

THE VASCULUM

APRIL 1968

Vol. LIII No. 1.

Price 7/6d. per annum, post free.

Edited by
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THE POPLARS, CHESTER-LE-STREET

BY THE WAY

Secretaries of Societies and other contributors to "The Vasculum" are invited to send their notes to the Editor before 15th June* 1968*

WILD PLANT PROTECTION BILL.

This Bill was first introduced into Parliament before Christmas, but owing to pressure of other legislation, has not yet come up for further discussion. It is most probable, however, that it will eventually become law. Most of us would want to make the comment that the sooner it is passed the better.

It aims to give general protection to wild plants, and in addition will specify certain rarities which it would be an offence to pick or uproot. There will also be a somewhat longer list of those plants which would suffer by wholesale picking. For these it will be an offence to pick them for sale. Lastly, local rarities may be similarly protected by Ministerial Order on the advice of local authorities.

The Bill has been drafted by a working party set up by the Botanical Society of the British Isles, The Council for Nature and the Society for the Promotion of Nature Reserves.

This, although overdue, is a great step forward and should help to slow down the gradual extinction due to urbanisation and all the other things that take place under the heading of "Progress", of many of our rare plants. It will be up to naturalists to see that the general public know what it is all about.

CONSERVATION.

All our readers will at least have heard the word "Conservation", although there may be some rather nebulous ideas of what it is all about. We can imagine some people thinking that it is something to do with the Naturalists' Trust of Northumberland and Durham, but not with any other organisation. We think that it is the prime concern of every naturalist.

In a paper produced for the Naturalists' Trust (A need for a Policy for the Conservation of Wild Life and Wild Places in the Countryside of Northumberland and Durham), Dr. M. E. Bradshaw has pin-pointed the reasons and the urgency for the conservation of our wild life at this time.

The North-East is undergoing considerable change. The old pattern of villages clustered round the coal-mine buildings is rapidly disappearing as the mines become worked out. In a short time, only a few collieries will be left. They are being replaced by more widespread industrial expansion and development. Every year and, indeed, every month, more and more of the good brown earth disappears under the ever increasing blanket of concrete and tarmac. All this spells death to living things. Because we would wish our counties to be pleasant places for recreation and the enjoyment of leisure time, it is important to try to preserve as much as possible of our wild countryside with all its attendant beauties, its ability to enable us to relax and unwind and many other possibilities. This is conservation and there are three main reasons for it.

The first is scientific. A proper scientific understanding of our natural communities can provide ways and means of greater productivity of the land. Food production must keep in step with the population explosion.

The second reason is educational. More and more children are taken out into the country for field studies by their teachers. The recently published course for teaching biology, known as the Nuffield Science Teaching Project, emphasises the outdoor study of the subject more than ever before. Furthermore, this course is a real study, not just an aimless collection of plants and animals seen on a country walk. Obviously there must be a suitable number of sites for study, and the more there are the better.

Thirdly, the process is concerned with amenity and the use of leisure. The general public is turning more and more to the countryside for recreation and we would encourage this wholeheartedly. At the same time there is a danger of over-usage of some parts, where the biological set-up is particularly sensitive to trampling and other forms of interference. These areas are a real problem to the conservationist and must have some means of controlling access, or the very things we wish to retain will be destroyed.

With these reasons in mind. Conservation Committees all over the country are attempting to deal with the problems in a number of ways. Thus reserves for scientific study, reserves for educational purposes and special areas for the quiet enjoyment of the countryside by everyone are being developed. We would all wish the conservation movement every success. To ensure it we hope every member will do his little bit to help.

OBITUARY NOTICE

GEORGE WILLIAM TEMPERLEY, M.SC.

George W. Temperley passed away on 30th November 1967. He was 92 years of age and had been in rather poor health these last few years. I first met him at Scarborough during the First World War. He was an active member of the local field naturalists' society and he showed me some of the interesting plants to be found in that district. In 1918, he left Scarborough to come to Newcastle to take up the Secretaryship of the "Citizens' Service Society". We often met at this time, and also went on holiday together, both abroad and in this country. Upper Teesdale was also explored to try to find out the status then, of the plants mentioned in the old records. We found all of them except *Orthilia (Pyrola) secunda* (L.) House, at the White Force, *Vaccinium uliginosum* L., and, of course, *Woodsia ilvensis* (L.) R.Br. (Vasculum Vol. VI, 48 and 76).

These were always plant holidays and he was able to put everything aside to pursue the main purpose. Birds were not much considered to begin with, but latterly they came in for much more attention. When he came back from Scarborough, he rejoined the Natural History Society of Northumberland, Durham and Newcastle upon Tyne, and was soon elected to the Council. In 1931 he became joint Hon. Secretary of the Society with the late Charles E. Robson, a post which he held for 20 years. On his retirement he was elected a Vice-President and in 1955 an Honorary Member; also for some years he was an Honorary Curator.

In 1935 he became recorder of the newly formed ornithological section of the society and, in that capacity, compiled the annual report for Northumberland and Durham for 21 years.

In 1951 he wrote a history of the birds of County Durham. This was published in the Transactions of the Natural History Society, Vol. IX.

In 1939, he collaborated with Professor J. W. Heslop Harrison in compiling a "Flora of Northumberland, Durham and Cumberland", published in the "Three Northern Counties of England", but Professor Heslop Harrison was entirely responsible for what plants were included in this list.

In 1952, The University of Durham conferred upon him the degree of M.Sc. Honoris Causa, in recognition of his contribution to Natural Science.

When he moved from Low Fell to Stocksfield in 1932, he had a garden of about 3/4 acre, and he kept part of it in a wild state to encourage birds to nest there. With this encouragement and nesting boxes, he had 17 species of birds nesting in the garden, and 51 other species were recorded there. His robins were noted for their tameness and would take food from his lips. They have done the same from me, perhaps not knowing the difference!

He was a very early member of the British Trust for Ornithology and when, in 1948, it appointed Regional Representatives throughout Great Britain, he became representative for Northumberland and Durham, a post from which he had just recently retired. In 1956 the Trust presented him with the "Tucker Medal" for outstanding services as Regional Representative in connection with the Trust's field investigations.

In 1956 he went with friends to South Uist and, though nearly 80, climbed to the top of Ben Mhor, a little over 2,000 ft. The following year, he made a trip to Ullapool and again after a hard climb, saw *Artemesia norvegica* Fr. var. *scotica* Hulten, in its first Scottish station. On the way home he was able to take us up the Sow of Athol and show us *Phylodoce caerulea* (L.) Bab. This showed that his enthusiasm for birds and plants was unabated by his advanced years, and his example as an outstanding amateur naturalist will encourage others for years to come.

Randle B. Cooke.

THE SOCIETIES.

NORTHERN NATURALISTS' UNION.

The 44th Annual Meeting of the Union was again held in the Hancock Museum, Newcastle upon Tyne, by kind permission of the Natural History Society of Northumberland, Durham and Newcastle upon Tyne.

Owing to the absence, through illness, of Mrs. Gibby, Mr. Dunn read the minutes of the last meeting and then the Treasurer's Report. This was followed by reports from Mr. Thompson, the Meetings Secretary and Mrs. Gibby, the General Secretary.

At this point, the President, Mr. Lowe spoke about Mr. G. W. Temperley who had died in November 1967. This was followed by a few moments of silence in remembrance of a very faithful member of the Society and one who had done a lot for natural history in the North of England. After announcing the field meetings for 1968, the Rev. G. G. Graham was elected President in his absence. Mr. Hird then took over the Chair to continue the election of further officers. Mr. Dunn then announced the suggestions of the Council concerning the Autumn Meeting. In future this is to be called the "Heslop Harrison Memorial Lecture"; and it is proposed that some lecturer of national importance be invited each year. For October 1968, Dr. H. B. D. Kettlewell has been invited to give the first lecture, which will be about Industrial Melanism in Moths. This is a subject in which Professor Harrison was interested throughout his working life and is, therefore, a very appropriate one to begin with. Tickets will be on sale nearer the date.

Mr. R. H. Lowe then gave his Presidential Lecture entitled "The Origin of Plant Names". He spoke first of all about our North-Eastern dialect, mentioning some of our old words.

Children's games were also discussed. He regretted the passing of several words that had come down to us from the Old English. Turning to old flower names, these were often quite different in different parts of the country, the best example being *Arum maculatum* L. with 107 different common names. Mr. Lowe then showed a number of coloured slides of many of our common plants, commenting in each case, on the origin of the common name and how it had often given rise to local place names.

After votes of thanks to the Natural History Society and the various helpers, Mr. Hird introduced Mr. Graham who had by this time arrived. He spoke of his plans for his Presidential year. These include a start on a Flora of County Durham and a widening of the plant mapping scheme to include more detail.

We then adjourned to the adjacent laboratory for tea, where Miss Vincent and the girls of Chester-le-Street Grammar School attended to our wants. Here Mr. Cooke had on display his usual magnificent collection of spring flowers. Here also Mr. Hird exhibited a series of pressed flowers. Dr. Todd showed transparencies of British Orchids, Mr. Graham had several local mosses and lichens, and Mr. Dunn showed some of the butterflies to be found in our counties with notes on how to avoid confusing closely related species, and a second exhibit showing the Mull form of the Speckled Wood Butterfly, *Pararge aegeria* L.

BIRTLEY NATURAL HISTORY SOCIETY.

After Christmas the lecture programme was continued on January 9th when Mr. T. W. Wanless showed some of his slides taken during a recent trip to Central Africa. Later, on March 12th, Mr. E. Hall showed his film of the same holiday, the two lectures taken together thus forming a splendid record of what appeared to have been a wonderful experience for the pair. On February 6th, Mr. J. Peters arrived, laden with all sorts of apparatus for studying freshwater organisms, and proceeded to interest us greatly by an account, with pictures, of their uses. Mr. B. Little talked very enthusiastically about Hauxley Bird Ringing Station on February 20th and invited us all to see the station whenever we could make the journey.

