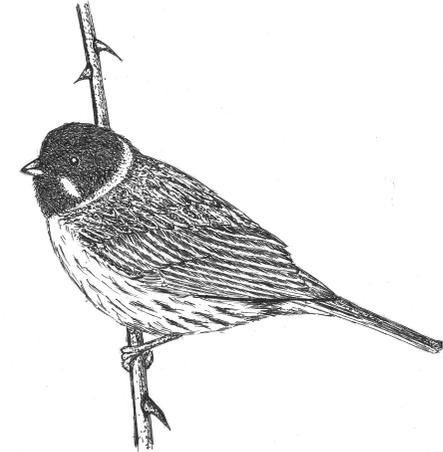

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Reed Bunting

(David Clarke)

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The record warm and dry Spring, lasting until mid July, followed the unusually cold winter of 2009/10, and will have been variously beneficial or harmful to wildlife. Streams, bogs and shallow waters certainly suffered, and presumably some of their flora and fauna: time will reveal more. At least butterflies and some other insects seemed more numerous than usual this spring.

Reports of our field meetings and workshop are rather more extensive than usual, reflecting some notable occasions. One Field Meeting (17th July) had to be cancelled due to poor weather. Post-July meeting reports will appear in the next issue.

The current issue also contains two articles, and it is a pleasure to be able to welcome the two authors as first-time contributors to this journal. I hope this will encourage yet more.

David Clarke, Editor

Additions to the Society's library

Following the death of Richard Little in 2009, his widow Elaine has very kindly donated his notebooks, and various books and journals to the Society. These comprise six notebooks containing moth records 1984-2009; two notebooks containing garden observations for Haresfield, Cumwhitton, February 1986 to August 2009; two ring-files of typed copies of his articles for the *Cumberland News*, plus a folder containing the articles as cuttings from the newspaper; folder containing moth records for local sites. There are also twenty books, which have been added to the Society's library. Many are standard works, especially on butterflies and moths. There are also several useful runs of journals, including Butterfly Conservation newsletters, *Journal of the British Dragonfly Society* and *British Wildlife*. A full list has been compiled by Allen Armsby and the books are included in the updated list of the Society's library available on our website.

Website

The Society's website (www.carlisenats.org.uk) developed by Tristan Reid, is full of useful information, including a members' area with photo galleries, downloadable publications and access to Allen Armsby's bibliography of natural history in Cumbria. Please use the site and let us have your feedback.

Karen and Robin Hodgson have also created a 'Facebook' site for the Society with reports and photos of local wildlife encounters. The pages are at:

<http://www.facebook.com/pages/Carlisle-Natural-History-Society/351267851427>

Museum News

Elements from the dismantled *Freshwater Life* exhibition are now installed in Border Galleries. Over the summer, the *Flower Power* exhibition on wildflower grasslands provided a successful collaboration with Cumbria Wildlife Trust. We are presently in the process of appointing a Manager for the Cumbria Biodiversity Records Centre on a one year contract. This, together with the Data Officer post undertaken by Mathew Grose, will ensure one and a half posts over the coming year, when we hope to develop the Records Centre further, and to negotiate funding arrangements for future years. The Virtual Fauna website (www.lakelandwildlife.co.uk) is being updated and the Cumbria checklists on the site now provide distribution maps of each of 9,000 or so Cumbrian species, provided through links to the NBN Gateway. Much of our data is now available on the NBN Gateway, including some 50,000 records so far extracted from our natural history collections. Thanks again to Geoff Naylor, Dorothy Iveson, Tony Tipling and John Read for their continued work on the collections and wildlife records.

These observations are for the period March to mid-September 2010. As usual, some may be unconfirmed.

Birds

A notable count of *ca.* 35 **Red-throated Divers** was made at Bowness on Solway on April 26th (NF).

A **Spoonbill** was at Campfield on May 26th (PW) and 2 **Little Egrets** at Port Carlisle on August 23rd, followed by 5 on September 9th (CA).

An unusually late observation of **Barnacle Geese** was of 265 migrating north in three flocks over Kershope on May 11th (SW). Two unseasonal **Whooper Swans** were at Rockcliffe on June 11th (GN). A **Green-winged Teal** (the American equivalent of our Teal) was at Campfield on June 3rd (PW) and a male **Garganey** spent twelve days on a pool near Easton in April (CA, NF). A female **Goosander** with ducklings was on the river at Dalston on April 22nd (DH). There was a late **Smew** at Longtown on March 26th (JM).

Raptors included **Red Kites** at Longtown (March 26, JM and May 9th, PW), near Penrith (August 6th, AA) and at Geltsdale (August 18th, JM). **Marsh Harriers** were at Bassenthwaite in April and 4 different individuals were noted at Tindale Tarn in August and early September. Records of **Hobby** in July and August include two together at Foulshaw Moss, August 1st (DJC); **Ospreys** were well-represented, with several birds reported during the spring period April 3rd to May 19th (not including the Bassenthwaite pair), with another in late June and more in August.

Amongst waders, **Whimbrel** were recorded at Longtown and Bowness in spring but were more frequent in autumn in the same areas. The only **Jack Snipe** was at Wedholme on April 19th and an unusual number of **Woodcock** (5) was at Finglandrigg on March 23rd. **Wood Sandpipers** are scarce in spring and single birds were at Longtown on May 9th (NF) and Campfield on May 23rd (TR). Also unusual was an **Avocet** at Wedholme on April 18th (FJM). Good counts of **Black-tailed Godwit** included 44 at Wedholme on April 18th and 34 at North Plain on April 23rd. A **Green Sandpiper** at Low House, Armathwaite on March 20th was at an unusual location (FJR). A trip of of 18 **Dotterel** on Cross Fell, 27th April: pairs were present on two different Lake District fells on 12th and 16th May but neither pair could be refound on later searches (SMH).

There were 3 **Little Gulls** and 15 **Kittiwakes** at Bowness on April 20th (NF). Spring passage of **Skuas** on the Solway was reported on April 26th and May 16th, with totals of 3 **Great**, 16 **Pomarine** and 3 **Arctic** on these dates and an excellent 11 **Long-tailed** on the latter date.

Two pairs of **Puffins** were seen at nest burrows on St. Bees Head on April 8th, but failed to show up for the Society's Field Meeting in June.

There was nothing very exceptional about the arrival dates of most summer visitors. although some early (and late) **Swifts** were noted over Penrith on 30th April (SMH) and Carlisle on April 28th and August 15th (DAI), and **Yellow Wagtails** were observed regularly at Longtown from April 2nd, along with several **White Wagtails** later, from May 15th.

Pied Flycatchers failed to appear at their well-known sites at Talkin Tarn, apart from one late bird that only stayed a few days. There were more normal arrivals of this species at other sites. There also seemed to be a worrying shortage of **Whinchats** and **Tree Pipits**. These shortages were compensated for by more frequent reports of **Grasshopper Warbler** and **Lesser Whitethroat** (8 or more of the latter were singing birds between Burgh by Sands and Mawbray).

An unusual late spring record was of a **Fieldfare** with **Ring Ousels** on May 4th; one was also seen with **Mistle Thrushes** on September 8th - both from Geltsdale (JM). At Cliburn Moss, a party of 8 **Crossbills** on May 4th included 3 juveniles - a good breeding record (CA).

Other good records here and there were a **Hooded Crow** at Hethersgill on March 29th (JM); Green Woodpeckers (now rare in north Cumbria) at Kershope and Geltsdale, and an exceptionally unusual (and early) **Lapland Bunting** near Tindale on August 31st (FJR and others); a juvenile **Black Tern** was at Longtown on September 9th (NF). A **Guillemot** found well inland - at Geltsdale Farm - on 14th September was perhaps one of many casualties of a period of strong westerlies (JM); another was seen on the Eden near Rockcliffe the next day (CA). A **Red-necked Phalarope** (Plate 1) at Carr Beds, Rockcliffe on September 14th-15th may also have been storm-driven (NF).

Mammals

There were several reports of **Mink** in the Dalston area in mid-April (DH) (we receive fewer cards of this species now than in the past). An **Otter** was seen fishing in Bassenthwaite on April 8th (JM).

