

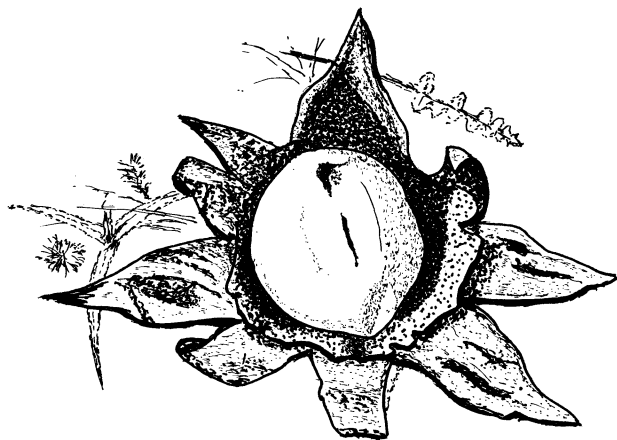
The CARLISLE NATURALIST

Volume 6 Number 2

Autumn 1998

Published twice-yearly (Spring/Autumn) by Carlisle Natural History Society

ISSN 1362-6728



Earthstar (*Geastrum* sp.)

(David Clarke)

Contents

Reports on Field Meetings

Gait Barrows NNR – Geoff Naylor	25
Colvend, Kirkcudbright – David Clarke	26
Ribblesdale – Marie Saag	28
Fungus workshop & field trip – Jennifer Gate	29

Notes and Records

A new record of Tubular Water-dropwort (<i>Oenanthe fistulosa</i> L.) for Cumbria – Christopher Graham ..	31
The Banded Demoiselle (<i>Calopteryx splendens</i> (Harris)) in north Cumbria in 1998 – Geoff Naylor ..	31
A nest of the Median Wasp (<i>Dolichovespula media</i> Retzius) at Longtown in 1998 – Stephen Hewitt ..	32
First records of the myrmecophile spider <i>Thyreosthenius biovatus</i> Cambridge in the nests of the wood ant <i>Formica lugubris</i> Zetterstedt – Neil Robinson ..	33
The ground beetle <i>Leistus rufomarginatus</i> (Duftschmid) new to Cumbria – John Read & David Atty ..	33
Further information on the Sulphur Beetle (<i>Cteniopus sulphureus</i> (L.)) in Cumbria – David Atty ..	35
Notes on recent records of earthstar fungi – David Clarke & Dorothy Iveson ..	35
The Nettle Groundbug (<i>Heterogaster urticae</i> (Fabricius)) new to Cumbria – Stephen Hewitt ..	37
Waterfowl at Talkin Tarn in late 1998 – Geoff Naylor ..	37

Articles

A review of plum (<i>Prunus</i>) species in Cumbria – Mike Porter ..	40
A review of the Wall Mason Bee <i>Osmia parietina</i> Curtis in Cumbria, with two new records – Neil Robinson ..	44
Notes on <i>Parasyrphus nigrirarsis</i> (Zettstedt), a rare hoverfly breeding in Cumbria – Graham E. Rotheray ..	47

Society Announcements – see end covers

The Carlisle Naturalist

From the Editor

An apology is due for the late appearance of this issue, caused by a heavy workload last autumn.

National Fox survey

The University of Bristol, together with the Mammal Society, are looking for people willing to survey fox populations by walking all hedgerows, footpaths etc in a 1 km square during February and March and/or to collect Fox scats throughout the year from a regularly visited area. If you are interested, please contact Dr Phil Baker or Charlotte Webbon at the School of Biological Sciences, University of Bristol, Woodland Road, Bristol BS8 1UG, Tel: 0117 928593. If you do get involved please remember to copy your results to Tullie House for our local records database.

The National Survey also wishes to receive dead Foxes to investigate the population structure and diet. If you come across any dead Foxes, Tullie House can act as a collection point. Please check first that the Museum has freezer space available and include details of date, location and cause of death (if known) of the animal.

Mouse in your house?

The Mammal Society has launched a national survey of the mice living in peoples' houses. We would like to co-ordinate a Carlisle Nat. Hist. Soc. response – please complete the enclosed questionnaire and return it to Stephen Hewitt for copying and forwarding to the Mammal Society. We will report back on the responses from Society members.

Rod Young/Brathay Hall Trust Herbarium

This collection of some 3,000 pressed plants has recently been given to Tullie House by the Brathay Hall Trust. The collection was assembled by Rod Young who was a tutor at Brathay Hall when it ran a field studies centre. The specimens were collected for the Brathay Hall operations during the 1970s and 80s and almost all the material is of Cumbrian origin. The collection had been on long term loan to Lancaster University for some years. The herbarium is available for study by appointment. Thanks are due to Dr Geoffrey Halliday of Lancaster University and Mr Brian Liversidge of the Brathay Hall Trust for their assistance in this transfer.

Survey of river shingle wildlife

Cumbria has some of the most important rivers in England for their communities of river shingle invertebrates. This statement is based on information gathered almost 100 years ago. Is it still true? No one knows, but our rivers are still amongst the cleanest and least disturbed in the country. In 1999 we plan to carry out a survey of river shingle sites in the county to try to rediscover some of the important rare species which were recorded in the past, identify additional good sites and catalogue the best sites in the county today. As well as the insects and spiders, we hope to identify the different vegetation types, the different types of river shingle and other associated wildlife. You don't need to be an expert to get involved; anyone who would like to take part should contact the Secretary.

Field Meetings

6th June 1998: Gait Barrows

Leader: Rob Petley-Jones

From the rain-sodden pages of my notebook, I eventually deciphered most of what I had written at the time. It was exactly a year since a similarly wet field meeting at Coombs Wood. Perhaps we should avoid early June fixtures in future!

Everything began very well as a group of 24 members arrived at the site which unfortunately lies some 200 metres south of the Cumbrian border. Rob Petley-Jones gave an introduction to the extremely rich and varied natural history of Gait Barrows. He had thoughtfully captured a selection of moths on the previous night and we examined about 20 species, several of which are scarce in northern Cumbria, notably Alder Moth, Treble Lines and The Shears.

We were then led round the main site, a lot of which is limestone pavement and is home to many plants which are near their northern limit here and were therefore of especial interest to our members. Spindle and Alder Buckthorn are two such trees, but an example of Whitebeam (*Sorbus lancestransis*) was also seen. This is endemic to the limestone regions surrounding Morecambe Bay. We examined a nest of the Wood Ant (*Formica rufa*) and a nearby ladybird-like beetle proved to be *Clytra quadripunctata* which lays its eggs in such nests.

On the limestone pavement, The process of its formation was explained before we went on to examine some of the more unusual plants including Rigid Buckler-fern, Lily-of-the-Valley, Angular Solomon's-seal, Limestone Bedstraw, Wild Privet, Dropwort, Tutsan, Fingered Sedge and Northern Bedstraw (the last at its southern limit). The highlight of this part of the day (for some) was a specimen of the minute snail *Vertigo angustior*, which is extremely rare in Britain and known from only six or so localities.

As the rain increased, so did the pace of the walk and we had to return to the car park for lunch without having seen any of the butterflies for which the site is famous.

After lunch, despite continuing heavy rain, we walked to nearby Haweswater and having noted Northern Marsh and Common Spotted-orchids on the way, examined the vegetation close to the lake side. Here was abundant Bird's-eye Primrose growing amongst Bog Rush (*Schoenus nigricans*) and, at the waters edge, were Fen Sedge (*Cladium mariscus*) and Cyperus Sedge (*Carex pseudocyperus*), both near their northern limit.

In another clearing were three species of damselfly. We heard and/or saw both Green and Great Spotted Woodpeckers and watched a Marsh Harrier hunting on the opposite side of the lake. Some members heard the calls of Bearded Tit, but none were seen. As the rain eased, we made our way back to the car park again, then, to finish off the day, most of the party drove to the Eric Morecambe and Allen hides, adjacent to Leighton

Moss RSPB Reserve. On the way we paused for even closer views of a Marsh Harrier quartering a roadside field.