The Annual Dinner this year was held in the Lambton Arms Hotel. Numbers had to be limited because of the hotel dining space. This proved to be a very pleasant evening, which was thoroughly enjoyed by all present. The session finished on March 26th with the Annual General Meeting and Conversazione.

There have been two outings, one to Hawthorne Dene on March 3rd to see the snowdrops etc., and the other to Bollihope Burn on April 7th. The latter was a particularly fine sunny day which was thoroughly enjoyed. In the pools much frog spawn was in evidence, some of the tadpoles having hatched already. The frogs themselves had left the water and were found in the long vegetation nearby with a number of smooth newts. Mosses were

noted in particular, as they were in great profusion. During the course of the afternoon, one member counted 15 different bryophyte species. Several juniors were present and much time was spent with them, introducing them to the mosses and also some liverworts and lichens. A very fine colony of *Marchantia* was discovered alongside the stream.

In addition birds also were noted. The final list consisted of red grouse, redshank, curlew, jackdaw, wheatear, pied wagtail, green plover, kestrel and pheasant.

DARLINGTON AND TEESDALE NATURALISTS' FIELD CLUB

The Annual Report for 1967-68 has just been received. In the President's Report a noteworthy event seems to be a move to a new meeting place which has provided a store-room for the club's collections of books and specimens. These have been more accessible to the club members which has resulted in their greater use, surely an important step forward.

The many reports following, indicate once again, the tremendous activity going on in the club. Surveys of amphibians and reptiles, of the plants in squares NZ 21 and NZ 31, and also of the freshwater organisms in Hell Kettles Ponds have continued. Other sections record new patterns of distribution of some importance. Altogether this is a very full and interesting report.

NOTES AND RECORDS

NOTES.

Bird notes. Two lists have been received, both of which are of interest to ornithologists. Mr. R. Harris sends the following records made near Brasside Ponds on 25th February 1968:—

Mallard: 14 birds were counted.

Coot: Very common, at least 60 birds.

Tufted Ducks: in larger numbers than usual, 24 birds.

Pochard: 12 birds present. Mute Swan: 1 pair of birds, possibly the residents.

Black-headed Gulls: 18 birds in winter plumage.

Magpies: 4 seen.

Water Hen: Only 1 pair seen.

Great Tit: 1 pair in the bushes surrounding the pond.

Common Wren: 1 only seen.

In addition several Black-backed and Herring Gulls were on the water and in the bushes an unknown number of reed buntings, lesser redpolls and blue tits were present. Several skylarks were heard singing overhead.

The second list comes from Miss H. Johnson and refers to Witton-leWear Nature Reserve on 21st February 1968. She writes:— "There was much ice on the main lake but in brilliant sunshine about 40 mallard and 8 tufted ducks were present, also some golden-eye, coots, one mute swan, and a heron, which took flight when we approached. There were 4 magpies in the trees on the other side of the lake. A further mute swan was seen in the small lake near the ground where trees were planted on a bank side.

The duck appeared to be pairing off already and their plumage approached breeding condition. "

A Pheasant in Chester-le-Street On February 11th, a cock pheasant was seen in the front garden of a house at the south end of Chester-le-Street, where it (the garden) abutted on the main road through the town. We were able to observe it and indeed talk to it from a distance of about 2 yds. After visiting our allotment garden, we returned home about 15 minutes later to find the same cock pheasant in our own garden, which is about 100 yards from where the bird was first seen. It stayed about 30 minutes, then flew on to the high garden wall adjoining Red Rose Lane. This road carries quite a lot of vehicular traffic and many pedestrians. In spite of this, it strutted along the wall for some minutes before flying off in the direction of the River Wear. T.C.D.

The Small Tortoiseshell Butterfly, *Aglais urticae* L. This butterfly, which spends the winter in a comatose condition, tucked away in some sheltered spot, has been tempted to break its hibernation by our frequent warm spells during the early months of this year. Thus Mr. Lofthouse reports one in his garden at Ludworth on January 14th, surely a very early sighting. Another was seen in our own garden at Chester-le-Street on February 26th, whilst Mr. and Mrs. H. M. Collier report one at Stocksfield on March 3rd. Unless these insects have managed to go back into hibernation a second time, which is a difficult and unusual procedure, it seems doubtful that they could have survived the cold snap in early April, particularly when there are few suitable flowers from which to obtain nectar, if this is necessary to them. There is actually some doubt about the last point, in which case they may just have had sufficient energy to mate and lay eggs before the cold caught them T.C.D.

Some Unusual Casual or Introduced Plants. In October 1967, *Vaccaria pyramidata* Medic., a plant nearly related to our Soapwort, and *Fagopyrum esculentum* Moench, Buckwheat, were found in the grounds of Van Mildert College. In the newly sown lawns in the College. *Linum usitatissimum* L., Cultivated Flax, and *Hordeum jubatum* L., a species of wild Barley, which has been introduced from N. America, were both abundant. The last was also seen in other lawns in Durham City. A. J. Silverside.

Senecio x londonensis Lousley, a hybrid ragwort was discovered on waste ground in South Shields town centre. Only a single plant was seen.

A. J. Silverside and J. R. Edmondson.

Caddisflies at Chester-le-Street. During moth trapping work for Rothamsted Experimental Station, the Caddisflies have been separated out and identified by Dr. M. I. Crichton of Reading University. Of these, *Glossosoma boltoni* Curtis, was by far the most abundant, yet Dr. G. N. Phillipson of the University of Newcastle comments that this insect is usually rather local in its distribution and usually associated with small streams in W. and N. Britain. The trap is situated only 300 yards from the River Wear, which could hardly be classed as a small stream at this point. *Halesus digitatus* Schrank, he states as not common in the north, probably more so in the south and west. Only a single specimen was captured. Dr. Phillipson has recorded it from Allendale. The entire list appears in the Records section of this journal. T.C.D.

RECORDS.

INSECTS

TRICHOPTERA—CADDISFLIES.

<i>Glossosoma boltoni</i> Curtis.	66
The most abundant Caddisfly taken in the trap at Chester-le-Street.	
<i>Polycentropus flavomaculatus</i> Pictet.	66
Two individuals only, Chester-le-Street, in July 1967.	
<i>Hydropsyche instabilis</i> Curtis.	66
Common in June, July and August 1967, Chester-le-Street.	
<i>Limnephilus vittatus</i> Fabr.	66
Not common, one in June, another in July and a third in September 1967, Chester-le-Street.	

Halesus radiatus Curtis.	66
Not common in September and October, 1967, Chester-le-Street.	
Halesus digitatis Schrank.	66
One only in October 1967, Chester-le-Street.	
Athripsodes cinereus Curtis.	66
One only in July 1967, Chester-le-Street.	
Athripsodes dissimilis Stephens.	66
Common in July, August and September, Chester-le-Street. T.C.D.	

LEPIDOPTERA—BUTTERFLIES AND MOTHS

Pandemis heparana Schiff.	66
Abundant at light, Chester-le-Street; taken on the wing at Durham.	
Pandemis cerasana Hubn.	66
Extremely common at light, Chester-le-Street. Melanic forms appear from time to time but not common.	
Archips oporana L.	66
Abundant at light, Chester-le-Street; Waldrige Fell; Durham.	
Archips xylosteana L.	66
Fairly common in the garden and on the river banks, Chester-le-Street.	
Archips rosana L.	66
Common at Chester-le-Street, Waldrige, Cassop, freely bred from hawthorn from all these localities.	
Syndemis musculana Hubn.	62, 66
Frequently bred from bramble, Waldrige (66); Osmotherley (62).	
Amelia vibumana Schiff.	66
Larvae common on Bilberry, Waldrige Fell.	
Amelia paleana Hubn.	66
Common enough wherever searched for; Chester-le-Street, Butterby, Barnard Castle, Billingham.	
Clepsis consimilana Hubn.	66
Frequent on privet hedges. Chester-le-Street. N. R. Lowe reports it also at Roker.	
Clepsis costana F.	66
Often frequent on Epilobium hirsutum L., and easily bred if spun leaves are collected in early June. Chester-le-Street, Cassop, Waldrige.	
Ptycholoma lecheana L.	66
Bred from rose and willow, not at all common, Cassop, Waldrige.	
Lozotaenia forsterana F.	66
Fairly common at light, Chester-le-Street.	
Batodes angustiorana Haw.	66
Quite common, Chester-le-Street. T.C.D.	

FLOWERING PLANTS AND FERNS.

Veronica filiformis Sm.	68, 81
In many places around the Tweed, as at Cornhill, Norham (68), and near Gainslaw (81).	
Symphytum tuberosum L. Tuberous Comfrey.	68, 81
In various places around the Tweed, as at Cornhill, Norham (68), and near Gainslaw (81).	
Carex riparia Curt. Great Pond Sedge.	68
Near Embleton; near Bridgemill on the North Low; and near the mouth of the Whiteadder.	
Lactuca virosa L.	68
Near Horncliffe.	
Stellaria nemorum L. Wood Stitchwort.	67, 68, 81
Near Studdon in E. Allendale (67); Norham (68); Coldstream (81).	
Carex acuta L. Tufted Sedge.	68
By the Tweed near Boathouse, S.W. or Norham.	
Vicia lathroides L. Spring Vetch.	68
Quarry near Mindrumill; old lime quarry on Ford Common; E.side of Holy Island. G. A. & M. Swan.	

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BY THE WAY

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QUARRY FILLING.

In a recent number of this journal (Vol. LII, No. 3), we reported the discovery of two new colonies of the Red Helleborine, **Epipactis atrorubens** (Hoffm.) Schult. A few days ago we visited the spot again, to see the beautiful assemblage of orchids and other limestone plants, and to check on the colony of the Argus Butterfly, **Aricia agestis** Schiff. which also lived there. Alas, one habitat is no longer. We were appalled to see bull-dozers, heavy lorries and other earth moving equipment, very busy obliterating the entire site. The colony of the Red Helleborine has gone for ever and with it, thousands of other orchids, for the habitat supported **Dactylorchis fuchsii** (Druce) Vermeui., **Dactylorchis purpurella** (T. & T. A. Steph.) Vermeui, **Orchis mascula** (L.) L., **Anacamptis pyramidalis** (L.) Rich., **Gymnadenia conopsea** (L.) R.Br., **Coeloglossum viride** (L.) Hartm., and **Listera ovata** (L.) R.Br. as well as many other species of local limestone plants.

