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Lakeland Naturalist



— a journal of Cumbrian Natural History

Autumn 2018



Lakeland Naturalist publishes material on all aspects of the natural history of the Lake District, the wider county of Cumbria and its immediate environs

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Address: c/o Tullie House Museum, Castle Street, Carlisle CA3 8TP
Tel: 01228-618736; email: info@carlisenats.org.uk
Editor: David Clarke: davidclarke6970@gmail.com; 01228-560117
Editorial Panel: Roy Atkins, David Clarke, Stephen Hewitt, Jeremy Roberts
Layout & DTP: *Jeremy Roberts*; cover & centre: *David Clarke*

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Notes for authors:

General articles, results of personal research, news items, records and items of relevance to Cumbrian natural history and naturalists, present and past, are welcomed. Material accepted for publication must not be submitted in a similar form to any other journal or magazine.

Material offered for publication should be in the formats used in this issue. Computer files should be in rich text format or Microsoft Word and e-mailed to the Editor, or submitted on CD/DVD accompanied by a paper copy. **Bold** and *italic* may be applied to text, but no other formatting should be applied. References should be given in full at the end of the article or note, and authors are responsible for their accuracy. Authority names for species, where given, should be in full. Line illustrations should be in black ink and must be originals. Good quality photographs are welcomed where these relate to submitted text. Each photograph, figure or table should be submitted as a separate file. Whilst every care will be taken of original artwork, the Editor can not be held responsible for any loss or damage. Authors of papers will be provided with PDF format copies on request. The Editor reserves the right to submit papers to a referee, and to reject items.

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Next issues: deadlines for final copy

1st March 2019 & 1st September 2019

Cover:

White-letter Hairstreaks, Lanercost old bridge, 5 July 2018 © *Adam Moan*

(Wednesdays at 7.15pm, except where stated)

3rd October: 'Wild Ennerdale – Working with Natural Processes'

An illustrated talk by Gareth Browning, Forestry Commission

17th October: 'Cumbria's Living Seas' An illustrated talk by Dr Emily Baxter, Senior Marine Conservation Officer, NW Wildlife Trusts

31st October: '125 years of the CNHS' followed by Members' Night

With contributions from the membership

14th November: 'A Tale of Pine Marten Conservation'

An illustrated talk by John Martin

28th November: 'The Bogs of Cumbria – their place in the global peatland jigsaw'

An illustrated talk by Dr Richard Lindsay, Head of Environmental Research, Univ. of East London

12th December: 'Whinchats at RSPB Geltsdale'

An illustrated talk by Stephen Westerberg, Manager, RSPB Geltsdale

2019

9th January: 'Re-introductions for a wilder Cumbria' An illustrated talk by Kevin Scott, Northern Reserves Manager, Cumbria Wildlife Trust (Joint meeting with the Cumbria Bird Club)

23rd January: 'New advances in understanding the British and Irish Ice Sheet with particular reference to Cumbria'

An illustrated talk by Prof. David Evans, Durham University (Joint meeting with Cumberland Geological Society) (NB starts at 7.30pm)

6th February: 'Cumbrian Butterfly Populations and DNA research'

An illustrated talk by Steve Doyle & Lucy Gunson

20th February: 'Violets and Pansies of Britain and Ireland'

An illustrated talk by Mike Porter

6th March AGM & Members' Night

AGM followed by contributions from the membership

9th March (Saturday) Field Meeting - South Solway birds

Leader: Frank Mawby. Meet at 10.00 am at Wedholme Flow car park (NY238539), 1 mile south of Kirkbride



1. (p. 37)
The plant bug
Corizus hyoscyami

Sandscale Haws
17 July 2018

© *Stephen Hewitt*



4. (p. 43)
Broad-bodied Chaser,
young female

Ousby
26 May 2018

© *Anna Robinson*

2. (p. 43)
The plant bug
Saludula pallipes

Hodbarrow
12 September 2018

© *Stephen Hewitt*



5. (p.45)
The sawfly *Caliroa annulipes* (larva)

Cockermouth
July 2016

© *John Read*



3. (p. 40)
Cinnabar moth larva
predated by crab spider

Silloth (Field Meeting)
8 July 2018

© *Annie Burgamy*



6. (p. 44)
The leaf beetle
Chrysolina oricalcia

Edderside, Aspatria,
1 June 2018

© *Deborah Muscat*

7. (p. 48)
The solitary wasp
Trypoxylon clavicularum

Carr Beds, Rockcliffe
5 August 2018

© Nick Franklin



8a. (p. 56)
The lichen
Peltigera britannica

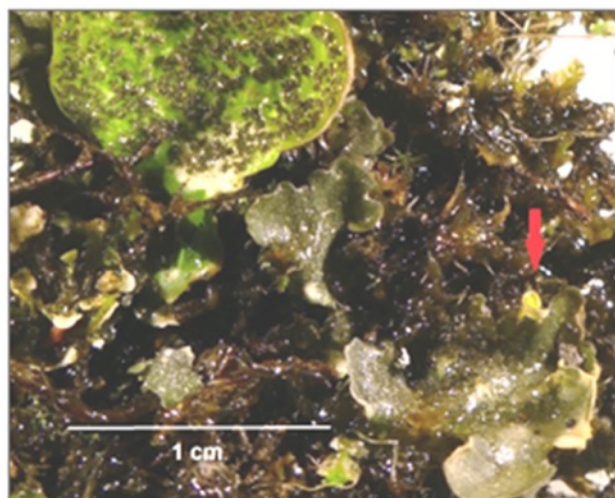
Heltondale,
12 Sept 2018

© David Clarke

8b. (p. 56)
Peltigera britannica
Heltondale, Sept 2018

Arrowed: normal thallus
growing from
blue-green morph

© David Clarke



9. (p. 54) Stipitate hydroid fungi new to Cumbria. a: *Sarcodon scabrosus*. Borrowdale, 1 Sept 2017; b: *Phellodon confluens*. Borrowdale, 16 Aug 2017; c: *Hydnellum spongiosipes*. Borrowdale, 1 Sept 2017

© Andrew Denley

Editorial note: legacies of 2018?

2018 has already been an exceptional year, with a very cold period early on, followed by a record heatwave and drought over many weeks in summer. Some of its effects on Cumbrian wildlife are noted in this issue, but it will be well into 2019 at least before we are really able to weigh up others. There will have been winners and losers. The conditions were especially suitable for some insects, enabling better than usual survival and breeding. But burnt out grasses and other food plants will not have been good for the survival of herbivorous species, and therefore their predators. Equally, species of damp and aquatic habitats, from delicate mosses and liverworts and fungi to invertebrates such as snails and slugs, amphibians and many more, may have been highly stressed. Might life-cycle timings have been seriously disrupted? And what of species of cool upland sites? Could local exterminations have occurred? Relevant observations will always be welcome. They could simply be emailed notes to the Editor or CNHS *Facebook* comments. Notes or articles on particular groups or species would be of interest too.

Wildlife Reports, March to August 2018

The following are based mainly on cards submitted by CNHS members. Some records from the Society's Facebook site have been included. All have been forwarded to CBDC at Tullie House. Uncredited records are usually my own.

Weather

March began very cold, with snow lying from 1st to 4th (an air mass dubbed the 'Beast from the East') and again on 18th, turning it into one of the coldest on record, although rain was about average. April was a little wetter than average (60 mm) but temperatures near average (12°C). May was much drier and warmer than average. June was one of the warmest on record, with below-average rainfall (47 mm) and temperatures near 30°C in the last week. July was the third warmest and driest on record but was beginning to break by mid-month. August was generally cooler, with unsettled, often wet weather and rainfall around 100mm.

Observations of my own and others showed the weather has had some interesting effects. The early March migrants were perhaps most affected, especially the hirundines with many reportedly held up in Spain. The result was a noticeable split in arrivals of Swallows and House Martins. JC reported large numbers of the Swallows and a few Sand and House Martins passing Allonby on 25 May. It was soon clear that there were fewer early Swallow and House Martin nests and overall Swallow numbers were much lower than recent years, Other people reported fewer House Martins although on our own house we finally had eleven or twelve nests. Migrants arriving in April were generally less affected and seem to have had a normal season. Chiffchaffs arrived in good numbers in March, but my own observations

suggest they had a poor season. Resident birds were certainly affected by the weather and Blue and Great Tits nested about a week later than recent years.