Butterflies & Moths

So far, there are only 4 separate reports of **Comma** (though these included at least 6 in Geltsdale on 29th July) and 6 of **Painted Lady**. Unusual garden records included **Green Hairstreak** at Cumwhitton on May 21st and **Small Copper** and **Wall** there on August 15th (all DJC). **Holly Blue** was seen in Stanwix on August

4th (DAI) and **Dark Green Fritillary** at Jockey Shield, Geltsdale on June 28th (JM). The last were also reported from Warcop (a new site) on July 3rd (LR). There were **Speckled Woods** in Borrowdale, Fishgarth Wood and Ullswater amongst others, and **Small Skippers** were seen at Geltsdale, Gilsland, Watchtree, Warcop and Wedholme (other than Watchtree, all new sites). Several mating pairs of the very local day-flying **Cistus Forester** moth were found on Rockrose at Hellbeck Intake on 13th June (MS, SMH). **Hummingbird Hawk-moths** were reported at Cumwhitton on August 3rd (DJC) and Dalston on August 15th (DH) and my own garden moth trap (Milton) held a **Galium Carpet** (new to both the site and myself) on August 14th.

Other invertebrates

Amongst dragonflies perhaps the most notable were about a dozen **Black-tailed Skimmers** (Plate 2) at Soddy Gap, Cockermouth from about mid until late June (TR, DJC). **Emperors** were once again widely reported, and small numbers of **Migrant Hawkers** were at various Solway sites in early/mid September (DJC), and near Levens (IB). A **Glow-worm** beetle larva was seen at Cliburn Moss on May 27th (CA). There were more than usual records of the **Bee Fly** (*Bombylius major*) during April - indicating especially good numbers this season. A notable new find was the **solitary bee** *Epeolus cruciger* (Plate 3). This was found at Bowness NR on the 28th August, the first record north of Walney, and the most northerly in the UK of this cleptoparasite of other solitary bees (NF). A very interesting and unusual report was of the long-legged 'cellar spider' *Pholcus phalangioides* thriving in an Appleby house in July. It appears they first arrived there, with human assistance, from Gordonstoun School (LR).

Botanical records

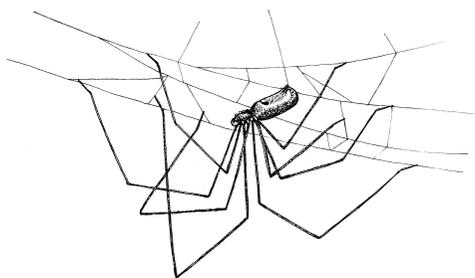
The following is just a selection of finds, most of them new post-*Flora of Cumbria* tetrad and/or hectad records. New sites for ferns included the rarer subspecies of **Maidenhair Spleenwort**, *Asplenium trichomanes* subsp. *trichomanes*, at Lodore, Borrowdale (MSP *et al.*) and **Adder's-tongue Fern** (*Ophioglossum vulgatum*) at Eskett Quarry (MSP). Further investigations of **Tunbridge Filmy-fern** (*Hymenophyllum tunbrigense*) by FJR in the far north of the county have yielded interesting results this year and will be fully reported in future issues. **Common Cudweed** (*Filago vulgaris*) on waste ground near Brampton Station (GRN) was a new hectad, and a fine colony of about 300 plants of the declining **Heath Cudweed** (*Gnaphalium sylvaticum*) was found in a forestry quarry at Burnt Shields, Kershope Bridge (FJR). **Purple Small-reed** (*Calamagrostis canescens*),

not previously recorded from the northwest of the county, was found at Orton Moss Cumbria Wildlife Trust Reserve (FJR), and at Biglands Bog (MSP). Good stands of the very scarce **Water Sedge** (*Carex aquatilis*) were noted at Bowness Bay, Bassenthwaite (DJC). **Northern Deergass** (*Trichophorum cespitosum*), new to Cumbria at Butterburn Flow, will be the subject of a future report (FJR). Amongst orchids are included several high-level records of **Early Purple Orchid** (*Orchis mascula*) – e.g. Harter Fell, Mardale at 565m (FJR); Loo Gill, Hartside at 400m; and Red Beck, Borrowdale at up to 450m (DJC). The latter recorder found this species also present on Greenside Crag, Shap Fells (along with **Bird’s-eye Primrose** (*Primula farinosa*) in some quantity). Other orchid discoveries were: **Pyramidal Orchid** (*Anacamptis pyramidalis*), Rowrah Quarry and **Bee Orchid** (*Ophrys apifera*) at Eskett Quarry (MSP).

Recorders:

Allen Armsby (AA); Colin Auld (CA); Ian Brodie (IB); David Clarke (DJC); Nick Franklin (NF); David Hickson (DH); Stephen Hewitt (SMH); Dorothy Iveson (DAI); Brian Jeffrey (BJ); Frank Mawby (FJM); John Miles (JM); Geoff Naylor (GN); Mike Porter (MSP); Tristan Reid (TR); Jeremy Roberts (FJR); Linda Robinson (LR); Mike Smith (MS); Peter Wilson.

Geoff Naylor



Pholcus phalangioides

(David Clarke)

14th May: Greystoke Forest bat boxes

Leader: Robin Hodgson

An encouragingly large number of members met at Millfield Lodge to check the bat boxes in Greystoke Forest. The boxes, of traditional wooden design, had been placed there by the Cumberland Bat Group many years ago and are checked twice yearly.

The boxes are situated in a small group, facing all aspects, and are attached to pines. Although most of the boxes were empty, one contained a single male Natterer’s Bat, whilst box 27 held at least twenty-five Natterer’s Bats. On examination, the vast majority proved to be females. This pattern follows on from previous years and suggests that the bats are using the boxes as nursery sites. (It was too early in the season for young to be present). The members were shown a bat in the hand by our licensed bat-worker (RH!) – a photo by Tristan Reid is viewable on the CNHS Facebook website.

In previous years the boxes have held Noctules, Pipistrelles and Brown Long-eared Bats but the greater majority of inhabitants have always been Natterer’s. This species has recently been shown to have a habitat association with conifer woodland, although do occur in other areas.

Whilst checking the boxes, an anxious Chiffchaff led to the finding by Frank Mawby of the well-concealed nest which contained eggs. As we approached an owl box in the area an adult Tawny Owl flew out and subsequent checking of the box by Frank showed the nest contained one young bird.

As dusk approached we headed back to the cars, dodging the midges, but enjoying the pleasant evening.

Robin Hodgson

22nd May: Gaitbarrows NNR

Leader: Steve Doyle

This meeting, timed to perfection by Steve Doyle to coincide with the peak flight period of Duke of Burgundy butterflies, was blessed with a perfect sunny day. Steve led us directly toward the first clearing where everyone was able to see and photograph the main target of the day with deceptive ease. Other butterflies were also flying with Brimstone, Pearl-bordered Fritillary, Dingy Skipper and Speckled Wood all showing well. A Four-spot Chaser dragonfly was patrolling the clearing as well. Returning to the barn area where we had parked, we were able to admire the Lady’s-slipper Orchids that have been planted by Natural England and an early Northern Brown Argus butterfly put in an appearance. On the broken limestone ground the uncommon micro-moth *Pyraustra cingulata* was flitting about the thin vegetation. A cockchafer beetle buzzed by and several beautiful green Rose Chafer beetles (*Cetonia aurata*) were also seen.

Moving out onto the limestone pavement we were able to admire the special flora of the grikes, including Lily-of-the-Valley, Angular Solomon's Seal and Dark-red Helleborine. Completing a circuit of the Nature Reserve, Steve explained the management work that Natural England with volunteer help from Butterfly Conservation members, have been undertaking to create suitable habitat for the various special butterflies found on the site. Along the rides, we encountered Orange Tips and the beefly *Bombylius major* hovering and nectaring at flowers. We were also pleased to find another speciality of the Morecambe Bay limestone – the very pretty, black and white, poker-dot micro-moth *Anania funebris*, which, although it gave good views, proved to be rather camera shy. Finally returning by some large Red Wood Ant nests we found the spotted leaf beetle *Clytra quadripunctata* which is most often found in the vicinity of wood ant nests in which its larvae develop.

Stephen Hewitt

5th June: Nenthead & Alston Leaders: Jeremy Roberts/David Clarke

Eighteen members and a small fleet of cars started from the Nenthead Mine car park. Here Jeremy explained that naturally occurring heavy metal, especially lead, had been exploited by man, creating extensive secondary deposits as mine spoil and metal-rich river gravels. This in turn had provided challenging habitats that certain 'tolerant' plants could colonise without the usual competition for open ground, perhaps after already being present as comparatively rare natives. The presence of limestone makes for base-rich ground in places, and thus a further factor determining the range of species. The expression 'calaminarian grassland' is used by ecologists to denote these unusual habitats, the name deriving from one of the names for an ore of zinc.