The sight made us feel very sad. Once again in the name of tidiness and progress, our natural heritage has suffered a grievous blow. How much longer is this senseless destruction to be allowed to continue? Following on the Cow Green Reservoir disaster, one feels that it is quite impossible to work with big business. Any offer of advice is just ignored if it is more convenient for the planners to do so. In this instance, no notification of the intention to fill up this particular quarry has ever been provided, nor has any advice been sought. Once again short-sighted senseless planning has triumphed over reason, and "civilization" is so much the worse off for it.

WILLOWS.

There was considerable interest among the botanists, during the N.N.U. outing to Hexham on July 6th, in the willows alongside the river Tyne. There were at least 6 species together with their hybrids, but once again **Salix triandra** L., the Almond Willow, was

missing. For some time now, we have been trying to estimate the frequency of this species in our two counties, but have failed to find a single individual. The botanists of 30-40 years ago had no trouble in finding it. The late Professor J. W. H. Harrison knew exactly where he could find specimens then, but latterly failed to do so. All his old certainties had disappeared. Does anyone know of **Salix triandra** in Durham or Northumberland? What can have caused its disappearance or sudden reduction in numbers, whatever the case may be?

MAMMAL TRAPS.

Readers will remember an appeal by the Mammal Society in these pages (Vol. LII, No. 2) for information about stocks of mammal traps available on loan to serious workers in this field of study. 94 replies were received, from which the following general picture has emerged.

About 40 organisations hold stocks of commercial traps, mainly Longworths, although a wide variety of other traps are also held. Twenty-one of these are willing to lend out their traps when they can do so without impairing their own work.

Most Natural History Societies do not do any regular mammal work so that the purchase of traps would be a liability. On the other hand, some replies from such bodies showed that they were in favour of a general trap loan scheme to help out with special surveys or projects when these became necessary or desirable.

Apart from Longworths, traps specialising in the capture of Water Voles, Stoats, Weasels, Moles, Rats, Mice and Rabbits are available. Because certain institutions do not wish it to be widely known that they are willing to lend traps, it is not possible to publish a list of trap lending institutions. Instead, Mr. Crawley, of the Mammal Society, has kindly agreed to act as an organiser in the lending scheme. If any society would like to borrow a certain type of trap, the secretary should write to Mr. Crawley at the British Antarctic Survey, Biological Unit, Department of Zoology, Queen Mary College, Mile End Road, London E.I.

For borrowers, the Mammal Society has compiled a number of basic requirements that should always be compiled with.

- (a) Traps should reach borrowers clean and well packed. Please see that when they are returned they are in the same condition.
- (b) Make sure the traps are returned at the exact time requested. Failure to do so may seriously inconvenience the lender, apart from making him reluctant to lend traps again.
- (c) It is usual to replace lost or damaged traps. Please ensure that before borrowing, the necessary funds are available to make good any losses.

The Mammal Society are most anxious to give every help they can to bona fide workers and it is hoped that this extension of the

existing scheme will enable many more people to carry out useful research on mammals.

MEMBERSHIP.

The total membership of the N.N.U., in terms of direct subscribers remained fairly constant for many years until about 5 years ago. Then the numbers began to fall. This tendency is not by any means catastrophic, the numbers involved being very small. The trouble seems to be that as the older members disappear for one reason or another, no new young ones are taking their places. This is not a very healthy state of affairs, one that worries us continually.

Since the annual subscription of the direct subscriber is what really pays for the "Vasculum", and since the printing bill for this journal is steadily increasing, only a slight mental effort is required to see that income and expenditure are not keeping pace with each other. The printers have recently informed us of a further increase of 101/2%. Hence the recent increase in subscription of 2/6 per annum, has been partly swallowed up before it has ever been collected. The only permanent solution is more members. Would every reader see if he can do something about this.

THE SOCIETIES.

NORTHERN NATURALISTS' UNION.

The 119th Field Meeting of the Northern Naturalists Union was held at Barnard Castle on May 25th, when there was an attendance of over 60.

Led by Mr. Mulliner of the Darlington Naturalists' Field Club, the party followed an easterly route alongside the Tees to the bridge opposite Egglestone Abbey, and thence, on the Yorkshire side, along Thors Gill. The sides of this valley were fully wooded with a mixture of deciduous trees, wych elm being very frequent.

The floor of the wood was clothed in a most luxuriant growth of spring flowers. All the common species were present, together with **Chrysosplenium alternifolium** L., the Alternate-leaved Golden Saxifrage, **Ranunculus auricomus** L., Goldilocks, **Campanula latifolia** L., Giant Bellflower, and Cowslip and Primrose with the hybrid between the two. A few spikes of the Early Purple Orchid, **Orchis mascula** (L.) L. were seen, but the numbers were rather disappointing according to one member of the party who knew the area well. Many ferns were observed, including Male Fern, **Dryopteris filix-mas** agg., and the Broad Buckler Fern, **Dryopteris dilatata** agg.

The banks of the Tees produced several other species, notably the Meadow Saxifrage, **Saxifraga granulata** L., Cookoo Pint, **Arum maculatum** L., and several Veronica species. On the walls bordering the river several more unusual plants were seen, Thale Cress, **Arabidopsis thaliana** (L.) Heynh., Ivy-leaved Toad-flax, **Veronica hederifolia** L., Pellitory-of-the-Wall, **Parietaria diffusa** Mert. &

Koch, Rue-leaved Saxifrage, **Saxifraga tridactylites** L., and the ferns Black Spleenwort, **Asplenium adiantum-nigrum** L., Wall Rue, **Asplenium ruta-muraria** L., Brittle Bladder Fern, **Cystopteris fragilis** (L.) Bernh.

As we walked, the entomologists worked assiduously although insects were scarce. The only butterfly seen on the wing was the Green-veined White, **Pieris napi** L. and a single species of Bumble Bee, the White-tailed Bee, **Bombus leucorum**, which was quite common. The only caterpillars beaten from the trees were those of the Winter Moth and a species of *Oporinia*, which was collected for identification. The latter are now pupae and their emergence is eagerly awaited.

Mr. Hird reported on the birds. He observed many common species together with Redstart, Dipper, Pied Wagtail and Nuthatch. The last named was watched for some considerable time, flying in and out of a hole in an elm tree, probably in the process of feeding young. Some members of the party were quite content to spend the whole afternoon watching these beautiful birds. After a picnic tea at the head of the valley the party split up, some returning via the wood and others via the road to Barnard Castle. All agreed that it had been a very satisfying and productive outing.

BIRTLEY NATURAL HISTORY SOCIETY.

Since the end of the winter lecture season the society has continued to meet in the field. Thus on May 5th a delightful afternoon was spent in Ryhope Dene, where the spring flowers of the woods were in full bloom. On May 19th a number of cars set out for Craster and Dunstanburgh for a whole day in the field. The day proved to be sunny but cold and windy. Nevertheless, we were able to renew our acquaintance with **Scilla verna** Huds., and spend a considerable time watching the seabirds on Dunstanburgh cliffs. Nests were complete and many birds were already incubating.

On June 2nd a trip was made to an old lead mining lake on Middleton Common. We had hoped to see Black-headed Gulls nesting there. There was plenty of evidence that they had tried to do so, but regrettably, it was also obvious that their eggs had been taken and the birds driven away. During the course of the afternoon, however, a single Dark-green Fritillary, **Argynnis aglaia** L. was seen. Other insects were still very scarce.

June 9th was a beautiful day when we started from Dufton to walk up to High Cup Nick and the weather stayed good throughout the day. On the way we were very interested in the plants growing in the rocky stream beds, but we were even more pleased when we reached the head of the valley to see the beautiful display, in the whinsill screes, put on by the Scurvy Grass, **Cochlearia officinalis** L. ssp. **alpina** (Bab.) Hook., Roseroot, **Sedum rosea**, (L.) Scop., Mossy Saxifrage, **Saxifraga hypnoides** L., Alpine Penny Cress, **Thlaspi alpestre** L. and Parsley Fern, **Cryptogramma crispa** (L.)

Hook. We returned via the south side of the valley, a way which proved to be much further than we had estimated. It was a very tired but happy party that finally struggled back to Dufton.

The outing to Holy Island on June 23rd was punctured by two very heavy rainstorms which caused some flooding on the roads and made driving unpleasant. In spite of this, a fine afternoon enabled us to enjoy the sight of several families of Eiders just below the Castle and the flocks of Black-headed Gulls on the mere. In the sand dunes to the north we were enchanted by the hosts of orchids which consisted mainly of **Dactylorchis incarnata** (L.) Vermeul, just going over and **Dactylorchis purpurella** (T. & T. A. Steph.) Vermeul, just at their best. On the wing we noticed the Cinnabar Moth, **Calimorpha jacobaeae** L., the Six-spot Burnet, **Zygaena filipendulae** L., and a very fresh specimen of the Dark Green Fritillary, **Argynnis aglaia** L.

NOTES AND RECORDS

NOTES.

Plants on Holy Island. While on a weeks' holiday at Holy Island, I listed about 160 flowering plants. Four of these I had not seen there before, nor can I remember having seen them listed for this locality in previous issues of the *Vasculum*. They were Round-leaved Wintergreen, **Pyrola rotundifolia** L., Wild Celery, **Apium graveolens** L., Petty Spurge, **Euphorbia peplus** L., and Slender Birdsfoot Trefoil, **Lotus tenuis** Walldst. & Kit. ex Willd. L. P. Hird.

