

## 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

Record Cards for some groups can be obtained from the Orkney Biodiversity Records Centre. Records, including completed cards, should be sent to the appropriate County Recorder. The use of Record Cards is desirable but not essential.

If no County Recorder is listed, please send your records to the Orkney Biodiversity Record Centre:

**Orkney Biodiversity Record Centre,  
Orkney Library and Archive,  
44 Junction Road,  
Kirkwall,  
Orkney  
KW15 1AG**

Email: [biodiversity@orkneylibrary.org.uk](mailto: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.

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

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



Common Milkwort. (Eric and Aileen Meek)

## President's Letter

*Mildred Cuthbert*

Welcome to the Orkney Naturalist for 2013.

It is now over forty years since I became a member of the Orkney Field Club and during that time I have had great enjoyment and have, I hope, acquired some knowledge of the natural world that I would not otherwise have had. But how things change! Although the articles in the Bulletin, our original yearly publication, were of a high standard, how much more attractive our Orkney Naturalist is with the excellent reproduction of coloured photographs.

We do not like to lose long standing Committee members, but we have lost two this year – Dennis Paice who has been our Treasurer and Membership Secretary and Chris Booth, an excellent and very knowledgeable naturalist, and to them, on your behalf I extend thanks for all that they have done for the Club. But if we did not lose some of our older members we would not have younger people with their new ideas to help the Club along – and things change with time. I hope our new Committee members will enjoy their time and find it stimulating to help run the Club.

From Saturday 11<sup>th</sup> to Sunday 19<sup>th</sup> May this year the first Orkney Nature Festival took place with many interesting events, which were all well supported, and the Club was strongly involved. The intention is to make this a regular fixture, celebrating our wildlife and providing more opportunities for learning and enjoyment, for visitors and local people alike, and after the success of the inaugural Festival, the dates for next year's Festival have been set as Saturday 10<sup>th</sup> to Sunday 18<sup>th</sup> May 2014.

If any of you have something you think might be of interest to others in the Club why not put pen to paper and send the results to one of the Committee?

I hope you all get as much enjoyment as I have from the Club. Do please try to attend our AGM, held in February each year, as all that is decided affects you.

## Contributions to the Bulletin

Contributions on all subjects relating to the natural environment in Orkney are welcome in *The Orkney Naturalist*, the annual Bulletin of Orkney Field Club. For enquiries about the Bulletin, including guidelines for those wishing to submit articles, please contact the Editor, John Crossley by emailing [flawsjohn@gmail.com](mailto:flawsjohn@gmail.com).

For the 2014 Bulletin, notice of intended contributions is required by 31 January 2014, and all contributions must be received by 28 February 2014.

The Club can also be contacted by mail:

Orkney Field Club, c/o Orkney Library & Archive, 44 Junction Road, Kirkwall KW15 1AG



Mountain Hare on Hoy.  
(Linda Heath)

## A look back at 15 years of the Orkney Woodland Project

*Jenny Taylor*

Orkney Woodland Project (OWP) has recently come to an end after fifteen years of providing advice on all aspects of woodland creation and care throughout the isles. The project began in 1997 following long-term concerns that a single fire could obliterate most of the islands' remaining 'wild' native trees on Hoy and thus lose the results of a long evolutionary process that has adapted them to our own, rather idiosyncratic, climatic conditions.



Prior to 1997, there were, of course, already some people planting native trees in Orkney, including the Orkney Field Club (and individuals like Brian Ribbands), who pioneered growing plants from seed collected from Berriedale and other local native woodlands. Many people in the community, however, still maintained that trees would not grow here. Changing this view was one of the many challenges of the project.

The climatic constraints to tree growth in Orkney are obvious – the regular salt-laden winds and short growing seasons are familiar to us all. The other important factors that have been an integral part of the project's advice are:

Good landscape fit – ensuring that all the new woodlands would nestle unobtrusively into our stunning open countryside was always considered essential and harsh geometric shapes have been avoided in all the woodland designs.

Habitat and species conservation – great care has been taken to avoid planting on any sites which already had conservation value e.g. for species-rich grassland, wetland margins or as sites for ground-nesting birds.

Conservation of archaeology – clearly underground archaeology is abundant in Orkney and is vulnerable to damage by tree roots and advice was always sought on any potential sensitivities.

The project had the help and support of the Orkney Woodland Group in discussing any potential concerns about site selection and a robust process was gradually evolved that meant that any conflicts with these sensitivities were avoided.

Putting aside the constraints, one great advantage that Orkney has for tree growing is its abundance of good soil and it has become evident over the years, that good soil can to a certain extent help to counteract the effects of exposure. The other huge advantage that soon became evident was that Orkney is inhabited by large numbers of enthusiastic optimists!

Growing trees in Orkney is not easy. Unlike in the more benign regions of the UK, there can be no cutting of corners. The choice of site, species, quality of plants, planting techniques, density of planting, weed control and maintenance all need to be of the highest standards if good results are to be obtained. OWP developed and refined advice and information over the years, providing booklets and information sheets, holding events and giving verbal advice, but much more importantly, giving abundant on-site, hands-on advice and training. (It is maybe unfortunate that there was no record kept of the number of trees personally planted by the part-time officer!)

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## Orkney Recorders 2013

(Please see second half of table for contact information)

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

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

An early (and ongoing) task of the project was to develop a supply of plants of Orkney native provenance and, as more and more sites came onboard, it was often difficult to ensure that the supply met the demand. Seed has been collected and supplied every year to local and mainland nurseries and there are currently good stocks of local provenance **Downy Birch**, **Rowan** and **Aspen** available to folk who will be planting under grant schemes this year and next. Other tree species were also used in many schemes as appropriate and again sourcing the best provenances of these plants was essential. It is sad that **Ash**, which is proving itself such a good tree for Orkney, cannot now be planted due to movement restrictions following the outbreak of **Ash Dieback Disease** *Chalara fraxinea* in Britain.

Is it possible to ever give perfect advice about woodland creation? No, ambiguity rules where trees in Orkney are concerned and every site (and every site owner) is completely unique, with its own range and balance of soils, pests, microclimate, drainage, micronutrients and mycorrhizal fungi associations. After 15 years, the project has become skilled at providing sound advice, but there are always the occasional unexpected results. I cannot, for instance, fully explain why on some sites **Rowan** grows faster than anything else and on others sits still for years, nor why **Common Alder** is the fastest, toughest tree on the



**Muddisdale Woodland, Kirkwall. (Jenny Taylor)**

vast majority of sites and yet will struggle on the few, nor why young trees are growing relatively well on the horrendous soil at the Peedie Sea. Fortunately the majority of tree planters are prepared for and undaunted by these uncertainties and life is much too short to disentangle the intricate web of multiple potential factors. What the OWP has proved, is that trees will successfully grow in Orkney, providing the quality of materials, workmanship and aftercare is of the highest standards.

So what has the project achieved? The facts and figures are that there have been 228 successful grants obtained and taken up by individuals through the work of the project, which advised, drew up plans and completed the dreaded application forms at no cost to the owners. The majority of these were for new woodland planting, with a minority being for the management of existing woodland. These grants were for a total of 127.16 hectares, ie an average of approximately half a hectare. Our new local woodlands are often, therefore, tiny projects, which compare pitifully, but unapologetically, with huge schemes happening on mainland Scotland. The small scale of many sites is usually appropriate, not just to the site, but to the time and energy resources of the owners. The minimum grantable area is normally 0.25 hectares and this would generally involve a thousand or so trees, a considerable number for any individual to plant and maintain properly. (The project remains proud of once having obtained a Forestry Commission grant for a site of 0.04 hectares on Sanday, which must be a record of some sort). In addition to the grant schemes, hundreds of other folk were advised, but didn't want to be constrained by the grant system and are planting over a longer timescale.



Apart from privately owned sites, some notable young urban-fringe woodlands have been created on Council owned land through the work of OWP. The paths through the developing wooded areas at Muddisdale and Papdale Park (behind the Papdale estate) are becoming increasingly well used by many walkers, runners and dog walkers enjoying the shelter of the trees. Local birdwatchers have noted that several species, including **Song Thrush**, **Blackbird**, **Willow Warbler**, **Wren**, **Dunnock** and **Linnet** have been breeding at Muddisdale and they suspect that other less common species such as **Whitethroat** and **Lesser Redpoll** may also be nesting there. Hopefully this will encourage the OIC and others to develop further urban woods for people and wildlife to enjoy.

In recent years, the project was fortunate to receive funds from the Woodland Trust to provide tree planting packs for schools (which, unlike the nationally generated ones, could be tailored to the local conditions) and this has resulted in large numbers of sessions working with schoolchildren of all ages in planting within their school grounds and elsewhere. These youngsters have proved incredibly adept at picking up good planting techniques very fast and they seem, almost without exception, to have great fun, even in the bleakest weather. They are great 'woodland ambassadors' for the future.

The Woodland Trust funds also provided trees for a large number of community tree planting events, from Jubilee planting by many community councils, to planting at the Peedie Sea, in play areas, at Happy Valley and in an assortment of other community open spaces.

My primary memory, as I look back over the span of the project, is of all the people involved with planting these woodlands. Orkney Woodland Project has always been as much about people as trees and it has been a remarkable experience meeting so many folk, of all ages, and from all parts of the community, and seeing them quietly putting so much effort into creating new woodlands on their land and elsewhere. I have the greatest respect and liking for all these people and am very aware that they are the unsung heroes (and heroines of course) who have been the essential ingredient in the success of the OWP.



**KGS pupils tree planting at Papdale Wood.  
(Jenny Taylor)**

This article can only skim the surface of the experiences and findings of the project. Suffice it to say that it has been a rich and rewarding experience and I hope that all the hundreds (or rather thousands) of folk involved over the years have enjoyed it as much as I have.

**Jenny Taylor is a Landscape Architect. She ran the OWP on a part-time basis between 1997 and 2012. Copies of all OWP leaflets and advice sheets are available from Scottish Natural Heritage, who are now the first point of call for free woodland advice in Orkney. The project is grateful for funding from the Forestry Commission, Heritage Lottery Fund, Millennium Forest for Scotland, Orkney Islands Council, Scottish Natural Heritage and the Woodland Trust Scotland.**

## Unidentified cetaceans

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

Sightings:

24th May 1 large whale seen blowing in Scapa Flow, near Holm.

25th August A possible Pilot Whale seen in Scapa Flow.

From Black Craig: 1 on 29th January and 13th June, 5 on 8th August, 2 on 30th November and 1 on 27th December.

In Scapa Flow: 1 on 2nd November.

Strandings:

2nd January 1, probable White-beaked Dolphin, live stranded on Stronsay, then refloated.

14th January The decomposing remains of a large whale, probably a Fin Whale, came ashore at Sands Geo, near Marwick, West Mainland.

3rd April A probable Minke Whale, long dead, Dingieshowe, Deerness. Length c8 metres.

7th July The remains of a large whale ashore near the Martello Tower, Lyness, Hoy.

19th July 1 dolphin sp. near Holm of Grimbister, Firth, not fresh.

20th July A Common/Striped Dolphin, Auskerry, dead some time. Length 2 metres.

## Acknowledgements

I am very grateful to the following for their records and help:

J Archibald, S Brogan, N Callaghan, M Cockram, CJ Corse, J Corse, J Crossley, R Davis, N Davison, T Dodman, A Duncan, E Green, J Kakkonen, A Leitch, M Lynch, M Maher, ER Meek, J Meil, North Ronaldsay Bird Observatory, D&A Omand, P Oswald, D&S Otter, D Peppitt, R Philby, JB Ribbands, S Sankey, R Schofield, L Shields, RJ Simpson, M Spence, J Stoneman & S West. A special thanks to D Cowan and EMEC for details of sightings from their manned sites.

### White-beaked Dolphin *Lagenorhynchus albirostris*

Formerly common  
now uncommon

Two were seen off St John's Head on 26th September.

Stranding:

An adult female, length 2.74 metres, Dingieshowe, Deerness, on 28th August had been present for about 2 weeks.

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

The first reports were of 6 seen off North Ronaldsay on 7th April and 4 in Shapinsay Sound on 17th May. Then in June 7 including a large male with a distinctive curved fin, moved north along the west coast of Papa Westray on 7th, at least 5 were off the Brough of Birsay on 11th and 3 in Scapa Flow on 14th. A single male was seen off the west coast of Papa Westray on 15th while on the 27th 6 were off Backaskaill, Papa Westray and an adult male was seen chasing seals in Echnaloch Bay. July sightings were of singles in Shapinsay Sound on 6th, off Black Craig on 10th, 4 or 5 off Honeysgeo, South Ronaldsay on 24th, 7 in Warness Sound, Eday on 25th (see note below) and 5 were seen west of Westray on 27th.

Mike Cockram describes a pod herding and feeding on a shoal of fish:

“At about 7am on the 25th July, I was on the cliffs at the south end of Eday when I saw the large dorsal fin of a male Orca *Orcinus orca* at the southwest end of Eday's Greeny faces. The wind was blowing from a SSE direction, force 2 to 3, with a fast ebbing tide.

Shortly afterwards and closer to the cliffs, a group of 5 female Orcas and a calf surfaced. The calf was a very much smaller individual, about half the length of the females. The group closed in between two rocky promontories and when they were quite close to the cliffs a period of frenzied activity, close enough to the surface to be observed, followed. They then regrouped further out and away from the cliffs and moved to another two rocky outcrops where the procedure was repeated. This happened on three occasions, the pod travelling southeast along the coast. While this was taking place the male followed at a distance and did not join the group.”

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

A school of 50 was seen off Rerwick Head, Tankerness, on 23rd February.

Stranding:

One, long dead, Twiness, Westray on 13th May.

### Risso's Dolphin *Grampus griseus* Common

In January singles were seen off Black Craig on 3rd and 14th and 2 on 27th and 30th. One was off there on 21st February and in March 3 on 22nd and 4 on 27th. May sightings were of 3 on 10th off Black Craig and 5, including a juvenile, moving north off Noup Head, Westray on 19th. In June 2 were off Black Craig on 19th and 3 on 21st. The only July report was of 5 off Black Craig on 29th. In August 8 were off Black Craig on 7th and 7 were seen in Warness Sound on 23rd. September sightings were of a single off Black Craig on 9th and 4 there on 26th. Four were seen in Scapa Flow on 4th November and 4 off Black Craig on 27th December.

## A day's birdwatching in February

Dick Matson

Saturday 9<sup>th</sup> February 2013 was not a typical Orkney winter's day. There was hardly a cloud in the sky; the sun was so bright that the whole countryside sparkled and the wind was a mere zephyr from the south-east. I had been asked to show some visitors to Orkney some of the County's birdwatching spots. Naturally I jumped at the chance, my only apprehension being that the visitors, a team of three couples who have got together each year for many years for a few days birdwatching, were very much more knowledgeable than myself.

February is not a favourite month for seeing Orkney's bird life. Finches, buntings and other passerines are difficult to find and it is too early for spring migrants. Our best bet was to concentrate on waterbirds. We met up at the new Evie Kirk in West Mainland and an obvious starting point was the Broch of Gurness. That part of Eynhallow Sound which lies between the Broch and Rousay is noted for its wintering flocks of **Long-tailed Ducks**, **Common Eiders** and **Common Goldeneye**, but although we counted 60 Long-tails, we could not pick up any of the last two species, perhaps they had drifted south out of view with the tide. Eight **Tysties (Black Guillemots)** also foraged out in the tide. In Evie Bay were 2 **Red-throated Divers**, at least 2 **Slavonian Grebes**, 2 **Great Northern Divers** and as usual a wintering flock of **Red-breasted Mergansers** (10). On the beach were most of the usual wader species – **Ringed Plover** (50), **Dunlin** (50), **Turnstone** (20) and **Redshank** (6).

Our next stop was Rerwick Head at the north-east tip of Tankerness. En route the visitors were amazed at the flocks of **Greylag Geese** in almost every field of “improved” grassland and were delighted to see the large number of wintering **Curlews**. As we approached Rerwick, flocks of **Pink-footed Geese** were spotted amongst the Greylags. Rerwick Head is approached on a made-up single-track road and then for the last half mile a rough track passable with care in a small family car. Four hundred yards before the car park at the end of the track is a ninety degree right turn and this is an excellent vantage point. Here we erected our telescopes and scanned the water encompassed by Rerwick, the Head of Work and the south coast of Shapinsay.

It was immediately obvious that there were good numbers of divers and sea-ducks present. Although we counted 40 to 50 divers they were all Great Northern. Then we started looking more closely at the ducks and there among a frisky party of handsome male **Velvet Scoters** was a scoter with white patches on its nape, on its forehead and at the base of its bill. It was unmistakably a **Surf Scoter**. This rare vagrant from North America was a real treat. The stretch of coastline from Rerwick west to Inganess Bay is an area where a wintering Surf Scoter can sometimes be found and in the recent past two have been recorded in the area at one time. As well as the Surf Scoter we counted 10 Velvet and 12 **Common Scoters**. A few Mergansers and Eiders were also in evidence. At rest on a skerry off the tip of Rerwick Head were 4 **Purple Sandpipers** and a small flock of **Wigeon**.



Surf Scoter off Rerwick Head.  
(Ian Cunningham)

Our next port of call was Mill Sand, a shallow inlet of sand, mud and shingle off the north-east of Deer Sound. Although the tide was fast receding wader numbers were only just starting to build up as feeding areas of mud and sand became exposed. Nevertheless 75 **Bar-tailed Godwits**, 50 **Knot**, 40 **Dunlin**, 20 **Ringed Plover**, 200+ **Curlews**, and several **Oystercatchers** and **Redshank** were busy probing the shore for invertebrates. Eleven **Shelduck**, 30 **Teal** and 150 **Wigeon** were also busy feeding, while 15 **Red-breasted Mergansers** dived for their food.



**Golden Plover.** (Ian Cunningham)

Carrying on south-east we came to St Peter's Pool, another wader hotspot of mud and sand. The mix of species was very much as for Mill Sand although 20 **Golden Plover** and 60 **Lapwing** were roosting out near the tide-line and 4 **Goldeneye** cruised just offshore. Again a good flock of 200+ **Curlew** were out on the water's edge. In the bushes where we parked was a single **Reed Bunting**.

Our plan for the remaining hours of good daylight was to look for the wintering **White-billed Diver** which had been seen regularly in

recent weeks in Water Sound between Burray and St Margaret's Hope. En route we had a quick scan of Graemeshall Loch. Nothing out of the ordinary was in view but it was good to see 3 **Whooper Swans** and 50 **Teal**. We pressed on but as we approached No 1 Barrier I spotted a diver close into the near shore. I dismissed it as just another Great Northern but my companions insisted (wisely) on stopping and taking a closer look. The bird swam rapidly away diving from time to time, but we had sufficiently good views to recognize the characteristic colour and shape of the upturned bill of a **White-billed Diver**, the second rare northern vagrant of the day. Now of course we were obliged to search for the Water Sound diver to confirm that there were two of these very rare birds wintering in Orkney waters. We headed south-west over No 1 Barrier and stopped at the turning to Cara, a favourite viewing point for the Water Sound diver, but to no avail. I suggested a move to St Margaret's Hope as the Bay there can often turn up something of note. As we approached the ferry terminal we could see a large diver 300 yards offshore. Telescopes were hastily erected and we were able to confirm that this was almost certainly the long-staying Water Sound **White-billed diver**, so that indeed there were two in Orkney waters.