Birds

Little Grebe: an adaptable and prolific breeding bird, as witnessed by RH on Hammonds Pond, Carlisle of a pair with one adult looking after chick and the other building a new nest on 1 May. **Whooper Swan:** late birds included 79 on 1 April at Wilkins Pool, Longtown (RH) and 5 April: 26 on flooded field at Burthwaite, Durdar (RD). **Pink footed Goose:** an estimated 150 were still present on Skinburness Marsh on 15 April (FJM). A northward movement of a skein estimated at 250 by Allonby (JC) on 19 April. **Barnacle Goose:** 2000 on Skinburness Marsh 15 April (RH); the total for the WEBS count on Border, Calvo and Skinburness was an estimated 4200 (FJM) 15 April. **Mandarin Duck:** a pair present for second year on Burtholm Beck, Lanercost and possibly bred, 25 March (MG). **Scaup:** one on Longtown Ponds on 21 March (DJ). **Smew:** a male on Derwent Water on 26 March (DJ). **Little Egret:** 33 on high-tide roost on the old harbour at Port Carlisle on 9 August; this species is now breeding regularly at the heronry on the Solway.

Osprey: flying over along River Esk at Longtown 5 April (DJ). **Kestrel:** with only 16 records on CBDC database this declining raptor needs regular reporting. **Merlin:** one at Jockey Shield on 3 April (JM). A **Hobby** was at Acorn Bank on 12 August (NF). **Red Kite:** a single flying over Uldale on 22 April (KC) and one over Cumwhitton, reported to DC, on 17 August. **Common Buzzard:** a raptor that is now a widespread and common breeding bird in north Cumbria. With the rabbit now under threat from VHD this bird should perhaps be recorded more frequently.

Black Grouse: five males at Geltsdale 29 March (JM) and a single bird near Spadeadam/Butterburn on 15 August (CA). **Quail:** two June Records from KH at Soddy Gap on 6 June and at Skiddaw Forest in an unusual heather and bracken location on 24 June (JC) and on 20 August CA heard one off the B5307 near Finglandrigg Wood NNR. **Water Rail:** two calling males heard frequently throughout the summer in the flooded rush on the north fringe of Glasson Moss, where they probably bred.

Seven **Dotterel** seen on Cross Fell on 11 May (RH). **Green Sandpiper:** still on Walby Flash on 5 April (DJ) and seen again on 7 April (RJ). **Common Sandpiper:** on the River Esk at Kirkandrews-on-Esk on 9 April (DJ). **Redshank:** minimum of 1500 at Port Carlisle at high tide on 6 August (FJM). **Black-tailed Godwit:** 36 on Calvo Marsh 12 August (FJM). **Curlew:** a species now generating a lot of interest and concern. There were three displaying males at Watchtree but only one successful nest recorded. One was a wind-turbine casualty in July. **Whimbrel:** Eight at Allonby on

19 April (JC) who also had 120 on the beach on 2 May. One at Bowness Railings on 6 August (FJM). **Woodcock:** Penrith Beacon was a notable location for single bird on 15 March (DC) and 3 April (SH). DC also reported a bird from Loo Gill, Hartside, 24 March. I had a small increase in displaying males, possibly five at Finglandrigg Wood and two at Watchtree for the BTO survey. **Skua** passage observed from Bowness on Solway on 17 April by BJ included eight **Great**, three **Arctic** and one **Pomarine Skua**. **Common Tern:** one on the Esk at Longtown on 17 April (DJ), not often reported and probably moving north. **Mediterranean Gull:** DS had a notable count of 57 on 14 August at St Helens near Flimby.

Cuckoo: VR heard the first at Grune Point on 18 April, thereafter singing males were recorded from a good range of locations between April and June; all seemed to be in regular Meadow Pipit habitat. It was notable that RH heard one calling on Bowness Common as late as 19 June. **Short-eared Owl:** significantly less abundant than 2017; one present on Alston Moor 14 April (GB). **Barn Owl:** several records received were of sightings in March, with comments about birds hunting during the day. The two very cold spells seem to have had dire consequences for them. I have only ringed five chicks in two of my nest boxes. Two pairs failed at egg and early chick stage and I had three non-breeding pairs and four single birds. Breeding was also late, although it is difficult to determine whether the vole and mouse population crashed as a result of the severe cold or the subsequent dry spell. **Swift:** One over Penrith on 23 April (SH) and more over Carlisle and Kirkoswald on 27 and 29 April (DS, MT). MT was amongst several who saw some 200 Swifts feeding over fields beside the A66 near Centre Parcs, Penrith on 5 July. A departure movement was recorded on 5 August (Birding Cumbria reports) and AE reported four over Southwaite on 9 August.

Sand Martin: one over the R. Derwent at Cockermouth on 3 March (KH) and lots were seen at Talkin Tarn and over the R. Esk (both DJ) on 5 April and over 100 on the Esk near Longtown on 10 April (DJ). **Swallow:** first record was on 4 April at Arkelby near Aspatria (SG), and another at Bowness Gravel Pits Reserve on 6 April. **House Martin:** two with other Hirundines along the R. Esk north of Longtown on 10 April (JM). Our nesting birds arrived in Kirkbride on 18 April. Relatively low numbers of Swallows and House Martins arrived at the usual time but it seems many were held up in Spain. They continued to arrive late into May, when JC noted a significant passage at Allonby on 24 May. Overall numbers of both species were down on recent years. **Waxwing:** a single was seen on 7 March in Penrith (DJ).

Wheatear: usually one of the early arrivals, were also slow – two seen by DJ on Campfield Marsh scrape on 5 April reflecting the lateness. **Redstart:** at Geltsdale on 29 April (JM). **Whinchat:** was seen at Anthorn on 25 April (AA). **Fieldfare:**

estimated flock of 50 over Walby on 7 April (RJ). **Ring Ouzel**: a male was at Castle Carrock on 19 March (JM). **Garden Warbler**: one at Geltsdale on 29 April (JM). **Blackcap**: G< had a female bathing in their garden birdbath in Carlisle on 4 March. A male was at Sutton Bank, Cargo (SDI) on 5 March and a singing male was at Watchtree on 14 April (LS). I am presuming that this is an overlap between wintering continental birds (March records) and African migrants (singing males in April). **Lesser Whitethroat**: one at Allonby and another at Crosscanonby Carr, 19 April (JC) **Whitethroat**: a singing male at Watchtree on 25 April (LS). **Wood Warbler**: a singing male in Miltonrigg Wood on 23 April (RH). **Willow Warbler**: ringed at Watchtree NR on 7 April (FJM). **Chiffchaff**: One along Rogersceugh Lonning on 11 March (AA) and singing males on north side of Glasson Moss and Port Carlisle on 13 March (CA). Good numbers arrived in the following two weeks but the population seemed to have encountered problems with few singing males in my regular haunts. We are catching low numbers of juveniles at Watchtree and reports from others do suggest the population was badly hit by the cold weather at the end of March. **Sedge Warbler**: singing male at Watchtree on 25 April (LS). A notable ringing result was a juvenile we ringed at Watchtree on 17 July that was re-captured by another ringer at Navarre, northern Spain, on 11 August. **Grasshopper Warbler**: singing males on 21 April at Weddicar Hall Park and Walkmill Tip (GB). **Reed Warbler**: two singing males at Watchtree on 30 April (LS). **Spotted Flycatcher**: a nest with five chicks on Aikbank Farmhouse on 5 July (JT). **Pied Flycatcher**: three singing males in Miltonrigg Wood on 23 April (RH). **Willow Tit**: breeding confirmed in west and north side of Glasson Moss; sadly, both nests were taken by predator, probably Great Spotted Woodpecker. A **Yellow Wagtail** was seen near Skirwith on 11 May (RH). **Twite**: a small flock still present on Grune Point 3 March (FJM). **Common Crossbill**: a pair seen near Spadeadam 23 June (RH) and four at Finglandrigg NNR on 20 August (CA).