Bird Notes from Stanley. The following ornithological observations may be of interest to readers:—

Shoveler: A pair at the Tanfield Ponds, Stanley, on April 20th.

Long Eared Owl: Two birds present in a young Scots Pine wood near South Moor, Stanley.

Fieldfare: Late date. On April 12th, a party of 13 birds was still present at Cockle Park, Northumberland.

Meadow Pipit: On April 19th, a single bird was noted on the bowling green in Leazes Park, in the built up area of the centre of Newcastle; an unusual situation.

Sedge Warbler: First noted singing at the Tanfield Ponds, on April 20th; rather early. R. Marston Palmer.

Observations on the early stages of the Red Currant Sawfly. I recently brought within doors (at my house at Birtley) a small leaf of Red Currant upon the underside of which were several ova of the Sawfly, *Nematus ribesii* Scopoli. When first deposited the ovum is oblong, whitish, with contents homogeneous, and about 1/24" long; beneath, it is boat-shaped, this being possibly due to the grip upon the central region of its axis by the tissues within which it has been inserted. The ova are deposited longitudinally in pairs along the centre of the main nervures or ribs of the leaf, an incision being made by the female parent insect with her saw-like ovipositor for the securement of each ovum. After emergence of the larva, the empty shell remains firmly attached inside the incision on its lower edge or side. When the empty egg-shell is forcibly removed, the long darkened scar is seen plainly, with its lips or edges closely appressed. When the ovum has been unfertilised, the manner of the attachment to the nervure is very evident, it being sunk to no great depth, though for the greater part of its length, into the tissues of the leaf vein. With the gradual development of the embryo larva the ovum increases in size.

About 24 hours before hatching, the nearly mature larva can be seen through the thin pellicle of the ovum. It is white in colour with brown mandibles and claws (on the thoracic legs), and an intensely black circular eye on each side of the head. It lies dorsum uppermost and the thoracic limbs are laid back along the sides.

On hatching out, the young larvae commence to feed on the tissues of the leaf-blade, at the base of the particular nerve upon which the ova from which they have emerged, have been deposited, passing off alternately to the right and left of the nerve with much regularity. The young larva first eats out a little patch or disc of leaf, and then affixes itself firmly to the edge of the hole thus made, and henceforward feeds on and from the edge of this rounded hole. They very firmly cling to the edge of the hole with their thoracic limbs. At this stage they are tiny, whitish in colour, with large head, black eyes and brown mandibles, with the green stuff (food) in the intestinal tract showing very clearly through the only partially opaque tissues. The claws are brown, the strongly convex cornea occupies the centre of a much more extensive circular black mass constituting the eye. The length of this newly hatched larva is 5/64". The holes which they individually eat out gradually increase in size, and shortly run into each other so completely skeletonizing the leaf. In a short time (when they have reached 3/32" long), they are wholly and uniformly green in colour, the liberal speckling of black not yet being developed. These black areas to be can, however, be discerned through a hand lens in embryo so to speak, on a small scale and brownish in colour.

Before very long (possibly after the first casting of its skin), the young and still small larva becomes abundantly speckled with jet-black and shining tubercles, from which spring black hairs. The head and thoracic limbs are also a shining black; the head is also covered with black hairs. C.R.

RECORDS.

INSECTS

ODONATA—Dragonflies.

Enallagma cyathigerum Charp. The common Blue Damsel-fly. Cragside, Rothbury.	68
Pyrrhosoma nymphula Charp. Large Red Damsel-fly. Cragside. Rothburv. C. J. Gent.	68

LEPIDOPTERA—BUTTERFLIES AND MOTHS

Epirrhoe tristata L. Small Argent and Sable The commonest moth at Kielder on July 7th, 1968.	68
Pseudargyrotoza conwagana Fabr. Very common in the garden at Chester-le-Street, in the wood at Waldridge, Houghall wood at Durham (66). By the Tyne just W. of Hexham.(67)	66, 67
Oliodia schumacherana Fab Not common in Kildale, N. Yorks.	62
Isotrias trifasciana Don. Quite common in the garden at Chester-le-Street, also at Waldridge and Sherburn.	66
Eulia ministrana L. Very common on Birch on Waldridge Fell, Chester-le-Street, Barnard Castle. (66). Also at Osmotherly, N. Yorks. (62).	62, 66
Cnephasia chrysantheana Dup. Chester-le-Street, Waldridge, Lumley, Durham, very common indeed.	66
Cnephasia interjectana Haw. Very common at Chester-le-Street, Lumley, Waldridge. Bred from lettuce, where it attacks the young heart and turns the young leaves to jelly, thereby completely ruining the plant.	66

Cuephasiella incertana Treits.	66
Common in my garden at Chester-le-Street and all the surrounding localities. Bred from stinging nettle and field thistle.	
Eana osseana Scop.	66
Waldrige, Hisehope Valley, Bishop Middleham. Meyrick gives its foodplants as any low growing herbs, but I have never taken it in any habitat other than wet ground near rushes (<i>Juncus</i> spp.).	
Aleimma loefflingiana L.	66
Quite common Chester-le-Street, Waldrige.	
Tortrix viridana L.	66
Very common wherever there are Oaks, which they may completely defoliate. Chester-le-Street, Waldrige, Beamish, Houghall etc. T.C.D.	

FLOWERING PLANTS AND FERNS.

Polypodium vulgare L. Common polypody.	66
Growing on the wall alongside the road from Baybridge to Hunstanworth. T.C.D.	
Polygonum bistorta L. Bistort.	67
By the side of the main road between Haydon Bridge and Warden.	
Crepis biennis L. Rough Hawk's-beard.	67
Roadsides S. of Haydon Bridge and S. of Morpeth.	
Koeleria cristata (L.) Pers. Crested Hair-grass.	67
On limestone near Colwell; old lime quarry to N. of Thorngrafton Common.	
Arabis hirsuta (L.) Scop. Hairy Rock-cress.	67, 68
Near Great Swinburn; on the basalt near Colwell (67). Roddam Dene (68).	
Antennaria dioica (L.) Gaertn. Cat's-foot.	67
On the basalt near Colwell.	
Cryptogramma crispa (L.) R.Br.ex Hook. Parsley Fern.	67
On the basalt near Colwell.	
Juncus maritimus Lam. Sea Rush.	68
Sea banks near Howick.	
Carex distans L. Distant Sedge.	68
Sea banks near Howick.	
Scirpus maritimus L. Sea Clubrush.	68
N. of Embleton.	
Anacamptis pyramidalis (L.) Rich. Pyramidal Orchid.	68
Sand dunes near Embleton.	
Genista tinctoria L. Dyer's Greenweed.	67
Near Great Swinburn; near Fallowfield lead mines.	
Potamogeton alpinus Balb. Reddish Pondweed.	67
In the Swin Burn near Swinburn.	
Lvconodium selaco L. Fir Clubmoss.	67,68
Very near the summit of Cheviot (68). Irthing near Cromel Linn (67).	
Lycopodium clavatum L. Common Clubmoss.	67
By a tributary of the Devil's Water, arising from Lilswood Moor, N.W.of Broadwell House.	
Equisetum telmateia Ehrh. Great Horsetail.	67
Devil's Water between Ordley and Newbiggin. N. Tyne between Wark and Bellingham.	
Asplenium marinum L. Sea Spleenwort.	68
Needle's Eye, N. of Berwick.	
Dryopteris lanceocristata (Hoffm.) Alston. Narrow Buckler-fern.	68
Coidmartin Lough (Det. conf. Dr. F. H. Perring).	

Ophioglossum vulgatum L. Adder's Tongue. Damp places near old quarry heaps near Scremerston (68). Warks Burn near Stonehaugh Shields. (67).	67, 68
Trollius europaeus L. Globe flower. Both banks of N. Tyne between Wark and Bellingham; also opposite Barrasford. Along the Warks Burn between Stonehaugh and Wark. Banks of Rede, N. of East Woodburn.	67
Ranunculus fluitans Lam. Water Crowfoot. Tweed W. of Carham. Till near Tillmouth Park.	68
Coronopus squamatus (Forsk.) Aschers. Swine-cress. Holy Island, near the village. Side of track S. of Goswick.	68
Erysimum cheiranthoides L. Treacle Mustard. By roadside on W. side of E. Alien near Sinderhope.	67
Hypericum androsaemum L. Tutsan. Among bushes on a rocky slope by the old railway near Castle Farm, Edlingham.	68
Silene noctiflora L. Night-flowering Campion. Field near mouth of Whiteadder.	68
Dianthus deltoides L. Maiden Pink. Southern slopes of Shotton Hill (Bowmont).	68
Moenchia erecta (L.) Gaertn., Mey and Scherb. Upright Chickweed. S. of Craster. Budle Golf Links.	68
Scleranthus annuus L. sensu lato. Annual Knawel. Linshiels. Southern slopes of Shotton Hill (Bowmont).	68
Malva moschata L. Musk Mallow. Gravels of Whiteadder near Gainslaw Bridge.	68
Geranium endressii Gay. Naturalised at Allenheads.	67
Impatiens parviflora DC. Small Balsam. Bank of Coquet opposite Old Barns (Warkworth).	68
Genista tinctoria L. Dyer's Greenweed. Old railway near Birtley Shields (N. Tyne). Near head of Colt Crag Reservoir. Links near Hadston.	67
Trifolium arvense L. Hare's Foot. E. bank of Bowmont near Blunty's Mill (80). Southern slopes of Shotton Hill (68). Roadside between Haugh Head and Lilburn (68).	68, 80
Trifolium striatum L. Soft Trefoil. E. bank of Bowmont near Blunty's Mill (80). Tweed banks, S. of Horncliffe (68).	68, 80
Vicia sylvaticum L. Wood Vetch. Sea banks, N. of Berwick and at Marshall Meadows.	68
Rubus saxatilis L. Stone Bramble. Warks Burn.	67
Saxifraga granulata L. Meadow Saxifrage. Banks of Coquet near Morwick Mill.	67
Chrysosplenum alternifolium L. Alternate-leaved Golden Saxifrage. Devil's Water between Ordley and Newbiggin. Small stream near Wood Hali (Haydon Bridge).	67
Lythrum salicaria L. Purple Loosestrife. S. of Goswick.	68
Myriophyllum spicatum L. Spiked water-milfoil. Tweed, W. of Carham.	68
Hippuris vulgaris L. Mare's Tail. Green Swangs (Hareshaw Common).	67
Callitriche hermaphrodita L. Autumnal Starwort. Paston Lake. G. A. & M. Swan.	68

THE VASCULUM

OCTOBER 1968

Vol. LIII No. 3.