Without venturing more than a few steps we were able to see good examples of four of the more constant members of the suite of flowers especially typical of these situations: Mountain Pansy (*Viola lutea*), Spring Sandwort (*Minuartia verna*), Pyrenean Scurvygrass (*Cochlearia pyrenaica*) and Alpine Penny-cress (*Thlaspi caerulescens*). All but the first are nationally scarce, with the North Pennines as their main centre of distribution. Moving down beside the river Nent, a particularly floriferous mixture of these scarce species was seen. The 'ground cover' over the some of the more mineralised ground was often provided by 'lower plants' – especially sheets of the moss *Weissia controversa* and *Cladonia* lichens such as *C. portentosa* and *C. rangiformis*, and *Peltigera* spp. Upstream of the bridge, the banks had some good growths of Lesser Clubmoss (*Selaginella selaginoides*), a plant more often seen in base-rich flushes – perhaps indicating

limestone influences in the soils here.

The stream bank at one point had a strong Sand Martin colony – with at least 35 nest-holes and the pool in the woodland just above the stream produced one or two Large Red Damselflies and attractive growths of the bright yellow 'earth-tongue' fungi *Mitruha paludosa* on rotting vegetation at the waters edge.

After this we took the Dowgang Hush road over to the lower slopes of Flinty Fell, stopping where roadside mine-spoil provided a further range of species. Moonwort (*Botrychium lunaria*), also seen at the previous site, was notable here, with some spectacularly large plants beside the road. On the spoil we soon found the fern-relative Fir Clubmoss (*Huperzia selago*) and eventually in one place its scarcer relative Alpine Clubmoss (*Diphasiastrum alpinum*), some in fruiting condition. The latter was close to a small pool with floating leaves of the pondweed *Potamogeton natans*. Palmate Newts were active and dragonfly larvae (later confirmed by the writer as Common Hawker) were clearly seen on the pondweed stems. Again, metal-tolerant lichens were present, including nicely fruiting examples of *Stereocaulon dactylophyllum*. Other species thriving in the normally damp upland soils were Melancholy Thistle (*Cirsium heterophyllum*) and three species of horsetail, Water, Marsh and Field (*Equisetum fluviatile*, *palustre* and *arvense* respectively.)

The Bentyfield Mine site beside the Middleton road was then visited. Here another regular component of the mine-waste flora, Thrift (*Armeria maritima*), was flowering in abundance. Leaves of Grass of Parnassus (*Parnassia palustris*) were showing over much of the site. A strong bush of the rather local Tea-leaved Willow (*Salix phylicifolia*) showed strange de-barking at mid height – suggesting that winter snow may have provided a 'nibbling platform' for small mammals. Eagle-eyed Bryophyte expert Rod Corner pointed out the tiny moss *Tetraplodon mnioides*, which has the unusual substrate preference of carnivore dung!

With numbers a little depleted, our final port of call was the Northumberland Wildlife Trust's Reserve at Williamston, near Slaggyford. Here a small but interesting fragment of riverside calaminarian grassland provided more of the characteristic plants, especially some fine drifts of *Viola lutea*. A feature of the site (as of others along the South Tyne) was the Dune Helleborine (*Epipactis dunensis*), of which around 100 developing shoots, not all destined to flower this season, were found under the shade of trees. (Until recently plants such as these ranked as a variety of Narrow-lipped Helleborine: *E. leptochila* var. *dunensis*.) In the pasture were Limestone Bedstraw (*Galium sternerii*), Fairy Flax (*Linum catharticum*) and, at the edges of the terraces above the river, the green dog-lichen lichen *Peltigera leucophlebia*: all species more usually found in limestone

habitats. At the close of the visit, Jeremy led us to see a Common Sandpiper nest in light woodland at the edge of the river.

Other non-botanical encounters during the visits had included Orange-tip and Green-veined White butterflies and Common Frogs at Nenthead, a timber-beetle *Rhagium bifasciatum* at Bentyfield and a varied selection of birds, including regular moorland breeders such as Oystercatcher, Lapwing, Snipe, Curlew, Black-headed Gull and Cuckoo.

David Clarke

19th June: Borrowdale Woods Leaders: Maurice Pankhurst, David Clarke & Stephen Hewitt

This field meeting followed on from a talk on the 'Natural History of the Borrowdale Oakwoods' given by Maurice Pankhurst of the National Trust to CNHS in October 2009. Thirteen members met at Great Wood car park, Borrowdale to spend the first part of day with Maurice, who took us through the nearby woods and along the Derwent Water lakeside.

While still in the car park we made the first observation of the day – a group of several Bird Cherry trees in the car park had been completely defoliated by caterpillars of the Bird Cherry Ermine Moth *Yponomeuta evonymella*. The trees bore the tell-tale white gossamer webs that the caterpillars spin to protect them from predators. Looking in some rolled leaves of Elm, Stephen showed us a nymph of the bug *Anthocoris gallarum-ulmi* that often eats aphids. Seen in a sunlit area nearby were other characteristic woodland insects – the hoverfly *Volucella pellucens* (whose larvae which live on detritus in wasp nests), and a Speckled Wood butterfly, a recent colonist to this part of Cumbria.

Moving on, Maurice gave us a background to the history of the wood, its management and its conservation importance as a high quality example of 'Western Atlantic Oakwood'. The lower section of Great Wood was previously owned by Greenwich Hospital in the 17th and 18th centuries and was later sold to private landowners before it came into National Trust ownership. An area of planted European Larch dates back to Greenwich Hospital times and was probably the first conifer plantation in the UK. Although not a natural part of the woodland here the Larch will be kept because of their historic interest and their use by Red Squirrels, Buzzards and other raptors. Grey Squirrels are found in the wood and are actively culled to aid the survival of the Reds. Dead wood is left in place for conservation reasons and where possible it is left standing so it can be used by Nuthatch, woodpeckers and Tree-creepers. The oaks in this part of the wood are approximately 200 years old and interspersed with other species such as Wych

Elm and Beech. Dutch Elm Disease has wiped out many of the older native Wych Elms (*Ulmus procera*), in Cumbria. The loss of these trees has been particularly significant as they provided important sites for lichens and woodland invertebrates.

Maurice pointed out a mature Beech which had been purposefully pruned. Beech does not occur in the pollen records of this wood but brings in a greater diversity of wildlife, though has to be controlled to prevent harmful effects of shading. This particular specimen was expected to live another 100 years or so. A hollow near the top of the trunk was home to a bat colony. Nearby, a large tree wasps' nest was found at low level amongst the scrub.

We crossed the road and headed towards Derwent Water. Last winter's floods had left a strand line of woody debris high above the normal lake level and amongst the trees. Touch-me-not Balsam (*Impatiens noli-tangere*), the food plant of the rare Netted Carpet moth, was seen to be growing in a new spot here, obviously having been spread by the flood waters. Here we saw the hoverfly *Sphagina sibirica* – a relative newcomer to Cumbria – and a nymph of the Forest Shield Bug *Pentatoma rufipes*.

Maurice took us to see what he thought to be the most studied oak tree in Cumbria. It was the only oak in northern England known to have three of the four rare old-forest lichens (*Lobaria* species) growing on its trunk. These were 'Lungworts' – *Lobaria pulmonaria*; *Lobaria virens*, a flatter species bearing brown apothecia; and *Lobaria amplissima*, the rarest of the three. Although these lichens produce spores it is thought that they are not able to develop for some reason. All species are particularly sensitive to air pollution and to the acidity of the tree bark, have declined greatly over the past two centuries and continue to do so.

We then walked along the lake side passing the Geological SSSI known as the 'Hollows Farm Intersection'. Here Maurice explained how two major rock formations of the Lake District, the Skiddaw Slates and the Borrowdale Volcanic Series, meet at this location. He pointed out rocks from ancient volcanic eruptions – ignimbrites – that contained a mixture of the two groups.

We headed for a grassy promontory where we saw small, black, day-flying Chimney-sweeper moths. Amongst the plants we found Northern Bedstraw (*Galium borealis*) and Thread Rush (*Juncus filiformis*), a plant more or less restricted in the UK to lake shores in the Lake District. The strand-line had some interesting plants: Jeremy Roberts pointed out detached plants of the Floating Water-plantain (*Luronium natans*), the Water Lobelia (*Lobelia dortmanna*), Nuttall's Pondweed (*Elodea nuttallii*) and the very invasive alien New Zealand Pigmyweed (*Crassula helmsii*).