At the pools, the reported Spoonbills appeared as three rather distant, large white birds which spent most of the time asleep. Also here was an unseasonable drake Wigeon, possibly a sick or injured bird.

Finally we located the resident Mediterranean Gull which appeared to be tending a chick, despite the absence of a mate of its own species.

This was quite a remarkable day which revealed a tremendous variety of plants, invertebrates and birds despite the heavy rain which fell throughout most of our time there. Many thanks are due to the warden for his highly efficient leadership.

Geoff Naylor

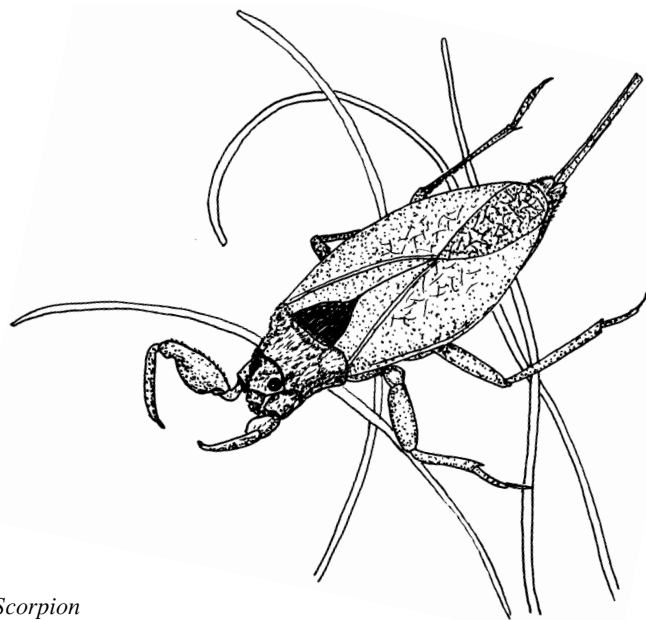
13th June 1998: Colvend

Leader: David Clarke

Continuing in the now established pattern of rain-sodden Saturdays, the Colvend meeting attracted 13 hardy naturalists. Among them were visitors Bob and Betty Smith, both noted dragonfly recorders – Betty being Regional Recorder for Scotland.

The morning was spent looking for dragonflies along the east side of Borean Loch. En route in the conifer plantation, we encountered several of the Red-necked Footman moth (*Atolmis rubricollis*), a species which seems to have become much commoner in this area over the past decade (See Richard Mearns' note in the last issue). The weather being unsuitable for larger flying insects, we had to content ourselves with searching for dragonfly larvae and exuviae. Bob Smith netted two half-sized larvae of the Hairy Hawker (*Brachytron pratense*) – for which the site is especially noted – but no signs of the emergence of this species were found. Netting activity also yielded a few damselfly larvae (probably Common Blue-tailed (*Ishnura elegans*)). Other livestock included a large and very lively water beetle, *Dytiscus* sp., which proved something of a handful while we attempted to examine its diagnostic ventral features! An aquatic bug the 'Water Scorpion' (*Nepa cinerea*) and a 3-inch Pike (!) added further variety. Betty Smith kept us (and me especially) right on the finer points of identifying both sexes of the Variable Damselfly (*Coenagrion pulchellum*), a few of which struggled onto the wing, along with Common Blue Damselfly (*Enallagma cyathigerum*) and Common Blue-tailed. (Curiously, *C. pulchellum* is frequent at this and neighbouring Scottish sites despite being scarce in Cumbria and northern England).

Deteriorating weather hastened a decision to devote the remainder of the day to plant-hunting. Under Jeremy Roberts' guidance the foreshore at Port o' Warren was the first venue. The very rare, coastal, Dotted Sedge (*Carex punctata*) – here at its northerly limit in Britain – was duly found in sheltered sites near the upper shore, on both sides



Water Scorpion

(Stephen Hewitt)

of the bay. Several commoner sedges – *Carex extensa*, *distans*, *flacca*, *nigra* and *otrubae* – were around for comparison, as well as the rush-like ‘sedge’, Few-flowered Spike-rush (*Eleocharis quinqueflora*). This very attractive area yielded many other characteristic plants of the SW Scotland coast: the cliffs had Bloody Crane’s-bill, Samphire and Burnet-saxifrage; Sea Spleenwort was especially fine in a raised sea-cave, and the upper beach had a very good flowering patch of the rather local Sea-kale. The rocky coast, with great cliffs to the west of the beach, gave good views of Shags, Fulmars, Razorbills and Guillemots, with Gannets well off shore. A Peregrine and Raven were also seen.

The final call was to the Scottish Wildlife Trust Reserve on the coast at Southwick. Particularly notable here was the nationally rare (Red Data Book) Holy-grass (*Hierochloa odorata*), which had quite an extensive though somewhat grazed sward, with a strong vanilla-like aroma; the characteristic flower-spikes were still present. A rock outcrop nearby had just three plants of the Sticky Catchfly (*Lychnis viscaria*) – a plant restricted in Britain to Scotland, where it is quite scattered in occurrence. The very attractive and rather local grass Wood Millet (*Milium effusum*) was seen in the wooded descent to the shore.

David Clarke

4th July 1998: Ribblesdale

Leader: Jeremy Roberts

It was a cloudy but dry day that seven members joined Jeremy Roberts for an interesting, mainly botanical, excursion to the Ribblesdale area.

Our first stop was just north of Austwick where we embarked on a circular walk along Long Scar to Moughton Scar and returned across Crummack Dale. As soon as we arrived Jeremy related how he had seen Little Owls at this site previously and to cue Barry Marrs spotted one. A good start to the day!

After a brief introductory talk on the geology of the area – basically it’s Silurian Slate with the limestone perched on top – we were soon off looking for the rare Yorkshire Sandwort (*Arenaria norvegica* ssp. *anglica*) and Teesdale Violet (*Viola rupestris*) amongst the sward of Wild Thyme (*Thymus polytrichus*), Fairy Flax (*Linum catharticum*), Eyebright (*Euphrasia confusa*), Carlina Thistle (*Carlina vulgaris*) and closely cropped grasses. The Sandwort though small was easy to find with its beautiful white flowers. It was too late for the Teesdale Violet to be in flower but it could be recognised from its leaves. Although only occurring at a few sites in England it is locally abundant here with thousands of plants growing on the patches of boulder clay and limestone outcrops..... maybe there are more here on Ingleborough than in Teesdale!

A little further onto the limestone and Autumn Gentian (*Gentianella amarella*) was found growing on the edge of the track, closely followed by Brittle Bladder-fern (*Cystopteris fragilis*), Pill Sedge (*Carex pilulifera*), Common Rock-rose (*Helianthemum nummularium*) and Spring Sandwort (*Minuartia verna*). The latter was the Yorkshire Sandwort’s look-alike but with mossier leaves. Soon we were all on hands and knees, testing each other on which was which! A few minuscule snails, only about 1 mm in diameter, identified as *Pyramidula rupestris*, were found living in the crevices of the limestone rock. The view down onto the limestone pavement at Moughton Scar is particularly picturesque and probably appears in many geography textbooks. As we climbed down and crossed the pavement we saw both Common and Green Spleenwort (*Asplenium trichomanes* and *A. viride*) along with Hart’s-tongue Fern (*Phyllitis scolopendrium*) in the grikes.

After a break for lunch and another viewing of that same young Little Owl, we drove further up Ribblesdale to Colt Park Wood, passing several large roadside clumps of majestically-flowering Melancholy Thistle (*Cirsium heterophyllum*) en route. Colt Park Wood, part of the Ingleborough National Nature Reserve, is an area of original stunted Ash woodland on the limestone pavement, a remnant of the woodland that would once have covered much of the high limestone area. It was on a rock in a hay meadow on the edge of this area that we saw the very rare Lady’s-mantle – *Alchemilla glaucescens*. On the limestone pavement itself we saw Field Garlic (*Allium oleraceum*), Baneberry (*Actaea spicata*) and the rare Alpine Cinquefoil (*Potentilla crantzii*). A few more snails were found and identified by Geoff Naylor as *Discus*

rotundatus, *Trichia striolata* and *Clausilia dubia*. The wood is attractive with limestone rock covered in clumps of Lily-of-the-Valley (*Convallaria majalis*) and Common Polypody (*Polypodium vulgare*). The deep grikes covered in vegetation make it a particularly dangerous place, which is why we opted to walk along the edge rather than spending much time actually in the reserve, despite having a permit for the day.