Butterflies, moths and other insects

The hot weather had remarkable effects on the abundance of several species of butterfly, notably **Wall**, **Small Copper**, and all three 'Whites'. (A count of 96 **Wall** on a Watchtree transect in early August by LS was indicative.) The **Marsh Fritillary** had another very good year and three were seen at Watchtree where I found two active broods on Scabious on 22 July **White-letter Hairstreak** is becoming increasingly widespread – see article on page 49. However **Small Tortoiseshell** sightings remained relatively scarce. Perhaps the grassland butterflies **Meadow Brown** and **Ringlet** fared less well when the grasses dried out under the hot sun. Given the very cold March perhaps we can assume that the early **Red Admirals** were all migrants, along with small numbers of **Painted Ladies**, **Large** and **Small Skippers**. **Common Blue** were regularly reported and the **Dingy Skipper** colony at Watchtree fared well.

Orange-tip was perhaps a little late emerging and seemed to finish flying a little earlier than in recent years with an early record of 21 April at Weddicar Hall Park (GB) and last at Watchtree on 6 June. **Green Hairstreak** records included above Naddle Forest, Haweswater 18 May (DC), and MW reported two near Cleator Moor on 14 May. **Small Pearl-bordered Fritillary** colonies at Thornhill Moss and Finglandrigg Wood NNRs remain strong and the summer seems to have prompted a second emergence in early August with a report of a mating pair near Lanercost from MG on 18 August. This '2nd-generation' occurrence is unusual, though not unheard of in the county. A **Holly Blue** first record of the year was at Carlisle University, Fusehill Street on 6 May (RA). One reported to DC from Armathwaite 11th August would have similarly been 2nd-generation – again indicating a good season. **Comma** seems under-reported this year, but RH had a first in his Carleton Garden on 27 July, SDI had another in Etterby on 15 July and KH in his garden on 22 July and 4 August. **Speckled Wood** is being recorded in ever more locations, including Finglandrigg Wood NNR. **Purple Hairstreak** was again recorded from Finglandrigg Wood on July (DJ). **Large Heath** was present in good numbers on a short transect I walked on the Kirkbride Awards on Wedholme Flow in July. Day-flying migrant moths included abundant **Silver Y**, though few **Hummingbird Hawkmoths**. DC saw one at Cumwhitton, 19 July and two were at Dalston Nursery 17 June, with another there on 25 August (DH).

The **Dark Bush-cricket** is restricted to a handful of the mildest of locations in Cumbria. Individuals were encountered during a moth-trapping evening at a known site for this species at Arnside Cliffs on 2 September (GB). The northward advance into Cumbria by the spectacular scarlet and black bug *Corizus hyoscyami* (Plate 1) was first heralded by an individual found on river shingle at Sebergham in 2014 (*Lakeland Naturalist* 3(1):10). The bug has now established a strong beachhead in the county with healthy populations found this summer on sand-dunes around the Duddon Estuary at North Walney, Sandscale Haws, Haverigg Haws and also at Hodbarrow Point (SH & JP). Hodbarrow also provided a new Cumbrian location for another distinctive bug, *Coriomeris denticulatus*, which is also expanding its range into south Cumbria (SH).

As the dragonfly note (page 42) also reveals, the hot summer weather seems to have resulted in many flying insects moving considerable distances. One apparent result of this was the number of usually very localised hoverfly species reported from suburban gardens at Dalston (DH), Maryport (KH) and Penrith (SH): *Arctophila superbiens* was in KH's garden in August and another was seen nectaring at Devil's-bit Scabious flowers in SH's garden on 27 August. Also noted in KH's garden during August were *Melangyna umbellatarum*, *Helophilus hybridus* and *Dasytyrphus albostrigatus*, whilst *Sericomyia silentis* was observed in gardens of DH, KH and SH in August/September and DH photographed the handsome black and yellow *Xanthogramma*

pedissequum in his garden in August. The most exciting record though was of the large and impressive wasp-micking **Hornet Hoverfly** (*Volucella zonaria*) which Bob Jones recorded on *Buddleia* at Wetheral on 26 and again on 29 August. This is only the second Cumbrian occurrence, following Viv Russell's record at Silloth last year, reported and illustrated in volume 5(2) of this journal. While this too may be the result of the exceptional summer, it is also likely to be the vanguard of things to come.

Amphibia and Reptiles

Adder: Only records were from Finglandrigg Wood NNR (GB, NF, RH, DJ) Wedholme Flow (RH) and Mardale (LSch). CA noted one on the Boardwalk in Finglandrigg Wood on 20 August. **Slow-worm:** only records, as usual, from Dalston churchyard 26 March (DJ) and DH 15 May.

Mammals

American Mink along the R. Eden at Beaumont on 8 March (R&SG). **Polecat:** a roadkill on 16 June near Cumwhitton (DC) reflects regular occurrence in this part of the county. **Red Squirrel:** recent research shows they are stressed in the presence of Greys, which despite a lot of work on their eradication are still commonly recorded. Red squirrels were reported by SR at Burnbanks 12 April, DC at Mardale 3 May and SR at Haweswater on 17 June. **Otter** records for some reason seem quite scarce again but LS had a very close encounter with one at her feet whilst moth-trapping in Pond Wood at Watchtree on 25 August.

Recorders

AA: Anne Abbs, CA: Colin Auld, Gbe: Graham Bell, GB: Guy Broome, JC: J Callion, DC: David Clarke, LC: Lindsay Cowen, KC: Kirsten Crowther, RD: Richard Dixon, AE: Anita Evans, MG: Mike Gardner, R&SG: Russell and Sara Gomm, SG: Sam Griffin, KH: Keith Hamilton, SH: Steve Hewitt, DH: David Hickson, RH: Robin Hodgson, SDI: Dorothy Iveson, DJ: David Johnstone, RJ: Robert Jones, FJM: Frank Mawby, JM: John Miles, JP: John Parker, FJR: Jeremy Roberts, LR: Linda Robinson, SR: Steve Routledge, VR: Vivian Russell, DS: Dave Shackleton. LSch: Lee Schofield, LS: Liz Still, MT: Martin Thomas, G & LT: George and Linda Tinkler, JT: James Turner. MW: Megan Watson. Tony Matthews at Drumburgh kindly supplied weather records and Steve Hewitt provided some additional notes on insects.

Frank Mawby

14th April 2018: Geology of Eycott Hill area Leaders: Sylvia and Peter Woodhead

After a very changeable and cold week the weather improved markedly just in time for the first field meeting of the season. It was a small and enthusiastic group of five members that joined Sylvia and Peter Woodhead for a splendid day out. From the car park we looked across Eycott Hill – the Cumbria Wildlife Trust Reserve which is an SSSI for both its mires and its unusual geology. It is also a Local Geological Site, designated by Cumbria GeoConservation (a specialist group of Cumbria Wildlife Trust), who have organised the geological interpretation boards and geology leaflets at Eycott. As we enjoyed the panoramic view Sylvia pointed out the fells surrounding the reserve – Blencathra with its dark smooth slopes, part of the Lake District Skiddaw Group, Carrock Fell of gabbro and granite, and Little & Great Mell Fells of more recent sandstones and conglomerates of Devonian/Carboniferous age. Immediately in front of us lay the reserve and the ridges of the Eycott Volcanic Group.

A Curlew was calling as we set off from the car park. In this initial area the volcanic rocks are overlain by limestone and glacial drift. We examined a few of the natural 'shake holes' or sink holes where water had widened cracks in the limestone causing the slumps in the surface. One of the holes seen was a classic 'swallow hole' with a small stream water (draining from a boggy patch) falling into the depression and disappearing at the base into a fissure in the limestone. A few erratics were to be seen among the sink holes – dropped there by receding ice at the end of the ice age.

The unconformity between the limestone surface and the volcanic rocks was marked by a boggy area. Recently a few scrapes have been excavated in this area by the CWT. This work has exposed a few large boulders – more erratics that had been previously buried by topsoil.

