west through the North Ronaldsay Firth. Two were seen off Billia Croo, Stromness on 20th December and were probably the same whales that were present in Scapa Flow from 29th December until the end of the year. These whales spent most of the time in the Echnaloch Bay and Hunda area allowing many people excellent views. This species has now occurred annually since 2003.

Minke whale *Balaenoptera acutorostrata* Common

The first report of the year was of two adults and a juvenile off Bea Ness, Sanday on 13th February and the next was of one seen off Billia Croo, Stromness on 26th March. There were no more sightings until singles appeared at the same site on 26th May and 19th June. July reports were of singles off Billia Croo on 6th, Warness Sound, Eday on 24th and Billia Croo on 28th. In August there were singles off Billia Croo on 8th, 17th and 20th, North Ronaldsay on 25th and west of Mull Head, Papa Westray on 28th. During September there were sightings of singles off Billia Croo on 15th and 29th, while one was seen from the ferry between North Ronaldsay and Papa Westray on 27th. In October one was seen off Billia Croo on 14th and 15th and there was one in Lashy Sound, Sanday on 17th and one on the east side of Papa Westray on 19th. November sightings were of singles off Billia Croo on 1st, then two there on 3rd and singles on 4th, 12th and 21st. December reports were again of singles off Billia Croo on 3rd, 9th and 16th. The last sighting of the year was of one in Scapa Flow, near Hunda, on 31st.

Stranding: one, 5.3 metres in length, stranded near Crockness, Hoy on 6th December. It was thought that it may have been entangled in creel ropes.

Sperm whale *Physeter macrocephalus* Uncommon

The only sighting was of three off Billia Croo Stromness on 15th September.

Stranding: The body of one in an advanced state of decomposition was found near Bay of Swandra, Rousay on 18th December.

Cuvier’s beaked whale *Ziphius cavirostris* Rare

Stranding: One Birsay Bay on 10th June, was 5.5 metres in length and badly decomposed. Only the 6th Orkney record of this species: all have been of strandings.

Harbour porpoise *Phocoena phocoena* Common, present throughout the year.

Monthly distribution of sightings 2015

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	6	8	8	5	12	13	7	19	20	6	8

The majority of sightings were of one-five animals and the highest count was 19 seen off North Ronaldsay on 4th October.

Stranding: one Scapa Beach on 23rd July.

Short-beaked Common dolphin *Delphinus delphis* Uncommon

On 4th August one was observed in Warness Sound, Eday. Then in September a single was seen south-east of the Holm of Papa Westray on 9th and four were east of Noup Head, Westray on 22nd.

Stranding: the headless body of one that had been dead several weeks was found at the Bay of Skail, Sandwick on 1st February.

Striped dolphin *Stenella coeruleoalba* Rare

Stranding: One live stranded near the Brough of Birsay on 25th October; it was re-floated but later found dead on 28th October; it had a length of 1.8 metres.

Bottle-nosed dolphin *Tursiops truncatus* Rare

There was a sighting of five off Billia Croo, Stromness on 21st December. Although there is a population of this dolphin in the Moray Firth area there are very few reports of them in Orkney waters.

Atlantic White-sided dolphin *Lagenorhynchus acutus* Uncommon

There were a number of sightings off Billia Croo, Stromness, the first being of four on 13th March, then five on 8th June. In July there were 14 on 3rd and nine on 22nd while in August ten were seen on 8th. The only September sighting was of three on 15th and in December three were seen on 7th and two on 21st.

Strandings: the body of one, not fresh, stranded near Quindry, Widewall Bay, South Ronaldsay on 5th January. It was about 2 metres in length. Another, which had been dead some time, was found on North Ronaldsay on 28th May.

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

More reports of sightings than for many years. A single was seen off the Old pier, Papa Westray on 24th June; seven were observed off Billia Croo on 19th August and 25 off there on 27th August. In September one was seen in Warness Sound, Eday on 9th while in October there were sightings off Billia Croo of seven on 4th, eight on 10th and nine on 17th.

Strandings: one on 8th July, 1.6 to 1.8 metres in length, at Sea Taing, Burray.

An adult male, 2.86 metres in length, near the Brough of Birsay on 14th October.

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

There was a sighting of three west of Shapinsay on 23rd February. Then in April two were seen from the Pentalina in the Pentland Firth on 17th and an adult male was observed west of Mull Head, Papa Westray on 20th; six were seen off Billia Croo on 29th. In May four, comprising a male, two females and a juvenile, came close to a dive boat near Cava on 12th, while a male was in the Bring Deeps on 13th; on the same date four were seen off North Ronaldsay, five were off the lighthouse North Ronaldsay on 24th and five off Billia Croo on 27th. June sightings were of three seen from Hoxa Head, South Ronaldsay on 3rd, six Billia Croo on 4th, two Burray Ness on 15th, while a pod was seen off the west side of Switha during the month. A male was seen off Auskerry in July and five were off Billia Croo on 24th. On 1st August four were observed in the Copinsay passage and on the same day three were seen off the Head of Holland; also in August four were watched off Burwick, South Ronaldsay on 17th. The only September sighting was of at least one off North Ronaldsay on 18th. During October five were off Billia Croo and one off North Ronaldsay on 17th. November records were of five off Fowl Craig, Papa Westray on 3rd and four off Billia Croo on 15th. The last report of the year was of a pod of between 10 and 12 in Scapa Flow on 31st December.