By this time we had enjoyed the best of the daylight and reluctantly headed back towards Kirkwall but one last treat awaited us. As we approached Stairilie only a couple of miles out of St Margaret's Hope we spotted a **Short-eared Owl** quartering the rough vegetation between the road and the shore. We pulled off the road and for quarter of an hour we were treated to wonderfully close views as it silently hunted the area on moth-like wings. From time to time it would settle on a fence post or stone pile to watch and wait for the next movement of potential prey.

In the hobby of birdwatching it's not often that everything goes right and that both the birds and the weather behave as one would wish but this was certainly one of those days. My six companions who had almost 300 years of birdwatching experience between them had been amazed and delighted at the range of wintering, resident, migrant and vagrant birds which they had seen in one day in Orkney.

## Whale, dolphin and porpoise report 2012

Chris Booth

### Humpback Whale *Megaptera novaeangliae*

Very rare

Three were seen, from a survey vessel, to the north of Sanday, on 12th February. On 18th May one was found in Scapa Flow, between Burray and Hunda, with a creel rope entangled around its mouth. The rope was cut by diver Magnus Spence and the whale released. It was estimated to be 14 metres in length. This is the second time that one of these whales has been released from creel ropes; the first was in the Bay of Holland, Stronsay in May 2008.

### Minke Whale *Balaenoptera acutorostrata*

Common

The first reports were of single whales on 18th April off Black Craig and in Warness Sound, Eday. The only May sighting was of 2 off Black Craig on 24th and there was a single off there on 19th June. In July there were singles off Black Craig and in Warness Sound on 16th while 1 was off Black Craig on 29th with 2 there on 31st and 8th August. Other August sightings were of singles east of Swona on 10th and off Marwick Head on 19th. One was seen in the Pentland Firth on 26th September and one in Warness Sound on 22nd October with the last report, also coming from this site, of 1 on 13th December.

### Sperm Whale *Physeter macrocephalus*

Uncommon

One was seen off Echnaloch, Burray on 19th May and there was an unconfirmed report of possibly the same whale, in the Bring Deeps on 27th May.

### Harbour Porpoise *Phocoena phocoena*

Common, recorded every month

#### Monthly distribution of sightings 2012

J	F	M	A	M	J	J	A	S	O	N	D
10	4	13	6	6	7	11	7	10	9	4	4

A maximum of 6 was seen south of Faray on 11th August, while 5 were recorded on 2 occasions: Skelwick Bay, Westray on 15th January and Warness Sound, Eday on 17th January. All other sightings were of 1 to 4 individuals.

### Short-beaked Common Dolphin *Delphinus delphis*

Uncommon

A school of at least 20 were present in the Bay of Firth on 5th July and 4 were seen off Black Craig on 24th July.

Stranding:

A freshly dead adult female, length 2.2 metres, Marwick, Birsay on 5th October.

### Striped Dolphin *Stenella coeruleoalba*

Rare

One was seen in Hoy Sound on 26th September.

Strandings:

1, dead some time, Marwick, Birsay 14th April, length 1.8 metres.

A freshly dead juvenile male, Scapa Beach, 25th October. Length 1.3 metres, weight 29.5kgms.

### Atlantic White-sided Dolphin *Lagenorhynchus acutus*

Uncommon

The only reported sightings were from Black Craig with 8 on 17th May and 7th August then 4 on 11th December.



Other prey items noted were a crab, Eels, a Red Gurnard and, from December 2011, a 1.5m long live Conger Eel being dragged along by an otter!

### **Stoat *Mustela erminea***

Nine reports of sightings. Four of these were in the airport / Tankerness area and one was trapped there on 6<sup>th</sup> November. Two of the others were near Finstown, one each in Sandwick, Stenness and Orphir.

### **Common/Harbour Seal *Phoca vitulina***

Highest reported count was of 70 on the pipe attached to one of the redundant single point moorings in Scapa Flow in July, but some of these could have been Grey Seals. Haul-outs of 50 or more were recorded on Rousay in April and Hoy in June, 40 Birsay Bay in May, 30 Auskerry in July and 12 in Loch of Stenness in October. Smaller haul-outs were noted on Flotta, Brims, Holm, Gairsay, Holm of Rendall and two sites on Sanday.

### **Grey Seal *Halichoerus grypus***

A haul-out of about 50 animals was on the skerries in Burra Sound and 30 on Wyre Skerry, both in June, with 95 were counted near Whitemill Point, Sanday, in July. On 10<sup>th</sup> August there were at least 250 around Swona, probably many more. The only pup counts reported in November were from South Ronaldsay, with 55 between Burwick and Green Head and 50 Windwick.



**Grey Seal mother and pup. (Brian Ribbands)**

### **Cattle *Bos taurus***

In July and August the feral herd on Swona consisted of 16 animals (one less than in 2011): 11 cows, 2 calves and 3 bulls.

Many thanks to the following contributors of records:

CJ & J Booth, AK & JH Johnson, L Campbell, R Davies, R Flett, A Leitch, EJ Rosie, S & J Scott, R Matson, ER Meek, T Dodman, R Simpson, J Findlay, L Shields, S Spence, B & J Wright, A Gascoigne, J Branscombe, A Bignall, D Musson, S Pirie, H McKenzie, K Fairclough, D Otter, P & L Hollinrake, G Nicolson and T Kay, also SNH staff and all who have reported stoats. Chris Booth again deserves special mention for numerous records of his own and others he has passed on to me.

## **Bat Group activities 2012-13**

*Effy Everiss*

The Bat Group has had a busy but somewhat disappointing year. The poor weather over the summer and recent long winters have taken their toll on our bat population. This is probably the case nationwide and could also have an effect on the migratory species reaching our shores.

The group has been out nearly every weekend for the whole of the summer season, they took part in two dusk to dawn surveys and one extensive synchronised survey in Firth. The weather was poor for all these more involved surveys but we did get inconclusive bat activity. Many watches were disappointing with no bats detected.

We continued to carry out watches in promising areas of Kirkwall, again let down by the weather and the bats. We have several reports of bat activity in the town but nothing of a consistent nature, which suggests that there is not an active maternity roost in the town at the moment. I have been out in Kirkwall in the summer on warm pleasant evenings with my detector and there has always been plenty of folk still out and about; it would follow that if there was regular bat activity in one particular area it would surely have been reported by now? There was a report of a bat in the cathedral – not impossible but follow-up watches were quiet. A cave roost has been discovered on a nearby island and as expanses of sea do not seem to deter bat foraging it may be that the bats visit Kirkwall and have summer roosts in the town (B&Bs). We have a lot to learn!

A small roost has been located in Stromness and seems to have consistent activity ...only two bats so far. Stromness used to have regular bat sightings especially around the Old Academy and Hillside Road but for the past few years despite many bat watches in perfect conditions nothing has been recorded. The roost is in an area that used to have bat activity and the habitat is good too, with plenty of sheltered foraging possibilities and a source of freshwater. We know that there are at least two well established roosts at the North end of Hoy and bat activity is often seen on Graemsay; bats may be crossing the water to Stromness. We will have to try and find out. The group will continue to monitor the Stromness area and hope that there is an increase in the population.

We managed to visit most of the known local sites at least once and some we visited regularly all through the bat flying season. There has been a lot of bat watching in the various areas of Hoy. One bat was detected in Rackwick in the same place as last year, again late in the night, not just after dusk, suggesting that it roosts elsewhere. Extensive car surveys the full length of the island have achieved very little other than cold hands ...no detection in Longhope although local folk say that in the past they saw them regularly. The area around Longhope bay is very sheltered and has a pretty healthy midge population so seems ideal for bats.

We used video recording to help when monitoring bats on our dusk to dawn surveys; although the quality was poor it did help us to pinpoint emergence sites and cover a wider area. At the North end of Hoy due to the density and height of the trees it was very hard to establish exactly what was happening and it was inconclusive. We had maybe 7-8 bats here. We need to investigate further.

The watch at the south end of Hoy was carried out at exactly the same time as the previous year but this time we did not get swarming and the bat activity was not centred on one particular exit. There was also activity around a completely new access point as well that we had never seen them use before. We hope to follow this up next year. We counted 20 bats

here, the largest known roost in the county. We do not think that they bred; in 2013 the bats never left the area, repeatedly returning to the same hole all through the night with active swarming. So different this year, but we had a very cold and extended spring, poor conditions for breeding bats.

Bat calls were recorded and the sounds analysed using Batscan and the peak frequency in all recording was at 42-48 kHz indicating **Common Pipistrelles** *Pipistrellus pipistrellus*, the most abundant bat in Orkney.

Once again we would like to thank all the landowners who allow the bat group access to their property at such unsociable hours, who keep us up to date with the bat activity they have observed and are also so protective and proud of their bat squatters!

We have requested that folk do not put the sites of roosts on the internet; this is mainly to protect the landowners and to respect their privacy. We have so few bats and so very few roosts trying to survive in a precarious part of the bat world, they need all the protection they can get. It is illegal to disturb a bat roost and as a protected species care should be taken at all times when looking for bat activity.

Many thanks to all the members of the bat group, for turning up diligently with fully charged batteries in often uncomfortable conditions. They have made a huge difference to the information pool in respect to these creatures and hopefully will continue to do so in the future. It is an interesting and rewarding way to pass the night ...the excitement when you hear then see your first bat of the night ...wonderful!

Tim Dean is taking over from Chris Booth as the County Bat Recorder and the new contact email for the bat group is orkneybats@hotmail.co.uk which is now functioning correctly.

Many thanks to Roger and Sue Whitworth, Brian and Jean Wright, Brian Ribbands, Barry Jones, Wendy Adams, Marcia Humes, Chris Booth, Leona Graves, Lindsey Taylor, Elaine Batchelor, Tim Dean and Pauline Barber. My apologies to anyone whom I may have missed out. Thank you to all the folk who have contacted us to talk bat and give us their observations, all contributing to our knowledge. It has been encouraging to get so much support from the community on the whereabouts and activity of our very small and important bat population.

### **Rabbit** *Oryctolagus cuniculus*

Recorded this year from Mainland, Hoy, South Ronaldsay and Swona. I first noted small young rabbits on 13<sup>th</sup> April in Rendall (1<sup>st</sup> April in 2011), but a newborn young rabbit was found dead in South Ronaldsay on 28<sup>th</sup> February. Black rabbits were reported on Swona (about 25% black), South Ronaldsay and Hoy. Rabbit numbers seem fairly low in most places.

### **Brown Hare** *Lepus europaeus*

As usual recorded throughout Mainland in almost every parish. The maximum count in any one place was again nine but I recorded no more than four together in Rendall, fewer than usual. One observer counted 38 around the West Mainland on 16<sup>th</sup> February.



**Brown Hares.** (Brian Ribbands)

### **Mountain Hare** *Lepus timidus*

Reported from Hoy, almost all on the RSPB reserve. Highest count was 11 on 26th June. One regular observer considered numbers to be lower than usual around Ward Hill.

### **Hedgehog** *Erinaceus europaeus*

Recorded from Mainland and Hoy. The first report was of two road casualties on 22<sup>nd</sup> March; the last report of the year was of a small one seen alive on 4<sup>th</sup> November. There were more small hedgehogs than usual seen in daylight during September and October; no doubt the poor summer will have delayed breeding. Few of these small late animals are likely to survive the winter so hedgehog numbers may well be down in 2013. One observer reported 5 seen on the night of 22<sup>nd</sup> October. More usual were a few live sightings around mid-summer when the nights are probably too short for hedgehogs to be completely nocturnal.

### **Pygmy Shrew** *Sorex minutus*

Seven reports of animals found dead in West Mainland, South Ronaldsay, Hoy and Rousay.

### **Otter** *Lutra lutra*

Live sightings, of up to 4 animals, were reported from Mainland, Shapinsay, Rousay, Gairsay, Sanday, Westray and Papa Westray. Spraints and tracks were found in East and West Mainland, Hoy, Rousay, and Sanday. Females with young were reported at the Loch of Boardhouse, Loch of Stenness, on Gairsay and in Shapinsay. Some of the other reports of 2 or 3 were also likely to be females with young. Again one was seen near the centre of Kirkwall. Six were reported dead, all except one as probable or definite road casualties. Two of these were in May when it would not have been dark, one in Flotta and the other on No. 4 Barrier. The others were in February in Burray and Orphir, and March in Tankerness. Signs of Otter predation of breeding Frogs were reported from two West Mainland sites.



## Mammal report 2012

*Brian Ribbands*

The Mammal Society is collecting data for an atlas of British mammals so please make an extra effort to record any mammals you find, dead or alive, signs, tracks, etc. Rather few folk record mammals in Orkney. Don't assume anyone else has reported what you have found. Otters and Brown Hares are relatively well covered but small mammals are very under-recorded. Most land mammals cannot readily swim between islands so it is of particular interest which islands have them. Anyone who has a cat or sets a mouse trap could make a very valuable contribution by reporting which species they get. I am only interested in collecting data on distribution. No blame will attach to cats or cat owners, nor will anyone be accused of harbouring these animals. All that is needed is data that can be presented as dots on a map to show roughly where they are.

There seem to be changes in some of the isles, such as reports of Wood Mice in Westray and perhaps Rousay for the first time fairly recently. Records from these islands would show if they are still spreading. The same applies to Orkney Voles in Eday. Have they spread over the whole island now? There could be changes in other islands; most have no recent records. Mainland records will provide valuable baseline data to show the impact of Stoats if they become permanently established. If you record birds, please record mammals as well.

In 2012 another unexpected new mammal was claimed in Orkney – a Pine Marten in Hoy, but it seems very unlikely and no details have been forthcoming. Stoats continue to be reported and one more has been trapped.

### **Orkney Vole** *Microtus arvalis orcadensis*

Very under-recorded in 2012. Subjectively I think they were at a lower density than in 2011 in Mainland but I have no data to confirm this.



Orkney Vole. (Brian Ribbands)

### **Wood Mouse** *Apodemus sylvaticus*

Reported from Skelwick, Westray, in March, November and December. It seems to be a recent arrival in Westray. Does anyone have any older records? Elsewhere records came from South Ronaldsay and Mainland, from Birsay and here in Rendall, under my bird table in daylight between March and June. Others were trapped in roof spaces of rural houses in winter.

### **House Mouse** *Mus domesticus*

Very under-recorded. Only reported from two places, a garage in Kirkwall and a roof space in South Ronaldsay. If you get them please tell me!

### **Common Rat** *Rattus norvegicus*

Reported from Hoy, South Ronaldsay, East and West Mainland. Two reports were of colonies on the shore. These are likely to be present around the coasts of all islands that have rats; the tideline offers a year-round food source. Buzzards are increasing in Orkney and frequently seem to take rats. They are unlikely to make much impression on rat numbers but they are often scavengers so they also compete with rats for food to some extent, particularly in hard weather.

## An Orkney wildlife garden – an update

*Dick Matson*

My wife and I moved to the defunct farm of Dale on the east shore of Swannay Loch in the summer of 1994. In the OFC Bulletin of 2007 I wrote of our experience of 9 years of planting trees and shrubs in Orkney for the benefit of wildlife. This is an update after a further 6 years, describing lessons learnt, our mistakes and a few successes.

At this exposed west-facing site the ground is a mix of agricultural soil, natural stone and rock, and rubble from old farm buildings and farming activity. The underlying substrate is mainly alkaline Rousay Flags. Although on a substantial slope the ground becomes waterlogged in winter. Thus the first lesson we learnt was that we should have drained the area where we intended to plant trees where it was particularly badly waterlogged! This would probably have prevented many trees developing root-rock and then blowing over.



Dale in 2013: Whitebeam, Rowan and Sycamore on the left; hybrid willow and Fuschia on the right. (Dick Matson)

Our first priority was to establish outer defences against the elements. This was achieved in part by building a wall where the flower garden and some shrubs were to be planted, by erecting wooden fencing and some plastic net fencing and by planting trees and shrubs which we understood to be particularly hardy. There is no doubt that protection by these means has greatly enhanced the survival and subsequent growth of other trees and shrubs.

The choice of trees for protection is a fascinating subject deserving an article on its own. First we considered the question of alien species some of which are fast growing and many are beneficial to birds and other wildlife. We decided that we could employ alien species which had been grown in Orkney for many years without any apparent detrimental effect on the flora and fauna but would avoid harmful ones such as the invasive **Salmonberry** *Rubus spectabilis* which is taking over so much of Orkney's precious wild habitat. We were satisfied that in our choice of planting area we were not going to adversely affect any other significant species of wildlife.

We have concluded that quite the toughest plant in our garden is the **New Zealand Flax** *Phormium tenax*. While very slow-growing it thrives in the most exposed situations. Unfortunately it has nothing to offer in the way of fruit, berries or nectar and some people find its triffid-like flower spikes unattractive. However on our eastern boundary our 6 foot *Phormium* “hedge” is a very effective barrier to gales from that direction and Blackbirds have used it regularly for nesting.



A recently arrived Waxwing refueling on *Rosa rugosa* berries at Dale. (Stuart Williams)

Not far behind as regards toughness has been the **Japanese Briar** or **Ramanas Rose** *Rosa rugosa*. One plant sprung up (probably from a seed carried by a bird) in an exposed rocky bank on the loch shore where its roots and lower stems are under water for three months of the year. It has not only survived but flowers every summer. *Rosa rugosa* has many positive characteristics: it has a good survival rate when planted bare-rooted or as cuttings; it is fast-growing; it self-propagates by suckering; it comes into leaf early and retains its leaves late, so is valuable to insect-eating birds; it also flowers early and attracts many insect species and it forms large waxy fruits which are very popular with a wide variety of birds, including **Waxwings**, **Greenfinches**, members of the thrush family and *Sylvia* warblers. However the suckers can be a nuisance if allowed to get out of hand.

Next on our list is **Fuchsia**, mainly *Fuchsia magellanica* at Dale. This widely grown alien thrives in Orkney. It grows well from cuttings, is fairly fast-growing and self-propagates through self-seeding and suckering. Its attractive flowers are popular with a wide variety of insects and its fruits are taken by members of the thrush family, *Sylvia* warblers and other birds. As well as being cultivated as individual bushes it can be planted to form a protective hedge and responds well to being regularly trimmed and to a good pruning in the spring. In a county where bush/tree nesting habitat for birds is at a premium Fuchsia is very valuable and is used by blackbirds, finches and wrens. Fuchsia copes well with the Orkney climate but prolonged sub-zero conditions will cut it back severely, though it generally shoots again vigorously from ground level in the early summer. Be warned – Fuchsia can spread invasively and may choke watercourses.