We were now moving onto the ancient lava flows. These are thought to have originated from lava being extruded through long fissures and vents in the earth's crust around 450 million years ago. Over 20 separate flows took place and due to later tilting of these beds they now form a series of ridges and hollows due to differential erosion. The ridges we came to first are the youngest, while the oldest are those on the far side of the reserve. The younger rock was heavy and made up of small, very dark crystals. The older lava had large paler, feldspar crystals in it, showing that it cooled more slowly. We looked at the roughly columnar cooling joints of the lava below the summit of Eycott Hill. These were formed as the lava cooled from a temperature of over 1000 °C.

As we headed back to the car park we crossed boggy areas where peat formation continues and the habitat is suitable for a wide range of botanically important plants. Meadow Pipit and Reed Bunting were spotted and Skylarks were singing.

After a picnic lunch we headed off along a footpath on the opposite side of the Berrier road. Initially we crossed a field where the reddish soil denoted glacial drift. Going uphill we crossed a couple of stiles. In the rough limestone wall here a

brachiopod fossil was seen. On the top of the wall Rue-leaved Saxifrage (*Saxifraga tridactylites*) and Biting Stonecrop (*Sedum acre*) were growing. The heavily sheep grazed field beyond revealed patches of well weathered limestone pavement, highly vegetated and with wide runnels. Shake holes and erratics were also to be found. In one of the ‘craggs’ of exposed limestone we found the curved fossil of a Productid Brachiopod – these creatures were common in the Carboniferous seas. Sylvia pointed out examples of Kamenitzas (small shallow flat-bottomed depressions on the surface of the limestone that hold water), and impressive Rillenkarren (‘solution flutes’ which take the form of a series of sharp crests separating runnels). Amongst the clints and grikes we found growing Wall-rue (*Asplenium ruta-muraria*), Wild Thyme (*Thymus polytrichus*) and the mosses *Ctenidium molluscum*, *Tortella tortuosa* and *Homalothecium sericeum*. Simon identified a white dried out skull found lying on the surface – it was a young badger. In this area we were shown two perched erratic boulders, sitting on limestone pedestals.

As we headed back to the cars we thanked our leaders for an exceptional day where we had been treated to some new and unexpected sights of both volcanic and karst topography.

Marie Saag

8th July 2018: West Silloth dunes and shore

Leaders: David Hickson & Dorothy Iveson

Twenty members attended on a day that was warm but overcast until about 2.30pm, when the sun broke through.

Butterflies included Dark Green Fritillary, Grayling, Small Skipper, Small Copper, Common Blue, Small Heath and Meadow Brown, as well as the day-flying 6-spot Burnet, Latticed Heath and Shaded Broad-bar moths and the cream-coloured *Idaea lutealis*. A Cinnabar Moth caterpillar was found being attacked by a (much smaller) crab spider *Xysticus cristatus* (Plate 3). Stephen Hewitt helped us identify a wide range of other insects. Amongst the dune grassland were Field Grasshopper (*Chorthippus brunneus*) and Mottled Grasshopper (*Myrmeleotettix maculatus*) as well as bugs like the Hairy Shieldbug (*Dolycoris baccarum*) and the grassbugs *Notostira elongata* and *Trigonotylus ruficornis*. Among the flower-heads of Tansy were found numbers of the yellow-green Tansy Bug (*Megacoleus tanaceti*) and the bugs *Gampsocoris punctipes* and *Macrotylus paykulli* were found on Restharrow. A female of the mottled-winged gall-fly *Campiglossa plantaginis* was netted. This species is said to attack the flower-heads of Sea Aster. Along the paths and on patches of sand the large bristly robber-flies *Philonicus albiceps* and *Dysmachus trigonus* lurked in wait for passing prey. Here the males of Coastal Silver Stiletto-flies (*Acrosathe annulata*) also basked on the bare sand or performed aerial dances in the sunlight to attract females. The golden-haired Common Stiletto fly was also present. Beneath debris along the top of the beach

were found the large black ground beetle *Broscus cephalotes* which comes out at night to hunt; a single Brown Chafer beetle (*Serica brunnea*) and numerous tiny *Chersodromia inana* – hybotid flies little bigger than a grain of sand which run about the upper strandline in search of even tinier prey.

A very small Palmate Newt was found under a log on the strand line a long way from the pond in the dunes. The pond still held water in spite of the long hot spell of weather but failed to produce any insects of note. One Emerald Damselfly was seen. There was a lot of Bur-reed (*Sparganium* sp.) and Water-plantain (*Alisma plantago-aquatica*). Among the range of plants of note were several spikes of Pyramidal orchid (*Anacamptis pyramidalis*), Sea Holly (*Eryngium maritimum*), Hoary Mugwort (*Artemisia stelleriana* – a garden escape and native of Siberia), and Isle-of-Man Cabbage (*Coincya monensis* ssp. *monensis*). David Hickson also pointed out the scarce Sickle Medick (*Medicago sativa* ssp. *falcata*) near the car park.

The walk ended at the site of the Tassel Hyacinth (*Muscari comosum*) where several flower spikes were seen.

A final stop was made at the sunken bee garden on Silloth Green where we were met by Vivian Russell of Skinburness who has created and looks after the garden. She explained about the different nectar-producing plants used to encourage butterflies, bees and many other insects. We were glad to have her input and time.

Dorothy Iveson



Sea Holly – Annie Burgamy

Notes and Records

Dragonfly news from Cumbria, 2018

The long, dry and often very hot period of spring/summer 2018 surprisingly brought no migrant species, though it did produce some interesting occurrences of certain species in the northern half of the county, especially in June. (The period *ca.* 5–10 June seems to have been particularly notable for a concentration of ‘extra-limital’ sightings of the two demoiselle species.)

A number of records relate to the RSPB Haweswater Reserve, and no doubt reflect the regular presence of observers there. There were sightings of both species of demoiselle in Swindale (NY51) – where neither is previously recorded. Beautiful Demoiselles, up to two males and a female, was present on 5 June, and a male was seen in bracken at The Rigg, Haweswater (NY41) on the 11th. As there are no obvious sources of this species to the north of these valleys, it seems more likely that these individuals may have come over mountain passes through south-running valleys such as Kentmere and Longsleddale. Whether the presence of both sexes will have founded a new population remains to be seen. Fortunately, there is sufficient photographic evidence to confirm the identification.

A male Banded Demoiselle also appeared in Swindale, on 10 June. Here the source could well be from a northerly direction, since the species has been recorded well upstream on the Eden, and Eamont. This year one or two appeared on the Lowther at Askham (NY52), which receives the Swindale Beck. The date was again in early June. On 7 June another tributary of the Eden system, the Crowdundle Beck, yielded a single male at Acorn Bank (NY62). In Borrowdale, a Banded Demoiselle was seen on 24 June at Grange (NY21), presumably having negotiated the full length of Derwentwater from the usual upper limit at Keswick, 5 km away. A much more remote sighting was of a male photographed on the upper Irthing near Butterburn Flow (NY67) on 30 July, some 30 km by river-distance from the nearest known site – just upstream of Lanercost. 40–60 Banded Demoiselles on the Eden just above Lazonby (NY53) on 28 June were either an undiscovered colony or an accumulation of upstream-moving individuals, or both. Stray singles of both demoiselles variously turned up out of habitat along roadsides and even in towns.

(Quite evidently from the above, demoiselles did well generally: Mo Richards (pers. comm.) wrote, *It has been a wonderful year for C. virgo. If I see one I see a dozen. Seen on Rothay, Brathay, Little Langdale, High Arnside Tarn – all in numbers, with ones and twos seen in many places, including the centre of Ambleside. I have had people asking me ‘what are the black butterflies?’*.)

Keeled Skimmers seem also to have done well despite weather effects on the shallow runnels and mires they inhabit. A strong population was noted on flushes above Mungrisdale village (NY33) on 3 July, and the species was present at a mire well up the nearby Mosedale valley on 11 July. A few were also present at the Cotra

mires, Dunmail Raise (NY31) on 9 August. Each of these appear to be new records for these parts of the county. The mire at 320 metres in the Naddle valley, Haweswater (NY51) produced a first record later in the season (26 July). There was an especially interesting but unconfirmable sighting near Hallbankgate (NY65) of a single male on 26 June. There are no known breeding populations in the vicinity.