We ended our tour with a visit to Southscales – an area managed by the Yorkshire Wildlife Trust, and Scar Close NNR. Walking up from the car park/camp site at the Old Hill Inn we passed Great Douk Gorge and were soon on Southscales limestone pavement looking in the grikes and finding amongst other things Fragrant Orchids (*Gymnadenia conopsea*), Sanicle (*Sanicula europaea*), and Rigid Buckler-fern (*Dryopteris submontana*). Hairy Stonecrop (*Sedum villosum*) was seen as we walked on to Scar Close NNR. Here is an area that has been fenced off and left ungrazed since 1976 and consequently the vegetation is relatively rich. At this our last site we discovered Bird's-eye Primrose (*Primula farinosa*), Bloody Crane's-bill (*Geranium sanguineum*), Lesser Meadow-rue (*Thalictrum minus*), Northern Bedstraw (*Galium boreale*), a great deal of Baneberry (*Actaea spicata*) and trees such as Creeping Willow (*Salix repens*), Rowan (*Sorbus aucuparia*) and Hazel (*Corylus avellana*). Barry also managed to see the first reptile of the day, a Common Lizard (*Lacerta vivipara*).

Our thanks go to Jeremy for a most enjoyable day amongst the clints and grikes.

Marie Saag

26th September 1998: Fungus Workshop

Leader: Geoff Naylor

22 participants gathered for the morning workshop in Tullie House at 10 a.m. All were enthusiastic and ranged in ability from the complete novice to the book-toting experts. After a comprehensive and well-illustrated introductory session, Geoff settled us to the task of identifying as many specimens as possible in the structured environment of the classroom, prior to the afternoon fieldtrip.

“What does that smell of?” was the question most frequently heard as we learned that olfactory sense plays a major role in identification. By the end of the morning session, we were convinced that we could identify the poorest specimen, as long as it smelled strongly of ‘Russian leather’! We also learned that the textbooks have highly original ways of describing odours!

After lunch, most of us, with a few additions, reconvened at Talkin Tarn. A strong, cold, east wind did not deter us and seemed to invigorate some, particularly the younger element. The woods rang to the cries of “What's this, Geoff?”. Undaunted by the pressure, Geoff was able to enlist the assistance of some of the more skilled

amongst us.

Many specimens were found immediately in the main wooded area, including Amethyst Deceiver (*Laccaria amethystea*), Beechwood Sickener (*Russula mairei*) and the Geranium-scented Russula (*R. fellea*), all in abundance. However, the highlight came when the club-like *Cordyceps ophioglossoides* was identified and grown men began digging with their bare hands in a state of some excitement, for this species often grows in association with a subterranean truffle. A few specimens of False Truffle (*Elaphomyces muricatus*) were eventually found well below the surface litter – a triumph of faith over scepticism! Both these latter species are new to the site.

It took over an hour to reach the lakeshore gate, a few hundred metres from where we had started. Some covered the distance entirely on hands and knees! In the grass, some attractive specimens of *Hygrocybe nivea* and Parrot Wax-cap (*H. psittacina*) were found, along with *H. obrussea* and *Panaeolus foenisecii*, we think!

Noses started twitching and we all were able to recognise the disgusting smell of the Stinkhorn (*Phallus impudicus*). We hurried on to see the magnificent clumps of Sulphur Tuft (*Hypholoma fasciculare*) and Brick Tuft (*H. sublateritium*).

Other firsts for this location included Eyelash Fungus (*Scutellinia scutellata*) and Dry Rot (*Serpula lacrymans*): don't tell the Council! A total of 82 species was identified during the course of the afternoon, the rest were chucked behind the hedge! All in all, it had been a most successful and enjoyable day.

Jenny Gate

Notes and Records

A new record of Tubular Water-dropwort (*Oenanthe fistulosa* L.) for Cumbria

On the 21st August 1998 David Pearson and I visited an area of wetland to the north west of Kingmoor Nature Reserve at NY3759. Having previously noted the occurrence here of an unusual (and abundant) umbellifer, we were keen to establish its identity. We were surprised to find that it was Tubular Water-dropwort (*Oenanthe fistulosa*). This species is known from only one other site in Cumbria, in a marshy field at the north end of Derwent Water where it was recorded in 1982 (Halliday 1997). Its discovery so close to Carlisle is exciting and reinforces the point that there is much of interest yet to be discovered regarding the City's flora and fauna.

Two populations were recorded at the site, one of around 50 plants in a superbly diverse pond, while an adjacent pond had up to 10 scattered plants. Both ponds form part of a large interlinking wetland mosaic, being the remnants of Cargo Loch. Current populations are maintained through cattle trampling about the edges of the ponds. Other plants found in association with the water-dropwort included *Ranunculus flammula*, *Veronica scutellata*, and *Juncus effusus*. A full botanical survey of the site is planned for 1999, with the feeling that there are several more interesting things to find.

Reference

Halliday, G., 1997, *A Flora of Cumbria*, University of Lancaster, p 337

Christopher Graham, 2 Gosling Drive, Carlisle

The Banded Demoiselle (*Calopteryx splendens* (Harris)) in North Cumbria in 1998

The Banded Demoiselle was, until recently, restricted in its northern outpost to a few sites along the lower reaches of the river Waver occupying the 10 km grid squares NY15 and NY25. In 1996, as was reported in this newsletter (Clarke and Garner 1996), there were sightings at some places along the river Wampool and close to the river Eden, which expanded its range into squares NY24 and NY35. The records from the Wampool were the first known from that river and those for the Eden were the first there for almost 40 years.

The expected continuation of this expansion in 1997 did not come about, but there was one additional record near Rockcliffe, which was also reported in this newsletter (Naylor 1997). This was in another new square, NY36.

The expected resurgence seems to have arrived in 1998. Firstly, the Environment Agency reported very large numbers in the usual Waver sites (this also happened in 1996).

On 16th July Stephen Hewitt and I observed a female *Calopteryx* in Rickerby Park, Carlisle and although we could not be certain which species, *splendens* or *virgo*, it is very unlikely to have been the latter. This again was a new square (NY45).

Two weeks later I found a male and female *splendens* on the banks of the Eden at Cargo. David Clarke followed up this report and saw at least 7 (males and females) at the same site on the next day. During this visit, a local fisherman reported having seen them there in 1997. DC saw another one there on 15th August. At around this time I made an unsuccessful search of the area at Rockcliffe, where I had seen one in 1997.

It would appear from these observations that there may now be an established population along the river Eden from at least Carlisle down to Rockcliffe and that searches of other parts of this stretch of river and possibly upstream from Rickerby Park may produce more sightings. The flight period is from late May to mid-August so make a note of those dates in your diary for 1999.

References

Clarke, D.J. and Garner, S., 1996, A dispersal of the Banded Demoiselle (*Calopteryx splendens* (Harris)) in the Solway area in 1996, *Carlisle Naturalist* **4** (2): 38.

Naylor, G.R., 1997, A further record of the Banded Demoiselle (*Calopteryx splendens*) on the River Eden, *Carlisle Naturalist* **5**(2): 35.

Geoff Naylor, 2 Fell Cottages, Milton, Brampton, Carlisle

A nest of the Median Wasp (*Dolichovespula media* (Retzius)) at Longtown in 1998

In mid-August 1998, the Environmental Services Department of Carlisle City Council was called out to deal with a wasps' nest in a garden at Longtown (NY3868). The nest was situated in a low bush in the garden and the owner, who had been stung the previous day, had required hospital treatment for dramatically reduced blood pressure. The patient had recently been stung by ordinary wasps without adverse effects, but this previous incident may possibly account for the extreme reaction in this case.