After lunch Maurice Pankhurst left us and we moved on to the Bowder Stone car park to visit nearby Cummacatta Wood. Here we explored the boggy areas, with seepages and runnels drier than usual due to lack of rain. Despite this we were able to spend some time watching various stages of emergence of Keeled Skimmer dragonflies – one in the process of splitting its nymphal casing, others drying out their wings (Plate 4a) and yet others taking their maiden flights. Later we saw a mature male Keeled Skimmer that had attained its blue colouration, as well as various Common Blue Damselflies, and Golden-ringed Dragonflies. Ageing Small Pearl-bordered and newly emerged Dark Green Fritillary butterflies were also seen. This bog, rich in *Sphagnum*, also supported Bog Pimpernel (*Anagallis tenella*) with its pink flowers, *Juncus squarosus*, Star and Flea Sedges (*Carex echinata* and *pulicaris*), Narrow Buckler-fern (*Dryopteris carthusiana*), with Bogbean (*Menyanthes trifoliata*) growing in the more open areas of water. Other plants included the Bog Asphodel (*Narthecium ossifragum*) which was just starting to come into bloom, Round-leaved Sundew (*Drosera rotundifolia*), Lesser Bladderwort (*Utricularia minor*) with its delicate yellow flowers, and the Fragrant Orchid (*Gymnadenia conopsea* ssp *borealis*). Numerous Frogs were hopping around and we also came across a couple of Palmate Newts recognised from their hair-point tail tips, a Toad and a Common Lizard. Other insects included Red-necked Footman and Cinnabar moths, the hoverfly *Chrysotoxum bicinctum* and the robber-fly *Dioctria oelandica* (Plate 4b).

Marie Saag

26th June: St Bees Head

Leader: Stephen Hewitt

The meeting convened at Tarnflat Hall, from where we walked down the track to the lighthouse on the North Head. A range of butterflies were seen along the lane on a fine sunny morning, including Wall, Large Skipper and Common Blue. Various hedgerow birds were encountered such as Whitethroat, Linnet, Goldfinch and Yellowhammer. A Brown Hare was also flushed out of the hedge bottom.

Walking south along the cliff tops, we stopped off at the various viewing points to scan the seabird colonies on the cliffs. The large Guillemot colony provided the usual spectacular sight with Razorbills, Herring Gulls and Kittiwakes also nesting. Rock Pipits were seen scouting about the cliff and Cormorants were flying past on their way to and from their nests on the South Head. Further out, Gannets were also moving past the headland whilst overhead juvenile Ravens were enjoying the cliff-top breeze.

Six-spot Burnet moths were on the wing, as were Cinnabar and Latticed Heath

moths. Mike Clementson was on hand to name Bright-line Brown Eye along with several other moth species. John Read recorded a number of beetles including the weevil *Apion viciae*, which is a local species found on Tufted Vetch (*Vicia cracca*). A large patch of Dyer's Greenweed (*Genista tinctoria*) supported a colony of the local bug *Heterogaster tinctoria*.

The Bloody Crane's-bill (*Geranium sanguineum*) was in full flower as was the beautiful blue Sheep's-bit (*Jasione montana*), which was well established on areas of bare soil on the steep ground and wall tops. One turf-covered wall top provided a particularly spectacular floral display, including the local Sand Spurrey (*Spergularia rubra*). The day was completed with a visit to Saltom Bay to see Wood Vetch (*Vicia sylvatica*) flowering there.

Stephen Hewitt

10th July: Bumblebees Workshop

Leader: Carl Clee

Sixteen people were booked onto this workshop. Our leader for the day was Carl Clee from Liverpool Museum who is a leading authority on British bees and is the coordinator of the national recording scheme for bumblebees.

There are over 20 species of bumblebees in Britain, many of which are rare and locally distributed. Unfortunately some are in serious decline, mainly due to habitat loss and the impact of modern farming methods. During the past seventy years two species have actually become extinct in this country, and several others are seriously threatened and coming under increasing pressure. The workshop concentrated on the six most common social bumblebees. In the genus *Bombus*, and the species Carl dealt with were *B. lucorum* (White-tailed Bumblebee), *B. terrestris* (Buff-tailed Bumblebee), *B. hortorum* (Garden Bumblebee), *B. lapidarius* (Red-tailed Bumblebee), *B. pratorum* (Early Bumblebee) and *B. pascuorum* (Common Carder Bee). The two-hour morning session started with a general introduction to bumblebees and their systematic place within the order Hymenoptera. Various aspects of their biology and ecology, nest construction and development were outlined and discussed. Carl also explained the vital role which bumblebees play in pollinating a wide variety of plants, which includes many important food crops. He also talked about how important gardens are for attracting bumblebees and the various plants that can be grown to provide good nectar sources for them. One interesting bee Carl mentioned in his introduction was the Tree Bee (*Bombus hypnorum*) which was first discovered in Britain in 2001. It was first reported from south-east England and since 2007 has spread north to Northumberland and in the west to South Wales.

We then moved on to identification and with the aid of printed notes and coloured

images provided by Carl we learned about the main characters used to separate the various species. The way to recognise females/males and workers from the coloured bands on the head, thorax and abdomen was also explained and demonstrated. To put our newly acquired knowledge of identification into practise we all went out into the Tullie House garden to look for bees. Unfortunately due to showery rain and the very damp conditions bees were in short supply. However, a few were eventually collected from around the flower heads of various ornamental plants in the garden. They were then examined with hand lenses and by using our ID charts we managed to identify all the six common species. Two individuals of the large and striking Wool Carder Bee *Anthidium mannicatum* were also observed in the garden. This bee is named from its habit of stripping the woolly coating from the stems and leaves of various plants which it uses for nest lining.

Carl had brought along to the workshop a case of set specimens of bumblebees which were on display along with four drawers of bees from the Tullie House Museum collections. These exhibits gave all the participants an opportunity to examine more closely the various species discussed during the morning session.

After lunch we all journeyed out to Finglandrigg National Nature Reserve to look for bumblebees and test our skills at field identification. Heavy showers of rain in the afternoon made bees difficult to find and only three species were observed and recorded; they were Early, Common Carder and White-tailed Bumblebee. Various other insects were noted while walking around the Reserve. Butterflies seen were Meadow Brown, Large Skipper and Green-veined White, and moths noted were Grass Emerald, Barred Straw, Riband Wave and Yellow Underwing. One specimen of the common cantharid beetle *Rhagonycha fulva* was noted on a hogweed flower head by the Reserve entrance, and a specimen of the Forest Bug (*Pentatoma rufipes*) was also found.

John Read

23rd July: Finglandrigg NNR

Leader: Anne Abbs

On a lovely warm and sunny evening, 18 people (including 1 child) met at Haverlands car park to look for Purple Hairstreak butterflies. Our luck was in, and within the first minute a group of at least five were seen dancing over the top of a large oak tree a few yards from the car park. A fresh male Southern Hawker dragonfly was also spotted resting on gorse in the same area, perching for a while and giving everyone good views.

We moved on through the wood, checking some of the trees that Dorothy Iveson and Barry Marrs had surveyed in 1998. A minimum of 22 butterflies was seen, mostly over the canopy but one insect did venture down to about three metres,

allowing some members of the party good views, although a heroic attempt to net it failed. A further Southern Hawker was seen high in the trees at America Lonning.

Birds were few, although a Nuthatch was heard calling. Walking back across Little Bampton Common allowed us to admire a large patch of Bell Heather (*Erica cinerea*) and Dwarf Gorse (*Ulex minor*). Field Grasshoppers (*Chorthippus brunneus*) were very abundant.

A final highlight was a good patch of False Chanterelle fungi (*Hygrophoropsis aurantiaca*) close to the Chalybeate Well as we made our way back to the car park at the end of a successful evening.

Anne Abbs

[The following report was accidentally omitted from Vol. 18, Part 1. Ed.]

29th June 2009: Thornhill Moss and Meadows Leader: Frank Mawby

Thornhill Meadows is owned by Thornhill Meadows Trust and comprises three wet meadows/fen covering 30 acres. One field is part of the Thornhill Moss and Meadows SSSI. There is a separate area of SSSI a little further west, part of which is designated as an NNR .