Price 7/6d. per annum, post free.

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THE POPLARS, CHESTER-LE-STREET

BY THE WAY

Secretaries of are invited to Societies and other contributors to "The Vasculum" send their notes to the Editor before 15th November.

WALDRIDGE FELL.

Some time ago (Vol. 50, No. 2, 1965), we wrote about the complete lack of Educational Field Centres in Durham County. It therefore gave us great pleasure recently, to hear that arrangements for the purchase of Waldridge Fell, as such a centre, had been completed.

We have followed the negotiations with great interest for almost two years. When the site was first put up for sale, the Naturalists' Trust of Northumberland and Durham were extremely interested, but at that time quite unable to raise the money for its purchase. Durham County Education Committee then decided that it would be a most suitable site for outdoor Biological Studies. A bid to purchase was made but this was beaten by a private company. We were, naturally, very disappointed to hear of this. The private purchase was never completed however, so that the Education Committee were given a second chance, which they quickly accepted.

A work centre is to be constructed in Chester Moor County School, which is ideally situated on the edge of the Fell and which is now becoming redundant because of the movement of the population to Chester-le-Street.

Well done Durham Education Committee.

BOOK REVIEW.

PLANT GALLS, by Arnold Darlington, published by Blandford, price 25/-.

This is the latest addition to that famous line of natural history books in the Blandford Colour Series. Like the others, a good half of the book consists of photographs in colour. And what a fine set of pictures this is. There is little doubt that this is in our opinion, the best volume in the series.

Much has been written on plant galls in the past, but the information is mostly in specialist papers. No book has been published in Britain for 50 years, and, although there have been recent emissions in Germany and Holland, this volume is the only one with a price within the reach of most naturalists in this country. Moreover, this is the only book of its kind with colour illustrations. It is of such a size, that it can easily be slipped into the pocket for use in the field.

The book begins with introductory chapters on the causes and classification of galls and gall-formers and their fascinating life histories. Notes on the practical side of collecting, rearing and culturing are provided and then follow the wonderful colour photographs of M. J. D. Hiron. These are followed by a little encyclopaedia of the common British Galls. This section is by no means complete, but this cannot be expected within the compass of this type of book. We believe, however, that the selection of species has been made very wisely and shows an awareness of what is common and what is not, just to the right degree.

With the growing emphasis on project work in the field, this book will fill a gap for the student, the teacher and the amateur naturalist alike. We consider it very good value for money.

THE SOCIETIES.

NORTHERN NATURALISTS' UNION.

The 120th Field Meeting of the Northern Naturalists' Union was held at Hexham on Saturday, 6th July, 1968.

Led by Mr. Gent, the party of some 50 members and friends walked along the south bank of the River Tyne towards the meeting of the North and South Tynes near Warden Bridge.

Immediately, the botanists became interested in the willows growing along the banks. These were of several different species with frequent hybrids. Other plants included Broom, Hedge Bedstraw, Chicory, Yellow Loosestrife, Golden Rod, Monkey Flower, Square-stemmed St. John's Wort and Perfoliate St. John's Wort. In the meadows further to the west, a single plant of the Broadleaved Heleborine was found under a birch tree, and in a sandy stretch nearby a collection of seaside plants. These included Restharrow, Sea Thrift, Thyme, Sea Plantain, Quaking Grass, Dog Daisy, Yarrow, Knotted Pearlwort, Purging Flax, Spring Sandwort, Bladder Campion, Harebell and Lady's Bedstraw.

Meanwhile Mr. Graham had been taking careful note of the lichens. These were scarce, as is usual in areas of atmospheric pollution. The limes by the river supported the federation **Conizaedion**, i.e. **Pleurococcus** sp., **Lecanora conizaoides** and fragments of **Parmelia physodes**. The bridge over the railway proved more rewarding, as on the mortar there was a fine display of the federation recently described by Laundon in the *Lichenologist* 3.3. This is the pioneer community **Lecanorion dispersae**. Hexham Bridge supported

Candellariella aurella, **Lecanora dispersa**, **Caloplaca decipiens**, **Rinodina subexigua** and the moss **Tortula muralis**. On the more acid parapet were **Acarospora fuscata**, **Candellariella vitellina**, **C. aurella**, **Lecidea scabra**, and large rosettes of **Lecanora muralis**.

Insects were not plentiful and beating the trees beyond the golf course produced only a few common micros such as **Simaethis fabriciana** L., and **Argyresthia goedartella** L. The meadows just beyond this spot was more productive, however, and we were much interested in a dense colony of Meadow Brown Butterflies which showed much variation. In this place were also seen the Common White Wave, **Deilinia pusaria**, L., Silver-ground Carpet, **Xanthorrhoe montanata** Schiff., and Chimney-sweeper, **Odenzia atrata** L.

Meanwhile Mr. and Mrs. Collier were making a thorough study of the grasses. The very full list they made is included in the records later in this issue.

Mr. Gent reported that Sand Martins were plentiful over the river while several Common Sandpipers and one Dipper were observed. A pair of Pied Wagtails together with two fledglings were perched on some boulders in midstream, whilst a Sedge Warbler was in song in the willows by the river bank.

Although there is a marked decline in the volume of bird song by early July, the songs of the following were heard:—Skylark, Wren, Song Thrush, Blackbird, Whitethroat, Willow Warbler, Meadow Pipit, Tree Pipit, Chaffinch, Yellowhammer and Reed Bunting.

Several Black-headed Gulls and Wood Pigeons were seen, and a Stock Dove detected by its gruffer note. Other birds observed included Oyster Catcher, Swallow, Jackdaw, Blue Tit, Whinchat and Redpoll.

After a picnic tea by the river near the meeting of the two Tynes, some members returned to Hexham by bus whilst the rest returned slowly the way they had come.

The 121st Field Meeting was held at Salter's Gate on 14th September, 1968. About 80 members under the leadership of Mr. Dunn set out across the mixed heath and pasture to Tunstall Reservoir.

The botanists found a wealth of interest, not only in the flowering plants, but also in the Fungi, which are always abundant at this time of the year. Almost immediately, we encountered a clump of False Oat Grass, **Arrhenatherum elatius** (L.) Beauv. ex J. & C. Presl., which was infected with Ergots, **Claviceps purpurea**. The next twenty yards of the walk was so abundant in Fungi and so interesting that quite some time was spent on it. The old ballast heap was dotted with the Scarlet Wax Cap, **Hygrophorus coccineus**, and the Conical Wax Cap, **Hygrophorus conicus**. These two related species are fairly similar in colour but may be distinguished by the acutely conical cap of the latter and its habit of turning

black on bruising. To add to the colour were numerous Golden Wax Caps, **Hygrophorus chlorophanus**. The Parrot Fungus, **Hygrophorus psittacinus**, another Wax Cap, was more difficult to find, although it was quite plentiful. When young, the cap of this species is covered with a coating of thick green slime, which blends with the colour of the grass. This is one of very few green fungi, taking its name from its apparent resemblance to the colour of the Green Parrot. Scattered among these Agarics, were several species of Club and Stag's Horn Fungi, also very colourful. Clumps of the Waxy White Club, **Clavaria vermicularis** and the more dispersed Yellow Spindle Club, **Clavaria fusiformis**, were common, but these needed looking for rather carefully as they were covered by the taller surrounding grass. The dense masses of the Yellow Stag's Horn were less common and also well camouflaged in the grass. One surprise was a patch of Hairy Earth Tongues, superficially like the Club Fungi in structure but they were a rich velvety black in colour, and, in fact, belong to quite a different group of Fungi. As we finally left this rich area, we saw what we at first thought to be a group of baby hedgehogs, but which closer examination showed to be several Spiny Puff Balls, **Lycoperdon echinatum**. The walk across the pastures produced many other species typical of these habitats, **Psilocybe semilanceolata**, **Paneolus semiovatus**, **P. campanulatus**, **Stropharia semiglobata** and the dene near the reservoir was extremely rich in **Russula** species.

Meanwhile we were also on the lookout for interesting plants. Those seen included the Rushes, **Juncus squarrosus** L. and **J. effusus** L., each bearing on their seed heads the white encased caterpillars of the moths **Coleophora alticolella** Zeil. and **C. glaucicolella** Wood, respectively. The Reed Grass, **Phalaris arundinacea** L. was also seen to be eaten by an insect predator, and on careful searching the caterpillars of the Small Clouded Brindle Moth, **Apamea unanimis** Hubn., were found rolled in the leaves at the tips of the shoots. Other plants were the Toad Rush, **Juncus bufonius** L., Sneezewort, Valerian, Foxglove, Creeping Jenny, Marsh Pennywort, Autumn Gentian, the Sweet Grass, **Glyceria declinata** Breb. and the annual Cudweed, **Gnaphalium uliginosum** L. The last was particularly abundant on bare patches of soil where the surface vegetation had been removed during tree felling operations.