Specimens of the dead wasps, which were about twice the size of common species of wasp, were sent to Tullie house for identification, where they were confirmed to be the Median Wasp. This species has been spreading north through Britain since it was first discovered at Friston Forest, East Sussex in 1980 (Else 1994). Although there are records from central and south Cumbria in the 1990s, this is the first report of the species in the north of the county and is apparently the most northerly British record to date.

Larger than our familiar wasps it reputedly has a correspondingly painful sting, although it is not reputed to be any more or less aggressive than other wasp species.

The British press has given considerable coverage to its advance, xenophobically dubbing it the French Wasp or the European Wasp. *D. media* prefers to build its nest in low bushes and frequently occurs in suburban gardens and may well go unnoticed. However, gardeners who unwittingly disturb a Median Wasp nest in their shrubbery are likely to receive a stinging rebuke from this new addition to our fauna.

Reference

Else, G., 1994, Identification – Social Wasps, *British Wildlife* **5** (5): 304-311

Stephen Hewitt, Tullie House Museum, Carlisle

First records of the myrmecophile spider *Thyreosthenius biovatus* Cambridge in nests of the wood ant *Formica lugubris* Zetterstedt

In the previous issue (Vol. 6 No. 1) I reported on finding the myrmecophile spider *Thyreosthenius biovatus* in a nest of the Red Wood Ant *Formica rufa* (L.) on Arnside Knott. On 17th September 1998 I searched for males of the guest ant *Formicoxenus nitidulus* Nylander on nests of the ‘Northern’ or ‘Hairy’ Wood Ant (*F. lugubris*) in the woodland near Ashness Bridge and along the roadside beyond Surprise View, Borrowdale (Vice-county 70). I had no success with the guest ant, but on one of the group of nests beside the car park at Ashness Bridge I found a male of this tiny (2 mm) spider. Fortunately, although it is so small, the male is easily recognised with the aid of a lens by two prominent oval bulges along the back of the carapace, which presumably account for its specific name ‘*biovatus*’.

On 19th September I looked for the guest ant on *F. lugubris* nests near Seathwaite in the Duddon valley with Dr Jennifer Newton. We found both it, and a male of the spider, on a nest opposite the gate into Tongue Wood (SD2296) in VC 69 and also found the guest ant on a nest in Wallowbarrow Wood (SD2196) in VC 70. According to the British Arachnological Society’s information, these records for Vice-counties 69 and 70 are the first confirmed reports of *Thyreosthenius biovatus* in nests of *Formica lugubris*, as old records are often unsupported or date back to the period before the various species of wood ants in Britain were described and named definitively.

Neil A. Robinson, 3 Abbey Drive, Natland, Kendal, LA9 7QN

The ground beetle *Leistus rufomarginatus* (Duftschmid) new to Cumbria

This beetle was found independently by the two of us this year in Cumbria and these records represent the first sightings of this species in the county.

Since it was first discovered in Britain more than 50 years ago (Crowson 1942) *L. rufomarginatus* has spread rapidly (Hammond 1974) and has now been recorded from a large number of sites, mainly in England and Wales.

Leistus rufomarginatus is a medium-sized (10 mm), brown, ground beetle found in damp mixed woodland and often associated with Beech, where it feeds on springtails. It is very rarely observed in flight, though some individuals have functional wings. First seen in Britain in Kent in 1942 and then in Suffolk in 1953, in the 1960s and 70s it spread rapidly across the south and midlands, reaching Worcs., Glos., Devon and south Wales by 1979. It expanded up the east coast into S. Yorks. (1973), N. Yorks. (1980), Durham (1981) to S. Northumberland (1990) and also, perhaps separately, into E. Lothian (1994). Advance up the west coast seems slower, the furthest being one seen in Cheshire in 1988. Nearly all of these initial records were of singletons.

On a pouring wet afternoon on 6th June 1998, DA swept a single *L. rufomarginatus* beneath a Beech tree in a narrow belt of woodland on the shore of Bassenthwaite Lake near Banks Point (NY201316).

On 8th October 1998 JR found one female specimen of *L. rufomarginatus* on the edge of Great Coppice near Stangends Farm, Netherwasdale (NY1103). The beetle was collected from beneath a small rotten log lying on the ground beneath a mature Beech tree. Despite searching under other logs no more specimens were found.

These records were just too late to be included Dr Martin Luff’s *Provisional Atlas of Carabidae* (1998).

Acknowledgement

JR wishes to thank Dr Martin Luff for kindly confirming his identification of *L. rufomarginatus*.

References

- Crowson, R.A., 1942, *Leistus rufomarginatus* Duft. (Col. Carabidae) new to Britain, *Ent. Mon. Mag.* **78**: 281-282.
- Hammond, P.M., 1974, Changes in the British Coleopterous Fauna, in: *The changing flora and fauna of Britain*, edited by D.L. Hawksworth, pp 323-369 (*Systematics Assoc. Special volume no. 6*) London: Academic Press.
- Luff, M.L., 1998, *Provisional atlas of the ground beetles (Coleoptera, Carabidae) of Britain*, Huntingdon: Biological Records Centre.

John Read, 43 Holly Terrace, Hensingham, Whitehaven
David Atty, Beck House Mill, Embleton, Cockermouth

Further information on the Sulphur Beetle (*Cteniopus sulphureus* (L.)) in Cumbria

A record of the Sulphur Beetle at Humphrey Head in 1989 (Hewitt 1997) was reported to be the first record for Cumbria. In fact it is listed in Fowler (1887-91) as 'Kendal'. I have no note of the finder, though it may have been Fowler himself. Kendal seems an odd place for this species of maritime heaths, but was presumably the nearest large town to Morecambe Bay (or Humphrey Head!?). I have seen it on Privet flowers in the Clifton Gorge at Bristol, but it is recorded inland only rarely (Wicken Fen and Tubney, Oxon.). All the records I know of are in July or early August. The species is mainly southern in distribution extending north to Lincs. (1927) and Anglesey. There is a tick for the species on the old Lancs. and Cheshire list (c1930): 'rare in Lancs. only'. This could refer to Fowler's 'Kendal' record if it was actually somewhere such as Humphrey Head, which would be in the old 'Lancashire-north-of-the-Sands'.

Reference

Fowler, 1887 – 91, *Coleoptera of the British Islands*.

Hewitt, S., 1997, First Record of the Sulphur Beetle (*Cteniopus sulphureus*) in Cumbria, *Carlisle Naturalist* 5(2): 37.

David Atty, Beck House Mill, Embleton, Cockermouth, Cumbria

Notes on recent records of earthstar fungi

There have been two recent records of these uncommon relatives of the puffball group of fungi from the Carlisle area.

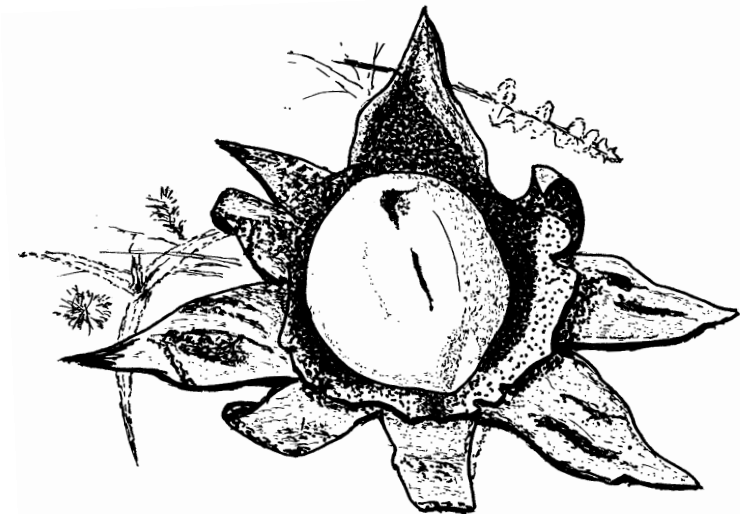
In late 1997, David Pearson and Christopher Graham discovered fair numbers of an unknown species under well-grown scrub Hawthorn (*Crataegus monogyna*) at a disused sand/gravel quarry near High Stand Plantation in the Eden valley (tetrad NY4648). Specimens (well past their fruiting prime) were sent to Dr B. Spooner, a co-author of the definitive identification guide to this group. He considered the material to be *Geastrum triplex*, the so-called 'Collared Earthstar' and one of the most widespread species of the genus. Though less productive in the autumn of 1998, the species was still in evidence.