Modern fast-growing hybrid willows have been planted widely in Orkney, very often to provide an initial shelter belt for other tree species. But this should be regarded as a short-term measure as the rate of growth slows up with age. However these hybrids have some advantages. As well as growing vigorously initially in Orkney conditions they tolerate wet ground. They harbour a wide variety of insects which attract various warblers and flycatchers. At Dale we made some mistakes. Our ground is so wet in winter that many of these willows have been blown over. Some initial drainage might have helped in this respect. We should also have coppiced alternate sections of these trees after the first year or two and then every other year in rotation. If allowed to grow unchecked they become tall and spindly, are prone to being blown over and the branches thrash together in the wind and damage each other. Coppicing produces healthy vigorous re-growth and thus more shelter for the garden.

## Amphibia report 2012

### Common Toad *Bufo bufo*

There was a count of 300 tadpoles in the pond near the bridge at Rackwick, Hoy on 22nd April (LS).

Single Toads were reported in July at Stourdale, Hoy on 14th (LS) and Hundasaeter, Birsay on 21st and 31st (AK&JHJ); in August, on the Rackwick track on 2nd (CJB) and in Rackwick on 19th (LS).

An unusual record was that of a Toad heard calling and then located, at The Loons, Stromness on 17th December (RJS).

### Common Frog *Rana temporaria*

Spawn was found at Hundasaeter, Birsay on 21st February (AKJ&JHJ), the earliest date so far recorded in Orkney. This was followed by reports of spawn on 23rd at Claymore Brae, Kirkwall (EB), 25th at Dale Birsay (REM), Braesdene, Holm (MR) and Quindry, South Ronaldsay (HM), 28th at Blackhamar, Rousay (J&SS) and Linegar, South Ronaldsay (HM), 2 March at Rosebank Cottage, Harray (EE) and 3rd March at Round House, St Ola (D&SW).

There was a count of 60 Frogs in 3 ponds at Dale, Birsay on 1st March and the last batch of spawn at Blackhamar was found on 25th March.

Otter predation of Frogs was noted at Dale on 21st and 25th February while Mallards were seen eating spawn at Blackhamar on 7th March.

Tadpoles were first seen at Hundasaeter on 17th March and Froglets on 3rd July, while juvenile Frogs found on 14th May were thought to have developed from tadpoles that had over-wintered.

Away from breeding sites there were reports of Frogs on 28th February, Clay Loan, Kirkwall (EJR), Castle Park, Deerness on 1st March (RH) and the Ness Battery, Stromness 11th March (AG). One was found dead on the road near Harray Stores on 28th March (SS) and single Frogs were seen at East Linnadale, Orphir on 3rd June (ERM) and Upper Cornquoy, Holm on 16th July (JG).

### Acknowledgements

I am very grateful to the following for their records:

E Batchelor (EB), E Everiss (EE), A Gascoigne (AG), J Goar (JG), R Humphrey (RH), AK&JH Johnson (AK&JHJ), RE Matson (REM), H McKenzie (HM), ER Meek (ERM), M Rinder (MR), EJ Rosie (EJR), J&S Scott (J&SS), L Shields (LS), RJ Simpson (RJS), S Spence (SS), D&S Walls (D&SW)



## Fish report 2012

Chris Booth

Details of some of the more interesting fish reported in 2012 are given below:

### Basking Shark *Cetorhinus maximus*

The first report was of 1 Widewall Bay, South Ronaldsay on 15th May followed by 1 off Bis Geos, Westray 25th May and 1 in Warness Sound, Eday on 27th May. In June singles were seen in Bay of Quoys Hoy on 19th, off Row Head, Sandwick on 20th and in Warness Sound on 28th June. July sightings were of singles on 2nd off Black Craig, Stromness and in Warness Sound, from North Ronaldsay on 20th and off Brough of Birsay on 28th, with 2 seen off North Ronaldsay on 31st. In early August 1 was seen west of Papa Westray, other August sightings were of singles Shapinsay Sound on 6th, Warness Sound on 7th, from North Ronaldsay on 8th, off Marwick Head, Birsay on 19th, in Warness Sound on 5 days between 17th and 23rd, off Faray on 24th and between Scapa and Holm on 25th. In Warness Sound there were 2 on 3rd September and singles on 5th and 16th September.

### Lesser Spotted Dogfish *Scyliorhinus canicula*

One Bay of Quoys, Hoy on 11th April.

### Flapper Skate *Raja intermedius*

One found dead on the shore at Ayre Sound, Start Point, Sanday on 25th March. Length 2 metres, width 1.5 metres.

A female was caught, tagged and released on 13th June, off Hoy. The length was 2.25 metres, width 1.79 metres and it weighed 229 lbs. On 14th June, off the West Mainland, a male was caught, tagged and released. The weight was 140 lbs.

### Deal-fish *Trachipterus arcticus*

One found dead on beach at Doun Helzie, Sanday on 25th March. The 11th Orkney record of this unusual fish.

### Lumpsucker *Cyclopterus lumpus*

One St Peter's Pool, Deerness on 10th March.

## Acknowledgements

My thanks to the following for their records

J Booth, N Callaghan, M Cockram, CJ Corse, D Cowan and EMEC, T Dodman, A Duncan, R Flett, E Green, P Hollinrake, P Martin, J&R McCutcheon, North Ronaldsay Bird Observatory, D&S Otter, L Shields, B&C Spencer, A Stacey, The Orcadian, R Thorne, F Tulloch, J Wallace.

Other willows and indeed many tree species also harbour insects, and by growing several different species there will be a greater diversity of insects for birds over longer periods of the spring summer and autumn. The native **Grey Willow** *Salix cinerea* and its hybrids are useful, while native **Tea-leaved Willow** *Salix phylicifolia*, although slow-growing compared with the vigorous hybrid willows, thrives on ground almost permanently water-logged, is almost immune to damage by the wind and like other natives requires little or no maintenance. **Dune Willow** *Salix hookertiana* from the North-west coast of America has done particularly well at Dale. This attractive tree is fast-growing, comes into leaf early and is the earliest willow at Dale to form "pussies" and these are one of the earliest food-sources for bees in spring. It also keeps its leaves till late in the year. However it has a major drawback, its height must be restricted to 6 or 7 feet by pruning otherwise the trunk is liable to split. This willow can be grown as an ornamental hedge but also provides useful shelter.

**Flowering Currant** *Ribes sanguineum* can be grown to form an attractive hedge. It is one of our earliest flowering shrubs (mid-March in a good spring) and is relatively tough. One problem with this shrub is that it can be infected by a fatal fungal disease.

Another good hedging shrub is **Escallonia**. We have done well with the cultivar "Crimson Spire" and its flowers are good for bees. When left unpruned it can grow into a very large bush. Prolonged cold gales may scorch the leaves but these re-grow in the early summer. **Blackbirds** have frequently nested in our Escallonia.

Another tough shrub which has done well at Dale is **Twinberry** *Lonicera involucrata* planted as a hedge. The wild native **Honeysuckle** *L. periclymenum* has also done well – this is best trailed over a fence. Both species are magnets for bees and other insects.

We have had success with some larger tree species. **Common Alder** *Alnus glutinosa* has grown vigorously in the wet ground, but where it has been too wet a few have blown over. In the main our alders have grown into attractive, beautifully shaped trees.



A rare vagrant from North America – a Yellow-rumped Warbler – finding shelter and food at Dale, 31st Oct 2003. (Stuart Williams)



Barbut's Cuckoo-bee *Bombus barbutellus* at Dale. (Brian Ribbands)

**Hazel** *Corylus avellana* has been successful in the drier areas at Dale and we may experiment with coppicing them to increase their potential as sheltering trees.

Of the larger trees **Whitebeams** (possibly *Sorbus intermedia*) have grown well in a fairly exposed position but have needed cutting back periodically to avoid wind damage, though they will grow into fine tall trees in suitable locations in Orkney. They are valuable for their white flowers which attract insects and their crop of autumn berries which are a



target for the Thrush family, Waxwings and even **Crossbills**. A relative of the Whitebeam is the **Rowan** *Sorbus aucuparia*, an Orkney native. In a favourable summer our Rowans produce large crops of bright red berries which attract similar bird species. Rowans of Orkney native provenance are hardier and produce berries more prolifically than imported specimens.

**Sycamores** *Acer pseudoplatanus* do well in Orkney and are a valuable source of aphids for insectivorous birds and their flowers attract insects. At Dale in late summer and autumn **Swallows** and **House Martins** can often be seen working in the lee of Sycamores catching airborne aphids; and warblers and **Goldcrests** may be spotted searching for aphids on the leaves and bark.

The wet ground and exposed situation at Dale has not suited our native **Downy Birch** *Betula pubescens* and several of these trees have suffered from ‘root-rock’ and/or have been blown over. However those that have thrived harbour insects for warblers and the catkins have attracted **Siskins** and **Redpolls**. Elsewhere in Orkney they do extremely well, growing into fine shapely trees

Several *Cotoneaster* species are grown in Orkney and in autumn invading Waxwings often search out their berries. *Cotoneaster horizontalis* has done surprisingly well, grown up against an exposed wall at Dale and the flowers attract very large numbers of bees, wasps and other insects in early summer.



**Cotoneaster horizontalis – a magnet for bees and Waxwings. (Dick Matson)**

Another good berry producer is of course the **Bramble** or **Blackberry**. Most of the cultivars grown in Orkney ripen late and have a poor flavour. We were given layered plants of unknown provenance which in a good summer have a fine flavour and give an excellent yield. As well as providing delicious crumbles, jams etc, for humans, the berries are sought out by many bird species such as Blackbirds, **Blackcaps** and other *Sylvia* warblers and the over-ripe fruits attract butterflies and moths as well as **Bluebottles** and other insects. If you decide to grow Brambles we recommend that you take professional advice as to which cultivars are suitable for Orkney. Be warned this plant can be invasive if left unchecked.

No wildlife garden would be complete without a **Buddleia**, the so-called “butterfly bush”. At Dale we have had good results with *Buddleja davidii* “Black Knight” and *Buddleja lindleyana* “Lochinch”. In a good butterfly summer these have been covered in **Red Admirals**, **Painted Ladies** and **Small Tortoiseshells**, as well as moths. Although fairly tough they are best planted in a well sheltered situation so that the blossom is not shrivelled by the wind.

In the harsh Orkney winter deciduous trees and bushes afford very little shelter at a time when birds most need it so we decided to plant small blocks of conifers. Our ground proved too wet for **Lodgepole Pines** *Pinus contorta* and these were blown over, but to date the

**Double Square-spot** *Xestia triangulum* (U); six taken by trap between 21 July and 3 August Bayview, Herston, South Ronaldsay (J&R McCutcheon).



**The Gothic. (Brian Ribbands)**

**The Gothic** *Naenia typical* (U); Five taken by trap, three between 3-15 August Cairston Road, Stromness (B Simpson), one each 14 August Queenamidda, Rendall (B Ribbands) and 21 August Smyril, Stenness (ER Meek).

**Great Brocade** *Eurois occulta* (I); one taken by trap 17 August Cairston Road, Stromness (B Simpson).

**Red Sword-grass** *Xylena vetusta* (R?); one taken by trap 22 April Queenamidda, Rendall (B Ribbands).

**Red-line Quaker** *Agrochola lota* (V); one taken by trap 4 October Bayview, Herston, South Ronaldsay (J&R McCutcheon).

**Dark/Grey Dagger** *Acronicta tridens/psi* (V/R); one taken by trap 21 July 34 High St, Kirkwall (CJ&J Booth). Specimen’s genitalia not checked to find out which species was caught.

**The Herald** *Scoliopteryx libatrix* (U); one taken by trap 3 May Gillbreck, South Ronaldsay (L Campbell & N Fairbairn).

**Pinion-streaked Snout** *Schranksia costaestrigalis* (R?); 16 taken by trap, four between 3-18 August Bayview, Herston, South Ronaldsay (J&R McCutcheon), and 12 between 14-21 August Queenamidda, Rendall (B Ribbands).



**The Herald. (Brian Ribbands)**

### Pre-2012 Record of Interest

**Camberwell Beauty** *Nymphalis antiopa* (V); one was seen 25 August 2006 Stronsay Hotel, Stronsay (The Proprietor, per J Davis). The Camberwell Beauty was identified from a photograph taken in the garden of the hotel. A check of the records for 2006 show that nine new species were added to the Orkney list and that it was a good year for other migrant species.

My thanks to the following for supplying records: C J & J Booth, N Callaghan, L Campbell & N Fairbairn, J Crossley, J A Davis, A Driver, E Green, A Leitch, D Mayes, N & R McCance, J & R McCutcheon, E R Meek, D & S Otter, Peedie Breeks, S Rendall, B Ribbands, L Shields, B Simpson, J Stoneman, G Strugnell.

**Oblique Carpet** *Orthonama vittata* (U); one taken by trap 25 July Gillbreck, South Ronaldsay (L Campbell & N Fairbairn).

**Flame Carpet** *Xanthorrhoe designate* (V); 27 taken by trap, eight between 13 July and 16 August Bayview, Herston, South Ronaldsay (J&R McCutcheon), 19 between 15 July and 3 August Cairston Road, Stromness (B Simpson).

**Pine Carpet** *Thera fermata* (R); three taken by trap, 17 July 34 High St, Kirkwall (CJ&J Booth), and one each on 18 and 23 August Queenamidda, Rendall (B Ribbands).

**Gray Pine Carpet** *Thera obeliscata* (R); one taken by trap 17 July Quoyberstane, St Ola (SV Gauld).

**Sandy Carpet** *Perizoma flavofasciata* (R?); eight taken by trap, three between 19 May and 6 July Ley House, Hoy (L Shields), three between 10 June and 10 July Cairston Road, Stromness (B Simpson) and two, one each on 10 June and 12 June Smyril, Stenness (ER Meek).

**Bordered White** *Bupalus piniaria* (R); one seen in the field 6 July Lyrawa Plantation, North Walls (ER Meek).

**Common Wave** *Hylaea fasciaria* (V); two taken by trap, one each on 7 and 14 July 34 High St, Kirkwall (CJ&J Booth).

**Barred Red** *Hylaea fasciaria* (R); 10 taken by trap, two, one each on 21 July and 16 August Bayview, Herston, South Ronaldsay (J&R McCutcheon), one 6 August Cairston Road, Stromness (B Simpson) and seven between 8–21 August Queenamidda, Rendall (B Ribbands).

**Convolvulus Hawk-moth** *Agrius convolvuli* (I); one seen on 2 September New Scapa Road, Kirkwall (S Rendall).



**Poplar Hawk-moth.** (Brian Ribbands)

**Poplar Hawk-moth** *Laothoe populi* (R); this moth is now well established across the South Isles and Mainland, and so far no records from any of the North Isles. During 2012 adult moths were seen at Bayview, Herston, South Ronaldsay; Braeside, Stenness; Cairston Road, Stromness; Gillbreck, South Ronaldsay; Ley House, Hoy; Queenamidda, Rendall; Quoyberstane, St Ola and The Willows, Finstown.

**Heart and Dart** *Agrotis exclamationis* (U); one taken by trap 15 August Cairston Road, Stromness (B Simpson).

**Dark Sword-grass** *Agrotis ipsilon* (I); two taken by trap, one each 22 May Quoyberstane, St Ola (SV Gauld) and 16 October Cairston Road, Stromness (B Simpson).

**Broad-bordered Yellow Underwing** *Noctua fimbriata* (V); one taken by trap 23 August Queenamidda, Rendall (B Ribbands).

deeper rooted **Sitka Spruce** *Picea sitchensis* we planted have done well. As well as providing shelter they have afforded some bird species good nesting habitat.

Mention has been made of the need to drain water-logged areas before planting. Also important is the provision of shelter to get your woodland started. If you cannot wait to get shelter belts established then a robust form of fencing is recommended. We have concluded that sarking-board (employed by builders for roofing) supported by agricultural fence posts, ranch-style, provide the best value for money both in terms of cost and life-expectancy.

Another protection measure is to plant your trees much closer together than normal so that they give each other mutual protection. Then when the trees are well established the surplus must be removed. The great problem here is that it takes a supreme effort of will to take a saw or axe to a perfectly healthy tree! But if you do thin out in this way either leave the thinnings in situ or create wood piles with these and other dead wood for the benefit of wildlife.

Most people won't need telling that planting trees in one's garden is rewarding aesthetically and in terms of the benefit to, and enjoyment of, wildlife; but many folk are discouraged because they think their garden is too small. But they shouldn't be. It is remarkable how just a few trees and/or shrubs will, even after just two or three years, attract many different species of birds and other wildlife to their gardens which they would not otherwise have seen there.



**No wildlife garden is complete without a pond.** (Dick Matson)

**The ponds created at Dale were soon colonised by Blue-tailed and Large Red Damselflies.** (Aileen Meek)



## The New Zealand Flatworm, Scotland's unwanted alien visitor

*B Boag & R Neilson*

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### Background

The **New Zealand Flatworm** *Arthurdendyus triangulatus* (Fig. 1) was first recorded from Scotland in 1965 and is now widely distributed throughout Scotland (Boag *et al.*, 1994). All major islands are infested e.g. Arran, Skye, Harris and Lewis, Coll, Orkney<sup>1</sup>, Shetland and even Fair Isle. It is an obligate predator of our native earthworms which has been shown to have the ability to decrease earthworm populations to below detectable levels in Northern Ireland (Blackshaw, 1990). In New Zealand it is confined to the South Island but there are probably over 100 other species of flatworms in New Zealand, many of which a) have not been described, b) belong to the genus *Arthurdendyus*, c) are in the North Island, so better equipped to withstand higher temperatures and therefore, if introduced into the British Isles, could become a greater problem than *A. triangulatus*. There is evidence that in Scotland the New Zealand Flatworm spread from botanic gardens to nurseries and garden centres then to domestic gardens and only more recently to agricultural land.

### Identification

New Zealand Flatworms are usually found during the day, often curled up like a Swiss roll, under pieces of wood, stone or polythene lying on bare earth. They are relatively flat compared with earthworms, are pointed at both ends and covered with a sticky mucus. They can vary in colour but usually have a dark brown upper surface with a lighter beige speckled border which extends to cover the ventral surface. Flatworms can also vary greatly in shape from long and narrow (up to 15 cm) to short and relatively fat. They produce egg capsules which look like small, shiny blackcurrants.



**New Zealand Flatworm and egg capsule.**  
(Brian Boag)

### Biology

The New Zealand Flatworm requires cool damp conditions to survive. It cannot tolerate temperatures below zero or above c.20 C, and has become established in agricultural land in Ireland, north and western Scotland plus the Faroe Islands. New Zealand Flatworms are hermaphrodite with the reproductive opening on the ventral surface. The egg capsules, which can contain between 1 and 14 young but usually 6-7, are often white or cherry red when laid. Observed births are usually through a spontaneous caesarean opening on the back of the flatworm which immediately heals over. The egg capsules are laid in summer under refugia similar to those where flatworms are found during the day. Hatching, it is estimated, takes place about one month later, the hatchlings being creamy white but soon turning to the colour of the adults. Probably one egg capsule is laid every 7-10 days and can weigh 10-15 % of the adult weight. Flatworms generally lose weight in summer but increase in weight in the autumn when earthworms are more numerous. It is thought that they feed by anaesthetising the earthworm, extruding digestive enzymes and then sucking up the remaining "soup". If starved they have the ability to remain alive for long periods by

<sup>1</sup> Editor's note: the New Zealand Flatworm is widespread and common in many parts of Orkney, especially in and around towns and villages, but its exact distribution is not known.