The entomologists had been very busy beating the trees for larvae and for adult moths. Apart from the three species noted above, caterpillars of the Peppered Moth, **Biston betularia** L., the Willow Beauty, **Cleora rhomboidaria** Schiff. and the Birch Sawfly were seen. Adults included specimens of the Common Ear Moth, **Hydraecia oculea** L., the Small Squarespot, **Diarsia nibi** View., Lesser Yellow Underwing, **Euschesis comes** Hubn., Common Marbled Carpet, **Dysstroma trirncata** Hufn., **Acleris ferrugana** Schiff., **Chelaria conscriptella** Hubn., and **Caloptilia elongella** L. Other insects noted were the males (drones) of the three Bumble Bees, **Bombus lapidarius** L., **B. agrorum** Fab., and **B. lucorum** L.,

and the Common Green Grasshopper, **Omocestus viridulus** L., which was quite common. It was during the walk across the grassland stretch that several hares were seen leaping away from the disturbance we were creating.

Mr. Gent reported the following birds:—Pheasant, Coot, Lapwing, Curlew, Black Headed-Gull, Wood Pigeon, Skylark, Pipit, Linnet and Pied Wagtail.

After a picnic by the side of the reservoir, the party split up, some encircling the reservoir whilst the rest returned via the woods at the north end of the lake.

BIRTLEY NATURAL HISTORY SOCIETY.

The last long-distance outing of the season was to the College Valley, near Wooler, on September 8th. After a picnic lunch near the stream about half way along the valley, the cars were taken as far as possible up the valley before starting to walk. By the stream, several species of Mosses and Potamogetons were noted. Just where the path began to climb steeply into the Hen Hole, the Starry Saxifrage, **Saxifraga stellaris** L., was searched for but not found. This plant once festooned the rocks in this area, but seems to have contracted during the past few years. It was seen later, but only a few plants were present in the bowl of the Hen Hole itself. A few hardy souls followed the stream right up to the top of the Cheviot, accompanied by Dippers all the way. A cloud descended on the party whilst on the summit making visibility almost nil, so there was nothing for it but to come down again. On the way down a number of fine specimens of the Small Autumnal Carpet, **Oporinia filligrammaria** H-S., were disturbed from the heather. Two other moths, the Common Chevron, **Lygris testata** L. and the **Dark Marbled Carpet**, *Dysstroma citrata* L., were also encountered in the same area.

NOTES AND RECORDS

NOTES.

Seasonal Movement of the Freshwater Shrimp, Gammarus. With the Birtley Natural History Society, a visit was made to Ryhope Dene on 5th May, 1968. During the course of the afternoon the stream was found to be swarming with fresh-water shrimps. These were attached to the undersides of the loose stones forming the covering over the limestone bed of the stream. So many were present that each stone of about 4 ins. diameter would yield up to 30 individuals. The facts were duly memorised, for **Gammarus** is a very useful animal for teaching purposes and here was a source which could be tapped without fear of any anti-conservationist results.

The site was visited again on 5th October for just such an educational purpose and it was hoped to collect about one hundred individuals. Stone after stone was turned over for inspection but not a single **Gammarus** was in evidence. Other animals such as water snails, freshwater limpets, waterbeetles and caddis-fly pupae were in abundance. The stream was worked systematically right down to the railway embankment, by which time I was becoming rather stiff with sitting in a crouched position by the stream, and very disappointed due to my complete lack of success. Finally, the project was abandoned and I made my way back the way I had come, completely

empty handed. Just as I was about to leave the dene, a last effort was decided upon at a convenient part of the stream which I had not looked at previously. The first and second stones were completely devoid of **Gammanis** as before, but at the third attempt two or three dead and decaying autumn leaves came up on the underside of the stone. On removing these carefully, there were the **Gammarus**—some twenty individuals at one fell swoop. After this, my tactics were changed and instead of picking up clean stones, dead leaves caught up on twigs and stones were investigated. This was the way to success. In five minutes I had all the animals I needed, as compared with the complete blank I had drawn in the previous two hours of searching.

Thus it would appear that **Gammarus** prefers the undersides of stones in the spring time and dead leaves in the autumn. Has any other reader noticed this different seasonal distribution? T.C.D.

Bird Notes from Stanley. The following ornithological observations, which I recently recorded, may be of interest to readers:—

Grasshopper Warbler: During July and August a single bird heard "reeling" at the Tanfield Ponds.

Common Pochard: Six drakes and one duck noted at Brasside ponds, on June 16th.

Tufted Duck: On June 16th, sixteen birds including one juvenile were counted on the Brasside ponds.

Great Crested Grebe: Successful breeding. During June a pair were noted, accompanied by a single juvenile, on a pond in Co. Durham.

Greenshank: Two birds on July 13th, at Washington ponds. Ruff: Two birds on July 7th, at the Tanfield ponds.

Ringed Plover: From July 7th to July 14th, two immature birds were at the Tanfield ponds.

Green Sandpiper: A single bird at the Tanfield ponds on August 3rd. Goldfinch: At least two birds were noted in the Framwellgate area of Durham City on June 16th.

Yellow Wagtail: On August 6th, a party of 14 birds at the Tanfield ponds, and on June 16th one pair at the Brasside ponds. R. Marston Palmer.

Butterflies in Co. Durham. The following notes have been received from three separate sources:—

Red Admiral butterflies, which have been such a delightful and regular feature in my garden here at Redworth, were completely missing this year. Normally the **Buddleias** and **Sedum spectabile** are a great attraction in early September. This year a few Small Tortoiseshells and a large number of Large Whites, between September 3rd and 10th were the only butterflies to be seen. T. W. Jefferson.

The Painted Lady is in our area (Rowlands Gill). I saw one on 15th and 16th September in the garden. The last date I have for this butterfly in this area is 24th May, 1952. On the whole it has been a poor year for insect life in the garden, perhaps the lack of flowers may account for this. C. Hutchinson.

A Red Admiral was found indoors on 18th October at Great Lumley.

R. Johnson.

RECORDS.

INSECTS

LEPIDOPTERA—BUTTERFLIES AND MOTHS

Lygris testata L. Common Chevron.	68
Plentiful at Chattlehope and Girdle Fell (Redesdale).	
Plusia festucae L. Gold Spot.	68
One at Kielder Burn. C. J. Gent.	

Croesia forskaleana L.	66
Common at light in the garden at Chester-le-Street. Also at Waldrige and Durham City.	
Croesia bergmanniana L.	66
Common at light in the garden at Chester-le-Street. Bred from rose.Cassop, Thrislington, Durham, Upper Teesdale.	
Acleris comariana Zeil.	66
Not common, Chester-le-Street.	
Acleris aspersana Hubn.	66
Common at light, Chester-le-Street. Bred from Sanguisorba officinalis , Chester-le-Street and Cassop.	
Acleris variegana Schiff.	66, 67, 68
Abundant everywhere in our counties and in great variety as the trivial name suggests. Bred from Hawthorn, Blackthorn and Rose.	
Acleris hyemana Haw.	62, 66, 68
Common on most heather moors and especially abundant in those areas which have recently been burnt off'. Goathland (62), Waldrige Fell, Upper Teesdale, Waskerley (66), Alwinton (68).	
Acleris sparsana Schiff.	66
Not common, Chester-le-Street, Waldrige, Upper Teesdale.	
Acleris hastiana L.	66
Not common, Waldrige. Bred from sallows and also taken at sallow blossom in the spring. Mostly very dark varieties.	
Acleris ferrugana Schiff.	66
Common where birch grows. Chester-le-Street, Waldrige, Salter's Gate, Coombe Bridges, Brasside, Durham City.	
Acleris rhombana Schiff.	66
Not common. Bred from hawthorn collected at Chester-le-Street and Waldrige, and from Salix purpurea from Woosingham.	
Acleris emargana Fabr.	66
Common on sallows. Bred from Waldrige, Satley, East Butsfield, Newton Hall and Durham.	
Acleris literana L.	66
Rather local. Waldrige, Upper Teesdale. T.C.D.	

FLOWERING PLANTS AND FERNS

Carex pendula Huds. Pendulous Sedge.	66
On the E. bank of the River Wear, between the old Finchale Abbey. T.C.D.	
Geranium endressii Gay, Streaked Cranesbill.	65
A single plant with pink flowers on the old railway track, near Lartington, Teesdale. Miss R. Wade.	
Dactylis glomerata L. Cocksfoot Grass	67
Collected on the N.N.U. outing between Hexham and Warden, all the following grass records.	
Cynosunis cristatus , L., Crested Dog's-tail grass.	67
Phleum pratense L., Timothy grass.	67
Briza media L., Quaking grass.	67
Trisetum flavescens (L.) Beauv. Yellow Oat Grass.	67
Agropyron repens (L.) Beauv. Couch-grass.	67
Agropyron caninum (L.) Beauv. Bearded Couch-grass.	67
Alopecurus pratensis L. Meadow Foxtail.	67
Holclis lanatus L. Yorkshire Fog.	67
Festuca ovina L. Sheep's Fescue.	67
Festuca rubra L. Creeping fescue.	67
Festuca anandinacea Schreb., Tall Fescue.	67
Lolium perenne L., Rye-grass.	67
Helictotrichon pratense (L.) Pilger., Meadow Oat.	67
Agrostis canina L. Brown Bent-grass.	67