A small 'island' of vegetation between the layby and the main road was the focus of our attention on arrival. The plant community here is a remarkable survivor of semi-natural grassland that would have been typical of many neutral meadows before the 1960's. Here Jeremy re-found Spiked Sedge (*Carex spicata*) a somewhat local species, along with the similar but rather more widespread Prickly Sedge (*C. muricata* subspecies *pairae*). Other sedges were: Oval Sedge (*C. leporina*), Pale Sedge (*C. pallescens*) and Common Sedge (*C. nigra*). Amongst the diverse community Large Bird's-foot Trefoil (*Lotus uliginosus*), Feverfew (*Tanacetum parthenium*) and Mullein (*Verbascum thapsus*) were noted. Several recently hatched Burnet Moths were seen and Latticed Heath moths, Ringlet and Red Admiral butterflies were also present.

Along the track we encountered Yellowhammers, Sedge Warblers, Whitethroat, Wren and Dunnock, and a few Chimney-sweeper moths. In the meadows Reed Bunting, Sedge Warbler, Skylark and Meadow Pipit breed and were still quite active, whilst Swallows, Swifts, House Martins, Sand Martins, a Kestrel, Linnets and a Stonechat were around us. Blue-tailed Damselfly was the only damselfly seen and Ringlets the only butterfly, together with few Silver Y moths.

The most easterly field is heavily dominated by Soft Rush (*Juncus effusus*), but

other fen and wetland plants were coming through – including Meadowsweet (*Filipendula ulmaria*), Valerian (*Valeriana officinalis*), Angelica (*Angelica sylvestris*) and Marsh Thistle (*Cirsium palustre*), with some dense patches of Sharp-flowered rush (*J. acutiflorus*) and in one place Common Cotton Grass (*Eriophorum angustifolium*). The middle field has also dominant rushes, but on the higher ground in its northern half patches of a more diverse community are developing. There is a selection of sedges, together with Yellow Rattle (*Rhinanthus minor*), Sorrel (*Rumex acetosa*), abundant Common Spotted Orchid (*Dactylorhiza fuchsii*) and foxtail grasses.

The westernmost field (a part of the SSSI) is much more diverse. In the spring it can be a mass of Marsh Marigold (*Caltha palustris*), followed by the swathes of pink Ragged Robin (*Lychnis flos-cuculi*). At the time of our visit taller herbs and grasses, sedges and rushes were tending to dominate, with variety provided by Carnation Sedge (*Carex panicea*) and Star Sedge (*C. echinata*), Bog Stitchwort (*Stellaria alsine*), Marsh Cinquefoil (*Potentilla palustris*), Tufted Forget-me-not (*Myosotis laxa*) and Common Arrow-grass (*Triglochin palustris*). Common Spotted and Northern Marsh Orchid (*D. purpurella*) were also present, though seemed much less abundant in this field this year. A Reed Bunting was flushed and close inspection revealed a nest containing four eggs, well hidden under a small patch of dead vegetation.

After lunch we had a quick look in the adjacent SSSI field (owned by Mr Dockray). There is a small area of flush vegetation at the base of the hill, which varies somewhat from the main community. Here patches of Bog Pimpernel (*Anagallis tenella*) and Devil's-bit Scabious (*Succisa pratensis*) were noted, although this area too had very few orchids this year.

From here we went on to Thornhill Moss NNR, to encounter an abundance of butterflies in the warm sunshine. These included four Painted Ladies, 20 Small Pearl-bordered Fritillaries and 10 Large Skippers; Ringlet and Meadow Brown were also seen. Birds recorded were Blackcap, Garden Warbler, Willow Warbler, Coal Tit, Buzzard, Sedge Warbler and a nest containing four recently hatched chicks of either Sedge Warbler or Reed Bunting. Common Green Grasshopper was found. The Moss has a range of fen communities and is a small but quite outstanding remnant of vegetation that would have been common in the area in the early 1900s. Here we located five species of orchid: Heath Spotted-orchid (*D. maculata*), Early Marsh- (*D. incarnata*) and Northern Marsh-orchids, Twayblade (*Listera ovata*) and Lesser Butterfly-orchid (*Platanthera bifolia*). At least five of the latter were counted in the usual spot on the west side of the middle compartment. We also noted Narrow Buckler-fern (*Dryopteris carthusiana*), Lady Fern (*Athyrium felix-femina*), Common Skullcap (*Scutellaria galericulata*),

Round-leaved Sundew (*Drosera rotundifolia*), Bog Asphodel (*Narthecium ossifragum*), Devil's-bit Scabious, Greater Tussock-sedge (*C. paniculata*), Bog Myrtle (*Myrica gale*), Bogbean (*Menyanthes trifoliata*), Arrow-grass and Butterwort (*Pinguicula vulgaris*). (The last was found only in a tiny area of boggy ground in the eastern compartment). The Reed Canary-grass (*Phalaris arundinacea*) was showing a good recovery from sheep-grazing but we were unable to locate the rare Marsh Stitchwort (*Stellaria palustris*) which Ron Groom identified on the last field trip here a few years ago.

Nine members attended, including Thornhill Meadows Trustees Jeremy Roberts, Russell Gomm and myself.

Frank Mawby

Notes & Records

The sawfly *Pseudodineura enslini* (Hering) new to Cumbria

On 19th June 2009 I visited Gowk Bank NNR (NY679.735) in company with Geoff Naylor. Whilst admiring the stand of Globeflower (*Trollius europaeus*) there, we noticed that the leaves had been mined by insect larvae (Plate 5). Close examination of the grubs in the mines revealed that they were sawfly larvae. Communicating this find to Guy Knight at the World Museum, Liverpool, who runs the national sawfly recording scheme, he informed me that the only species of sawfly to mine Globeflower leaves in Britain is *Pseudodineura enslini*, and that although it has been found widely in Scotland (Keith Bland pers. comm.), is almost unknown in England. Returning on 5th July, I collected a few mined leaves and, bringing them home, placed them on damp potting compost in a goldfish bowl covered with fine nylon netting. The larvae had soon vacated the leaves and I hoped that they had pupated in the compost. The bowl was kept indoors on a north-facing windowsill over winter, with periodic additions of water to maintain humidity. Four adult *P. enslini* emerged in May 2010.

Curious as to how widespread this sawfly may be in Cumbria, I asked various botanists and site managers around the county for information on Globeflower localities. I also circulated a photograph of the leaf-mines and posted pictures on the Society's website and Facebook site, requesting details of any similar mines in Globeflower leaves.

On 20th June 2010 Marie Saag and Linda Robinson showed me a meadow near Garrigill (NY7638) where there is an extensive patch of Globeflower. Here we duly found the mines of *P. enslini*, although not as frequent or well developed as they had been at Gowk Bank in 2009 – possibly because the season was retarded this year. Linda later sent me photographs of mines that she found in numbers on Globeflower at Marsett, Yorkshire (SD8986 and SD8985) on 25th June.

On 12th June I searched a large patch of Globeflower at Aisgill Farm (SD775.976) in Mallerstang but failed to find any leaf-mines. A return visit on 8th July revealed a few mines of *P. enslini*, together with smaller mines containing fly larvae. (The British leaf-mines website [www.leafmines.co.uk] states that there are three species of *Phytomyza* (Diptera: Agromyzidae) known to develop in the leaves of Globeflower, though their mines are significantly smaller than those of the sawfly.) A further locality came to light when Phil Taylor sent me photographs of *P. enslini* mines in Globeflower leaves at Crook (SD452.949; 21st July).

It thus appears that *P. enslini* is widely scattered in Cumbria although perhaps restricted to significant stands of Globeflower. Small patches of the plant at Augill

Pasture and Waitby Greenriggs Nature Reserves, for example, do not appear to support the insect, and examination of scattered plants in the Lake District fells has also so far failed to yield it. Mo Richards checked a patch of the plant by the River Brathay on 27th June, but again with negative outcome.

I have found globeflower plants can be very difficult to locate once the flowers have gone over and a number of these must therefore wait until June 2011 before checking. I also hope to confirm the presence of the sawfly grubs at the sites for which there is only photographic evidence at present.

My thanks to all who provided me with details of Globeflower sites and sent details of sites they had visited. I am grateful to Guy Knight for information and encouragement, and to Keith Bland at the Royal Museum of Scotland for the Scottish perspective. Voucher specimens are deposited in the collections of Tullie House Museum.

Stephen Hewitt, Tullie House Museum

The White-faced Darter (*Leucorrhinia dubia* (Vander Linden)) re-introduction project: year 1 (2010)

A project to re-introduce the rare White-faced Darter dragonfly to one of its former areas of occurrence in Cumbria moved significantly forwards this year with the first transfers of stock from the donor site near Carlisle to Foulshaw Moss (SD4582) in the south of the county. Foulshaw, an SSSI and Nature Reserve of Cumbria Wildlife Trust, is one of the Witherslack complex of mosses, from which the species disappeared through habitat changes in the mid twentieth century.