### Other Sightings of Interest

*Ypsolopha dentella* (R); 15 taken by trap between 9 August and 16 September 34 High St, Kirkwall (CJ&J Booth).

**Twenty-plume Moth** *Alucita hexadactyla* (U); two taken by trap one each 21 July and 16 September 34 High St, Kirkwall (CJ&J Booth).

*Crambus pascuella* (U); two taken by trap one each 22 July Cairston Road, Stromness (B Simpson), and 18 August Smyril, Stenness (ER Meek).

*Eudonia truncicolella* (U); one taken by trap 18 August Cairston Road, Stromness (B Simpson).

**Brown China-mark** *Elophila nymphaeata* (V?); one taken by trap 11 August The Willows, Finstown (A Leitch). This I believe will be the fourth record for this moth in Orkney, the third record being from this same site. No details available for the third record at time of writing this report.

The first records were 19 July 2010 Rackwick, Hoy (B Ribbands), and 31 July 2010 Northolme, St Ola (RG Adam).

*Margaritia sticticalis* (V); one taken by trap 19 August Cairston Road, Stromness (B Simpson).



**Udea olivalis.** (Brian Ribbands)

*Udea olivalis* (V?); 274 taken by trap, four between 15 June and 4 August Quoyberstane, St Ola (SV Gauld), 183 between 23 June and 8 September Bayview, Herston, South Ronaldsay (J&R McCutcheon), 83 between 17 July and 11 August Cairston Road, Stromness (B Simpson). One 18 July Gillbreck, South Ronaldsay (L Campbell & N Fairbairn), one 21 July 34 High St, Kirkwall (CJ&J Booth), two one each on 24 July and 8 August Queenamidda, Rendall (B Ribbands).

**Rush Veneer** *Nomophila noctuella* (I); one taken by trap 21 August Quoyberstane, St Ola (SV Gauld).

**Bee Moth** *Aphomia sociella* (R); eight taken by trap, four between 17 July and 9 September 34 High St, Kirkwall (CJ&J Booth), three by trap between 17-21 August and one at a light window 16 August Quoyberstane, St Ola (SV Gauld).

*Dioryctria abietella* (V); one taken by trap 18 August Queenamidda, Rendall (B Ribbands).

**Peacock** *Inachis io* (V); three seen in the field, one each 25 June Westray Lighthouse (Noup Head), 29 June Marwick Head, Birsay and 6 June Mull Head, Deerness (J Stoneman).

**Fox Moth** *Macrothylacia rubi* (R); one larva seen on 27 September Rackwick, Hoy (CJ&J Booth).



## Lepidoptera report 2012

SV Gauld

It was a pleasant surprise when it came to analysing the 2012 records, as one might have thought that there would not be much to report due to the uninspiring weather during the year, but there were more than initially expected. The more interesting sightings are listed here.



**Convolvulus Hawk-moth. (Brian Ribbands)**

Migrants were seen from May through to October. They included such species as *Udea olivalis*, **Rush Veneer** *Nomophila noctuella*, **Convolvulus Hawk-moth** *Agrius convolvuli*, **Dark Sword-grass** *Agrotis ipsilon*, **Great Brocade** *Eurois occulta* and **Silver Y** *Autographa gamma*.

Migrants seen in greater numbers than ones or twos were Silver Y and **Red Admiral** *Vanessa atalanta*. Red Admirals were seen from the May until the start of September and

Silver Y from May until October. **Painted Lady** *Vanessa cardui* was seen during August and September.

One new species added to the Orkney list was the **Codling Moth** *Cydia pomonella*, the details of which are below.

In the list that follows the following abbreviations are used:-

R - Resident: I - Immigrant: U - Status Uncertain: V - Vagrant: V? - Vagrant/Possible Resident: R? - Probably a Resident but not proven.

### New to Orkney

**Codling Moth** *Cydia pomonella* (V); one seen on 12 July Surrigarth, Westray (D&S Otter). Confirmed from a photograph by Roy Leverton.

The Codling moth is mainly found in England, distribution to the north of this is more scattered up to the Inverness area. The larvae feed inside fruit such as apple, pear, plum and other wild and cultivated fruit. The adult moth is on the wing July-August, and sometimes a second flight September-October.

### Confirmation of Old Record

*Eudonia lineola* (U); one taken by trap 7 August Gillbreck, South Ronaldsay (L Campbell & N Fairbairn).

In The Lepidoptera of the Orkney Islands RI Lorimer writes that Mr Pelham-Clinton suggested that this micro was probably a misidentification by Cheesman (1898). A photo taken by L Campbell which the author identified as possibly being *E. lineola* was confirmed by M Young. Recorded sparsely around the coast of Great Britain up to Shetland. The larva feed on lichens with the adult on the wing during July and August.

‘de-growing’ i.e. shrinking in size even down to 10% of their body mass until they find another earthworm.

### Impact on below ground biodiversity

Research in Scotland has shown that while all native earthworms are eaten by the New Zealand Flatworm the large anecic (building deep vertical burrows and surfacing to feed) species such as *Lumbricus terrestris* are particularly at risk since they feed on the soil surface at night (Jones *et al.*, 2001). In Ireland a long term experiment by Murchie & Gordon (2012) have shown *L. terrestris* numbers reduced by 75% and earthworm biomass down by 20% in infested land. Earthworms, particularly the anecic species, have large, vertical burrows which open to the soil surface and therefore help soil drainage. Research has shown that when earthworms are removed then drainage is impeded (Haria *et al.*, 1998).

### Impact on above ground vegetation

No research has or is being specifically undertaken to quantify the deleterious impact the New Zealand Flatworm might have on vegetation and crop yield but anecdotal evidence from farmers has suggested that there has been an increase in flooding, the establishment of rushes and lower crop yields in areas that are infested with the New Zealand Flatworm.

### Impact on above ground fauna

Many of our native mammals (badgers, shrews, hedgehogs, moles etc.) and birds rely on earthworms as their major source of food for at least some part of the year but there has been no investigation to quantify the deleterious impact the New Zealand Flatworm has on their populations. However, observations in an area between Dunoon and Loch Eck (where 55 of 59 fields were found to be infested with flatworms) no moles can now be found even though they had been a problem there after World War II. Similarly in Glen Massan flatworms were found in seven fields none of which had moles while in another seven fields there were moles but no flatworms. Since about 70% of grass fields without flatworms in western Scotland have moles it would seem that in the area south of Loch Eck flatworms have been responsible for the eradication of moles (Boag, 2000).

### Control

Once established there are no known ways of eradicating the New Zealand Flatworm hence it is very important to stop its spread. Initially garden centres and nurseries were probably mainly responsible but now it is could be neighbours, relatives and friends exchanging potted plants. Gardeners should inspect any containerised plants. If they have the flatworm only give away cuttings, seed or bare-rooted plants replanted in a flatworm free medium.

### Conclusions

The New Zealand Flatworm continues to spread in Scotland but its detrimental impact on the environment and on biodiversity below and above ground is unknown. At present there is no monitoring or research being undertaken to show what the situation is or how the flatworm might be controlled.

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## Some small terrestrial snails of Binscarth wood, Finstown

Derek Mayes

The study of snails is not over-popular but I have recently found it to be very absorbing. I became hooked in October 2012, when I made my first, quite accidental, find on the trunk of a sycamore tree at Binscarth wood, near Finstown<sup>2</sup>. At first glance I thought it was an insect pupa. Closer inspection, though without a hand lens, revealed the whorled structure of a small snail. It was, for me, a very surprising find. I confirmed, by finding others on several nearby trees, that I had not found something rare. Once home I was able to identify it as a **Two-toothed Door Snail**. There are three or four look-alike species, but my opinion, and that of the County Recorder, was that it was *Clausilia bidentata* (Fig. 1).

The Internet is wonderful for such ID quests but it is not without flaws and traps. Some caution and at least one form of expert confirmation are always needed. In this case, and subsequent ones, The Conchological Society of Great Britain and Ireland (CSGBI) responded to my emails. I also confirmed my findings via the NBN Gateway<sup>3</sup>.

*Clausilia bidentata* is 9mm long and 1.8mm wide. If a specimen is placed on a 20p piece, 9mm is the length of 'PENCE' in 'TWENTY PENCE'. Such a small creature on a rough, mossy tree trunk is difficult to spot. Figure 2 shows the snail and its flag marked with nail varnish.

This door snail is very numerous in Binscarth wood (I discovered) but seems to be absent from some other likely Orkney woodlands. It is recorded in Happy Valley<sup>4</sup> and a few other places. Almost certainly it is under-recorded throughout Orkney. It was previously recorded at Binscarth in 1967 and 2010 and in a few other Orkney locations by very experienced observers. It appears under-reported in previous bulletins (see Appendix).

Within a few days, I had set up a survey to find out how numerous they might be in Binscarth wood and, for any future monitoring, recorded my method. I divided the woodland into 50 metre grids and visited most of them in one day, looking at frequency on randomly selected trees. I found the snails to be numerous, noted them also in even greater numbers in all the stone walls in the wood and thus confirmed the presence of an apparently very healthy population of *C. bidentata*.

When making subsequent visits, I looked more closely at their habitat and habits. I began a marking experiment using Tippex on the snail shell and also marking the position on the tree with mapping pins. At first this was not very successful due to the difficulty of relocating individual trees. But I persevered, using bi-coloured nail varnish and managed to record movement, disappearance and the beginnings of apparent hibernation (November). It was disheartening to find some had gone missing but elating to find marked ones well away from their original stations. Some had moved a considerable distance, in door-snail terms. One or two had moved to another side of the trunk or had relocated by up to 50cms. In mid-November a few appeared to remain at their stations. But I had no easy way, without disturbing them, of telling whether they were still alive.

<sup>2</sup> Binscarth wood HY350140 is open to the public via a footpath and track.

<sup>3</sup> The National Biodiversity Network (NBN) Gateway is a Web-based Portal for viewing all the Biological data-sets in the UK <http://data.nbn.org.uk/>

<sup>4</sup> Happy Valley woodland is at HY326105

**Moss Carder Bees** *B. muscorum* were recorded in Birsay, Deerness, Gairsay, Kirkwall & St Ola, Sanday and South Ronaldsay, between 21 May (CJB) and 21 October (JEC). The highest count was of 40 in Gairsay on 14 July (JEC).

**Common Carder Bees** *B. pascuorum* sightings came from Birsay, Kirkwall, Holm, Rendall, Rousay and South Ronaldsay, between 25 March and 21 October (CJB, JEC, JBR). There were no high counts.

The **Gypsy Cuckoo Bee** *B. bohemicus* was recorded only from Queenamidda, Rendall, on four occasions between 10 May and 20 September (JBR).

### Social wasps

Reports of **Common Wasps** *Vespa vulgaris* were all from Kirkwall, between 24 May and 25 September (CJB). Up to 20 were feeding on apples put out for birds in September.

**Red Wasps** *V. rufa* were reported from Evie, Rendall and South Ronaldsay, between 27 May and 22 September (B & J McC, JBR and REM).

There was just one definite report of the **Norwegian Wasp** *Dolichovespula norvegica*, of a single individual at the same location as last year, Queenamidda, Rendall on 16 August (JBR).

There were reports of **Tree Wasps** *D. sylvestris* only from Evie and Kirkwall (CJB and REM) from 25 April to 23 August. All but one of the sightings were from Kirkwall, where numbers were quite high. Many were attracted to an MV light trap in July and August, the highest count being 23 on 8 August (CJB).

An unidentified wasp was enjoying late sunshine in the Marengo Garden, St Margaret's Hope on 3 November (B & J McC and LC).

### Solitary bees and wasps

**Tormentil Mining Bees** *Andrena tarsata* were spotted close to known breeding sites near Rackwick, Hoy on 18 August (JBR). About 10 were seen visiting the flowers of **Tormentil** *Potentilla erecta*.

*Andrena coitana* (no English name) were active at their only known breeding site near Queenamidda, Rendall. One to 15 individuals were sighted on five dates between 19 July and 28 August, and 77 nest holes counted (JBR). They were seen visiting the flowers of **Cat's-ear** *Hypochaeris radicata* and **Autumnal Hawkbit** *Scorzoneroides autumnalis*. An unidentified solitary bee of the *Andrena* genus, possibly *A. coitana*, was by the bridge over the burn at Durkadale, Birsay on 24 July (JBR). There must be more sites for this species, most likely in the West Mainland.

There was just one report of the **Mason Wasp** *Ancistrocerus oiventris*, near Herston Head, South Ronaldsay on 6 July (DM and JEC). This was new for the 10km square.

Many thanks to all contributors: Chris Booth (CJB), Lindsey Campbell (LC), Dick Matson (REM), Dave Musson (DM), Bobby and John McCutcheon (B & J McC), Orkney Field Club (OFC), Don and Sandra Otter (D & SO), Brian Ribbands (JBR), Steve Sankey (SS) and Lee Shields.

## Bees and wasps report 2012

John Crossley

There were fewer records of bees in 2012 than there have been in the last few years. Nevertheless several observers provided impressive record sets and some interesting observations. There were nearly 100 records in total, of 14 species. No new species were found and there were few records of the less common species.

### Bumblebees

There were 18 records of the **Great Yellow Bumblebee** *Bombus distinguendus*, the earliest a queen at the native tree plantation at Durkadale, Birsay. This queen visited a working party from the Orkney Field Club on that extraordinary warm day, 25 March, when they were having a lunch break and the bee alighted on a piece of cake. The highest count was of about 20 at Dale, Costa, Evie on 25 August (REM). The year's last sighting was a queen at North Flaws, South Ronaldsay on 4 October (JEC). There were other reports from elsewhere in South Ronaldsay and Birsay, and from Evie, Rendall, Stronsay and Westray (B & J Mc, CJB, D & SO, JBR, JEC and SS).

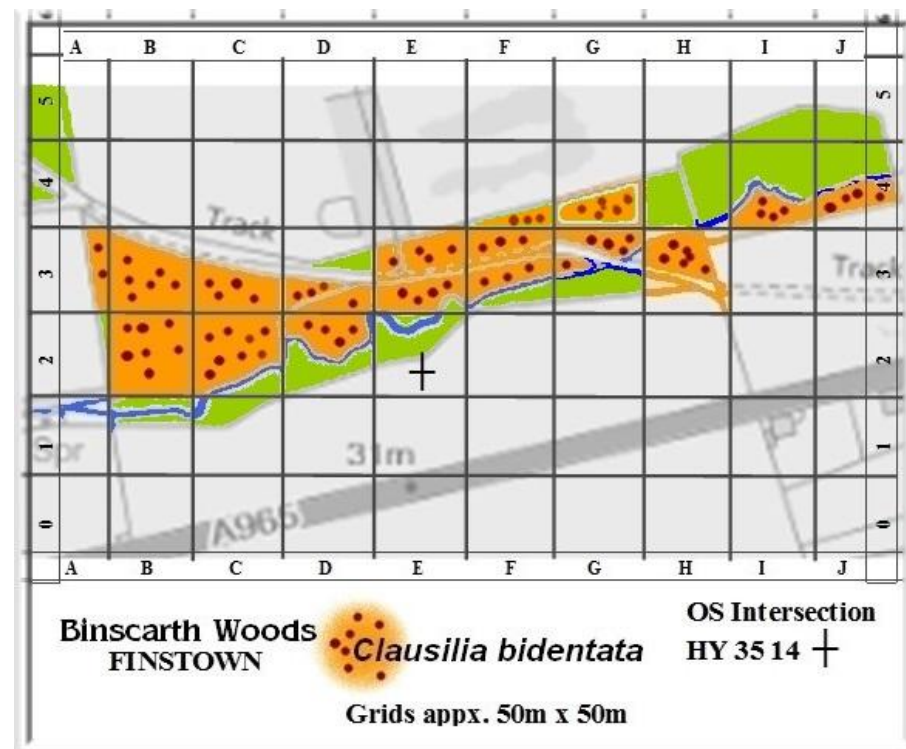


Great Yellow Bumblebee. (Brian Ribbands)

**Garden Bumblebees** *B. hortorum* were reported from Rendall (JBR), Rousay (JEC) and South Ronaldsay (B & J Mc and JEC) between 22 March and 21 October.

**Heath Bumblebees** *B. jonellus* were reported only from Rousay on 20 May and Gairsay on 14 July (both JEC).

There were reports of the **White-tailed Bumblebee** *B. lucorum sens. lat.* (aggregate of at least three critical species) from Birsay, Kirkwall, Rendall, Rousay, Sanday and South Ronaldsay (B & JMcC, CJB, JBR, JEC and OFC). The first record of the year was of a queen in Herston, South Ronaldsay on 13 March (B & JMcC) and the last a worker at North Flaws on 21 October (JEC). An unusually high count was of approximately 300, almost all workers, at Trumland plantation, Rousay on 20 May (JEC). All were feeding on the flowers of **Salmonberry** *Rubus spectabilis*. Worker bees of this species often emerge by late May, where queens have been successful in establishing nests early in the spring, during a fine spell of weather or in a sheltered locality. However, such large numbers relatively early in the year are unusual. Clearly the warmth and sunshine of late March, though followed by the bitter weather of most of April and May, provided a sufficient start for this adaptable species.



Once I began to look closely, all sorts of other creatures, from tree slugs, tree spiders, mosses, ferns, lichens and a huge variety of fungi became evident and very absorbing. Tree spiders, particularly, began to interest me, and I saw what might be a demonstration of 'relationships' between these tiny snails and an equally small spider *Metallina* sp. But that has to await further investigation.

During my early attempts to identify species, I had encouraging replies from the CSGBI and the Orkney County Recorder and continued to use the Internet for more detailed information. I soon found another snail and identified it as the **Tree Snail** *Balea heydeni* (*Balea sarsii*). It is smaller than and differently shaped to *C. bidentata* but I was soon able to separate them at several paces (Fig. 3 shows both the Door and the Tree Snails).

During my investigation of the walls, which run around the whole woodland, I found yet another species, the **Pellucid Glass Snail** *Vitrina pellucida* (Fig. 4) which became my favourite, being very small (4-6mm) and lively. Almost immediately after handling, it seemed to race away, looking for protective shelter.

I sometimes brought snails home overnight to photograph in a controlled environment, returning them to their rightful places in the following days. After several visits, I became adept at spotting them, beginning to become familiar with typical positions and growing to 'understand' them. It soon became apparent that many of these snails preferred company (probably hibernating groups) and the shelter of the woodland walls, though others remained alone, even in January, on wet and shaking trees. I found many Door and Tree



Snails in water runnels, oblivious perhaps. Up to the time of writing I have not visited the wood in frozen or snowy conditions. One can tell though that they are at the mercy of the weather, as even in this sheltered woodland, downpours and breezes dislodged many marked ones, even as I watched, though I have yet to find one in the litter.

In early November I found another species, the **Cellar Snail** *Oxychilus cellarius*. Far less numerous in the wood but widespread in Orkney generally – it is likely that this snail is to be found in most gardens in Orkney but it is still relatively tiny at 12mm. There appear to be far less Cellars than, for instance, Pellucid Glass in Binscarth wood.