Deschampsia flexuosa (L.) Trin. Wavy Hair-grass.	67
Arrhenatherum elatius (L.) J. & C. Presl., Oat-grass.	67
Poa annua L., Annual Poa.	67
H. M. Collier.	
Silaum silaus (L.) Schinz and Thell., Pepper Saxifrage.	67
Link House (Chevington).	
Ligusticum scoticum L. Lovage.	68
A colony about seven miles S. of the Border.	
Polygonum bistorta L. Bistort.	67
Railway near Haltwhistle. Near Allensgreen (S. of Bardon Mill).	
Rumex longifolius DC	67
Near Spartylea.	
Populus tremula L., Aspen.	67
Ravine in Billsmoor Park.	
Andromeda polifolia L. Marsh Andromeda.	67
Tutehill Moss (Harwood). In two peat mosses at the head of the Warks Burn.	
Pyrola minor L. Common Wintergreen.	67
Wooded W. bank of E. Alien, near Sinderhope.	
Primula veris X <i>vulgaris</i> . Common Oxlip.	67
Small stream near Wood Hall (Haydon Bridge).	
Trientalis europea L. Chickweed Wintergreen.	67
Near Campville (Holystone).	
Anagallis tenella (L.) L. Bog Pimpernel.	67
Coast near Hadston.	
Gentianella amarella (L.) Börner <i>sensu lato</i> . Felwort.	67
Near Ray Burn (Knowesgate). Quarry N.W. of Kirkheaton. Coast links near Hadston. Old heaps near Hareshaw Linn.	
Echium vulgare L. Viper's Bugloss.	68
Bank of Tweed near Twizell Station and the mouth of the Till.	
Lathraea squamaria L. Toothwort.	67
Devil's Water between Ordley and Newbiggin. West Alien near Far Pasture, and at Blackcleugh, the latter at approx. 1150-1200 ft. Ray Burn (Knowesgate). Both banks of N. Tyne between Wark and Bellingham.	
Origanum vulgare L. Marjorum.	68
Tweed near Twizell Station and near Yarrow Haugh.	
Littorella uniflora (L.) Aschers., Shore-weed.	67
Colt Crag Reservoir.	
Galium x pomeranicum Retz.	67
Hay meadow near the Eals (N. Tyne)—determined by Dr. F. H. Perring.	
Dipsacus fullonum L. Teasel.	67
Roadsides between Wark and Longlee.	
Petasites hybridus (L.) Gaertn., Mey. & Scherb (Female).	67
Carr Bum, near Whitfield Old Toll House. Railway near Haltwhistle. Beltingham.	
Filago germanica (L.) L. Cudweed.	68
Old Railway near Lilbum Burn.	
Antennaria dioica (L.) Gaertn. Cat's-foot.	67
Peel Craggs, to S. of Roman Wall. Basaltic outcrop to E. of Billsmoor Park.	
Eupatorium cannabinum L. Hemp Agrimony.	68
Till near Tillmouth Park. Sea banks near Marshall Meadow.	
Crepis mollis (Jacq.) Ashers. SoftHawk's-beard.	70
Hay meadow near Ayle Burn (near Alston).	
Groenlandia densa (L.) Fourr. Opposite-leaved Pondweed.	67
Coquet near Old Barns (Warkworth). G. A. & M. Swan.	

THE VASCULUM

DECEMBER 1968

Vol. LIII No. 4.

Price 7/6d. per annum, post free.

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THE POPLARS, CHESTER-LE-STREET

BY THE WAY

Secretaries of Societies and other contributors to "The Vasculum" are invited to send their notes to the Editor before 15th March 1969.

THE FUTURE OF NATIONAL TRUST PROPERTIES.

During the past few months there have been some very disturbing developments concerning National Trust Properties. In at least two cases Planning Authorities have exercised their right of compulsory purchase in order to construct new motorway type roads through them. This kind of development has, of course, been resisted but in each case the resistance has been over-ruled on the grounds that the Trust has failed to make out a good case for keeping the land in its wild state. These decisions seem to us to have made a complete mockery of the whole idea of the National Trust and associated movements like the Nature Conservancy and the Society for the Promotion of Nature Reserves.

If established nature reserves, recognised by the Government of the day as such, through the Natural Environment Research Council, can be rubbed out by the stroke of a pen in this way, there is very little future for any of our reserves. Naturalists everywhere will be appalled by these events. We must redouble our vigilance and fight this disgraceful snatching of nature reserves with greater vigour than ever. If we do not, our natural heritage is going to be whittled away bit by bit until it is all gone. We deeply deplore the shortsightedness of Government bodies and local authorities who have forced through the recent changes.

PUG MOTHS.

Pug moths of the genera **Eupithecia** and **Chloroclystis** form a compact group of insects which are important yet seldom studied seriously, probably because of their small size and drab colours. Yet they deserve special attention from our local entomologists, precisely because their distribution in our counties is not well known. In Durham, there are considerably more records than in Northumberland, where a few old records from Prestwick Carr in

Robson's Catalogue just about completes, the list This is a very feeble state of affairs.

The position has not been helped by some confusion in the taxonomy of the group. At one time **E. innotata** Hubn. and **E. fraxinata** Crewe were regarded as two good species, and are recorded as such by Robson. Our own opinion is that they are quite distinct. Yet South includes **fraxinata** Crewe as a subspecies of **innotata** Hubn., and to help the confusion Heslop's list, probably one of the most recent classifications, gives the two as separate species once more..

Some species, like **E. venosata** Fab., the Netted Pug and **E. succenturiata** L., the Bordered Pug, are stated to be rare or uncommon in our counties by Robson, but are now known to be quite common and well distributed in Durham. Others, like **E. virgaureata** Dbl., the Goldenrod Pug and **E. dodoneata** Gn., the Oak-tree Pug are not recorded at all. Both are known from Durham and the former also from Northumberland.

Could we suggest that a little work on this neglected group would produce some worthwhile results? There is nothing we can think of to discourage collectors. The moths are plentiful almost everywhere. Scrubby wasteland should prove very productive, especially if beaten for larvae.

OBITUARY NOTICE.

ROBERT HENRY LOFTHOUSE.

"Bob" Lofthouse of Ludworfh died at the age of 87 on September 13th, 1968 after a short illness.

He was an ardent field naturalist of the old type with a broad general interest, long experience in the open, and much reading.

He taught himself taxidermy from instructions in the Boys' Own Paper at an early age, and amassed a surprising collection of beautifully mounted and kept birds and mammals with framed pen and ink and water colour drawings, his own work.

This collection he gave to the Bowes Museum when he no longer felt able to look after it.

He had a strong religious faith, a love of poetry and a cheerful and generous disposition.

He is greatly missed in the district.

THE SOCIETIES.

NORTHERN NATURALIST'S UNION.

By a decision made in 1967, the October Meeting was to be named the first J. W. Heslop Harrison Memorial Lecture. It was duly held, by kind permission of Durham University, in the Applebey Lecture Theatre at the Science Laboratories on October 19th, 1968.

Unfortunately, a series of mishaps somewhat altered the original plan. The lecturer, Dr. H. B. D. Kettlewell, was too ill to travel north from Oxford, and although he arranged for a copy of his film on his experiments with melanic moths to be sent, it never arrived. After explanations from the President, the Rev. G. G. Graham, Mr. T. C. Dunn filled the gap by giving a short talk on Melanism in the Lepidoptera. He traced the history of the study of the subject, emphasizing the way in which Professor Heslop Harrison had initiated a series of critical experiments and observations in the north here. Dr. Kettlewell's recent experiments were then described, and it was shown how these had provided a very good example of how Natural Selection had worked and is still working on the Peppered Moth, **Biston betularia** L., during the last one hundred years.

At this point Dr. Kettlewell's film should have been shown to illustrate the talk and conclude the meeting. In its absence, a film on the Birds of the Fame Islands, kindly loaned by the Department of Zoology, was shown instead. Afterwards, tea was taken just outside the lecture theatre, when Mr. Dunn's exhibit of local melanic moths was discussed with great interest, as these had been referred to during the lecture.

BIRTLEY NATURAL HISTORY SOCIETY.

The indoor lecture programme started on September 17th, with a talk from Mr. David Burleigh of the Hancock Museum, on the work of a taxidermist. This was illustrated by examples of his own craftsmanship. On October 1st. Dr. J. A. Richardson talked about his own research into the conditions affecting the life of plants trying to colonise our local pit heaps. Mr. N. R. Lee of the Gosforth Forensic Laboratory was the next lecturer and he talked on how a biologist can be helpful in solving crime in a scientific way. His gruesome pictures were a fascination to the younger members. On October 29th, Mr. R. H. Lowe talked on the Old English origins of common plant names. This was illustrated by a series of superb slides of some of the species chosen. Mr. Warburton-Pope took us along the full length of Hadrian's Wall in pictures on November 12th, and on November 26th, Mr. C. C. Douglas talked about the Natural History of Majorca. Since his main interest is ornithology, he showed us some very fine slides of birds that the majority of his audience had never even heard of, much less seen. The session finished with a pictorial trip down the Tees from Cow Green to the lower reaches' by Mr. V. Brown, in his lecture entitled Riverside Reflections, on December 10th.

During the session, outdoor excursions have continued on the first Sunday of each month. Thus outings have been made to Cocken Woods and Finchale Abbey, Brasside Ponds and Blackhall Rocks

NOTES AND RECORDS

NOTES.

Egg-laying in the Poplar Sawfly. At 10 a.m. on July 8th, I watched the Poplar Sawfly, *Trichiocampus viminalis* L., ovipositing in the foliage of my young Balsam Poplar, in the garden at Birtley. As is usual, the parent sawfly was sitting longitudinally astride the leaf stalk, with her head directed towards the insertion of the leaf upon the twig. After firmly seating herself, she brought forward the abdomen until the hinder part (nearly one half) was bent almost at right angles with the anterior or basal part, and firmly pressing the tip of the abdomen against the tissues of the stalk, then commenced to make an incision therein, working the ovipositor or saw from behind downwards deep into the tissues and carrying the operation forwards and upwards, until finally the almost semi-circular pocket was cut out and the ovipositor withdrawn. On completing the operation the insect moved a little forwards on the leafstalk, to repeat the process and to leave an ovum in the pocket or pouch thus made, whose bulging outwards indicated that the newly deposited ovum was already of some size. I did not detect when and how the ovum was insinuated. C.R.

A Spotted Blackbird. In Exhibition Park, Newcastle upon Tyne, about the beginning of December, there was a small group of blackbirds feeding together. One of these, a male bird, had a few spots of white on the plumage. This was different from the white one seen occasionally on blackbirds, which is usually one or two wing or tail feathers wholly white. On this bird there were two or three small round spots of white on its back, a few more on its head, and also some on its breast. The wings and tail were not affected at all. Judith Dunn.

Bird Notes from Stanley. The following ornithological notes which I recently recorded may be of interest to readers of *The Vasculum*.

Greenshank: A single individual on Autumn passage was noted at the Tanfield Ponds, on August 28th.