Sightings of the north-advancing species Broad-bodied Chaser and Black-tailed Skimmer were only to be expected, and the former in particular produced a wide scatter of records, some well out of typical habitat and in various states of maturity. Locations included a mid-eastern ‘cluster’, broadly aligned with the Eden valley, within a 15 km radius of Penrith: Swindale, Bampton Common, Ousby (3-4, both sexes; also recorded nearby in 2016), Wan Fell, Kirkoswald (also recorded 2016), Eycott Hill, with dates ranging 26 May to July. Earlier dates are more likely to be indicative of local breeding (Plate 4). Black-tailed Skimmers featured less than perhaps might have been predicted and records in the north of the county were few. Soddy Gap (NY03) near Cockerthorpe (the site of some previous records) had one on 14 July. An unconfirmed but likely sighting of a male in Swindale was on 6 June.

The following variously contributed to records mentioned above: Susan Brandes, David Clarke, Stuart Colgate, Nick Franklin, Sam Griffin, Clive Griffiths, Keith Hamilton, Karen Hodgson, Dave Morris, Linda Reinecke, Mo Richards, Jeremy Roberts, Anna Robinson, Linda Robinson, Spike Webb. There may well be further records to come: records received by CBDC up to the end of September 2018 have been included where relevant.

David Clarke, Burnfoot, Cumwhitton, Brampton CA8 9EX

The shorebug *Saldula pallipes* (Hemiptera: Saldidae) new to Cumbria

Earlier this summer John Parker gave me a shorebug that he had caught in the flooded quarry at Hodbarrow (SD179791). I keyed it out as *Saldula pallipes* (Fabricius 1794) which has not been previously recorded in Cumbria. This species is very similar to *S. palustris* and there has been much confusion between the two species. I returned to the site on 12 September and was pleased to find several more specimens along the damp algae-covered shore of the quarry pool, enabling me to get some photos and to confirm my identification (Plate 2). Whilst *S. palustris* is widespread in brackish situations on estuarine mudflats around the coast of Britain including Cumbria, *S. pallipes* is usually found on sandy clays and gravels around freshwater pools and flooded gravel pits (Southwood & Leston, 1959). The British Bugs website (<http://www.britishbugs.org.uk/>) says this species is widespread by inland pools and flooded gravel pits at least as far north as southern Scotland. However, the NBN Atlas (<https://species.nbnatlas.org/>) has records only as far north as south Lancashire except for one in north Northumberland.

The addition of *S. pallipes* brings the list of Cumbrian shorebugs (Saldidae) to 18 species, out of 22 in the UK, which variously occupy habitats ranging from coastal saltmarsh to upland blanket bog.

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Stephen Hewitt, 28 Castle Drive, Penrith CA11 7ED

A recent record of the leaf beetle *Chrysolina oricalcia* (Muller, O.F.) (Chrysomelidae) from Cumbria

In May 2018 Deborah Muscat discovered the adults and larvae of the leaf beetle *Chrysolina oricalcia* just to the north of Edderside, near Aspatria. The beetles were found on the hostplant Cow Parsley (*Anthriscus sylvestris*) which was growing below a Hawthorn (*Crataegus monogyna*) hedge on a roadside verge at NY10494574 (Plate 6). Between 31 May and 3 June, DM observed *C. oricalcia* on Cow Parsley at the Edderside site on five separate occasions, as follows: 30 May – four adults; 31 May – 4 adults; 1 June – two adults and three larvae on one plant; 2 June – two adults and eight larvae on one plant; 3 June – two larvae only present on one plant. The larvae discovered by DM were black-grey in colour and measured approximately 0.4 mm in length and were observed crawling over the leaves and leaf stalks of the hostplant.

C. oricalcia is a shiny, oval-shaped and variably coloured leaf beetle with pitted elytra, measuring just over 8 mm in length. It is associated mainly with plants in the family Apiaceae. According to Cox (2007) the larvae are more active in the evening and at night when they feed on the foliage of the hostplants. In Britain *C. oricalcia* has just one annual generation and hibernation is passed in the adult stage. The adult beetles can be found throughout the year but are active mainly in May and June. The larvae occur mainly in April and May and pupate in an earthen cell, usually at the base of the foodplant.

C. oricalcia is currently designated Nationally Notable in Britain – *i.e.* a species known to occur in 31–100 ten-kilometer squares of the National Grid (Hubble, 2014). Despite this, according to Cox (*op. cit.*) it is widespread in England, North Wales and Scotland and has also been recorded from Ireland. Nonetheless, there is only one previous record from Cumbria – from v.c. 70, Cumberland. This was quoted by Day (1923), who lists the beetle as having been recorded from Coombe Wood, Armathwaite (no date) by T. C. Heysham (1792–1857). The fact that Day (1875–1963) himself failed ever to find the species in his long recording life is testimony to its scarcity. (Heysham and his father were well known and much respected 18th/19th century naturalists (Murray, 1909). TCH took a particular interest in entomology,

which included Coleoptera, and collected extensively in the county, discovering a great many uncommon beetles.)

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John Read 43 Holly Terrace, Hensingham, Whitehaven, Cumbria CA28 8RF

The Oak Slug Sawfly *Caliroa annulipes* (Klug) (Hymenoptera Symphyta: Tenthredinidae) discovered in West Cumbria

While walking along the main street in Cockermouth (NY119306) on 7 July 2016 I noticed that many of the leaves of the planted Large-leaved Lime trees *Tilia platyphyllos* that grow on either side of the street had what appeared to be feeding holes in them. The attacked leaves were very conspicuous and were present on the tillers at the base of the trees and on leaves extending well into the crowns. On closer inspection these holes were quite irregular in shape but were not completely holed and the leaf surface had been extensively grazed giving it a skeletonized appearance. At the time I could not see any insect or other invertebrate on the leaves that could have been responsible for making the feeding marks, and so I decided to collect a few leaves for later examination at home. Eventually several, small (approx. 5 mm long) pale green slug-like larvae (Plate 5) were found on a few of the collected leaves and these were removed and placed in a plastic container with a small amount of lime leaf material. A preliminary examination of the larvae under the microscope revealed that they were a species of sawfly. They had a typically large head with prominent ocelli and three pairs of prolegs. Also, the body was covered in a coating of mucous, which is characteristic of this group of sawflies. After about two weeks a few of the larvae pupated in the container, and one adult emerged on the 25th July 2016. The adult was kept in captivity and died on 6th August. It was later retained as a voucher specimen. The cast skins of several larvae were also found on the leaves together with the pupa of an unidentified hoverfly. All attempts at identifying the sawfly to species level failed and the specimen was put to one side for later determination. It was not until December 2017 that I showed it to Stephen Hewitt who eventually identified it as the Oak Slug Sawfly *Caliroa annulipes* Klug.

Similar feeding marks to those present on the lime leaves at the Cockermouth site were also observed in 2016 on leaves of large-leafed lime trees in Crowpark Wood, Whitehaven NX976179 on 14 August. No attempt was made to search for larvae or adults at this site and it was assumed that the leaves had been attacked by *C. annulipes*.

C. annulipes is a member of a group of sawflies in the family Tenthredinidae of which there are currently 439 species in Britain (Liston *et al.*, 2014). The genus *Caliroa* contains five species. The sawfly is associated mainly with oak and, apart from lime, the larvae have also been recorded as feeding on birch, beech, willows and bilberry. The common name of *C. annulipes* is derived from the slug-like appearance of the larvae which are typically covered in a coating of mucous. The larvae are mainly green in colour and are quite often yellowish towards the head. The body is transparent and becomes greener as the larvae reach maturity. The adults which measure just over a centimetre in length are all black and have distinctive black and white banded legs. The wings which are grey-brown in colour have a distinct dark spot and fore edge.

This would appear to be a new record of *C. annulipes* from Cumbria and the first for v.c.70, Cumberland. I have been unable to find any records of the sawfly from the county and there are no local specimens in the collections of Hymenoptera held in the Tullie House Museum. According to the distribution map on the National Biodiversity Network website, *C. annulipes* is somewhat locally distributed in Britain and has been recorded from England, Wales and Scotland and also Ireland (Liston, *op. cit.*). The NBN Gateway map shows the sawfly to be absent from all of the north west and north east of England.