And then, in late November I found, on a photo, the very tiny, dextrally coiled, **Common Chrysalis Snail** *Lauria cylindracea* (Fig. 5). I investigated more and discovered they are quite prolific but almost invisible. Most are less than 4mm, some only 2mm, far smaller than *Clausilia bidentata*. I was left wondering just how small snails can get, yet *L. cylindracea* seems the most widely recorded mini-snail in Orkney. At the very moment of finishing this essay, I found two more miniature snails in the wood – the **Rotund Disc Snail** *Discus (Gonyodiscus) rotundatus* (Fig. 6) and a single **Hairy Snail** *Trochulus hispidus*. I suspect there are many more of each. The former seems to be quite common in Orkney, having been well reported historically and also in recent years. It has a rather wonderful, exquisite really, dense ribbing.

It appears then, that the woods of Binscarth are teeming with tiny, cryptic, terrestrial snails, particularly *Clausilia bidentata*, *Balea heydeni*, *Vitrina pellucida* and *Lauria cylindracea*, less so *Oxychilus cellarius*, *Discus rotundatus* and *Trochulus hispidus* but they are all very hard to find the first time. Having once located them one will always be able to recognise them. I think it probable that all seven species will be found in most of the suitable places on Orkney Mainland and quite possibly on many of the isles too.

A few recent records for most of the above by Peter Kirby, Richard Preece, Tony Wardaugh, Tom Walker and RAD Cameron are available via the NBN Gateway. There are other, older ones (see Appendix). In summary, I have found and identified seven species, as indicated above. However, available records indicate that at least three other species – which I have yet to find – have been recorded by experts in Binscarth Wood:

**Wall Snail** *Balea perversa*

**Strawberry Snail** *Trochulus striolatus*

**Garlic Snail** *Oxychilus alliarius*

In the gloom of the woodland, even at midday during the winter months (when I began this study), photography was particularly difficult and I had to resort to the use of flash quite often. Generally speaking this is not desirable, as exposure control for the surrounding environment is difficult. However, with this sort of close-up photography and a computer at home, I was able to make other discoveries. For instance, it allows for easier separation of species and for glimpses of the unexpected, which may not be seen by the eye in such poor lighting. My camera, with which I take all my close-ups, is a Panasonic Lumix, an outstanding, yet truly pocketable, compact digital. I have photos of all seven species.

I am particularly grateful to Sydney Gauld at the Biological Records Centre in Kirkwall, and to Dave Musson (County Slug and Snail Recorder) who helped initially with identification. My project is on-going. I will respond to any interest from any quarter.

Derek Mayes, Orphir, email [dejay.emme@yahoo.co.uk](mailto:dejay.emme@yahoo.co.uk)

**Green Tiger Beetles** *Cicindela campestris* were reported from the usual area in Hoy, between 22<sup>nd</sup> April and 19<sup>th</sup> August. There were no records from south of Rackwick.

Many thanks to all contributors:

C & J Booth, L Shields, T Dean, J Branscombe, D Mayes, R & J McCutcheon, L Campbell, S MacKintosh, S Saum, T Thomson, R Andrew. Apologies to anyone missed out.

Species List for 2012	Records	Status
<i>Agabus bipustulatus</i>	1	
<i>Ilybius fuliginosus</i>	1	
<i>Colymbetes fuscus</i>	1	
<i>Dytiscus semisulcatus</i>	1	
<i>Carabus arvensis</i>	2	
<i>Carabus nemoralis</i>	1	
<i>Carabus problematicus</i>	1	
<i>Cychrus caraboides</i>	2	
<i>Cicindela campestris</i>	Green Tiger Beetle	10
<i>Loricera pilicornis</i>	1	
<i>Brosicus cephalotes</i>	2	
<i>Silpha atrata</i>	3	
<i>Nicrophorus humator</i>	2	
<i>Nicrophorus investigator</i>	12	
<i>Olophrum piceum</i>	1	
<i>Staphylinus erythropterus</i>	8	
<i>Creophilus maxillosus</i>	Carrion Beetle	2
<i>Aphodius rufipes</i>	3	
<i>Serica brunnea</i>	Brown Chafer	1
<i>Adalia decempunctata</i>	10-spot Ladybird	2
<i>Plateumaris discolor</i>	2	
<i>Chrysolina intermedia</i>	2	RDB2
<i>Chrysolina staphylaea</i>	1	
<i>Gastrophysa viridula</i>	Green Dock Beetle	12
<i>Lochmaea suturalis</i>	Heather Beetle	4
<i>Galeruca tanacetii</i>	2	
<i>Otiorhynchus sulcatus</i>	Vine Weevil	1

## Beetle report 2012

Brian Ribbands

83 records of 27 species were reported in Orkney in 2012. In contrast to 2011 there was no systematic recording by visiting experts so these are casual records of relatively conspicuous species.

There were no new Orkney species in 2012.

**10-spot Ladybird** *Adalia decempunctata* was the only ladybird reported; there were two records, one of which was in a new island for this species, Hoy. It has been recorded in Orkney every year since 2007.

*Dytiscus semisulcatus* is one of the two species of **Great Diving Beetle** reliably recorded in Orkney. One was found in a dog's water bowl in Stenness in 2012.

The nationally rare *Chrysolina intermedia* was recorded twice in the usual area around Yesnaby.

**Heather Beetle** *Lochmaea suturalis* was abundant in Costa, Evie on 27<sup>th</sup> March and in Rousay on 28<sup>th</sup> April. I found none in Rendall where I had found large numbers in 2011. This species seems to be going through very localised boom and bust cycles here. The most likely explanation would be a host-specific parasite or disease that catches up with the beetle after one year. I am not aware of any definite impact of this beetle on the heather in Orkney but it might be difficult to distinguish from the effects of winter moth and magpie moth. A few heather beetles were reported in Orphir in November before they went into hibernation.

**Green Dock Beetle** *Gastrophysa viridula* was much scarcer than usual early in the season. My first was a pair on 18<sup>th</sup> June; the previous year my first was on 27<sup>th</sup> April and peak numbers were in May and early June. In 2012 my peak count was on 23<sup>rd</sup> August. In most years they are much scarcer by that time of year. It may have been different elsewhere, there were records from Hoy in May. There are still no records of this species in the outer north isles.

Perhaps the strangest record was a **Brown Chafer** *Serica brunnea* which was found among tideline debris on the east side of Glims Holm, far from its usual habitat. They seem to be scarce in Orkney; one was found in Berriedale wood, Hoy, in 2011, which was the first record since 1980.

**Sexton Beetle** *Nicrophorus investigator* was as usual the most frequent beetle species recorded, between 25<sup>th</sup> July and 9<sup>th</sup> September, mostly from moth traps. There were only 2 records of the larger black *N. humator*, both in May.

**Devil's Coach Horse** *Ocypus olens* was not recorded this year but there were several records of its slightly smaller and more colourful relative, *Staphylinus erythropterus*. This has reddish wing-cases and spots formed by patches of yellow hair on the abdomen. It seems to like moorland tracks. The other large rove beetle in Orkney is the **Carriion Beetle** *Creophilus maxillosus*, which has wing-cases marked with patches of white hairs contrasting with a very shiny thorax. It probably eats other carrion eaters rather than feeding directly on carrion but in Orkney I have only found it under stones on the shore close to the high tide line. Another beetle found in similar places is *Broscus cephalotes*. This is a large black beetle with a very distinct 'wasp-waist'. I found both of these species in Birsay this year.

## Appendix: sources and summary of records from past Bulletins

The NBN Gateway shows records collected by some of those named above and below. Much, though not all, of the NBN data is held on the CSGBI data sets. Not all records are old – say 1950 to 1987 – and some recorders were active for a few decades. Michael Kerney, Arthur Wilson Stelfox, JG Evans, Andy Godfrey, M Fogan, Barry Colville, Lord Cranbrook, Adrian Sumner, PJ Spencer, I & W Mainland, ADP van Pewson and Bazil Sansom (and some I may have inadvertently missed) all have Orkney records on data-sets held by the Conchological Society of Great Britain & Ireland: Mollusc (non-marine): 1999 Atlas Dataset for Great Britain and Ireland <http://www.conchsoc.org>

An Index to Field Club Bulletins from 1966 to 1999, in pdf format, may be located by Internet searching for 'Records of Orkney Field Club Bulletins'. The following are some of the Bulletin references to the snails which are the subject of this small study. I could find no records, in Archived Bulletins 1966 - 2012, for any terrestrial molluscs in Binscarth Wood.

Rotund Disc Snail <i>Discus (Gonyodiscus) rotundatus</i> Land Slugs & Snails of Egilsay 1/1968/p3	Pellucid Glass Snail <i>Vitrina pellucida</i> Land Mollusca 2/1969/p3 Land Mollusca of N. Ronaldsay 1/1985/p4 Land Mollusca of Swona 1/1985/p5 Land Slugs & Snails of Egilsay 1/1968/p3
Two-toothed Door Snail <i>Clausilia bidentata</i> Orkney Terrestrial Mollusca Records 1999/p47	Tree Snail <i>Balea heydeni (Balea sarsii)</i> <i>Remains unrecorded in the Bulletin</i>
Common Chrysalis Snail <i>Lauria cylindracea</i> Orkney Terrestrial Mollusca Records 1999/p47 Land Slugs & Snails of Egilsay 1/1968/p3 Land Mollusca of Swona 1/1985/p5 Land Mollusca of N. Ronaldsay 1/1985/p4	Garlic Snail <i>Oxychilus alliaris</i> (Not found by me in Binscarth Wood) Orkney Terrestrial Mollusca Records 1999/p47 Land Slugs & Snails of Egilsay 1/1968/p3 Land Mollusca of Swona 1/1985/p5 Land Mollusca of N. Ronaldsay 1/1985/p4
Cellar Snail <i>Oxychilus cellarius</i> Land Mollusca of N. Ronaldsay 1/1985/p4 Land Slugs & Snails of Egilsay 1/1968/p3	Strawberry Snail <i>Trochulus striolatus</i> (Not found by me in Binscarth Wood) <i>Remains unrecorded in the Bulletin</i>
Wall Snail <i>Balea perversa</i> (Not found by me in Binscarth Wood) <i>Remains unrecorded in the Bulletin</i>	

One record worthy of repeat comes from the 1968 Bulletin.

Mrs Nora F McMillan – when presented with a freshly dead Fieldfare from Westray – found “...a number of small, shiny and rather sticky snails in clusters”. She identifies them as *Vitrina pellucida* and states “...it is frequent in Orkney.” She goes on “...it seems to be the most frequent snail found on birds' plumage, perhaps because it is active in winter and it is unusually sticky”.

I can vouch for the latter observation.



Fig. 1. Two-toothed Door Snail *Clausilia bidentata*. (Derek Mayes)

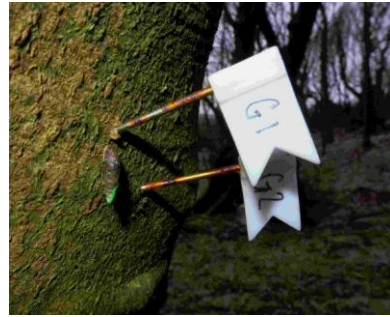


Fig. 2. *C. bidentata* with marker pins. (Derek Mayes)



Fig. 3. Door *C. bidentata* (above) and Tree *Balea heydenii* (*B. sarsii*) Snails. (Derek Mayes)



Fig. 4. Pellucid Glass Snail *Vitrina pellucida*. (Derek Mayes)



Fig 5. Common Chrysalis Snail *Lauria cylindracea*. (Derek Mayes)



Fig. 6. Rotund Disc Snail *Discus rotundatus*. (Derek Mayes)

#### KEY to TABLE on preceding page

B	Breeding Species
n-b	non-breeding species. This includes wandering or dispersing individuals or vagrants, where breeding is not suspected, but also includes records where the species may well be breeding but where breeding has not been proved.
No. 1km Sqs	The first number refers to the number of 1km squares where breeding <u>has</u> been proved; the 2 <sup>nd</sup> number refers to squares where breeding <u>has not</u> been proved.

#### BREEDING SPECIES

Cb = **Golden-ringed Dragonfly** *Cordulegaster boltonii*

Lq = **Four-spotted Chaser** (Dragonfly) *Libellula quadrimaculata*

Aj = **Common Hawker** (Dragonfly) *Aeshna juncea*

Sd = **Black Darter** (Dragonfly) *Sympetrum danae*

Ls = **Emerald Damselfly** *Lestes sponsa*

Ie = **Blue-tailed Damselfly** *Ischnura elegans*

Ec = **Common Blue Damselfly** *Enallagma cyathigerum*

Pn = **Large Red Damselfly** *Pyrrosoma nymphula*

#### NON-BREEDING, VAGRANT SPECIES

Ap = **Lesser Emperor** (Dragonfly) *Anax parthenope* (1 record, Sanday, 2000)

He = **Vagrant Emperor** (Dragonfly) *Hemianax ephippiger* (1 record, Burray, 2011)

I hope that this table will encourage you all to get out in future summers, to check suitable sites on 'your' island, to either add new species or to confirm breeding on sites, where previously, only presence has been recorded.

Confirmation of breeding is accepted if:-

- Females are seen ovipositing (egg-laying). This can involve females on their own, either carefully laying eggs on submerged vegetation, or simply flicking out eggs as they fly, or 'in tandem' with a male, who carries her to an egg-laying site. If males and females are seen in tandem at a site, this would usually mean that the site is a breeding site BUT, some species can fly considerable distances in tandem, away from breeding sites.
- Exuvia. Eggs develop into larvae which eventually 'pupate', similar to butterflies and moths. When development is complete, the larval case splits and the adults crawl out. Carefully searching emergent vegetation often reveals these, empty, translucent cases or exuviae, which of course prove breeding. (These cases are very beautiful and can be kept after they dry out).



Two species were involved:

The **Blue-tailed Damsel** *Ischnura elegans* is the species which I might have predicted, as it has already been recorded from several islands, including as far north as Sanday, and as far back as 1986. However, only a single damsel was seen on the Loch of Burness (HY4248).

On the other hand, the **Common Blue Damsel** *Enallagma cyathigerum* was recorded from three sites. There were just singles on the Loch of St Tredwell on Papay (HY4950) and on the Loch of Saintear on Westray (HY4347) but several damsels were seen on the Loch of Burness (HY4248).

### Breeding Common Hawkers on West Mainland

The **Common Hawker** *Aeshna juncea* is quite a common and widespread breeding species on Hoy. However, away from this island, breeding has only ever been proved at two sites on West Mainland. The first of these was at a large, man-made pond in Stenness, where breeding was first proved in 1997, and occurred again perhaps in one or two seasons thereafter. Sadly, in the last year or two, the water quality of this site has deteriorated and it seems far less attractive to breeding Odonata.

The other site is at Queenamidda, Rendall, where several small pools have been created. The first record at this site was as far back as 1992, and there were subsequent records during a further three seasons up to 2010, when breeding was first proved. It now seems that the pools at this site have become well-established and are proving to be more and more attractive to this species. In 2012, females were witnessed egg-laying at two pools, both different from the 2010 breeding pool. If this site continues to support and rear dragons, it is hoped that further potential breeding pools may become established.

**Table 1 ISLAND by ISLAND DISTRIBUTION OF ODONATA in ORKNEY**

LOCATION	SPECIES									
	Cb	Lq	Aj	Sd	Ls	Ie	Ec	Pn	Ap	He
W. MAINLAND	n-b		B	B		B	B	B		
E. MAINLAND			n-b	B		B	B	B		
BURRAY								n-b		n-b
SOUTH RON'				B		B	B			
SOUTH WALLS						B				
HOY	B	B	B	B	B	B	B	B		
GRAEMSAY						B				
FLOTTA			n-b							
SHAPINSAY			n-b							
PAPA STRONSAY						B				
ROUSAY			n-b	n-b			B	B		
EGILSAY						B	B			
SANDAY						B	n-b		n-b	
EDAY						B				
WESTRAY						n-b	n-b			
PAPA WESTRAY							n-b			
No. 1km Sqs	8, 7	1, 7	43, 27	22, 26	2, 2	41, 18	45, 19	104, 23	0, 1	0, 1

**KEY to TABLE provided on following page**

## Lepidoptera and their natural enemies: understanding moth outbreaks on Heather moorland in Orkney

*Steven Sait & Steven White*

Large areas of Orkney are covered by **Heather** *Calluna vulgaris* moorland, a habitat to be treasured as it becomes increasingly rare in Europe. It has an important socio-economic value, but for many its unique natural history is its most attractive feature. Flagship, charismatic species such as the Hen Harrier bring many visitors, but perhaps less well-known and appreciated are the communities of insects that are also associated with Heather moorlands. In particular, Orkney has some very interesting Lepidoptera, which are currently the focus of a long term study by the University of Leeds and the Centre for Ecology & Hydrology, Wallingford.

The **Winter Moth** *Operophtera brumata* is a long term resident of Orkney and is well-known for causing Heather die-back when the caterpillars reach high abundance in the late spring or summer. The exact timing and location from year to year of these moth outbreaks remain a mystery and this is one of the main questions that we hope to address.

Among the factors that affect the winter moth's patterns in abundance are its natural enemies and our primary interest has been in the parasitic wasps and viral diseases that attack and kill the caterpillars. Parasitoid wasps are an extremely diverse group of insects and are important regulators of their insect prey. Insects, like us, are vulnerable to a suite of diseases and the virus disease, which is found naturally, only infects and kills the caterpillar stage. Indeed, Orkney is one of the few locations in the UK where we can routinely find virus infections in Lepidoptera, which was the original motivation for scientists from Yorkshire and Oxfordshire travelling all the way to Orkney each summer! For a few weeks in May and June we come to collect moth caterpillars on Heather at sites that are scattered across Orkney, including Hoy, the mainland and Rousay. At the end of the field season we take them back to Leeds to monitor their fate; they either successfully develop into moths, they develop into wasps, or they die of virus infections. Thus, we can try and explain how the patterns in abundance of the moths change from one year to the next in terms of the numbers of their natural enemies.

The Winter Moth story changed a few years ago with the arrival and establishment of the **Magpie Moth** *Abraxas grossulariata*. This beautiful moth may have been a summer visitor to Orkney for years, but in 2003 we found very large numbers of caterpillars for the first



**A Winter Moth caterpillar building a characteristic "nest" at the tip of a Heather stem. The nest is often how we first spot it. This species forms its pupa in the relative safety and comfort of the soil, which is perhaps why it is better able to tolerate the weather conditions in Orkney. (Steven Sait and Steven White)**

time. The Magpie Moth's striking black and yellow pupa can be seen clearly on the stems of the Heather. Our first sighting of the caterpillars was on Hoy, but since then the Magpie Moth has spread steadily across Orkney, at least in our sampling sites. If it reaches high numbers it really does cause tremendous damage to the Heather and it may also be a serious competitor for the Winter Moth. Indeed, where Magpie Moth is abundant, Winter Moth has seemingly disappeared. We think the successful establishment of this potential invasive moth may have been facilitated by conditions associated with climate warming. Our limited searches for the moth on the Scottish mainland have only found them along the warmer east and west coasts. Interestingly, its success on Orkney is in stark contrast to mainland UK where the Magpie Moth has undergone a 70% decline in the last 40 or so years<sup>5</sup>.