Four earthstars, also apparently *Geastrum triplex*, were found in short turf in an open grassy field boundary near Castle Carrock (NY5454) in late November 1998 by Dorothy Iveson. As with the 1997 examples, they were all relatively small for this species – under 50 mm across the open fruit-body. The site is in pasture which is probably calcareous, at about 230 metres above sea level. When first seen the fruit bodies had already opened, the outer wall having split into pointed rays spreading on the ground. The overall colour of the revealed interiors was creamy and conspicuous.

They were not examined more closely until two weeks later. By then, the fleshy outer parts had dried, and darkened to a reddish brown and the increased curling of the 'rays' had raised the fruit bodies higher off the ground. Although this species is often associated with woodland conditions, these examples were in short grass on a former hedge bank (the hedge now replaced by a fence).

Recognising and identifying earthstars can be problematic. When they first appear above ground, the fruit-bodies are rather nondescript, and are either spherical or onion-shaped, with coarse brownish/earthy outer coats. At first, there is no obvious sign that they will subsequently split open in the characteristic manner. Most popular books omit some of the species, and there is much confusion in the use of scientific names. So far, it has not been possible to examine any of the examples mentioned above when in prime condition. This has made positive identification more difficult. The Kew guidebook referred to below has proved the best source of information.

Earthstars are recorded only infrequently. They could however be easily overlooked because of their similarity in colour to leaf litter, and because their appearance, once past maturity, quickly becomes rather distorted and easily confused with surrounding débris. The peak fruiting season for *G. triplex* seems to be in October, though the dried remains of these structures can persist for a long time – as do those of their relatives the puffballs. (The illustration is from material photographed in January).



Earthstar (Geastrum sp.)

(David Clarke)

Geoff Naylor has listed some other recent Cumbrian records of this interesting genus. There are relatively few records of Collared Earthstar, or any other *Geastrum* species, for northern Britain.

References

- Pegler, D.N., Læssøe, T., & Spooner, B.M., 1995, *British Puffballs, Earthstars and Stinkhorns*. Kew: Royal Botanic Gardens. [copy at Tullie House Museum]
- Naylor, G., 1998, 'Fungus recording in north Cumbria', *Birds & Wildlife in Cumbria 1997*. Carlisle: Cumbria Naturalists Union.

David Clarke, Burnfoot, Cumwhitton, Carlisle
Dorothy Iveson, 60 Etterby Street, Carlisle

The Nettle Groundbug (*Heterogaster urticae* (Fabricius)) new to Cumbria

On 7th July 1998, whilst collecting on a shingle bank of the River Caldew at Cummersdale (NY394523), I swept a single specimen of *Heterogaster urticae* from Nettles which were growing sparingly on the shingle.

This bug, although common in southern Britain, has not previously been reported this far north and the specimen represents the first record for Cumbria. It is unlikely that the species has been overlooked by previous collectors and it seems probable that *H. urticae* is one of several bugs which are currently extending their range northwards into the county.

H. urticae feeds entirely on Nettles. Here, at the northern edge of the bug's range, it is not surprising that the relatively sunny climate of the Carlisle area, together with the heat reflecting properties of exposed river shingle, have made this one of the first sites in Cumbria to be colonised by this warmth-loving species.

Stephen Hewitt, Tullie House Museum

Waterfowl at Talkin Tarn in late 1998

The late-autumn/winter period of 1998 produced some significant changes in the waterfowl population at Talkin Tarn. There were very much increased numbers of surface-feeding species and somewhat reduced numbers of diving ducks. This may be attributable to the recent 'invasion' of the tarn by the waterweed *Elodea nuttallii*, which seems to be a staple food item for Coot and Wigeon and possibly Gadwall but, strangely, not Mallard. It is more difficult to explain the reduction in numbers of diving species – perhaps the weed inhibits the diving process.

What is even more difficult to explain is the big increase in Goosander numbers. The 'inhibition theory' would suggest a reduction but two other suggestions come to mind:

- i) The increase in vegetation in the water may have resulted in an increase in the fish population and Goosanders, being more powerful than other diving ducks, can penetrate the weed in search of prey, or,
- ii) Goosanders are here for another reason and feed elsewhere.



Goosander drake

(Ann Robinson)

Between September and the end of the year I made 45 visits to the tarn and the following is a summary of observations during that period:

Great Crested Grebe - Present on 16 visits but only in ones or twos.

Little Grebe - Again, no more than two at a time, on seven occasions.

Mallard - Always present with many feral and hybrid birds. Numbers varied between 120 and 160, which is no more than last winter.

Teal - Only recorded five times with a maximum of three.

Gadwall - An important change in status from scarce visitor to an ever-present small wintering flock. Not recorded until November, but up to seven or eight were present thereafter.

Wigeon - 1997 saw the beginnings of a large winter population. In 1998 an early bird was seen in August, but from September numbers increased steadily and soon reached 100 and eventually a record 190 in December

Pintail - The only record was of three (two males, one female) in early December. Even this is the highest number recorded.

Shoveler - 1 reported in November. Formerly more frequent.

Tufted Duck - Comparatively small numbers (maximum 42).

Pochard - Even smaller numbers (maximum 15).

Goldeneye - Also in small numbers (usually fewer than six), but with 20 in November.

Common Scoter - One on 9th December.

Long-tailed Duck - A male in transitional plumage, first seen in late October, remained into 1999. The bird was extremely tame, and often fed close to the shore.

Goosander - After record numbers in late 1996, 1997 was very disappointing and the first half of 1998 showed little improvement. Only 1 Goosander was seen before November 1998 but numbers increased rapidly to a maximum of 109 in November and then a new record high of 140 in December. However, there were days when Goosander were in single figures or even absent. They are still a bit of a mystery.

Grey-lag Goose - Parties of up to 20 occasionally flew over.

Canada Goose - 2 joined by another 2 remained throughout the period. Not usually seen so regularly.

Mute Swan - A maximum of only three, but almost always present.

Whooper Swan - Only record is of five flying over in October.

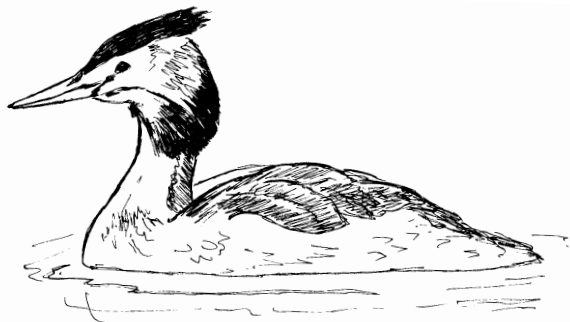
Muscovy Duck - Eight arrived from nowhere in September and were obviously a pair with six full-grown young. Whether they arrived unaided or were 'dumped' is unknown. One of the young birds was killed by a dog but the rest are happily settled.

Coot - Always feeding in close association with Wigeon, a flock built up slowly in numbers and eventually reached a new record of 130 or so by mid winter.

26 species of waterfowl were recorded in 1998, which equals the record of 1997 (Ruddy Duck was also reported in 1998). In December, 18 species were recorded which is the highest number on record for any month: on 9th December, 16 species were present, which is the highest number recorded on one visit.