Transfers this year were carried out in June and consisted of samples of floating *Sphagnum* containing mainly very small larvae and (it is assumed) recently laid eggs. This material was assigned to a single pool at Foulshaw, where future developments will be closely monitored. A visit on 8th September 2010 soon revealed the presence of larvae of about 6-8 mm size – which would be expected to take a further twelve months or so to reach full size and produce site-reared adults in 2012. The fact that they have survived for three months and grown is at least encouraging. One of the issues so far has been the desirability of distinguishing very small larvae of this species from those of the co-occurring Black Darter (*Sympetrum danae*). *Leucorrhinia* does not start to gain its distinctive dark underside markings until just over half size, but fortunately the rather more 'rotund' dorso-ventral profile of its abdomen, and the very noticeably lemon-yellow undersides of the eyes seem life-long features.

In Spring 2011 it is proposed to transfer mature larvae, so that they will emerge at

Foulshaw very soon thereafter. There will be at least one more transfer of stock in 2012. This programme will hopefully ensure sufficient genetic diversity in the transferred stock, and a multi-generational population of larvae. Flying adults should be first seen at Foulshaw in Spring 2011 and could include a few resulting from one year-old larvae that were amongst the 2010 translocations.

If successful, the project will result in a second strong colony within Cumbria of what remains a vulnerable species, locally and nationally. This very much accords with its Biodiversity Action Plan status. It will also make this attractive species more easily accessible to wildlife enthusiasts and gather useful experience to guide future projects, in Cumbria or elsewhere.

The preparatory work for this project has been ongoing for several years, and follows guidelines issued by the International Union for the Conservation of Nature. Landowners and relevant conservation bodies, including the British Dragonfly Society, have been involved throughout.

David Clarke, Burnfoot, Cumwhitton, Brampton, Cumbria CA8 9EX

Northern Buckler-fern (*Dryopteris expansa* Fraser-Jenkins & Jermy): a new site in the Lake District

Whilst following up (unsuccessfully) an old record for Holly Fern (*Polystichum lonchitis*) at Small Water Craggs above Haweswater, on 6th June 2010, I was startled to find a substantial and accessible colony of Northern Buckler-fern (*Dryopteris expansa*) – startled because I knew of no record of this plant in the High Street area. In *A Flora of Cumbria* (Halliday, 1997), the nearest tetrad ‘dots’ are on the Helvellyn range, about 11 kilometres west-north-west.

Another visit (with David Clarke) in August allowed a more thorough survey. At least 55 crowns were seen, centred on about NY453.097.

In *A Flora of Cumbria*, just thirteen tetrads are recorded in the county, and – as elsewhere in its northern and western distribution in the UK – the plant is noted from two distinct (but perhaps ecologically equivalent) habitats, ‘wet western woodlands’ at low altitude, and in block-scrée and sometimes cliff crevices and ledges in the mountains.

The habitat at Small Water Craggs was precisely as described: block-scrée, with the exception of one plant seen on a ledge just out of reach. Although familiar with the species in block-scrée on the Cross Fell range, I had never previously convinced myself that I had this species in Lakeland mountain habitats (candidate plants being often out of reach on ledges, and usually wind-damaged) although I had seen it in Johnny’s Wood, Borrowdale, a few times over the years. Hence it

was pleasing to see a well-established colony in the mountains.

The plants occurred quite widely over the western half of the crags, from about 470 metres a.s.l. quite close to the tarn, up to at least 625 metres. Most plants – and most of the best-developed – were in a small area of large boulders below some rowans. (See Plate 6.)

Compared with the few associates in acidic block-screes on Cross Fell, at Small Water Craggs the Borrowdale Volcanics block-screes carried a much larger range of ferns including Common Male-fern (*D. filix-mas*), Mountain Male-fern (*D. oreades*), Parsley Fern (*Cryptogramma crispata*), Common Polypody (*Polypodium vulgare*), Oak Fern (*Gymnocarpium dryopteris*), and Beech Fern (*Phegopteris connectilis*). Two patches of Wilson’s Filmy-fern were nearby on an outcrop and (unusually) down a very shaded crevice.

Identification of Northern Buckler-fern is often regarded as ‘critical’ (i.e. difficult to separate on morphological grounds from close relatives) and this is certainly the case here. Its closest relative, the ubiquitous Broad Buckler-fern (*D. dilatata*), grows intermixed in several places. Both species are very variable, and – unhelpfully – the mountain forms of the latter tend to adopt characters of the former. In the more distinct plants, Northern has a flatter, yellow-green frond (Broad having the margins of the pinnae more bent downwards on a colder, dark-green frond), the fronds are more dissected, producing a more delicate appearance, and the scales at the base of the leaf-stalk are usually ginger and uniformly coloured (in Broad, scales are darker and with a dark central stripe).

The spores of the species are often quoted as being dissimilar in the ornamentation and colour of the brown spore-coat, the Northern having sparse low projections on a ginger-tinged coat, and the Broad being ‘spiny’ on a somewhat more sooty-tinged coat (Crabbe *et al.*, 1970). The colours of spores ‘in the mass’ are perhaps different, whilst a magnification of at least $\times 400$, and preferably $\times 1000$, is required to see the spore-coat ornamentation. However, these differences are at the limit of vision – at least the limit of my vision – and both the density and length of the projections seem to vary in each species.

The hybrid between the Northern and Broad Buckler-fern, *D. \times ambroseae*, is also likely to be present, often arising where the parents grow together – further confounding identifications based on morphological grounds. However, the hybrid is completely sterile, with aborted spore-production, whilst the parents are abundantly fertile, and this provides the best clue to its presence. One plant sampled at Small Water Craggs may be this hybrid, although its identity has not yet been confirmed.

These two buckler-ferns are certainly ‘good’ species, with their hybrid being

sterile, and differing at the fundamental level in chromosome number, Northern being a 'normal' diploid, and Broad being 'allotetraploid' (or amphidiploid), i.e. the result of a doubling of chromosome number in an F1 (first-generation) hybrid, its chromosomes therefore derived from different species – the doubling restoring reproductive fertility. Cytological studies demonstrate that one parent of that original hybrid must be Northern Buckler-fern itself, and the other parent evidently a different diploid species, probably *Dryopteris azorica*, known, as its name suggests, from the Azores, and only there (see, e.g., Gibby, 1983; Manton, 1950). (Hence the query: did Broad Buckler-fern spread from the Azores after having arisen from a hybridisation event there, or did *D. azorica* have a wider distribution in the past – or could it even be awaiting discovery somewhere within the present range of Broad Buckler-fern?) I have waited – so far in vain – for the invention of a field 'ploidy-meter'. You would stuff a bit of plant tissue in, and presently it would give a readout of the level of ploidy – diploid, tetraploid, etc. It would rapidly become an essential accessory in the field study of ferns, and many other groups, but I see no sign of its being in development, let alone imminent release!

References

- Crabbe, J.A., Jermy, A.C., & Walker, S. (1970) The distribution of *Dryopteris assimilis* S. Walker [i.e. *D. expansa*] in Britain. *Watsonia*, **8**: pt 1, pp. 3-15. BSBI. London.
- Gibby, M (1983) The *Dryopteris dilatata* complex in Macaronesia and the Iberian Peninsula. *Acta Botánica Malacitana*, **8**: 59-72. Málaga. (Available for download from http://www.bioveg.uma.es/abm/Volumenes/vol08/8_Gibby.pdf)
- Halliday, G. (1997) *A Flora of Cumbria*. Centre for Northwest Regional Studies, University of Lancaster. Lancaster.
- Manton, I. (1950) *Problems of cytology and evolution in the Pteridophytes*. CUP. Cambridge.