We are especially interested in the role that natural enemies might play in the success of this invasive species and we have found a high level of virus infection associated with large numbers of Magpie Moth caterpillars. This is what we would expect from our understanding of moth-disease ecology. However, perhaps crucially in this story, parasitic wasps have been entirely absent and so a key factor that might normally limit moth numbers has been lacking on Orkney. This was the case until 2 years ago when, for the first time, we found that significant numbers of Magpie Moth were indeed attacked and killed by these wasps. We think that, together with the virus, they will ultimately bring an end to the damaging outbreaks.



**Healthy Magpie Moth caterpillar. We collect these and wait to see whether they turn into a moth, produce a parasitic wasp or die of virus infection. (Steven Sait & Steven White)**

As well as the natural enemies of these moths, the weather in Orkney seems to be an important factor affecting abundance. The Winter Moth is a sturdy insect and has adapted well to the harsh conditions that are sometimes found this far north. The more recent arrival, the Magpie Moth, is much more sensitive to weather and we have found that numbers appear to be severely dented by harsh winters. Weather and climate also seem to affect the competition between the Winter Moth and Magpie Moth and the latter certainly does not have it all its own way. Higher elevations seem to be safe havens for the Winter Moth, at least for the time being.

<sup>5</sup> Footnote by Sydney Gauld, County Lepidoptera Recorder: The Magpie Moth *Abraxas grossulariata* was first recorded in Orkney in 1981, then occasionally during the rest of the 1980s. Recorded numbers then steadily increased from 1991 to 2000, peaking in 2001 on Hoy. From 2001 they spread steadily across the rest of Orkney. The numbers seen now have eased back considerably, compared to the first half of the 2000s.

## Dragonfly report 2012

Keith Fairclough

### **Emerald Damselfly *Lestes sponsa* breeding on Hoy**

Two years ago, I wrote an article in the OFC Bulletin announcing that the Emerald Damselfly had been recorded on Hoy and that this was a species new to Orkney. Brian Ribbands and Dick Matson had found and photographed a single male in July, on the well-known dragonfly pool by the car park in Rackwick. A September visit revealed at least five males, but no females. There followed a discussion as to the possible explanation for the occurrence: did they emerge from the pool following undetected egg-laying in previous seasons, or did they just wander across from breeding sites in Caithness?

During 2011, the only recorded visit to the site was made by the author on July 20<sup>th</sup>. Although this was at almost exactly the same time as the previous year, the weather throughout early summer had been poor and no damsels were seen. It seems that it was just too early in the season. It was a great disappointment, to neither confirm breeding, nor to even record a presence.

It was with great pleasure therefore, to hear that this year, the two original finders had not only recorded the species again but also that they had confirmed breeding. To cap it all, they did this not only at the Rackwick car park pool (ND203994) but also at the so-called 'Toad ponds' along the Rackwick Road (HY202000). On 18<sup>th</sup> August, in Rackwick, they watched over 20 damsels, with at least three females and two pairs in tandem. On the same date, there were about 20 damsels along the Rackwick Road with at least three females actually egg-laying.

It is perhaps premature to suggest that this species is now well-established on Hoy, but it has already colonised at least two sites, with decent numbers witnessed and with egg-laying to help secure a bright future for the species. Providing nothing adverse happens to the two current breeding pools, there is no reason to doubt that they might flourish here and perhaps expand their range. The preferred breeding ponds are of the acid bog type and are often brackish, as is no doubt the case with the Rackwick pond. There are many such pools on Hoy and this fact, coupled with the species' one year life history, means that a range expansion would certainly be possible, if not expected.

### **The first Odonata records for Westray and Papa Westray**

Andy Riches is the Mammal Recorder for Dumfries and Galloway but has a general interest in wildlife. He has been holidaying in Orkney for the last five years and has consistently supplied interesting records. On 12<sup>th</sup> July, AR visited both Westray and Papa Westray to check out a few sites which looked suitable for breeding damsels. This is obviously not the first time these islands have been looked at. Many naturalists have made many general visits in the past, not least the resident, seasonal RSPB Wardens who have lived on Papay for many summers, and who have also made regular visits to Westray. Admittedly this was to check on the Noup Cliffs Reserve rather than to look for damsels but nevertheless, there has been coverage of the loch systems and previously, no damsels had ever been seen.

Breeding was not proved by AR on any of the three lochs on which damsels were recorded but they are exciting records nevertheless. All of the lochs in question look eminently suitable breeding sites and with the general northward range expansion, which has been witnessed for several Odonata species, it is not too far-fetched to assume that these sites, and others, may be successfully colonised in the not-too-distant future, if indeed they have not supported breeding insects already.





Grey, or Silver, Sedge (Caddis Fly). (E Ross)

#### Acknowledgements

I would like to thank Dr Kirby for his assistance and for kindly forwarding a number of specimens. I would also like to thank Dr R Guthrie, Manager of the SEPA North Ecology Unit and Dr M Nicolson, SEPA Ecologist, for providing SEPA survey data for Orkney. Dr IDM Gunn of CEH kindly provided Orkney RIVPACS data. Thanks also to Dr E Ross of the Natural History Museum, London, for providing the image of *Odontocerum albicorne*. As ever, thanks to Sydney Gauld at the Orkney Biodiversity Records Centre.

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The answers to our questions have yet to be fully determined and understood, due in part to the ever-changing role of natural enemies and climate, but also because it takes a long time and a lot of effort to collect the information. We have been coming to Orkney for about 10 years, but each year only represents a single data point in terms of the numbers of moths and their enemies that we record. We think it will be several more years yet before we start to see consistent patterns emerging in time and Orkney space, but we don't mind. Our field trip to Orkney is a research highlight and a rare opportunity to escape the office. Perhaps more importantly, each year we get to experience and enjoy the unique landscape that is the Orkney Isles, its wildlife and the long summer days.

Dr Steven Sait, University of Leeds.

Dr Steven White, Centre for Ecology & Hydrology, Wallingford.



Adult Magpie Moth on Heather in Orkney. (Brian Ribbands)



## A new hoverfly in Orkney

**Brian Ribbands**

On 15<sup>th</sup> August 2012 at Queenamidda, Rendall, I captured an unfamiliar hoverfly that was sitting on a Devil's-bit Scabious flower. It keyed out as a member of the genus *Chrysotoxum*, none of which had previously been recorded in Orkney. This genus is easily recognised by relatively long forward-projecting antennae. There are eight British species. This specimen had hairy eyes which together with details of the antennae, identified it as *C. arcuatum*, the most likely species, with a mainly northern and western British distribution.

I sent a photograph to Ross Andrew, the Orkney hoverfly recorder, who confirmed my identification. He told me that it has recently been recorded in Caithness. As it was a female I released it in the hope that it might lay eggs. The larvae feed on aphids in ant nests, there are ants nearby but I have no idea whether there are suitable aphids in the nests in Orkney.

On 28<sup>th</sup> August I was very surprised to find it or another female about 200m away from the place where I had released it. I will be looking out for more next summer.



*Chrysotoxum arcuatum* in Rendall, 28 August 2012. (Brian Ribbands)

### *Wormaldia occipitalis*

Tubular bag net-spinning larva, living in small upland burns in the faster water of miniature rapids and waterfalls. Adult forewing length of 6-7mm, uniformly brownish grey. Recorded only from the West Mainland as a larva (Kirby). Adults not attracted to light. Common throughout Britain apart from southeast England and East Anglia. Recorded from Caithness.

### *Tinodes maclachlani*

The gallery building larvae are found on near vertical rock faces covered by thin flowing water films on waterfalls and cliffs, also small burns of bedrock and stone. Likely to be widespread in Orkney and found throughout Britain wherever the preferred habitat occurs, coastal and inland. (I identified this species amongst specimens from Fair Isle). Probably grossly under-recorded. Adult forewing length 6-7mm, not known to be attracted to light. Recorded as an adult from the West Mainland only (Kirby). Not yet recorded from Caithness.

### *Plectrocnemia geniculata*

Net-spinning larvae on the beds of small, fast flowing stony burns. Often locally distributed, mainly a headwater and tributary species. Adults attracted to light, forewing length 11-13mm. Found throughout Britain, apart from south-east England and East Anglia. Recorded only as a larva from the West Mainland (Kirby). Recorded from Caithness.

### *Polycentropus kingi*

Larvae build food catching nets beneath stones. Forewing length 8mm. Adults attracted to light. Recorded as a larva from Swannay Loch (SEPA). Not common but widespread in Britain apart from southeast England, in stony loch shores and the lower reaches of burns. Recorded from Caithness.

### *Crunoecia irrorata*

Recorded as adults from Hoy and West Mainland using sweep net and suction sampler (Kirby). The case-bearing larvae live in trickles and oozes at the margins of burns and springs. Adults not known to be attracted to light, forewing length 6-8mm. A widespread and common species throughout Britain. Not yet recorded from Caithness.

### *Beraeodes minutes*

A tiny case-bearing caddis found amongst exposed roots of emergent vegetation in shallow water at the edges of burns and lochs. Adult with a forewing of 4.5mm. Not known to be attracted to light. Probably under-recorded, however, widespread with one or two records from most parts of the country, "most water authority teams meet it a few times" (Wallace, I.D. 1991). This is the most local of all the caddis newly recorded for Orkney, found as a larva from Durkadale (SEPA). Not recorded from Caithness.

### **Grey, or Silver, Sedge** *Odontocerum albicorne*

The case-bearing larvae live in swiftly flowing stony burns. Adults can be attracted to light, normally a day and early evening flyer. Forewing length 13-18mm, silvery grey when fresh, pale antennae longer than forewing, distinctly toothed under a lens. Adults on the wing from June to October elsewhere in Britain, probably peaking in Orkney in August. A widespread and common species throughout Britain. Recorded as eight adults from five sites (also as a larva from one of these sites) in the West Mainland and Hoy (Kirby), and as larvae from Durkadale (SEPA) and the West Mainland (RIVPACS). This is the most frequently encountered and largest of the newly recorded caddis. It is interesting to note that this conspicuous day flyer has been previously overlooked. Recorded from Caithness.

body cream, three very long tails. Recorded only from Harray Loch (SEPA), common and abundant throughout Britain, recorded from Caithness.

#### Small Dark Olive *Baetis scambus*

Agile darting nymph with three tails, good swimmer in weed. In longer burns with good flow, the smallest of the *Baetis* species. Recorded only from the West Mainland (RIVPACS), recorded from Caithness.

#### Turkey Brown *Paraleptophlebia submarginata*

Labouring swimming nymph, 8-11mm, three tails as *P. cincta*, in fast flowing stony burns. Sub-adults, or duns, with heavily shaded cross-veins in fore wing, adults, or spinners, with clearer wings. Forewing length, 10-13mm. Widely distributed, but never abundant where found. Recorded only from the West Mainland (RIVPACS). Recorded from Caithness.

#### Large Summer Dun/Spinner *Siphonurus lacustris*

Large, agile-darter nymph, three tails, mainly in lochs and slow flowing sections of burns. Large dun/spinner, two tails, almost as large as the **Green Drake** but of different appearance. The dun has greenish-grey wings with dark main veins, the spinner has clear wings with dark veins, the body is olive-brown with variable darker markings. Occurs in scattered locations but often in large numbers where found. Recorded only from the West Mainland (RIVPACS and Kirby). Recorded from Caithness.

#### Caddis Flies (Trichoptera)

Species A+L=adult+ larva	SEPA Lochs 2007>		SEPA 2007>	CEH RIVPACS 2001			Kirby 2011	
	Swannay	Harray	Durkadale Burn	Hoy	West Mainland	Rousay	Hoy	West Mainland
<i>Wormaldia occipitalis</i>								●
<i>Tinodes maclachlani</i>								●A
<i>Plectrocnemia geniculata</i>								●
<i>Polycentropus kingi</i>	●							
<i>Crunoecia irrorata</i>							●A	●A
<i>Beraeodes minutus</i>			●					
<i>Odontocerum albicorne</i>			●		●		●	●A+L

The presence of *Halesus digitatus*, suspected as one larva from Russa Dale in the West Mainland, cannot be confirmed. To date, this species has not been recorded from Orkney, though it does occur in Caithness and may yet be found here.

## The Basking Shark in Orkney waters

Chris Booth

### Introduction

The **Basking Shark** *Cetorhinus maximus* is the world's second largest living fish; it has an extensive distribution being found in temperate and cool seas throughout the globe. It feeds on zooplankton which it collects by filtering water through its gill rakers. Thought to be migratory, the Basking Shark moves into deeper water in the winter months but there is still much to learn about the biology of this species.

In an attempt to find out more about Basking Shark movements some are being tagged off the west coast of Scotland. These tags will then transmit data back via satellite. If the tags become detached they float and may get washed up on a beach; the recovery of a tag could provide even further information.

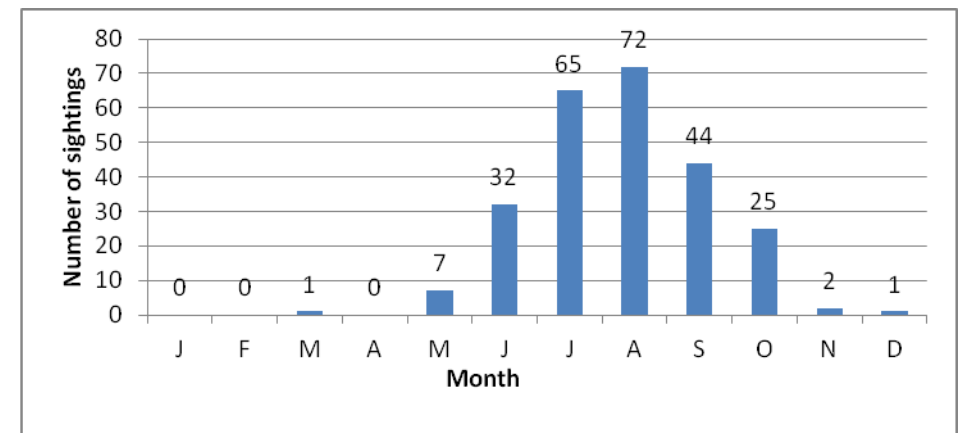
There is some historical information concerning the occurrence of the Basking Shark in Orkney waters. In the 18<sup>th</sup> century Low (1813) stated that the Basking Shark was "The most common species of the larger sharks found in these seas. It is frequently seen in Stromness harbour and other creeks of these isles and in the open seas". In the 19<sup>th</sup> century the position appears to be the same, as Buckley and Harvie-Brown (1891) quote a Mr Moodie-Heddle who wrote that it was a very common species. Anecdotal evidence suggests that it was common until at least the middle of the 20<sup>th</sup> century but there then appears to have been a decline in the next 50 years. An increase has occurred in the last 8 years. The purpose of this paper is to document its present status.

### Methods

Records of sightings, from a variety of sources and from all around the islands, have been kept since 1981. These have been termed 'random' observations to distinguish them from those obtained from regular sea watches, which started in 2005, and are carried out by observers employed by EMEC at locations such as Black Craig, Stromness and Falls of Warness, Eday. Both forms of observation are included in the totals from 2005 to 2011.

### Results

The number of monthly sightings from 1981 to 2011 is shown in the Table below.



There is a very early sighting of a shark on 27<sup>th</sup> March 2010 in the Falls of Warness, Eday but usually Basking Sharks do not begin arriving in Orkney waters until May with numbers increasing throughout June to reach a peak in July and August. Some are still present in September but there is a decline throughout the month and into October. Only 2 have been reported in November and one in December. The latter was seen off Westray on 17<sup>th</sup> December 1992. The majority of sightings have been of single fish but 2 have been seen together on 19 occasions, 3 twice and 5 just once.

A total of 249 sightings was obtained during the study period, 23 of these were noted in the 22 years between 1981 and 2002. The maximum in any one of these years was 5 in 1998 with 3 in 1992 and 1993, while in 9 of the years none were reported. However in the 9 year period from 2003 to 2011 Basking Sharks were recorded annually with a total of 226 sightings. Numbers fluctuated from year to year, varying from 3 to 59, see Table.

Number of sightings annually 2003 to 2011

2003	2004	2005	2006	2007	2008	2009	2010	2011
3	3	14	56	31	30	10	59	20
*3	*3	*11	*34	*18	*18	*8	*25	*6

\* Denotes the number of random observations in each annual total.

The Basking Shark is known to reach a length of 10 metres, but those reported in this study ranged from just over 2 metres to approximately 8 metres.

## Discussion

During the last 20 years of the 20<sup>th</sup> century the Basking Shark was an uncommon visitor to Orkney waters. However, as can be seen from the Table, there has been an obvious increase in sightings since 2005 and it can now be considered, in some years at least, to be a common visitor. Although the rise in sightings coincides with the start of the employment of observers to carry out regular sea watches, at the same time the number of random observations has also increased.

## Threats

A fish the size of a Basking Shark has few natural predators. Attacks from Killer Whales *Orcinus orca* have been reported from some parts of the world but so far none from around Orkney. Although now a protected species under the Wildlife and Countryside Act the Basking Shark is at risk from various human associated activities including:

- o Entanglement in ropes, especially creel ropes
- o Collision with fast moving boats
- o The proposed positioning of wave machines off the west coast of Orkney. As the Basking Shark feeds by cruising along slowly just below the surface of the sea, these machines could disrupt its feeding patterns. In view of the sharks' protected status it is important that measures are taken to prevent this happening.

## Acknowledgements

I am very grateful to all the observers who, over many years, have submitted records of Basking Sharks. Without their help this paper would not have been possible.

## References

- Buckley, TE & Harvie-Brown, JA. 1891. *A Vertebrate Fauna of the Orkney Islands*. Edinburgh
- Low, Rev. G. 1813. *Fauna Orcadensis*. Published and edited by W Leach, Edinburgh

## Mayflies (Ephemeroptera)

Species (A = adult, all others larvae)	SEPA Lochs 2007>		SEPA 2007>	CEH RIVPACS 2001			Kirby 2011	
	Swannay	Harray	Durkadale Burn	Hoy	West Mainland	Rousay	Hoy	West Mainland
<i>Baetis scambus</i>					●			
<i>Caenis rivulorum</i>	●	●			●			
<i>Ephemera danica</i>		●						
<i>Ecdyonurus dispar</i>		●						
<i>Ecdyonurus venosus</i>							●A	
<i>Paraleptophlebia cincta</i>				●	●	●		●
<i>Paraleptophlebia submarginata</i>					●			
<i>Siphonurus lacustris</i>					●			●

### Angler's Curse, White Curse *Caenis rivulorum*

Tiny, silt-crawling nymph, up to 4.5mm, in stony burns. Recorded, probably near an in or outflow, from Swannay and Harray Lochs (SEPA) and from the West Mainland (RIVPACS). Adults swarm in small groups of up to fifty at dawn or dusk. Three tails, duns, or sub-adults, with cream coloured bodies and whitish broad wings. Recorded from Caithness.