Geoff Naylor, 2 Fell View, Milton, Brampton, Carlisle

[For those who are inspired to visit Talkin Tarn, Geoff has published a booklet on the birds of Talkin Tarn (not just wildfowl) which is available at £2.00 per copy – Ed.]



Great Crested Grebe

(Ann Robinson)

A review of plum (*Prunus*) species in Cumbria.

Michael S. Porter

5 West Avenue, Wigton, CA7 9LG

From February to the end of May our hedges are graced with a succession of white-flowered *Prunus* species which flower, sometimes in great profusion, sometimes more sparsely, over most of the lowland areas of the county. This short paper aims to record their flowering times, their different habits and their chief diagnostic characters. Species are dealt with in their order of coming into flower, though in late April several species may start to blossom at the same time. Sites are given for the two less common and non-native species – Cherry Plum and Dwarf Cherry. Finally details are given of the hybrid between Wild Plum and Blackthorn and help is requested in trying to establish its status in the county.

Cherry Plum (*Prunus cerasifera* Ehrh.). This species is always the earliest to come into flower, often in mid-February, but in mild winters sometimes a fortnight earlier still. It differs from the later-flowering Blackthorn in its generally larger (15-20 mm), sparser flowers, its spineless twigs and its dull green young shoots. The leaves of Cherry Plum appear at the same time as the flowers, or just a little later, so that in March its fresh green leaves and white flowers form a striking combination in the bare countryside of early spring. Cherry Plum develops into a large shrub, sometimes even a small tree, and, where it does occur, is often used for hedging. According to Halliday (1997) it is thinly distributed, mainly in the south of the county but with a few sites in the north. It is possible, however, that Cherry Plum is more common than it appears since its blossoms could, at a casual glance, easily be mistaken for early-flowering Blackthorn. To the south and west of Wigton it is by no means uncommon and careful searching during late winter and early spring could well reveal more sites. The easiest places in which to see Cherry Plum are on both sides of the road at High Longthwaite (NY251468) and on the south side of the road north-east of Stubb Bridge (NY253475). See Roberts (1998) for more details on its distribution in the north of the county.

Blackthorn (*Prunus spinosa* L.). Blackthorn is a familiar sight over much of Cumbria, only becoming uncommon on the high ground of the Lake District mountains and the Pennines. It generally comes into flower a month or so later than Cherry Plum, in the second half of March, though individual plants may be seen in blossom from the end of February. Its peak flowering time, the first half of April, often coincides with a spell of bitterly cold weather, the traditional 'Blackthorn Winter'. The smaller (10-15 mm) flowers of Blackthorn are much more densely

packed along the stem and twigs than those of Cherry Plum and its twigs are much darker in colour, often almost black. Blackthorn does not generally come into leaf until later in the season and the blossoms appear as white on black, usually without any hint of green. It is also a much spicier shrub and its subsidiary stems frequently grow at right-angles to the main stems. Blackthorn often tends to sucker freely and can form dense thickets in suitable habitat. It never loses its shrubby habit, attaining a maximum height of only 4 metres. After they have passed their peak Blackthorn flowers acquire a pinkish hue which is also very distinctive.

Wild Plum (*Prunus domestica* L. subsp. *domestica* and subsp. *instititia* (L.) Bonnier & Layens). Though the two subspecies are not difficult to distinguish in their most typical forms – subsp. *domestica* has twigs that are spineless and only slightly pubescent while those of subsp. *instititia* are spiny and distinctly pubescent – there is much hybridisation and atypical specimens are often found. (The famous damsons of the Lyth Valley are examples of the subspecies *instititia*.)

Wild Plum comes into flower in early April and has blossoms that are usually larger (15-25 mm) than those of both Blackthorn and Cherry Plum. Generally the leaves appear later than the blossoms but a cold early spring may delay the flowering period so that the two appear simultaneously. The flowers do not cover the stems as densely as those of Blackthorn and often appear thinly scattered and star-like. Wild Plum is usually considerably larger than Blackthorn, often attaining the stature of a small tree. It is widespread in the county except on higher ground and is quite common in north-east Cumberland and south Westmorland.

Wild Cherry (*Prunus avium* (L.) L.). Flowers and leaves usually appear together, often in mid-April. The flowers differ from those of all previous species in that they are borne in clusters of 2-6 on long stalks and each individual flower (12-25 mm) is cup-shaped. The leaves are a dull, matt green on the upper side, though when first flushed they often have a rather bronzy coloration. Leaf stalks have two distinct glands near the leaf blade. Wild Cherries are very obviously trees rather than bushes and sometimes reach a height of 30 metres with well-developed trunks. The bark is often reddish and shiny with horizontal striations and peels readily, particularly when the tree is young. The Wild Cherry is a common species in most of Cumbria, being scarce only in the far west and in the uplands.

Dwarf Cherry (*Prunus cerasus* L.). As with the Wild Cherry the flowers and leaves appear together, generally in the second half of April. However, the Dwarf Cherry is usually a shrub rather than a tree and its leaves are shiny on the upper side and rather thicker in texture than those of its close relative. The flowers also appear in clusters but there are only 2-4 individual flowers per cluster and they are shorter stalked and ‘saucer’ rather than ‘cup’-shaped as well as being smaller (12-18 mm). Because of

the short stalks the flowers are often more hidden in the leaves so they appear much less obvious than those of Wild Cherry. Dwarf Cherry is not a common plant in Cumbria, being almost absent from the south of the county. It is most readily seen on parts of the Solway Plain, particularly around Highlaws, west of Abbeytown, but even here it is not always easy to identify since, being a hedgerow shrub, it is often trimmed before or just after it comes into flower. Perhaps the most convenient site to find it is by the east side of the road which runs north from Highlaws towards Parkhead and Silloth. Here there are a number of tall bushes which grow in the hedge which runs at right-angles to the road, by a gate, at NY138500.

Bird Cherry (*Prunus padus* L.). Often the last to flower of the hedgerow *Prunus* species, Bird Cherry is sometimes not in full blossom until well into May. The blooms, which appear after the leaves, differ from those of all the other species discussed in that they are borne in long hanging racemes, sometimes consisting of up to forty individual flowers (each 10-16 mm). The leaves are of a dull green with serrated edges and, like those of Wild Cherry, have two distinct glands on the stalk. Bird Cherries develop into large shrubs or small trees, occasionally attaining a height of 15 metres. During the summer months many plants are defoliated and covered in dense webs by the caterpillars of the Bird Cherry Ermine Moth (*Yponomeuta euonymella*). Bird Cherry is widespread and common over the whole of our region in hedges and sometimes in deciduous woods.

There remains the intriguing question of the hybrid between Wild Plum and Blackthorn (*Prunus × fruticans* Weihe). During the 1998 season a number of plants were seen in various Cumbrian sites which did not fit comfortably into any species description but did appear to combine a number of the characters of Wild Plum and Blackthorn. This problem is noted by Halliday (*op. cit.*) where he speaks of the variable spininess of Blackthorn and the difficulties of distinguishing some plants of this species from Wild Plum. In addition a recent correspondence in *BSBI News* (Oliver 1998) has also discussed this hybrid and listed four characters which distinguish it from Blackthorn.

These are:

- the fruit stones are flattened in shape not globose;
- the flowers are bigger than those of Blackthorn and the plant fruits much more profusely;
- the thickets of suckers formed by the hybrid are on a much larger scale and attain a much greater height, sometimes up to 10 metres;
- the thorns of the hybrid are much longer and harder than those of Blackthorn, making them a real danger to the tyres of cars, lorries and even tractors.

No work has, as yet, been done on the status of this hybrid in Cumbria, an omission which it is intended to remedy during 1999. It is hoped that readers of this paper will

contribute by sending in details of Cumbrian plants which show differences from the species listed above so that such plants can be investigated and some idea gained of the relative frequency of the hybrid in our region.

All being well, a further paper will be published in a year or two giving an updated report on the status of *Prunus × fruticans* in Cumbria.

Acknowledgements

I thank Ron Groom and Jeremy Roberts for their help with sites and other details.