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The lichen *Solorina saccata* (L.) Ach. on Borrowdale Volcanic Series rocks in the Lake District

This distinctive green foliose lichen is not uncommon in upland districts, usually growing on more or less directly on mossy limestone where this is somewhat shaded from direct sunlight. It can also occur on other lime-rich rocks – such as mica-schist in Scotland, but in Cumbria it is virtually an 'indicator' for

outcropping limestone. Some very healthy-looking patches on Borrowdale Volcanic Series outcrops in a gill-ravine near Iron Crag, Thirlmere (NY295.195) in April this year at about 400m altitude were therefore an unusual find. The largest of these was some 12 cm across. Other more usual calcicoles were present including Green Spleenwort (*Asplenium viride*) and the liverwort *Preissia quadrata*. The dog-lichen *Peltigera leucophlebia*, another indicator of base-rich conditions, was also present in two places in the same gill. Asking around for other instances of *Solorina* on non-limestone substrates in the county has so far yielded no reports: in particular Jeremy Roberts and Rod Corner cannot recall any, despite being familiar with the species and having wide knowledge of the area. This is therefore an interesting and apparently rare occurrence, and strong evidence of the locally high base status of BVS rocks, which in other places, and mainly at higher levels, support some of the rarer elements of the upland flora.

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Reed Buntings (*Emberiza schoeniclus* (L.)) nesting in Marram grass in north Cumbria

John Callion

Bank Cottage, Allonby, Maryport, Cumbria CA15 6QH

During the late 1990s whilst looking for Stonechat nests on the coast north of Maryport I became aware of singing Reed Buntings on the narrow coastal strip south of Allonby between the shoreline and the B5300 road. At the time I paid little attention to it, other than to think that this was atypical habitat for the species! Later in 2003 when I moved to live at Allonby I was able to pursue my curiosity.

The habitat is one of low sand-dunes, mainly composed of various grasses, with Marram (*Ammophila arenaria*) predominating closer to the beach (Plate 8). There are several wind-dwarfed hawthorns (*Crataegus* sp.) – often used as song-posts, and a few clumps of gorse (*Ulex europaeus*) and roses (especially *Rosa rugosa*). Stretching from the beach car park at Staith Cottage, the habitat runs approximately north to south for about 1200 m, ending at Blue Dial Farm. At no point is it wider than *ca.* 50m. Through the centre running parallel to the road is a public coastal footpath. Facing the prevailing westerlies, it is quite an exposed location.

From 2003 until 2010 I have looked for Reed Bunting nests in the described area. For a variety of reasons my effort has been variable. Nevertheless I have found 42 nests, of which only four have been known to fail. During these years I have ringed approximately 130 nestlings from these nests. In subsequent years I have seen several ringed adults but have made no effort to capture them to confirm their origin; however it seems likely they are locally bred from earlier years.

Apart from one second brood in thick Sea Rocket (*Cakile maritima*) and another in a low rose, all nests found were up to 0.5 m above ground in rank Marram, hidden and tucked into the plant under the canopy of the wind-bent leaves. After a while it became possible to ‘cold search’ successfully for nests by examining likely sites close to where males had been singing.

Evacuating the site for winter, males start to arrive back ‘on site’ in mid-March, (in 2009 one was singing on 13th February), and up to seven males have been observed holding territory in any one year. With such a linear, narrow habitat, interaction between males and pairs is inevitable and may make it difficult to assess how many pairs may be breeding at any given time. However, five simultaneous nests have been observed on several occasions. (As Reed Buntings

are double-brooded, this makes it especially difficult to be sure how many pairs are present).

Most Reed Buntings breeding in areas with a mean January temperature of below 0°C migrate for the winter. In milder areas the proportion of birds moving away decreases rapidly with increasing temperature, with populations becoming essentially sedentary at the 5°C January isotherm. Since much of Britain falls between the 3° and 5° isotherms, most British Reed Buntings are believed to be reasonably sedentary (Prys-Jones, 1984). There have been no British-bred birds recovered abroad, though there have been several movements of up to 300 km within Britain. Ringing recoveries of incoming winter visitors to the east and south coast of Britain, mainly from Scandinavia, exceed 70 individuals.

Adult Reed Buntings show a high degree of breeding site-fidelity, with most males moving no more than 50 m between breeding seasons; by contrast, first-time breeders tend to settle in the general vicinity of where they were reared (Bell & Hornby, 1967).

Although ‘BWP’ (Cramp & Perrins, 1994) states that specialized (*i.e.* away from wetland) habitats for the species include middle and upper zones of salt-marshes on low coasts, moist slacks in coastal sand dunes, it makes no reference to such dry breeding sites as in the Marram at Allonby.

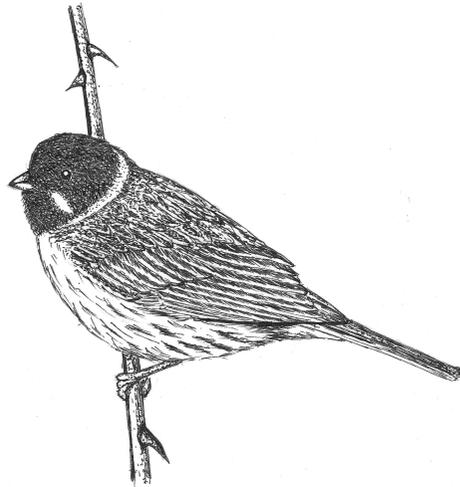
The Cumbria breeding atlas (Stott *et al*, 2002) shows a maximum density of two birds for this particular 2 × 2 km tetrad, (NY04Q), whereas in the years following, up to at least seven pairs were present. NY04Q also has more traditional wetland habitat immediately to the east of Swarthy Hill, some 1 km inland from the coastal site.

During the breeding season, Reed Buntings are almost entirely insectivorous, but independent young and post-breeding adults rapidly become increasingly granivorous from late summer, in line with ripening crops. In winter, prolonged snow-cover and frozen ground cuts off access to fallen grass-grain and herb seeds, and will inhibit survival. Following the severe and prolonged winter of 2009/10, I fully expected to see a decrease in breeding pairs. However I was thrilled to hear two males singing on 9th March. Subsequently numbers increased and the summer of 2010 held the usual seven breeding pairs.

The land use around and inland from Allonby is, I believe, a factor in the winter survival of farmland passerines such as Reed Buntings. Most of the barley and wheat fields were left unploughed over the winter of 2009/10. Many such hectares around Allerby, Crosby, Crosscanonby and Hayton held large mixed flocks of Yellowhammers, Reed Buntings, Linnets, Chaffinches and both House and Tree Sparrows, showing the importance of a good winter food source for granivorous passerines.

References

- Bell, B.D. & Hornby, R.J. (1967) In *Attenborough Nature Reserve Ringing and Bird Report, 1967*, pp 9-15. Attenborough Centre, Nottingham.
- Cramp, S. & Perrins, C.M. [senior edtrs]. (1994) *Handbook of the Birds of Europe, the Middle East and North Africa: The Birds of the Western Palaearctic, Vol. IX, Crows to Finches*. Oxford University Press, Oxford. [=‘BWP’].
- Prys-Jones, R. P. (1984) Migration patterns of the reed bunting, *Emberiza schoeniclus schoeniclus*, and the dependence of wintering distribution on environmental conditions. *Gerfaut*, **74**: 15-37.
- Stott, M., Callion, J., Kinley, I., Raven, C. & Roberts, J. (2002) *The Breeding Birds of Cumbria: a Tetrad Atlas 1997-2001*. Cumbria Bird Club.



Reed Bunting

(David Clarke)

The status of Mezereon (*Daphne mezereum* L.) on the Morecambe Bay limestone

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Mezereon has been known from the Morecambe Bay limestone since at least the mid nineteenth century. However, its long use in gardens seems to pre-date reports from the wild in the UK. This together with a propensity for spread by birds feeding on its berries has led to doubts over its status as a true native – both in Cumbria and other parts of the UK. Authorities differ in their assessments: for Cumbria, Halliday (1997) considers it ‘probably native’; Stace (1991) simply states that it is ‘probably native in some places’ [in the UK]. However, all the Morecambe Bay records are mapped as aliens in Stewart *et al.* (1994) in their review of scarce plants. The species is native in many of the warmer parts of the northern hemisphere.

We have been monitoring the known sites of *Daphne mezereum* around Morecambe Bay for the past few years. Most are in Westmorland v.c. 69, although one site covered is in v.c. 60, West Lancashire. 2010 has seen the most co-ordinated approach to surveys of some sites. The four more northerly Cumbrian sites reported as probable garden escapees (Halliday, 1997) have not been covered, though in passing we note that the single plant at Staveley was reported as flowering well in 2009. Most occurrences are on sites designated as SSSIs.