### Purple Dun/Spinner *Paraleptophlebia cincta*

Small nymph, laboured swimmer, 7.5mm, three tails at right angles to one another, in fast flowing stony burns. Recorded from Hoy, West Mainland and Rousay (RIVPACS) and from West Mainland (Kirby). Three tails longer than body in adult, pale hindwings. Female of the dun distinctive with pale hindwings and a dark brown/purple body. Common and widespread, recorded from Caithness.

### Autumn Dun/Spinner *Ecdyonurus dispar*

Flat, stone-clinging nymph, 11mm, three tailed, stony loch shores. Recorded only from Harray Loch (SEPA). Adult with brown-olive body, two tails and yellowish grey wings. Common and often abundant where found, recorded from Caithness.

### False, or Late, March Brown *Ecdyonurus venosus*

Nymph as *dispar*, above, but in stony burns. Recorded only from Hoy (Kirby) as an adult. A large mayfly adult with two tails, adults with mottled wings. Common and widespread in preferred habitat, recorded from Caithness.

### Green Drake *Ephemera danica*

A large three tailed nymph, 24mm, bottom-burrowing in silt and sand in lochs and burns. The largest, by far, of the newly recorded mayfly species. The female has a wingspan of up to 48mm. Wings heavily veined with dark patches and transparent in the adult, or spinner,



None of the species has common names in widespread use; anglers' names are given where available. Many, though by no means all, of the newly recorded species are small and inconspicuous as adults. Although Orkney would be expected to have fewer species overall than mainland Scotland, not least because of the absence of rivers, this survey work clearly demonstrates that more species remain to be recorded.

(Records are always welcome, nymphs, larvae and adults should be preserved in alcohol if possible. Isopropyl alcohol – used neat, is available from chemists and should be contained in a tightly stoppered tube or small bottle with the site, date and recorder's details in pencil on an inserted slip of paper).

### Stoneflies (Plecoptera)

Species	SEPA Lochs 2007>		SEPA 2007>	CEH RIVPACS 2001			Kirby 2011	
	Swannay	Hartray	Durkadale Burn	Hoy	West Mainland	Rousay	Hoy	West Mainland
<i>Leuctra moselyi</i>				●			●	
<i>Leuctra geniculata</i>			●					
<i>Protonemura meyeri</i>				●				

#### Needle Fly *Leuctra moselyi*

Recorded only from Hoy to date, as a nymph from RIVPACS and Kirby. From 5-7mm in length, scattered and few localities but abundant where found in small stony burns. Recorded from Caithness.

#### Willow Fly *Leuctra geniculata*

Recorded only from Durkadale to date as a nymph from SEPA monitoring. From 8-11mm in length, common and widespread in the stony beds of large burns. Not recorded from Caithness.

#### Early Brown *Protonemura meyeri*

Recorded only from Hoy as a nymph (RIVPACS). From 5-9mm, common and widespread, in swiftly flowing waters with aquatic mosses. Recorded from Caithness.

### Stalked jellyfish

*Penny Martin*

Stauromedusae are the stalked jellyfishes. Numbering 50 or so species they are the sole living members of the class Staurozoa, and belong to the Medusozoa subphylum of Cnidaria. The term "Medusa" derives from the snake-haired female monster of Greek mythology. Stalked jellyfish (in common with their close relatives the anemones, free-floating jellyfish, quill-like sea pens and corals), use stinging cells within their tentacles to stun or kill prey and as a means of defence against predators. These animals are all cnidarians – which means 'stinging creatures'.

Stalked jellyfish are unusual members of the group as most cnidarians have two phases of their lifecycle; one attached as anemone-like polyps and the other as free-drifting jellyfish. Stalked jellyfish, however, remain attached to seaweed, sea-grass or rocks all their lives. They occur in shallow water near to the shore. These are upside-down jellyfish with their tentacles on the top. Their funnel-shaped bodies grow up to 5cm in height, and have eight webbed arms, each with about 50 tentacles on the ends. The reproductive organs of a stalked jellyfish are at the end of the arms.

The body of the jellyfish is shaped like a tiny funnel made up of eight equally spaced arms joined together by a membrane. Each arm ends in a cluster of tentacles on the funnel rim, and in some genera, between each of these clusters is an extra anchor-shaped tentacle. This animal cannot swim, but it can move by bending over on its stalk and turning "head-over-heels," using the anchor tentacles to fix itself temporarily to the sea bed as it flips over and then reattaches its adhesive disk. Stalked jellyfish can be found attached to seaweed or sea-grass in the intertidal zone and shallow water, where they feed by catching prey, such as small shrimp and fish fry, with their tentacles and passing it to the mouth inside the funnel. Undigested remains are expelled from the mouth.

Sexually mature Stauromedusae free-spawn eggs or sperm which fertilize in the sea and form larvae which are either free-swimming or creeping and which may possess cilia or fine hairs for locomotion. The larvae travel across the sea floor and find a suitable place to attach themselves, typically to rock or algae, where they eventually develop into a new, attached Stauromedusa. The sexes are separate and they are thought to be annuals. In 2012, 3 species were found in Orkney waters.

#### Stalked jellyfish *Haliclystus auricula*

These were seen at a several locations indicating that they are probably quite common but seldom noticed. The body is funnel shaped 2 to 3 cm in height with the stalk being approx half the body length. It has eight equally spaced arms with clumps of tentacles at the tips. Between these are kidney shaped primary tentacles known as "anchors". They can be all shades of yellow, brown and pink.



*Haliclystus auricula*. (Penny Martin)

<u>Location</u>	<u>Date</u>	<u>Location</u>	<u>Date</u>
Birsay	19 <sup>th</sup> May	Stromness	8 <sup>th</sup> June
Sandside, South Ronaldsay	5 <sup>th</sup> August	Halley, Deerness	11 <sup>th</sup> August
Sandside, South Ronaldsay	18 <sup>th</sup> August		

### Stalked jellyfish *Craterolophus convolvulus*

This one is urn-shaped and about 2.5 cm tall with short stalk and wide basal disc; there are 8 short arms with approx 60-80 tentacles in clusters. The gonad halves are evenly lobed on each side seen as 4 “feathers” in oral view.

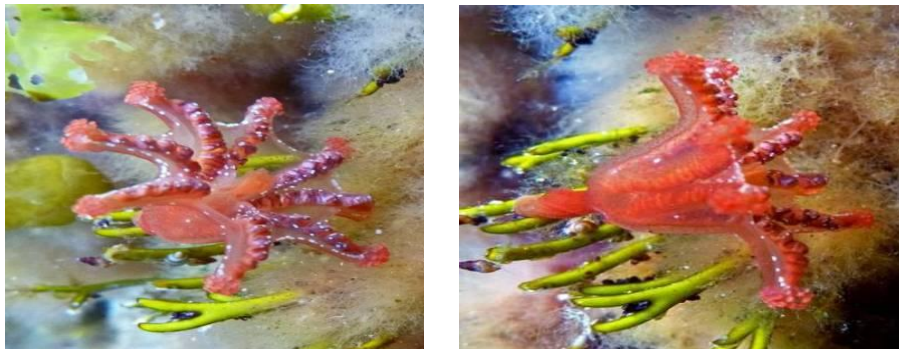


*Craterolophus convolvulus* – views from side and above. (Penny Martin)

<u>Location</u>	<u>Date</u>	<u>Location</u>	<u>Date</u>
Sandside, South Ronaldsay	5 <sup>th</sup> August	Sandside, South Ronaldsay	11 <sup>th</sup> August

### Stalked Jellyfish *Lucernariopsis campanulata*

This has a funnel-shaped bell with a short stalk. The arms are long with up to 45 tentacles, each with a discoid head. Gonad halves extend to arm tips and appear coiled as thick “ropes” with conspicuous bright turquoise spots. These “warts” are where the stinging cells are stored.



*Lucernariopsis campanulata* at the 2nd Barrier in August 2012. (Anne Bignall)

Some of the stalked jellyfish species found in Orkney waters are designated as UK Biodiversity Action Plan Priority Species. This means they are species of principal importance for the purpose of conservation of biodiversity. I believe that stalked jellyfish are more common in Orkney than we think. Please can you look out for them when you are rock pooling or beach combing and if you see any of these delicate creatures, please could you report them to me at: [physiopenny@hotmail.co.uk](mailto:physiopenny@hotmail.co.uk)

### Recent additions to the known Orkney stonefly, mayfly and caddis fly species *R.H. Andrew*

#### Background

The last twelve years have seen detailed survey and continuous monitoring of Orkney freshwaters using macro-invertebrates for the purposes of measuring environmental change (Countryside Survey), running waters classification (River Invertebrates Prediction and Classification, RIVPACS) and environmental quality and post-pollution monitoring (using Biological Monitoring Working Party, BMWP, standards). For stoneflies, mayflies and caddis, this survey work records the immature stages only, nymphs and larvae. The work is undertaken by biologists from the Scottish Environmental Protection Agency (SEPA) and also by them on behalf of the Institute for Freshwater Ecology, now the Centre for Ecology and Hydrology (CEH).

The BMWP standard survey, although broad in scope, does not include identification to species level. However, the SEPA Lochs and fixed monitoring sites does and is repeated twice per year, either in consecutive or alternate years at three sites. The RIVPACS survey work was very detailed to species level and involved three surveys during spring, summer and autumn at ten sites in Hoy, West Mainland and Rousay. The standard technique for these surveys is the three minute kick sample, usually at a riffle in running water, vigorously disturbing the stream bed with the heel of the foot and collecting the dislodged invertebrates carried by the current into an open, standard pattern water net. In addition to sampling a range of macro-invertebrates, this technique also records numbers found, giving an indication of relative abundance over time.

Most recently, Dr Peter Kirby, a consultant entomologist, was contracted to carry out entomological survey work, including thirteen freshwater sites, during July 2011 on behalf of the Scapa Flow Landscape Partnership project. (For details of the survey, sites, methods etc., see Kirby, 2012). Dr Kirby’s survey work includes nymphs, larvae and adults. In addition to the three minute kick sampling for immature stages and sweeping for adults, previously untried methods for Orkney such as window traps (a low flight intercept trap) and suction samplers were used. The suction sampler used along loch and burn margins appears particularly useful for the smaller adult insects unlikely to be found otherwise.

Amongst a wealth of new freshwater macro-invertebrate records resulting from all of this survey and monitoring work, three additional stonefly species, eight mayfly species and seven caddis fly species have been recorded. As a result of the survey and continuing monitoring programme, freshwater macro-invertebrates as an entirety from lochs and burns must now be some of the best known of any habitat in Orkney. Prior to my own caddis survey of 1986-87 (Andrew, 1992) which was for adults using light traps and Malaise traps and occasional stonefly (Andrew, 1988) and mayfly (Andrew, 2001) new records, the major published freshwater survey for stonefly and mayfly was undertaken in 1969 (Kellock and Maitland, 1969). Caddis recording was undertaken by Mr JD Walker and a species list published in The Natural History of Orkney (Berry, 1985), which also included the species list from Kellock and Maitland.

I have summarised the various SEPA, RIVPACS and Kirby findings for additional species by year and broad distribution in three tables. (Details of the individual biological records for all the species can, or will shortly, be found at the website of the National Biodiversity Network or from the Orkney Biodiversity Records Centre, by request).





Fig. 1. Purple Stinger Jellyfish *Pelagia noctiluca*. (Anne Bignall)



Fig. 2. Blue Jellyfish *Cyanea lamarckii*. (Penny Martin)



Fig. 3. *Halcampa chrysanthellum*. (Rachel Shucksmith)



Fig. 4. Cross Jellyfish *Cosmetira pilosella*. (Penny Martin)



Fig. 5. *Cerianthus lloydii*. (Penny Martin)

## Ferns in the town *John Crossley*

Ferns do not care whether their habitat is natural or man-made. Mortared stone walls, especially if damp and shaded, can provide good conditions where several species can grow, if not thrive. Probably they get too dry at times to support luxuriant plants. Seven species have so far been recorded in Kirkwall and close by, mostly by Hugo Shearer, who has been updating them in 2012. There are likely to be more sites and possibly other species. Stromness must have its fern flora too, but there are very few records from there. A nice little project for pleasant autumn or early winter weather.

**Hart's-tongue** *Asplenium scolopendrium*. Though 'Locally Scarce'<sup>6</sup> in Orkney this is one of the more frequent species on walls, being found in New Scapa Road and at the OIC car parks behind Scott & Miller's and King Street. It also occurs at two places on Hatston Industrial Estate, in a wartime bunker at Crow Ness and on a wall near J & W Taits' hangar (where there are many plants growing quite luxuriantly).



Hart's-tongue *Asplenium scolopendrium*. (Eric Meek)

**Lady-fern** *Athyrium filix-femina*. Bridge Street Wynd and the Willows.

**Borrer's Male-fern** *Dryopteris borreri*. Possibly 'Locally Scarce', but probably under-recorded due to difficulty of identification. Found on the same wall as Hart's-tongue in Hatston, and new for the area in 2012.

**Broad Buckler-fern** *Dryopteris dilatata*. Willowburn and Main Street.

**Male-fern** *Dryopteris filix-mas*. The Strynd and among stones on the harbour front.

**Wall-rue** *Asplenium ruta-muraria* and **Maidenhair Fern** *Asplenium trichomanes*. I am cheating by including these two in the Kirkwall area, as they occur outside the town at Scapa Distillery. But they do grow on a wall, on the north-east side of the distillery. These species are happier in drier conditions than the others. Wall-rue is 'Locally Scarce'.

<sup>6</sup> Locally Scarce: found at not more than 15 sites in Orkney since 1970



## Curved Sedge in Orkney

John Crossley

Scottish Primrose *Primula scotica* may be the iconic plant species for Orkney, but there are others in the county with nationally important populations. Curved Sedge *Carex maritima* is one, although unfortunately its appearance is much less appealing than that of *P. scotica*: renowned local botanist Elaine Bullard used to liken it to a rabbit dropping. Nondescript and inconspicuous it may be, but there is excitement to be had from searching for it and finally coming upon it in its distinctive habitat – damp, sandy turf by the sea.

Curved Sedge is Nationally Scarce, Red Data Book ‘Endangered’ and a UK Biodiversity Action Plan Priority species. According to the ‘New Atlas’ (2002)<sup>7</sup>, it was recorded in just 22 different 10 km grid squares in the British Isles, entirely round Scottish coasts, between the years 1987 and 1999 (compare 24 for *P. scotica*). Nine of these were in Orkney. Historically it occurred in as many as 83 such squares in the British Isles and 15 in Orkney,



**Curved Sedge. Note curved stem. Fruits are yellowish in spring but soon become dark brown. (John Crossley)**

and it is thought that the difference partly represents real decline, partly under-recording. In view of such significance and the uncertainty about status, great efforts have been made in the last 10 years or so, by many people, to re-visit all the historical sites in Orkney and arrive at a true picture of its distribution.

The map below shows occurrence historically recorded in a total of 14 different 10 km squares, now reduced to nine. One post-1999 square (in Sanday) has two sites, making a current total of 10

recorded sites. All the apparently lost sites have been well searched since 2000, and many of them in earlier years. Some of the last known sightings at these sites were long ago, in the 19<sup>th</sup> Century, others were as late as 1979. It is almost certain that the species is gone from these places, but small populations are hard to spot and it may yet turn up at one or more of them.

The decline may be attributed mainly to long-term habitat change. Curved Sedge thrives in active dune environments, where accretion, erosion and stabilisation are continual processes, finding its particular niche around the edges of wet dune hollows and in damp sand plains (‘links’ in Orkney, ‘machair’ in the Western Isles). Here it may thrive in short, often sparse, turf, and occasionally be abundant, as at Linklet Bay in North Ronaldsay. But most dune and links systems are not as active at present as in the past. With less natural disturbance, dune grassland becomes longer and thicker, suppressing the Curved Sedge plants. These become more scattered, and any concentrations confined to the most favourable remaining areas. Such small populations are then vulnerable to changes in management, such as the use of links as cattle feeding areas in winter, or they may simply die out without any such assistance. Two small colonies in Stronsay are examples of this: one, at Loch of Matpow, last recorded in 1979, appears to have died out; another survives at

## Anemones

There are many sea anemones in Orkney waters so I will not list all the dates of sightings as they seem to be present every time we dive or snorkel. They are not mobile but it is not always easy to see if they are present all year round. Some seem to get covered by silt, sediment and sand at times. I will list the main species and where they were seen:

### Dahlia and horseman anemones *Urticina felina* and *U. eques*

3 <sup>rd</sup> Barrier	200+	Halley	200+
4 <sup>th</sup> Barrier	20+	Eve’s Bay, Deerness	50+
Skaill Bay	10+	Evie Bay	Few
Houton	Few		

### Beadlet Anemone *Actinia equina*

Very common on most rocky shores. Mainly red, orange and pink but the much less usual, green-coloured ones were seen at The Round Church Bay, Orphir and Sandside Bay, Deerness.

### Snakeslocks Anemone *Anemonia viridis*

I have only seen these in Finstown Bay.

### Plumose Anemones *Metridium senile*

Very common at all the barriers and on the wrecks and blockships.

### Elegant Anemones *Sagartia elegans*

Seen at 3<sup>rd</sup> Barrier and on fishing pontoon off 3<sup>rd</sup> Barrier.

**Tube-dwelling anemones** or cerianthids look very similar to sea anemones but belong to an entirely different subclass of anthozoans. They are solitary, living buried in soft sediments. Tube anemones live and can withdraw into tubes made of a fibrous material, which is made from sediment-encrusted secreted mucus. Cerianthids have a crown of tentacles that consists of two whorls of distinctly different sized tentacles. The outer whorl consists of large tentacles that extend outwards. These tentacles taper to points and are mostly used in food capture and defence. The smaller inner tentacles are held more erect than the larger lateral tentacles and are used for food manipulation and ingestion.

### *Cerianthus lloydii* (Figure 5.)

These have been seen in Swanbister Bay and in the sand at 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Barriers.

### *Halcampa chrysanthellum* (Figure 3)

This tiny 5 mm anemone was seen in Tingwall in eel-grass and maerl beds by Rachel Shucksmith on Jan 5<sup>th</sup> 2013.

### Cloak anemone *Adamsia carciniopados*

This is an anemone that lives only on hermit crabs as a “cloak” around the shell. Seen on Seasearch dives in Scapa Flow, 24/25 November and 8/9 December.

## Soft Corals

### Devonshire cup coral *Coryophyllia smithii*

On Seasearch dives in Scapa Flow 24/25 November and 8/9 December .

### Dead Man’s fingers *Alcyonium digitatum*

Very common on all the Barriers, on pontoons and on probably all the wrecks in Scapa Flow.

<sup>7</sup> Preston, CD, Pearman, DA & Dines, TD. 2002. *New Atlas of the British and Irish Flora*. OUP.