Acknowledgement

I wish to thank Stephen Hewitt for kindly identifying the adult specimen of *C. annulipes* for me and for checking the collections of Hymenoptera in the Tullie House Museum.

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John Read, 43 Holly Terrace, Hensingham, Whitehaven, CA28 8RF

The hot summer of 2018 – a perspective on some records of aculeate Hymenoptera

Nick Franklin

19 Eden Street, Carlisle CA3 9LS

The record summer of 2018 proved to be a short but excellent season for some solitary bees and wasps in Cumbria but a more challenging one for others. The unbroken run of dry, hot and sunny days from late May until late July saw the early appearance of many solitary wasps and bees, but also the early disappearance. Some species, particularly solitary wasps, that are not normally on the wing until well into July appeared in June but these same species, which normally persist until late August, were virtually absent by the start of the month.

In late May I was lucky enough to find at least a dozen *Chelostoma florissomne* – Large Scissor Bee – nesting in a fence post pile at the Acorn Bank National Trust property near Culgaith (NY62). This is a scarce bee in Cumbria with two records from Cummersdale, Carlisle by F.H. Day in 1952 and a single record in 2000 from Temple Sowerby by S. Hewitt (Robinson, 2005). As with many of the species this year the bees were present for a short period of only two weeks, but hopefully the warm dry weather simply allowed them to conduct their nesting quickly. Only next season will allow us to tell.

Other early bees seemed to do well, with good numbers of *Andrena cineraria* found nesting at Cowraik Quarry (NY53), with a smaller number of their cleptoparasite – *Nomada lathburiana* – also present. Another nesting colony under paving flags at Askham Hall (NY52) was also recorded. These are, as far as I know, the most northerly recorded nesting of this species which is, like so many others, slowly pushing north. This year has also seen a record of this species in a garden at Cumwhitton near Carlisle (NY55) which may well be the most northerly UK sighting.

The same garden produced one of two confirmed records of the cleptoparasitic bee *Nomada flava* this year, the other came from Acorn Bank. This bee is very hard to distinguish from its northern counterpart *Nomada panzeri* and there are only a handful of Cumbrian records, but once again this is a predominantly southern species that seems to be extending its range north.

The same theme seemed to run through the whole summer, with several scarce species being located but few on the wing for long. These included in June the second record for Cumbria of the small black wasp *Psenulus pallipes*, on old logs at Rockcliffe Marsh (NY36), the first having been recorded in 1940 by F.H. Day at Durdar, Carlisle (Robinson, *op. cit.*). The third record followed shortly after, again at Acorn Bank, and in early July the scarce solitary wasp *Passaloecus monilicornis* was located nesting in an old tree stump near Lanercost (NY56). A first for the county

followed in early August when *Trypoxylon clavicularum* (Plate 7), a wood borer wasp, was found nesting in a dead tree at Carr Beds, Rockcliffe. All these aculeates are probably becoming commoner in Cumbria as the summers warm up as they were unlikely to have been missed by the extensive collecting activities of earlier Cumbrian naturalists, some results of which were detailed by Routledge (1933).

Other species did not seem to have such a good year, such as the recent coastal colonist *Osmia aurulenta* which fared badly, presumably as the hot dry weather rapidly affected the supply of its host plant, Bird's-foot Trefoil. Bees that generally appear in mid-to-late summer, such as *Megachile* and *Hylaeus*, were generally in short supply. This was equally true of solitary wasps where the *Ancistrocerus* and *Ectemnius* species normally associated with high summer were only visible in notably small numbers. One unusual *Ectemnius* that was seen in small numbers this year was *E. ruficornis*, again located nesting at Acorn Bank.

For no discernible reason the opposite seemed true of *Crossocerus* and *Pemphredon* wasps which were present in good numbers all through June and July. They did, however, disappear earlier in August than would normally be expected.

We can only really wait until next season to see if the shortened nesting season has been as productive as a normal, wet, Cumbrian summer.

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Andrena cineraria – Nick Franklin

The White-letter Hairstreak in North Cumbria

Peter Howard

Woodcock Cottage, New Mills, Brampton, Cumbria CA8 2QS

Present UK status

Between 1976 and 2014 it is estimated that the UK abundance of the White-letter Hairstreak (*Satyrrium w-album*) declined by 96%, and its occurrence diminished by 45% (Fox *et al.*, 2015). The butterfly is a BAP Priority species and is listed as 'endangered' in the Butterfly Red List for 2010 (Fox *et al.*, 2010). The White-letter Hairstreak is not, however, an easy species to survey accurately. Indeed, it is an elusive and under-recorded insect, spending most of its life high in the canopy of elm trees (*Ulmus* spp. and their hybrids). So, a note of caution is called for here. It is very difficult to assess whether newly-discovered colonies represent a genuine recent range expansion or are partly/wholly the result of increased observer effort and have thus simply been overlooked in the past.

Elms

Elm species are the foodplant of the White-letter Hairstreak larva and are also an important source of food (honeydew) for the adults. The most recent UK epidemic of Dutch Elm Disease began in Gloucestershire in 1965, and within a couple of decades had spread across the length and breadth of Britain. Millions of mature elms have succumbed to this fungal infection, carried by two species of elm bark beetle. Of the many elm species, Wych Elm (*Ulmus glabra*) has proved the most naturally resistant to the disease. This is probably partly because it reproduces from seeds which are wind dispersed, and very rarely produces suckers (clones), thereby lending it greater genetic variation (Rackham, 2002). Wych Elm, incidentally, has always been the most common species in the north of England. Elms located on woodland edges and in sheltered valleys have also proved less susceptible to infection than trees in more open parkland or hedgerow habitats (Rackham, *op. cit.*). Wych Elm is largely a floodplain species, favouring relatively damp sites. The White-letter Hairstreak has been shown to breed most successfully on this species of elm, and although mature trees are most favoured, even non-flowering trees under 7 m in height can support colonies (Oates, 2015).

Colony structure and dispersal

During the mid-1980s, mark-and-recapture experiments were carried out on a White-letter Hairstreak colony along the fringe of a woodland ride in Herefordshire (Davies & Ceney, 1992). The colony here was about 345 m long. It was demonstrated that the butterflies were actually quite mobile, regularly moving up to 300 m between

trees. Similar behaviour has also been observed by Andrew Middleton in north London and Hertfordshire (Barkham, 2010). It was, however, also noted that the insect very seldom passed through or over any heavily shaded areas. During the period of the study, butterflies were also recorded in places some distance from the nearest colony, suggesting that dispersal may occur across gaps of several kilometres of unsuitable habitat.

Recent observations in north Cumbria

Between 2011 and 2015 Jill Mills and Ken Haydock set out to find White-letter Hairstreak colonies in Cumbria (Mills, 2015). In the north of the county they were able to locate twelve new sites between the middle Eden valley and the Scottish border. They noted a gap in occurrence between the Penrith area in the north and the Kendal area in the south, which they were unable to bridge. Inspired by this fieldwork, in 2017 I decided to start searching for this elusive butterfly myself in the north of the county. To date I have been able to find a number of previously unrecorded colonies, one of which is a meta-colony stretching some 800 m along a lightly-wooded section of the river Irthing. Other observers have also located additional colonies in the area. Roberts (2016) and Hedges (2017) contributed earlier notes in this journal and the latter illustrated an *in situ* egg.

All the colonies that I have found have been on Wych Elms in relatively sheltered yet open and sunny locations, invariably close to water courses. Clumps of elms around bridges have proved particularly productive. Interestingly, I have been unable to locate any colonies (or signs of larval leaf damage) in areas where apparently suitable elms are growing in more shaded areas of denser woodland. This would appear to be consistent with the aforementioned observations made by Davies (Davies & Coney, *op. cit.*). Some of the colonies have been on relatively small, non-flowering trees. Many of the butterflies have been seen on adjacent Ash trees (*Fraxinus excelsior*), presumably attracted by the often-plentiful aphid honeydew which is a noted characteristic of this species. Mating has actually been observed by the writer on 7th July. It was also seen and successfully photographed by Adam Moan, Guy Broome and Steve Doyle. This was at Lanercost old bridge, which gives views high into the canopy of an adjacent elm. The image shown on the cover of this issue was taken here on 5th July 2018. A third individual, presumably another male, was initially present. I can find just a single reference to this behaviour ever having been witnessed before (Davies & Coney, *op. cit.*), and even the esteemed butterfly ecologist Jeremy Thomas states that he ‘... knows of no-one who has seen this take place’ (Thomas & Lewington, 2016). Egg-laying has also been observed and photographed this summer by Colin Auld and the writer.