References

- Halliday, G., 1997, *A Flora of Cumbria*, Lancaster University
Roberts, F. J., 1998, New records of Cherry Plum in north Cumbria, *Carlisle Naturalist* **6 (1)**: 14.
Oliver, J., 1998, *B.S.B.I. News* **79** (Botanical Society of the British Isles.)

A review of the Wall Mason Bee (*Osmia parietina* Curtis) in Cumbria, with two new records

Neil A. Robinson

3 Abbey Drive, Natland, Kendal, Cumbria, LA9 7QN

Osmia parietina is a scarce mason bee (family: Megachilidae) found sporadically in western and northern Britain, from west Wales northwards to west and central Scotland (Else, in prep.). It is a mainly northern Eurasian species, belonging to a small group (represented in Britain by *O. parietina*, *O. inermis* and *O. uncinata*, the last two only occurring in Scotland) which have a boreo-alpine distribution. A male which I took at Horseshoe Vetch (*Hippocrepis comosa*) at Meathop Crag (SD4379) near Grange-over-Sands on 12th May 1998, and a female taken by Stephen Hewitt (Tullie House Museum, Carlisle) at Gowbarrow Park, Ullswater (NY4020), on 5th June 1998, are the first records in what is now Cumbria for nearly 50 years. The latter is also the first record for the species in VC 70 (Cumberland). This bee has been rated as nationally rare, Red Data Book 3, (Falk, 1991), as there were only five known post-1970 localities in Britain: one in England (Gait Barrows NNR, where it was first found by Alan Stubbs in 1977 and also was reported by W. Kenneth-Booker in 1979), one in Wales and three in Scotland. In 1995 I confirmed it at Gait Barrows (SD4877), and also found it at Carnforth Ironworks (SD4971). In 1998 Barry Brigden, after watching it at Gait Barrows, saw a female at Yealand Hall Allotment (SD4876) about 1km further south. These locations are in Lancashire, and, with the two new locations in Cumbria, have increased the number of recent sites in England from one to five. This bee has been selected for attention under the Cumbria Biodiversity Action Plan and is also the subject of a national Biodiversity Action Plan, which is in preparation.

The history of *O. parietina* in north-west England is interesting. It was first described, figured and named by Curtis in 1828 from Ambleside, where it was seen flying round walls, which presumably accounts for its specific name. Subsequently it was found at scattered localities in Wales and Scotland (from Dumfriesshire to as far north as Skye). It does not seem to have been recorded again in Cumbria until three males were discovered in the Natural History Museum, London, in the collection of the Grange-over-Sands entomologist A. E. Wright, apparently having been identified as *O. caerulescens* (L.) (G. R. Else, NHM, pers. comm.). They were dated 29th May 1942, 23rd May 1943 and May 1943, but without location information. When I looked up these dates in Wright's diaries, which are held by Dr Neville Birkett, it appeared probable, from his records of *O. caerulescens*, that the 29th May 1942 specimen had been sent to him by a friend in Windermere, the 23rd May 1943 specimen may have been taken in his garden, and the one dated May 1943 had been taken at Common

Bird's-foot-trefoil (*Lotus corniculatus*) on Hampsfell Road, on the way to his favourite hunting ground at Eggerslack. On 3rd July 1950 G. M. Spooner took a male and female at Sawrey (SD3795) near Windermere lake: the female on a strawberry, (*Fragaria vesca* or *Potentilla sterilis?*), and the male on a roadside speedwell (*Veronica sp.*).

It was not recorded in Cumbria again until 1998.

Osmia parietina is about the same size as the very common Red Mason Bee *O. rufa* (L.) but is much less brightly coloured. The female's abdomen is shiny black with a slight bluish tinge and has a black pollen brush on the underside. The thorax has reddish brown hair and the head, which is almost spherical, is black. The male is similar but slimmer, with longer antennae and no pollen brush. The female's favourite forage flower is *Lotus corniculatus* and its behaviour, as it goes from flower to flower, is very distinctive (Robinson, 1996). It straddles the keel, gripping the neck with its front legs while pushing its face under the standard petal to reach the nectar, and bending down the wing petals with its middle legs, which are bent forward at a peculiar angle. Meanwhile its hind legs are extended along either side of the keel, squeezing white pollen from the tip onto the black pollen brush under its abdomen. In this manner it goes rapidly round a circuit of patches of *L. corniculatus* flowers. When it has a full load of pollen it flies off at such speed that I have not yet succeeded in following it back to its nest, which has yet to be described. What was thought to be a nest from Scotland of this bee, in the Natural History Museum, London, was later found to be that of *O. inermis* (Zett.), an even rarer species which in Britain is found only in Scotland. However, it has been reported as nesting in cavities in stones in walls and in dead wood, that the cells are made of chewed up plant material and it is likely that emergence of the offspring may be spread over more than one year. Its flight period has been quoted as early May to late July (Else, *op. cit.*). Most of my observations have been made in May and June, but in 1996 it did not appear until June and fresh females were seen as late as mid July. *L. corniculatus* is sometimes not in flower until June in this area, but more observation is needed to find out whether its flight period is synchronised with *L. corniculatus* or whether it also forages at other flowers. It has been reported as visiting bramble *Rubus sp.* and bugle *Ajuga reptans*, but I would be surprised if it is still in flight by the time bramble is in flower in the North West.

Vey little is known about the habitat requirements of this bee. The impression gained from Gait Barrows, where it occurs on damaged limestone pavement, and Carnforth, on old ironworks slag, is that it favours sheltered suntrap situations with abundant *L. corniculatus*. However, as both these sites are man-made, the prolific *L. corniculatus* may represent a transient stage of re-vegetation which the bees have colonised from elsewhere. The history of scattered records in Cumbria at sites without distinctive features, and the fragmentary and irregular nature of records in Wales and

Scotland, suggests that it could be quite widespread in suitable habitats where *L. corniculatus* occurs, but at very low population densities which makes it difficult to detect. The female only appears on her circuits about once every twenty minutes and often only one bee is seen on a site (I have never seen more than three even on a 'good' site). This, coupled with its short flight period, and that it only seems to fly in warm sunny weather, makes finding it a chancy business.

Finding it at Meathop was no surprise, in view of A. E. Wright's specimens from Grange, but Stephen Hewitt's discovery of it at Gowbarrow on the east side of the Lake District is a new development. Considering this in conjunction with the previous records at Ambleside, Windermere (?) and Sawrey suggests that it could be present in 'semi-wild' locations, where *L. corniculatus* may occur only locally, in more of the valleys around central Lakeland. There is clearly a great deal more to be learned about this bee, e.g. its habitat requirements, how widely it is distributed, where it nests and whether it collects pollen from other flowers before, or after, *L. corniculatus* is in bloom. Having completed my work on the survey of the Red Wood Ant *Formica rufa* (L.) in Cumbria, (to be reported, I hope, in the next issue) I have undertaken to concentrate on *Osmia parietina* in 1999, but the more people who can recognise this bee, the more information we are likely to obtain. Stephen Hewitt and I have reference specimens which we will be pleased to show to anyone who is interested. Any further information will help to contribute to the Biodiversity Action Plan and conservation of this species.

References

- Else, G. R., *British Bees*, In prep.
- Falk, S., 1991, *A review of scarce and threatened bees, wasps and ants of Great Britain*, NCC Peterborough.
- Robinson, N. A., 1996, Observations on *Osmia parietina* Curtis (Hym. Megachilidae) in Lancashire. *Entomologist's Monthly Magazine*, **132**: 32-32.

Notes on *Parasyrphus nigratarsis* (Zettstedt), a rare hoverfly breeding in Cumbria

Graham E. Rotheray

National Museums of Scotland, Chambers Street, Edinburgh EH1 1JF

Parasyrphus nigratarsis is a rare RDB 1 (endangered) species with just a few records from the Scottish Highlands, Yorkshire and scattered sites in Wales. Now Dr Bill Fakes has discovered this species regularly breeding at Workington in West Cumbria (Fakes, 1996).