## Cnidaria report 2012

Penny Martin

Cnidaria (pronounced nid-AIR-ee-ah) are a Phylum comprising jellyfish, anemones, sea pens, corals and hydroids. They are classified into four main groups: the almost wholly sessile Anthozoa (sea anemones, corals, sea pens), swimming Scyphozoa (jellyfish); Cubozoa (box jellies); and Hydrozoa, a diverse group that includes all the freshwater cnidarians as well as many marine forms, and has both sessile members such as *Hydra* and colonial swimmers such as the Portuguese Man o' War. They are distinguished by using stinging cells called cnidae for defence and to capture prey.

2012 has been a very different year than 2011 for Cnidaria sightings.

I have seen thousands of jellyfish and hydromedusa in Orkney waters in the past year, but I think this is only a fraction of what is there. The sightings are limited to where I have been snorkelling and I suspect that there are many more jellyfish throughout Orkney waters that are not seen or recorded.

### Sightings

The most numerous species of true jellyfish sighted this year was the **Moon Jellyfish** *Aurelia aurita*. Thousands were seen between March and end of May in Finstown Bay, at all the Barriers and in Scapa Flow at The Lash. These started off very small approx. 1 cm in diameter and over the next few weeks I saw them increasing in size to approx. 20 cm in diameter but then I saw none after June.

#### **Blue Jellyfish** *Cyanea lamarckii* (Figure 2.)

Two were seen this year, both alive, at The Lash and 3<sup>rd</sup> Barrier in June and July.

#### **Mauve Stinger** *Pelagia noctiluca* (Figure 1.)

Hundreds seen in Scapa Flow and Stromness Harbour between 10<sup>th</sup> and 28<sup>th</sup> Oct. Several people were reported to have been stung by them.

Many hydromedusae were seen, often turning the sea into “jellyfish soup” with thousands of them “swimming” around in several different areas. These included **Cross Jellyfish** *Cosmetira pilosella* (Figure 4.) sized between approx. 2 and 10 cm, thousands seen at The Lash and all the Barriers, in May and June.

*Clytia hemisphaerica* is very translucent and nearly impossible to take photos of. Seen at the Barriers, The Lash and in the waters around Deerness in April through to June.

**Clapper hydromedusa** *Sarsia tubulosa* were seen in their hundreds in April and May around the Barriers and around Deerness. These are fascinating hydromedusa shaped like bells with distinct “clappers”.

#### **Brain Jellyfish** *Leuckartiara octona*

A few were seen in Orphir in March and at the 2<sup>nd</sup> Barrier in May.

#### **Crystal Jelly** *Aequorea vitrina*

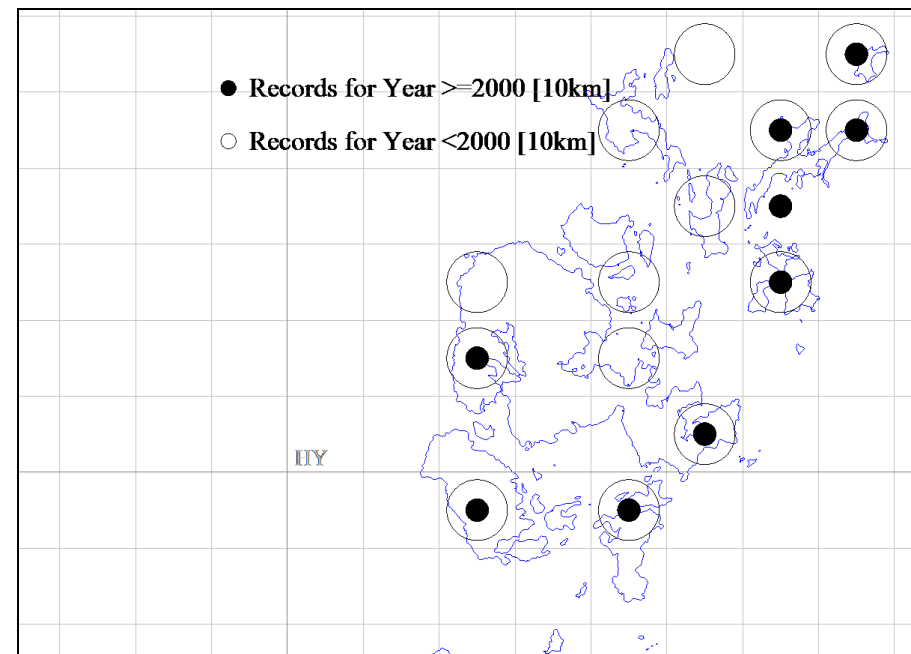
Single one was seen at 2<sup>nd</sup> Barrier on 18<sup>th</sup> August.

#### **Sea Gooseberry** *Pleurobrachia pileus*

Seen in Waulkmill Bay on 26<sup>th</sup> May.

Gricey Water but is confined to an area of 20 x 4 metres. Some of the remaining populations are small and the prospects for some of them are not good. However, there are strong populations remaining, especially in Sanday and North Ronaldsay, and the one at Bu Links in Burray appears to be thriving in some areas previously disturbed by sand quarrying.

If anyone wants details about sites for this rare plant I will happily provide these. Contact details are at the end of this Bulletin. I am also intending to produce a summary of rare plants and previously recorded sites where they have not been seen in recent years, which will also be freely available.



Curved Sedge distribution by 10 km grid square, pre-2000, and 2000 to present.



## Bryophyte report 2012

Rosemary McCance

The year started well, thanks again to funding from the Scapa Flow Landscape Partnership, when Nick Hodgetts ran another successful three days course in March. Sites visited included Banks Head, South Ronaldsay; Binscarth wood; Hill of Heddle; Waulkmill Bay and a return visit to the Burn of Lushan.

In order to provide data for the forthcoming new Atlas, recording was needed in some under-recorded hectads. In April Julian Branscombe provided a good list from Eday. In June John Crossley and I visited Stronsay where we recorded *Bryum pallescens* beneath a dripping corrugated iron roof. Nick Hodgetts had shown us this moss in exactly the same type of habitat in the middle of Kirkwall. John also had a good record of *Leucobryum glaucum*. Then we had a very wet visit to Westray in July. The bryophytes looked very good in the rain, unlike the recorders!

Andrew Upton sent me a list from Fara including two excellent records, one again of *Leucobryum glaucum* and another of *Sphagnum fuscum*.



*Sphagnum fuscum*. (Andrew Upton)

## New Orkney records

*Fissidens exilis* - a moss, Binscarth wood

*Weissia rutilans* - a moss, Hill of Heddle

HY6928722438, 11/07/12 (ERM). One plant only. This appears to be where the species was first recorded in Orkney in 1971 and subsequently seen in 1992, but some 200m from the site of a 2006 record. A thorough search of the area is needed to ascertain the extent of this population of one of Orkney's rarest plants.

**Water Figwort** *Scrophularia auriculata*, near Muce, Birsay, HY24162391, 18/07/12. Native to British Isles but not in Orkney. Rare in Orkney. Self-seeded in wet grassland from nearby garden (JM conf. JEC). New for 10 km square.

**Field Madder** *Sherardia arvensis* (Locally Rare), Brodgar RSPB Reserve, Stenness, HY294135, undated 2012 (MM). Update for 10 km square.

**Field Woundwort** *Stachys arvensis* (Locally Rare), Voy, Sandwick, HY259153, 10/10/12 (ERM). At least two plants in potato field, the first record since 1984.

**Annual Sea-blite** *Suaeda maritima* (Locally Scarce), Garson shore, Stromness, HY258092, undated 2012 (MM). New for 10 km square.

**Alpine Meadow-rue** *Thalictrum alpinum*, Ward Hill Cliffs SSSI, South Ronaldsay, ND46718878, 20/09/12 (TD). First record for linked South Isles.

**Brooklime** *Veronica beccabunga*, South Walls, three separate sites in ND38, June and July 2012 (ERM). Updates for 10 km square.



Field Madder. (Eric and Aileen Meek)



Field Woundwort. (Eric and Aileen Meek)

Many thanks to all contributors:

Chris Booth; Tim Dean (TD); Barry Jones; Theo Loizou; Rosemary McCance; Eric Meek (ERM); John Moar (JM); Martin Moncrieff (MM); Sandy Payne (SP); Richard Poppleton (RP); Brian Ribbands (JBR); Hugo Shearer (HS); Andrew Upton (AU).





**Holy Grass. (Eric and Aileen Meek)**

**Holy Grass** *Hierochloa odorata* (Nationally Rare<sup>13</sup>), southwest shore of Loch of Isbister, Birsay, HY2539723392, 03/08/12 (JEC). A fifth Orkney site. New for 10 km square.

**Creeping Soft-grass** *Holcus mollis*, Old Plantation, Flotta, ND348947, 22/08/2012 (ERM). New for 10 km square and island.

**Dwarf Juniper** *Juniperus communis* ssp. *nana*, near the Manse, South Walls, ND302905, 12/06/12 (ERM). New site, and update for 10 km square.

**Greater Bird's-foot Trefoil** *Lotus pedunculatus*, South Walls, ND38E, 30/08/12 (ERM). Update for 10 km square.

**Ray's Knotgrass** *Polygonum oxyspermum* ssp. *raii* (Locally Rare), Birsay Bay, HY247277, undated 2012 (ERM). Recently recorded at this its only site in Orkney but now confirmed as the sub-species *raii*, the usual one in the British Isles (it could have been the Scandinavian sub-species *oxyspermum*).

**Hard Shield-fern** *Polystichum aculeatum* (Locally Rare), Woodwick House, Evie, HY390240, 11/10/12 (JBR). Presumably introduced at this site. New for 10 km square.

**Scottish Primrose** *Primula scotica* (Nationally Scarce, Endemic), Faraclett Head, Rousay, HY4443533493, 13/09/2007 (SP). Site re-visited in 2012 (JEC). This may be the 'lost' Faraclett Head site recorded in 1992 but not since re-found. The original grid reference for this site seemed a little odd and may have been incorrect.

**Allseed** *Radiola linoides* (RDB 'Near-threatened')

1. Quendal, Rousay, HY33R, 09/08/12 (JEC). New site in recent 10 km square.
2. Faraclett Head, Rousay, HY4433, 18/07/12 (JEC). New for 10 km square.

**Northern Yellow-cress** *Rorippa islandica* (Nationally Scarce)

1. The Loons, Birsay, HY2524, 29/07/12 (JEC). New for 10 km square
2. Brings, Rousay, HY38573406, 19/07/12 (JEC). New for 10 km square
3. Gairsay, HY42K and HY4422, 14/07/12 (Local BSBI group). New for island (not for 10 km square)

**Brookweed** *Samolus valerandi* (Locally Rare), near Geo of Gessan, Cleat, Stronsay,



**Ray's Knotgrass. (Eric and Aileen Meek)**



**Northern Yellow-cress. (Eric and Aileen Meek)**

## Plant records 2012

*John Crossley*

### Local field meetings

Local BSBI members had three meetings in 2012, at Enegars and Meadow of the Kame in Hoy; in Gairsay; and at Aith Hope, South Walls.



**Starry Saxifrage. (Eric and Aileen Meek)**

In Hoy, the main aims were to see **Starry Saxifrage** *Saxifraga stellaris* in flower at its only known location in Orkney and to generally record plants in the gullies and cliffs of Enegars and in the Meadow below. We located a few plants of the saxifrage but thought we were missing more: sure enough, Barry Jones located several larger groups a few days later. Nearby were scattered plants of **Purple Saxifrage** *Saxifraga oppositifolia* (Locally Scarce<sup>8</sup>), no longer in flower, and in one of the gullies an abundance of **Wilson's Filmy-fern** *Hymenophyllum wilsonii* (Nationally Scarce<sup>9</sup>). The Meadow (actually mainly fen and bog) together with free-draining grassy slopes by the sea proved less rich in plant species than expected but nevertheless yielded 117 species, among them an array of calcicoles including **Wild Thyme** *Thymus polytrichus* ssp. *britannicus* and **Limestone Bedstraw** *Galium sternerii*, as well as a stunning display of **Northern Marsh Orchid** *Dactylorhiza purpurella*.



**Wilson's Filmy-fern. (Eric and Aileen Meek)**

The flora of Gairsay has been well recorded in the past, but it is 13 years since a full species list for the island was recorded. On this occasion we found 152 species, without quite completing a survey of the whole island – a very respectable total. The habitats are very varied for a small island, and include heathland and bog; improved, unimproved, marshy and maritime grasslands; the seashore and a small loch. Some parched calcareous grassland was particularly rich, with **Common Milkwort** *Polygala vulgaris*, **Silver Hair-grass** *Aira caryophyllea* and **Downy Oat-grass** *Avenula pubescens*, whilst **Northern Yellow-cress** *Rorippa islandica* (Nationally Scarce) was found in the almost dried-up loch at Sweyn's Castle.

The visit to Aith Hope was mainly in search of the **Hawkweed** *Hieracium maritimum*, one of the few distinctive species in that very large and complicated genus. This one is uncommon in the British Isles and Aith Hope the only known site for it in Orkney. We counted approximately 100 plants just coming into flower on a steep grassy face of the low cliffs. Another **Hawkweed** nearby was probably *H. scoticum*. The grass **Slender False Brome** *Brachypodium sylvaticum* (Locally Scarce) was growing there too. Another grass, one that is seldom identified in Orkney but probably overlooked, is **Smooth Meadow-grass** *Poa pratensis* sens. strict. It was growing by the parking place on the Ayre.

<sup>8</sup> Locally Scarce: found at not more than 15 sites in Orkney since 1970

<sup>9</sup> Nationally Scarce: found in not more than 100 different 10 km squares in the British Isles (there are 3859 of these grid squares in total) since 1987

<sup>13</sup> Nationally Rare: found in not more than 15 different 10 km squares in the British Isles

## New County records

**Three-cornered Garlic** *Allium triquetrum*, St Margaret's Hope, ND445936, 11/06/2011 (JEC and ERM). Well established and abundant along Pier Road, and elsewhere around the village. Not native – a Mediterranean plant, naturalised in southern British Isles, scarce further north.

**Narrow-leaved Ragwort** *Senecio inaequidens*, Hammars Hill, Evie, HY3855522664, 15/09/2012 (AU), a single well-grown plant on disturbed ground at one of the wind turbine positions. Not native – a South African plant, naturalised in southern England with scattered records further north. Possibly originating here from seed brought in on contractors' equipment.



**Narrow-leaved Ragwort in Evie.  
(Andrew Upton)**

## Other records of note

The following are a selection from the 2000+ species records for 2012.

**Few-flowered Garlic** *Allium paradoxum*, Kingsdale Road, Firth, HY379125, 23/04/12 (ERM). Up-date<sup>10</sup> for site and 10 km square. Not native – an Asian species naturalised throughout the British Isles, rare in Orkney.

**Alpine Bearberry** *Arctostaphylos alpinus* (Nationally Scarce), southwest of Withamo, Rousay, HY41013142, 22/08/12 (JEC). New site in recent<sup>11</sup> 10 km square.

**Sea Aster** *Aster tripolium*, on cliff ledges of Stinkanie Geo, near Sacquoy Head, Rousay, HY38853504, 18/07/12 (JEC). New site, update for 10 km square.

**Frosted Orache** *Atriplex laciniata* (Locally Rare<sup>12</sup>)

1. East side of No. 3 Barrier, Glimps Holm, ND476990, 02/10/12 (ERM). Two plants. New site in recent 10 km square.

2. Tresness, Sanday, HY73E, 26/06/12 (JEC). New for 10 km square.

**Common Orache** *Atriplex patula*, North Ronaldsay HY75, 01/06/12 (RP). New for island and 10 km square.

**Downy Oat-grass** *Avenula pubescens*

1. Quendal, Rousay, HY33R, 09/08/12 (JEC). Update for 10 km square.

2. Meadow of the Kame, Hoy, HY2004, 23/06/12 (Local BSBI group). Update for 10 km square.

**Soft Brome** *Bromus hordeaceus* ssp. *hordeaceus* (Locally Scarce)

1. North Ronaldsay HY75 01/06/12 (RP). New for island and 10 km square.

2. Tresness, Sanday HY73E 26/06/12 (JEC). New for 10 km square.

**Long-bracted Sedge** *Carex extensa* (Locally Scarce), by Isbister chambered cairn, South Ronaldsay, ND47078451 11/12/2012 (JEC). New site within 10 km square.

**Curved Sedge** *Carex maritima* (RDB 'Endangered', Nationally Scarce and UKBAP Priority), east side links (Golf Course), North Ronaldsay, HY767540, 01/06/12 (RP). Locally abundant. Update for island and 10 km square.

**Greater Pond-sedge** *Carex riparia* (Locally Rare), Stove, Sanday, HY610356 27/06/12 (JEC). Locally abundant. A third Orkney site. New for island and 10 km square.

**Cornflower** *Centaurea cyanus* (UKBAP Priority Species and was believed extinct in Orkney), near Aithsdale, South Walls, ND299893, 30/08/12 (ERM). A single plant, not obviously introduced (for instance in a conservation mix). New for 10 km square. Last recorded in 1971 and before that in 1931. Probably was always a casual in Orkney.

**Frog Orchid** *Coeloglossum viride* (RDB 'Vulnerable' and UKBAP Priority Species), Brings, Rousay, HY37713425, 16/08/12 (JEC). Three plants in maritime grassland. New for 10 km square.

**Pignut** *Conopodium majus*, near Gallow Hill, Cross, Sanday, HY66124091, 27/06/12 (JEC). Update for 10 km square and island.

**Northern Marsh Orchid** *Dactylorhiza purpurella* var. *cambrensis*, Telegraph Cottage, Cross, Sanday, HY66124067, 27/06/12 (JEC). The rarely recorded but not uncommon variety of this species with heavily dark-spotted leaves.

**Borrer's Male-fern** *Dryopteris borreeri*, Sparrowhawk Rd, Hatston Industrial Estate, Kirkwall, HY443116, 19/10/12 (HS, det. JBR). New for 10 km square.

**Foula Eyebright** *Euphrasia foulaensis* (Nationally Scarce)

1. Geo of Gessan, Stronsay, HY69342239, 11/07/12 (ERM). Update for island and 10 km square.

2. Kirk Bay, Flotta, ND37149351, 22/08/12 (ERM). New for island and update for 10 km square.

3. Faraclett Head, Rousay, HY4433, 18/07/12 (JEC). Update for 10 km square.

**Slender Eyebright** *Euphrasia micrantha*, House Geo, Flotta, ND37289234, 22/08/12 (ERM). New for island and 10 km square.

**Eyebright hybrid** *Euphrasia foulaensis* x *marshallii*, near burnt mound, Quendal, Rousay, HY36317, 26/07/12 (JEC & TL). Third Orkney record. New for island and 10 km square.

**Dove's-foot Crane's-bill** *Geranium molle* (Locally Scarce), Tresness, Sanday, HY70833828, 26/06/12 (JEC). New for 10 km square.

**Corn Marigold** *Glebionis segetum* (RDB 'Vulnerable', Locally Scarce), Dale, Stronsay, HY651251, 09/09/12 (JEC). New for island and 10 km square.

<sup>10</sup> Update: first record since 1987

<sup>11</sup> Recent: recorded since 1987

<sup>12</sup> Locally rare: found at not more than 3 sites in Orkney since 1970