In 2009 it was concluded that the populations in the survey area were in decline and threatened with extinction. This was based on trends noted in earlier surveys of 2007 and 2008: by 2009 about 10-12% of the known surveyed population had died. In 2010 one new site has been confirmed, two other sites reported but not confirmed and four additional plants have been located at existing sites, but against that the previously most prolific sites for this plant have suffered a significant collapse in their populations. It would be easy to suggest that the very hard, long winter had been responsible for the demise – indeed the flowering season did not occur until late March, perhaps 3-4 weeks later than after a mild winter. However, given that a number of plants were floristically more productive in 2010 than in 2009 and that some populations appear to have been little affected by the winter, other mechanisms may be involved. The winter damage theory might hold for those plants that have roots close to a stony surface. To this must be added the unknown effects of the especially long dry spell during the period of fruit formation. Other factors that may be just as, or more, significant, include the increasing shading of the plants by the surrounding woodland vegetation, grazing

by deer and sheep and, perhaps, the relatively old age of some plants. A viral or other disease cannot be ruled out as yet another possible explanation. In some instances changes caused by habitat management are certainly a threat (see individual site reports).

There is little evidence of any growth in height of the plants measured, nor of any signs of replacement plants occurring naturally in the vicinity of the established plants. However, there also appeared to be a loss of taller and floristically very productive plants during the 2009 season (200+ individual flowers) – which might be related to a relatively poor formation of leaves in the preceding summer. The relationship between leaf production and subsequent fruiting success might repay detailed study: Hampsfield Fell (site 5) should be interesting in this respect next year.

Searches for berries in August 2010 proved positive at five sites. (In the main, berries were found only on those plants that had in excess of 20+ flowers.) Berries collected will form the basis of various attempts to raise the seeds and replant at the specific sites of seed origin, which will be documented accordingly. In addition at least two sites should benefit from a degree of shade management during the winter 2010-11.

Our overall conclusion remains that the Morecambe Bay population of *D. mezereum* is threatened with extinction unless action is taken soon. The issue of uncertain native status will no doubt make prioritizing such work difficult for conservation bodies, but it would be a great pity to see this attractive and long-established member of our flora disappear without some effort to save it.

Notes on individual sites, updated to 2010 where possible:

1) **Brigsteer Park Wood** (NT) SD4888

The four plants remaining from 2009 all produced flowers this year – two with more than in 2009, one with a smaller number.

2) **Cinderbarrow Wood** (private) SD4886

Information about this (new) suspected site has not yet been confirmed.

3) **Durham Bridge Wood** (private with very restricted access) SD4589

There were 18 known plants here in 2007 but access restrictions in 2009 enabled reports of only 15 of them. This year all plants were reportedly searched for but 4 could not be found (2 may be under a fallen tree). Of the other 14 some 12 appeared dead, one with 5 flower buds and one with 2 buds but looking sickly. It thus appears that one of the prime population sites for *D. mezereum* in this area could be extinct very soon.

4) **Eaves Wood** (NT) [v.c. 60] SD4776

Of the two plants here the one that had not flowered for a number of years had one flower and the other plant had about half the number of flowers as in 2009.

5) **Hampsfield Fell** (private – on access land) SD4080

This single plant has always looked scraggy but reasonably productive with some 50+ flowers. In summer 2009 it grew a huge number of leaves and looked quite rich in flower buds this year and about 30 berries were found in August. Sadly this plant seems to suffer the most from grazing animals.

6) **Holme Park Quarry** LNR SD5378

This newly reported site near Clawthorpe has a single plant about a metre tall, with some 250-300 buds. Its form, and position in clay-lined sink-hole, suggests it may be a garden transplant.

7) **Middlebarrow Wood** (Forestry Commission/Dallam Estates) SD4676

As noted in 2009, this site is probably extinct. Further searches have taken place this year to no avail. The Forestry Commission may be willing to consider a species re-introduction here – if so the Eaves Wood plants appear to be the most appropriate source of supply.

8) **Park Wood** NNR, Hutton Roof (CWT) SD5677

One of the four plants found in 2009 now appears dead. One further plant looked badly nibbled, especially the buds. One of the other two plants had three times as many flowers as in 2009, the other less in number than previously (Plate 7).

9) **Sandside** (private) SD4881 & 4880

This is the site with white-flowering plants and is much different in terms of flowering plants than other sites this year. Previously we had found 8 to the north of the road and were aware of two to the south. The two south plants have been visited and they, like some of the main group of plants are having a good year on the whole in flower production. One of these two plants has two stems and I am unsure if this is a single plant or not. Three new plants were located north of the road, but one appeared dead. One of the previously notified 8 plants also appeared dead. Some of the plants have produced more flowers than in 2010 than in 2009, others less.

10) **Witherslack High Low Wood** (private) SD4287

Nineteen plants were known at this site in 2009 and a further plant found this year. However, we were unable to gain full access in 2010. Site management (forestry) work on this site has meant some devastation, and the consequence that five plants could not be found -including some possibly buried under

brashings; at least one plant on the extraction site was still extant but damaged. The population here might now be down to 12-14 plants. We might expect that any dormant seed in the area of the felled timber could respond to the increased light this year and it would be worth searching for new plants in 2011.

11) **Witherslack Church** SD4384

The road side plant to the NW of the church was reported as stolen in 2008. The *Atlas* site above the church has not been located.

12) **Witherslack High Park Wood** (private but leased to Lake District National Park Authority) SD4387

Of 10 plants known from earlier years, two appeared dead by Spring 2010. Flower production was generally less numerous than in 2009 but some plants having a higher number. One of the most productive of the remaining plants died during this season, and a previously unknown plant may have been located.

13) **Witherslack Howe Ridding** (CWT) SD4388

Both plants are producing flowers but less than in 2009. The suspected plant to the SE of these two plants has not yet been proven.

14) **Witherslack Woods** (private) SD4387

This newly reported site (late 2009) of a single plant has not been confirmed despite significant searches including by the original finder of the site!

15) **Wart Barrow** (private) SD3976

This *Atlas* site has not yet been re-found.

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This work would not have been possible without the help of Julie Clarke, Brian Fereday, Alan Ferguson, Betty King, Ann Kitchen, Wendy Nelson and the late David Brown, to whom we extend our grateful thanks for surveying the plants and discussing some of the ideas in this note.

References

- Halliday, G. (1997) *A Flora of Cumbria*. University of Lancaster, Lancaster.
Stace, C. (1991) *New Flora of the British Isles*. Cambridge University Press, Cambridge.
Stewart, A., Pearman, D.A. & Preston, C.D. (1994) *Scarce Plants in Britain*. JNCC, Peterborough.

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Standard abbreviations used in this issue:

B.S.B.I. Botanical Society of the British Isles; CWT Cumbria Wildlife Trust; LNR Local Nature Reserve; NNR National Nature Reserve; NT National Trust; v.c.: vice-county.

For Conservation status definitions (e.g. Nationally Scarce, etc.) consult: www.jncc.gov.uk/species/Species_Status_Assessment/hierarchyoflists.htm

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Winter Programme 2010/11

(Wednesdays 7.15 pm, except where stated)

6th October: ‘Wildlife by my river – the Lyne’ An illustrated talk by Bryan Jeffrey

9th October (Saturday): Field meeting, Red Deer rut, Martindale Leader: Geoff
Horne. Depart 12.30 pm. Meet Martindale Old Church (NY434.184) 1.30 pm.

20th October: ‘Is the Honey Bee native to Britain?’ Dr Dorian Pritchard

**3rd November: ‘The ecology and conservation of the Vendace: the UK’s rarest
freshwater fish’** Dr Ian Winfield

17th November: ‘Fungi in northwest England: form and function’ Mike Hall

1st December: ‘Norway Nature’ Brian & Sophie Fuller

15th December: Members’ Night Contributions from the membership

5th January: ‘From Mytilini to Antalya: my quest for the “Balkan 10” Mike
McKavett. Joint meeting with Cumbria Bird Club

**19th January: ‘Solving the Bassenthwaite mystery: magnetic fingerprinting of fine
sediment sources’** Prof Barbara Meyer. Joint meeting with Cumberland Geological
Society (NB: 7.30 pm. start)

2nd February: ‘Mosses & liverworts of the Lake District woods’ Dr. Ben Averis

5th February (Saturday): Field Meeting. Loch Ken, Galloway (wild goose chase)
Leader: Geoff Horne Depart 9.00 am.

16th February: ‘Birds of Arran’ Jim Cassels, Arran Bird Recorder

2nd March: AGM & Members’ Night

AGM followed by contributions from the membership

16th March: ‘Pine Martens in northern England’

An illustrated talk by Neil Jordan, Vincent Wildlife Trust