The larva of this species has a very unusual life history. It constitutes one of the few exceptions to the general rule that predatory hoverflies eat greenfly and blackfly (Homoptera). Instead, it feeds on the eggs, larvae and pupae of leaf beetles (Coleoptera, Chrysomelidae). Previously, most of the few larval feeding records have come from the continent where they have been found eating leaf beetles on trees such as willows and alder. What Bill has managed to discover is that this species also predated the beetle *Gastrophysa viridula* (Degeer) which feeds on Dock leaves (*Rumex* spp.)

This finding opens the way for a new type of survey that could extend our knowledge of this rare species. As with many insects, the usual method of survey depends on recording adults. However it might be better to give up the search for adult *P. nigratarsis*, which appear to be very enigmatic in where and when they appear, in favour of looking for larvae.

The larva is distinctive and unlikely to be mistaken for anything else – once seen never forgotten. When fully grown, it is just over a centimetre long and tapers towards the head end. It has a beautiful pattern of brown, orange and white markings along its back which are made up of pieces of coloured fat beneath the skin (photograph in Rotheray, 1993). It can be found on the undersides of the leaves of the beetle host plants close to or among the beetles. It moves slowly in a looping fashion similar to many caterpillars.

By searching for the larva in June and July among leaf beetles on Dock, Alder and willows there is a good chance of extending the known range of *P. nigratarsis*, as Bill has shown. The possibility also exists that it will feed on other leaf beetles and it will be worth searching for these too. Leaf beetle larvae themselves are easy to recognise. They are like ladybird larvae except for being entirely black or grey. Many species 'skeletonise' leaves and feed close together.

I found that 'beating' was the best way to find larvae on Alders in Yorkshire and Scotland. Trees infested with leaf beetles were located and a beating tray (a white piece of fabric stretched over a frame obtainable from entomological suppliers – a

large pale-coloured umbrella may do just as well) was placed under an infested branch and the branch struck sharply with a stick. This knocked off any insects and they fell onto the beating tray from where they could be examined. Afterwards the insects are tipped back onto the tree to re-establish themselves. Alternatively, leaves and branches can be searched by simply turning them over.

It can take quite a while to find anything, but once a site has been located they do seem to occur in relatively high numbers – at least on trees. Rearing the larvae through to adult is relatively straightforward. Place the larvae in tubes with a few leaf beetle eggs or larvae and store in a cool, shaded place, such as a garage or back bedroom. The larva of *Parasyrphus nigratarsis* is one of the most voracious hoverfly predators I have yet encountered. They have a particular mechanism for catching their prey. The hoverfly predator relies on touch to locate food and when it encounters a beetle larva it loops over it and retracts itself, which pulls the beetle over exposing its underside. The hoverfly larva pierces the underside of the prey with its sharp mouthparts and begins to suck out the contents. It may prefer to feed on the underside of the prey to avoid the noxious secretions that some leaf beetles are capable of producing from glands on their abdomens. Often several hoverfly larvae feed on the same hapless victim, which is demolished in a few minutes. Dozens of leaf beetle larvae appear to be consumed over the development period of each hoverfly larva. Again, unusually for predatory hoverflies, *P. nigratarsis* larvae do not appear to feed on each other – something that the aphid predators readily do!

When the feeding period is over in late July or August, the larva empties its hind gut which is full of accumulated black material and overwinters among the leaf litter and plant debris beneath the host plants. It becomes still and quiescent. In captivity, overwintering larvae should be placed in tubes with moistened tissue paper and stored in a cool, dark place. The following May or June the puparium forms and the adult emerges about three weeks later. The adult is one of the wasp mimicking type with black and yellow markings.

References

- Fakes, W., 1996, *Gastrophysa viridula* (Degeer) – the Dock Beetle, *Carlisle Naturalist* **6** (1): 14-15.
- Rotheray, G.E., 1993, Colour Guide to Hoverfly Larvae, *Dipterists Digest* **9**: 1-155.

Carlisle Natural History Society Officers

President: David J. Clarke

Vice-Presidents: Geoffrey Horne, Bob Buchanan

Council: Jeremy Roberts, Bob Wright, Mike Tulloch, Brian Spencer, Barry Marrs, John Hamer, Ann Robinson, Anne Abbs and Geoff Norman

Secretary: Stephen Hewitt c/o Tullie House Museum, Castle St., Carlisle CA3 8TP

Assistant Secretary: Roy Atkins

Treasurer: Dorothy Iveson, 60 Etterby St., Carlisle

Recorder: Geoff Naylor, c/o Tullie House Museum

Subscription Rates: Adult £6.00; Family £8.00; Junior £3.00; Affiliated £5.00

(Affiliated members receive the *Carlisle Naturalist* only)

Membership application forms are available from the Secretary.

The Carlisle Naturalist

Editor: Stephen Hewitt.

Layout & DTP: Jeremy Roberts.

Editorial Panel: Roy Atkins, David Clarke, Stephen Hewitt, Geoff Naylor, Jeremy Roberts.

Word Processing: Stephen Hewitt.

Artwork: David Clarke, Stephen Hewitt, Ann Robinson

All material for publication should be sent to Stephen Hewitt at:

Tullie House Museum, Castle St., Carlisle CA3 8TP;

e-mail (text and RTF attachments possible): SteveH@carlisle-city.gov.uk

Copy deadline for the next issue is **28th February 1999**.

Information for Authors

The Carlisle Naturalist publishes material on all aspects of the natural history of Cumbria. General articles, results of personal research, news items, records and letters of relevance to Cumbrian naturalists are welcomed. Material accepted for publication must not be submitted in a similar form to any other journal.

Material should be clearly legible – ideally type-written double-spaced on one side of white A4 paper, or submitted on DOS-formatted 3.5 inch computer disc in ASCII or RTF format and accompanied by a paper copy. Only species and genera should be underlined. Authority names should be given in full. Illustrations should be in black ink; they must be originals and not photocopies. Whilst every care will be taken of original artwork, the editor can not be held responsible for any loss or damage. References should be given in full at the end of the article or note.

Authors of papers two or more pages in length will be provided with 10 reprints. Papers may be submitted to a referee.

Opinions expressed in the *Carlisle Naturalist* are not necessarily shared by the Council of Carlisle Natural History Society nor the Editorial Panel.

Discounted publications to Society members

The following publications of the Society are available to members at the discounted prices shown:

Cumbrian Wildlife in the 20th Century (1996) £5.00 (retail price £6.50)

Lakeland Ornithology (1954) £5.00 (2nd hand price £15 - £20)

Lakeland Molluscs (1967) £3.00 (2nd hand price £10 - £20)

Also:

Lakeland Birdlife 1920 - 1970, R.H. Brown (1974) £5.00 (2nd hand price c.£10.00)

Winter Meetings 1998/99

Tullie House Museum and Art Gallery, Castle Street, Carlisle.

Meetings start promptly at 7.15pm (doors open at 6.50pm).

14th October 'BIRDS OF THE ISLE OF MAN' An illustrated talk by Dr J. P. Cullen

28th October 'WILDLIFE OF THE CUMBRIAN PENNINES' An illustrated talk by Terry Wells

11th November MEMBERS' NIGHT Contributions from the membership

25th November 'FROM BHARATPUR TO BARUN' An illustrated talk by John Mather

9th December 'BUTTERFLIES' An illustrated talk by Richard Little

6th January 'ICELAND' An illustrated talk by Malcolm Stott

20th January 'PINE MARTENS' An illustrated talk by Johnny Birks

3rd February 'PLANT HUNTING IN CUMBRIA' An illustrated talk by Mike Porter

6th February (Saturday): Field Meeting LOCH KEN, GALLOWAY (wild goose chase) Leader: Geoff Horne. Depart 9.00 am.

17th February 'FOLLOWING FALCONS' An illustrated talk by Terry Pickford

3rd March AGM & MEMBERS' NIGHT Annual General Meeting followed by contributions from the membership