Long finned Pilot whale *Globicephala melas* Formerly common, now uncommon

There were two sightings, both off Billia Croo, Stromness, of 18 on 22nd April and 14 on 1st June.

Stranding: a juvenile female live stranded on 10th June at Dingieshowe, Deerness and was eventually returned to the sea.

Risso's dolphin *Grampus griseus* Common

Recorded throughout the year.

Monthly sightings of Risso's dolphins 2015

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2	1	2	2	0	3	4	7	6	0	5

The highest counts were 26 off Billia Croo on 27th April, 8-12 Bay of Skaill Sandwick on 17th April and eight Billia Croo on 12th October. Five were seen off Billia Croo on 5th February, 20th March, 20th July and 28th August. All other sightings were of one-four dolphins.

Apart from the localities mentioned above there were reports from North Ronaldsay; Lashy Sound, Sanday; Warness Sound, Eday; Stromness and Hoxa Head, South Ronaldsay.

Unidentified cetaceans

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

21st April two west of Mull Head, Papa Westray

16th August six dolphin sp North Ronaldsay

First week of September two dolphins Bay of Brough, Sanday

4th October three off North Ronaldsay

14th October three probable Risso's dolphins between Flotta and Nevi Skerry

From Billia Croo, Stromness:

singles on 29th January, 3rd and 4th February, 24th and 27th March, 4th and 8th August, 4th and 29th September; four on 13th and eight on 15th October; singles on 4th November and 31st December.

Stranding: Common/Striped dolphin Bay of Firth, Finstown 2nd July.

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Orkney Recorders 2016

(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 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	VACANT
Butterflies & moths	Sydney Gauld
Caddis flies (Trichoptera), mayflies (Ephemeroptera) & stoneflies (Plecoptera)	Ross Andrew*
Centipedes & millipedes	VACANT
Cetaceans (whales, porpoise & dolphins)	Chris Booth
Cnidaria (sea anemones, jellyfish, hydroids, comb jellies and siphonophores)	Penny Martin
Crustacea (marine)	Anne Bignall
Dragonflies & damselflies	Graeme Walker
Earthworms, leeches etc	VACANT
Echinodermata (sea urchins, starfish, etc)	VACANT
Fish	Chris Booth
Fungi (including slime moulds)	Julian Branscombe
Grasshoppers	Dick Matson
Hoverflies	Alastair Forsyth
Isopods (Woodlice & relatives)	VACANT
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)	VACANT
Mosses, liverworts & hornworts	John Crossley
Sawflies	Jenni Stockan
Slime moulds	Lee Johnson
Spiders, pseudoscorpions & harvestmen	Edward Milner
Stoneworts	Effy Everiss
True bugs (Hemiptera)	Peter Kirby
True flies (Diptera) except hoverflies	Lee Johnson
Vascular plants	John Crossley

* Ross Andrew has moved away but will continue temporarily. A replacement is sought.

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General advice on recording

All records are worthwhile. The essential four pieces of information that must accompany **all** records are:

What	Where	When	Who by
SPECIES NAME (& HOW MANY)	PLACE NAME (GRID REF IF POSSIBLE)	DATE	YOUR NAME

If no County Recorder is listed, please send your records to the OWIARC:

**Orkney Wildlife Information and Records Centre, Orkney Library and Archive,
44 Junction Road, Kirkwall, Orkney, KW15 1AG**

Email: biodiversity@orkneylibrary.org.uk

If you want a reply it would be appreciated if you include a stamped addressed envelope. This is essential when specimens have to be sent away for identification. When collecting specimens please collect only the minimum number needed for purposes of identification. If you need help with identification or if you would like more information about records of a particular species of plants, birds, mammals, invertebrates, etc, please ask the appropriate County Recorder. To assist with species identification the OWIARC holds a library of reference books and equipment including microscopes.

Guidelines for Contributors

Contributors to the Bulletin are warmly welcomed. If you are interested in contributing, please contact John Crossley at North Flaws, South Ronaldsay, Orkney KW17 2RW or by emailing flawsjohn@gmail.com. Articles for the Bulletin follow certain conventions, such as the use of capitals for the English names of species, with this name being bolded at first use, and the Scientific name being provided with it at that point. More detailed guidelines for contributors are available from John, and it will be a great help to John and his editorial sub-group of the Orkney Field Club if they are followed.

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