The probable corridor of colonisation

It is believed that the expansion of the White-letter Hairstreak into areas north of Yorkshire began in the late twentieth century, with the first reported sighting north of the Tees being in 1982. The first record for Northumberland was in 1996 (near Wylam), and the butterfly has now been recorded as far west along the Tyne valley as the lower river Allen, between Hexham and Haltwhistle (Norman *et al.*, 2014). The first accepted record for Cumbria was in 2007, at Arnside Knott. There were no known colonies in the north of the county until 2011, when Jill Mills and Ken Haydock found an old hatched egg near Culgaith in the middle Eden valley. Since then colonies have been located as far north-west as Gilsland, a village which straddles the Cumbria-Northumberland border. The distance (as the Hairstreak flies) between this site and the river Allen colony is just 17 kilometres, and it is, I believe, highly likely that a number of undiscovered colonies exist to connect these known sites. No colonies have yet been found to bridge the Eden and Kent catchment clusters, strongly suggesting that by far the most likely ‘corridor of colonisation’ into north Cumbria has been along the ‘Tyne Gap’ from Northumberland. Map 1 shows the earliest records from all presently-known colonies in north Cumbria.

Outlook

The White-letter Hairstreak does appear to be spreading northwards, and in 2018 it was confirmed as breeding in south-eastern Scotland, near Coldstream, for the first time in 130 years. Climate change and the slowing incidence of Dutch Elm Disease are both likely drivers (Norman *et al.*, *op. cit.*). As mentioned earlier, this is a highly overlooked and under-reported butterfly, and observation does indeed require not a little patience and persistence. It is, however, a species which amply rewards the time and effort spent in searching for it. There are great opportunities for the amateur naturalist to find new colonies throughout Cumbria, and to help fill in some of the gaps in the distribution map. Egg searches during the winter months could also help to locate new sites. It is likely that the hot summer of 2018 has encouraged better/wider than average dispersal of the adults this year. So, I for one will certainly be getting out and about in 2019 to continue my search for the White-letter Hairstreak.

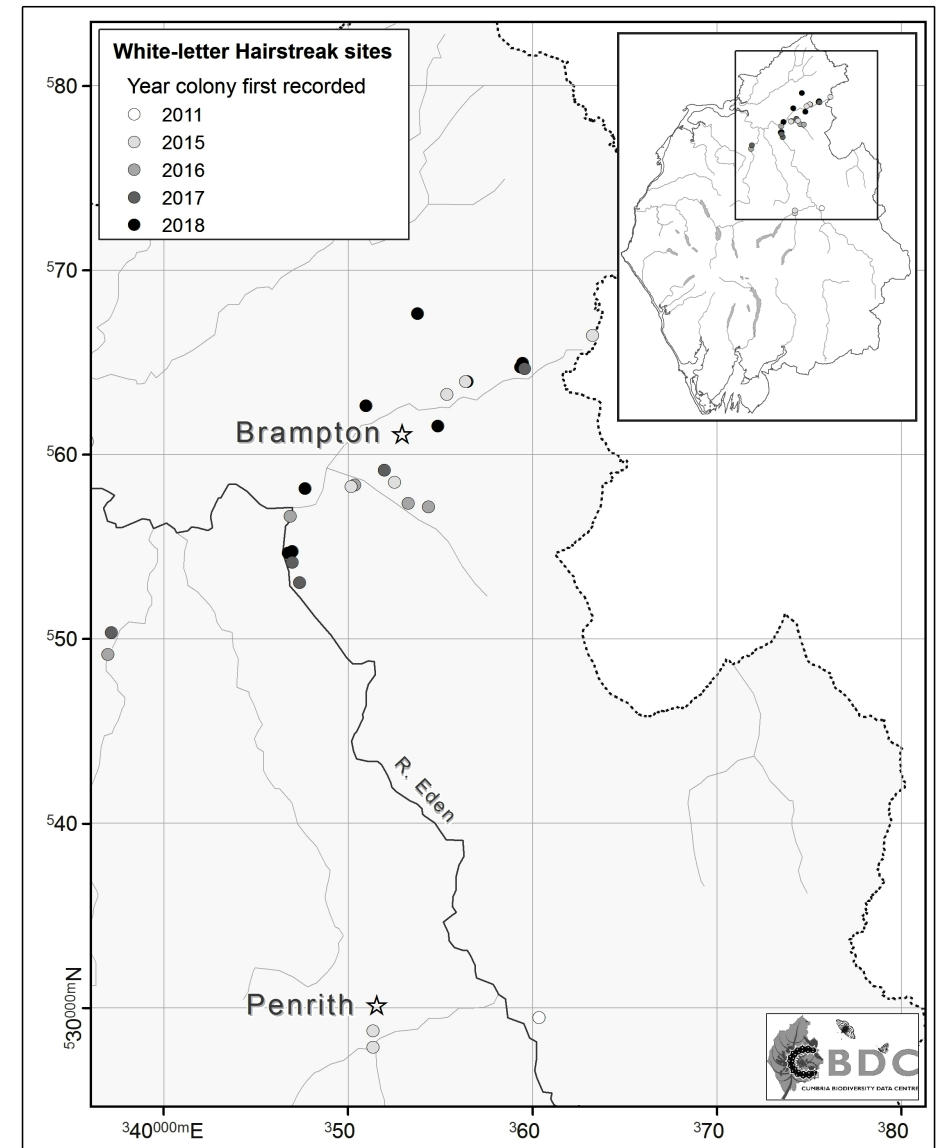
Acknowledgements

I am grateful to El-Moustafa Eweda and Stuart Colgate of Cumbria Biodiversity Data Centre, Carlisle for further records and production of the map.

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Map 1. White-letter Hairstreak: breeding colonies in north Cumbria, plotted by earliest year of discovery

Some stipitate hydroid fungi ('tooth fungi') new to Cumbria

Paul Nichol

1 Chapel Brow, Carlisle CA1 2PP

Stipitate hydroid fungi are mycorrhizal fungi with a short stalk that bear their spores on tooth-like projections on the underside of the cap – as can be well seen in the image at the end of this article. Most are rare in Britain and are fungi of ancient and mature woodlands. Strongholds for these fungi are the Caledonian pine forests of Scotland, the New Forest and Windsor Forest. A frequent observation has been that several species are often found in close proximity to one another, suggesting that they require similar conditions. Streambanks also seem to be a favoured habitat.

Despite the availability of suitable environments and woodland communities in Cumbria, there are very few records and the tooth fungi would seem to be poorly represented in the mycota of the county with the exception of the ubiquitous *Hydnum repandum* (Wood Hedgehog) and occasional *Hydnum rufescens* (Terracotta Hedgehog).

Species of *Phellodon*, *Hydnellum* and *Hericium* have been recorded but we need to go back to the 1960s when there were six records, from near Beetham, Arnside in the extreme south of the county, viz: *Phellodon niger* (2), *Hydnellum conrescens* (1), *Hydnellum scrobiculatum* (1) and *Hericium coralloides* (2). Before that, we go back to the mid-19th century, when there were three records for the county: *Hydnellum scrobiculatum*, *Hydnellum conrescens* and *Phellodon melaleucas*.

During September 2016 while foraging in the Borrowdale Atlantic oak woods – at Strutta Wood, a member of the Cumbria Fungi Recording Group came across a Sessile Oak (*Quercus petraea*) growing on the side of a ghyll, the base of which was surrounded by fungi he had never previously seen. Specimens were collected and I was able to identify them to genus – those of *Phellodon*, *Hydnellum* and *Sarcodon*. As we are unfamiliar with these fungi in Cumbria, confirmation of species was necessary and this was provided by Martyn Ainsworth, a mycologist at the Royal Botanic Gardens, Kew, who identified them as *Sarcodon scabrosus* (new to the county, Red Listed and BAP species); *Phellodon confluens* (new to the county, Red Listed and BAP species); *Phellodon niger* and *Hydnellum spongiosipes* (new to the county and BAP species). Three are shown on Plate 9. Interestingly, the tree with which the fungi were associated was growing on the streamside. Each of the species was growing in distinct clusters, and they were not intermixed. *Hydnum repandum* also occurred in this community, as did a large troop of *Cantharellus tubaeformis* (Trumpet Chanterelle). This tree was therefore particularly well served by fungal partners.

During a return visit in 2017, all species were found to be fruiting in profusion, but

contractors were busy dredging the ghyll and piling the boulders on the streamside as they installed a small hydroelectric plant. We were able to speak to the contractors about the need to preserve the habitat and the National Trust was alerted and as a result the particular section of the ghyll was left untouched.



Sarcodon scabrosus – Andrew Denley

The lichen *Peltigera britannica* at Bampton Common, Haweswater

David Clarke

Burnfoot, Cumwhitton, Brampton, CA8 9EX

On 23 May 2018, whilst botanising, Jeremy Roberts noticed a patch of a *Peltigera* which he suspected of being *P. britannica*. This was in a very desiccated condition owing to recent drought. I examined the sample he had collected and clearly it was this species – only the fourth known site in the county for this very scarce upland lichen. I visited the site, in upper Heltondale (NY471.190), on 12th September to record and photograph the colony. The altitude here is at ca. 410 m a.s.l., slightly lower than that of the three other known localities. The site is more or less west-facing, at the base of a low crag, where this meets the ground, extending over some 0.2 m². It is on the north side of the Dodd Beck and sheltered by the deep gill at the confluence with the Heltondale Beck. The rocks here are Borrowdale Volcanic Group tuffs – acidic in nature judging by other flora, which included *Calluna vulgaris*, *Vaccinium myrtillus*, *Digitalis purpurea* and *Dryopteris* species. The site is only some 3 km from the 2009 find in Swarthbeck Gill (Clarke, 2009), though the extent of the present colony is much greater.

A significant proportion of thalli showed a ‘white rot’ – seen in Plate 8a. Possibly this may relate to the re-wetting of very desiccated/dead parts of the thalli following the exceptional drought of 2018. This seems to be affecting even small, developing thalli. Monitoring of this colony over the next year or so should reveal how well it recovers.

P. britannica and some of its allies are symbiotic partnerships of three organisms – a lichen fungus, an alga (*Coccomyxa* sp.) and a cyanobacterium (*Nostoc* sp.). Both of the latter are photosynthetic agents, and the last-mentioned can also fix atmospheric nitrogen. In normal green thalli the colour is due to the presence of the algal partner, the cyanobacteria being confined to discrete surface structures – cephalodia. In *P. britannica*, cephalodia readily detach from thalli and can ‘germinate’ to form blue-green (= cyanomorph) thalli differing in structure and appearance from normal thalli. The latter develop by ‘budding off’ from the cyanomorph form.

I therefore made careful searches for evidence of these stages at Heltondale and found small thalli near the base of the colony having blue-green irregularly rounded lobes with faint white interstices and no cephalodia. One of these is arrowed in Plate 8b and has a small wholly green lobe ‘budding’ from it. To its left is a much larger green lobe that already has a dense covering of cephalodia. I showed the image to Orvo Vitikainen, a veteran (his word!) authority on the taxonomy of the genus in Europe, who agrees with my interpretation of these structures. Clearly, some active generation

of new thalli is in progress here.

Brodo *et al.* (2001) illustrate both forms of thalli and discuss the possible role of the nitrogen fixation capabilities of the cyanomorph form. In North America and northwest Europe, *P. britannica* is very westerly-oceanic and humidity-demanding, in contrast to the two related green species (*P. leucophlebia* and *P. aphthosa*), both of which are far more widespread there. (Of the two latter only *P. leucophlebia* occurs in the UK.)

Jeremy Roberts’ specimen and the material I collected have been deposited in the collections of Tullie House Museum, Carlisle.

References

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P. britannica site, viewed from south – David Clarke

J.R.A. (Jim) Thomas FRES (1938–2018)

Jim Thomas died on 16th June 2018 after a long battle with lymphoma. Jim was an active member of Carlisle Natural History Society and was a well known and respected entomologist who published in national and regional journals. He was a particular expert in the study of beetles. Growing up and spending much of his working life in Lancashire, he loved the Lakeland fells and retired to Borwick on the Lancashire/Cumbria border after a career in teaching. Jim's enthusiasm for the natural world was infectious, he was a great communicator and an inspirational tutor. He was most generous in his support of CNHS and the work of the natural history section at Tullie House Museum through the delivery of workshops and recording insects in the county, always with selfless *joie de vivre*.

Born in Leicester, Jim was raised in Lancashire where he attended Ormskirk Grammar school. He developed a passion for the Lake District at a very early age, regularly visiting his mother's family who lived in Ambleside. After National Service he applied to teacher training college at St John's, York, to do Rural Sciences. Jim's love of the Lakes now progressed from walking the fells to climbing them, an interest that stayed with him for many years. Always watchful for interesting insects whilst out on the hills, he discovered a new location for the rare montane beetle *Leistus montanus* on the Langdale Pikes (Thomas, 1972).

It was at St John's that he became particularly interested in insects and for his dissertation he chose to research bees. After training he returned home to Newburgh and his first teaching post at Skelmersdale County Secondary School. Throughout the 1960s his interest in entomology developed. Each Friday night he travelled on his motorbike to Manchester Museum to hear lectures given by George Kloet, then President of the Manchester Entomological Society. Together with fellow teacher, Stan Bowstead, he joined the local Raven Natural History Society and both became life-long entomologists.

In the early 1970s he took up the post of Deputy Head at the Dormston School, Sedgley, in the Midlands. Jim encouraged his pupils to discover and explore the countryside, taking them to various areas of the UK. For many camping holidays at Easter he and another member of staff would drive the school mini-bus, through France, down to Andorra to spend a few



days in the mountains. During the late 1970s he gained Mountain Leadership and boat-handling qualifications. He also took up SCUBA diving and weekends were now largely spent on the south coast, or in South Wales, Anglesey or Oban. Together with his wife Maureen, he dived in many areas of the world, including the Galapagos Islands, Borneo, the Red Sea etc. During these frequent excursions abroad, Jim also took the opportunity of collecting and studying the local insects.

Jim became Headmaster of the Longlands School, Stourbridge in 1983. In 1989 at the age of 51 he took early retirement and bought a bungalow in Burton-in-Kendal, which he and Maureen visited whenever possible. In 2000 Jim and Maureen moved from Walsall to the village of Borwick, just south of Burton-in-Kendal and Jim renewed his studies of the insects of Cumbria and Lancashire in earnest. He became a Voluntary Warden with the Lake District National Park, a position he cherished for sixteen years until ill health took its toll. He spent much time at Drigg Dunes, Ravenglass, which he visited every month for ten years, assiduously collecting and recording the beetles and culminating in a list of species present on the site (Thomas, 2011). Jim joined Carlisle Natural History Society at this time and in 2005 he published three short notes in the Society's journal, thereafter becoming a regular contributor to the *Carlisle Naturalist* and its successor, *Lakeland Naturalist*, and adding a number of species to the Cumbria list. Jim also published in other regional and national entomological journals over the years and even when feeling quite ill he managed to write two books with Stan Bowstead and Thomas Eccles: *The Coleoptera of the Witherslack area of Cumbria* (2014) and *The Coleoptera of the Sandhills of South Lancashire* (2016), which were published by The Raven Society. Jim's insect collection of some 6,500 specimens from Britain and around the world has been donated to World Museum, Liverpool.

Stephen Hewitt (drawing heavily on the memories of Maureen Thomas)

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- 1972: Two records of *Leistus montanus* Steph. (Col., Carabidae) *Entomologist's Monthly Magazine*, **108**: 30.
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See *A Bibliography of Cumbrian Naturalists* (<http://www.carlisenats.org.uk/public-resources/bibliography/>) for a fuller list of Jim Thomas' publications.