Gadwall: Three individuals were present on the Tanfield Ponds, on August 31st. R. Marston Palmer.

A Blackcap in Winter. On 22nd December a blackcap was spotted and watched continuously for some time in my garden at Chester-le-Street. Its presence was a great surprise and I doubted my own identification until I was able to look up details of its habits. In my bird book I read that occasional individuals overwinter in the South and West of England. I had always looked upon the species as being fully migratory, and in any case, the North-East has a much more severe winter than the South-West. The sighting of an individual in this locality at this time of the year must therefore be exceptional. Has any other reader any record of a blackcap in midwinter in the North-East? E. Hall.

Birds at Brasside Ponds. During a visit to Brasside Ponds on 24th November the following birds were seen:— Fieldfares and Greenfinches, many Redpolls, 2 Magpies, 36 Pochard, 18 Tufted Duck, many Coot, several Black-headed Gulls, Kestrel, one Waterhen, Wren, one Greater Blackbacked Gull, 2 Mistle Thrushes, several Blue Tits, a Reed Bunting, 3 Snipe and a large flock of Bullfinches containing both sexes. The last was a most impressive sight and the flock was watched for some time. E. Hall.

Collared Doves. Up to four Collared Doves have been seen in the grounds of Highfield Hospital, Chester-le-Street, during the last few months. It is possible that they have nested here during the summer season, but I have not found a nesting site. There is little doubt, however, that they have come to stay and must be nesting somewhere in the neighbourhood. During the last few days of November and all during December, a number of bullfinches have regularly been visiting my kitchen garden, and on December 30th, a family of Long-tailed Tits were very busy feeding in the trees in the hospital grounds. R. Harris.

RECORDS.

INSECTS

LEPIDOPTERA—BUTTERFLIES AND MOTHS

Acleris rufana Schiff.	66
A single insect captured at Dawdon.	
Pseudargyrotoza conwagana F.	66
Taken on the wing in Castle Eden Dene.	
Cnephasia interjectana Haw.	66
Taken at the same time as the previous insect in Castle Eden Dene.	
Eana osseana Scop.	66
Common in Fulwell Quarry, Sunderland.	
Croesia berginanniana L.	66
Captured at Newbottle, N. R. Lowe.	
Dicrorampha petiverella L.	66
Not common, Teesmouth, Chester-le-Street, also taken on Tunstall Hill by N R. Lowe	
Dicrorampha plumbagana Treits.	62,66
Not common. Redcar, Saiburn (62), Chester-le-Street (66)	
Dicrorampha montanana Dup.	66
With us this insect is rather local. Upper Teesdale.	
Dicrorampha plumbana Scop.	66
Uncommon as the last. Upper Teesdale.	
Laspeyresia succedana Schiff.	66
Abundant wherever gorse grows. Wolsingham, Cassop, Waldridge, Durham, Chester-le-Street.	
Laspeyresia aurana Fab.	66
This insect seems to be fond of Rosebay Willow Herb flowers, where have frequently captured it, although on the whole it is not very common with us. Chester-le-Street, Waldridge. Also captured on Tunstall Hill by N. R. Lowe.	
Laspeyresia pomonella L. The Codling Moth.	66
Commonly taken in the light trap and bred from infected apples in the garden at Chester-le-Street.	
Laspeyresia coniferana Ratz.	66
Always captured near <i>Pinus sylvestris</i> , not common. Beamish, Rainton.	
Grapholita jungiella L.	66,67
Common. Waldridge, Chester-le-Street (66). Blanchland, Apperly Dene (67).	
Grapholita internana Gu.	66
Bred from Gorse pods, Waldridge.	
Pammene regiana Zeil.	66
Fairly common. Taken in the light trap in the garden at Chester-le-Street Also at Waldridge, Pittington, Durham.	
Pammene fasciana L.	66
Rare. Chester-le-Street.	
Lathronympha strigana F.	66
Abundant in spun shoots of <i>Hypericum perforatum</i> , and very easily bred therefrom. Chester-le-Street, Waldridge, Durham, Cassop, Wolsingham.	
Rhyacionia buoliana Schiff.	66
Not common, Waldridge.	
Rhyacionia pinivorana Zell.	66
Common. Bred from pine shoots, Chester-le-Street, Beamish.	

Spilonota ocellana Schiff.	66
Uncommon, Chester-le-Street.	
Thiodia citrana Hb.	66
Not common, Chester-le-Street, Upper Teesdale.	
Eucosma hohenwartiana Schiff,	66
Fairly common, Chester-le-Street, Cassop, Bollilhope.	
Eucosma fulvana St.	66
Quite Common, Chester-le-Street, Waldrige, Durham, Cassop.	
Eucosma cana Haw.	66
Abundant, Chester-le-Street, Sherburn, Cassop, Hart.	
Eucosma expallidana Haw.	66
Common at light in the garden at Chester-le-Street. Also taken at Dawdon by N. R. Lowe.	
Eucosma campoliliana Schiff.	66
Very common, Chester-le-Street. Also taken at Dawdon by N. R. Lowe.	
Epiblema scutulana Schiff.	66
Common at Chester-le-Street and Waldrige.	
Epiblema cirsiiana Zeil.	66
Very much commoner than the last where ever knapweeds grow. Chesterle-Street, Waldrige, Lumley, Blackhalls, Cassop, Bishop Middleham, Upper Teesdale. T.C.D.	

FLOWERING PLANTS AND FERNS

Allium vineale L. Crow Garlic.	68
Tweed at Yarrow Haugh and near the south of Whiteadder. Heugh on Holy Island.	
Coeloglossum viride (L.) Hartm. Frog Orchid.	67
Old lime quarry near Swinhope Burn (Spartylea.).	
Gymnadenia conopsea (L.) R.Br. .Fragrant Orchid.	67
Near Campville (Holystone). Near Link House (Chevington).Warks Burn near Haining.	
Orchis mascula (L.) L. Early Purple Orchid.	67
Ray Burn (Knowesgate). Both banks of N. Tyne between Wark and Bellingham. At various points along the Warks Burn.	
Scirpus lacustris L. Bulrush.	67, 68
Whiteadder both above and below Gainslaw Bridge (68), Rede, N of E. Woodburn. (67).	
Blysmus compressus (L.) Panz ex Link. Broad Blysmus.	67
Rede, N. of E. Woodburn.	
Schoenus nigricans L. Bog-rush.	68
Small pool, S.E. of Snook House, Holy Island.	
Rhynchospora alba (L.) Vahl. White Beak-sedge.	67
In a peat moss near the head of Warks Burn.	
Carex distans L. Distant Sedge:	68
S. of Goswick. i:	
Carex serotina Merat.	68
Damp hollows. Holy Island. (Determination confirmed by Dr. F. Perring).	
Carex limosa L.Mud Sedge.	67
The Wou (Thirlwall Common). Determination confirmed. Dr. F.Perring).	
Carex paupercula Michx.	67
Near Wardrew Farm (Thirlwall Comirion). Peat moss near the head of Warks Burn.	

Carex muricata L. Prickly Sedge. Southern slopes of Shotton Hill (Bowmont).	68
Carex pauciflora Lightf. Few-flowered Sedge. Two peat mosses near the head of Warks Burn.	
Carex dioica L. Dioecious Sedge. Near the Ray Burn (Knowesgate) and CaddCleugh (N. of Linnheads Lake). Under Harbottle Crags, at the head of a stream running down to Campville. Eisdon Burn near Whiskershiel.	67
Glyceria maxima (Hartm.) Hoinberg. Reed-grass. S. bank of the Tweed near Twizell Station.	68
Melica nutans L. Mountain Melick. Limestone rocks by the Ayle Burn (near Alston).	67
Koeleria cristata (L.) Pers. Crested Hair-grass. Staerough Crags, near Yetholm (80). Coldsmouth Hill, Southern slopes of Shotton Hill (Bowmont). Hare Law, Paston Hill. Sea banks N. of Berwick (68).	80, 68
Asplenium adiantum-nigrum L. Black Spleenwort. Near Great Swinburn (67). By the Coquet at Linshiels (68).	67, 68
Thylopteris dryopteris (L.) Slosson. Oak Fern. Crookbank Kern; Linn Kern near Forestburn Gate; Gilliehill Clints; Tarsset Burn near Pit House (67). Woldgill Burn at 1,200 ft. (70).	67, 70
Cardaria draba (L.) Desv. Hoary Pepperwort. N. of the harbour at Berwick.	68
Melilotus officinalis (L.) Pall. Common Melilot. N. of the harbour at Berwick.	68
Lythnim salicaria L. Purple Loosestrife. By the North Low at Bridgemill; Newham Bog.	68
Filago germanica (L.) L. Cudweed. Track by the Smales Burn, near Ridge End (67). Near Swinhoe Lakes (68).	67, 68
Centaurea cyanus L. Cornflower. Field N. of Belford.	68
Potentilla anglica Laichard. Trailing Tormentil. Old quarry near Causey Park.	67
Platanthera cholorantha (Causter) Reichb. Greater Butterfly Orchid. By the Barrow Burn, S.W. of Alwinton; by the railway, S.W. of Forestburn Gate.	67
Polygala vulgaris L. Common Milkwort. By the Black Burn, a tributary of the Tarsset Burn, at Gilliehill Clints; by a small stream near Whiskershiels.	67
Melica nutans L. Mountain Melick. By the Black Burn, a tributary of the Tarsset Burn, at Gilliehill Clints.	67
Carex laevigata Sm. Smooth Sedge. Little Whickhope Burn; Smales Burn.	67
Melampyrim pratense L. Common Cow-Wheat. Whickhope Burn near Emmethaugh; Alien near Staward Station.	67
Campanula latifolia L. Large Campanula. Island in the N. Tyne W. of The Eals.	67
Lysimachia vulgaris L. Yellow Loosestrife. Island in the N. Tyne W. of The Eals.	67
Equisetum hyemale L. Dutch Rush. By the Coquet at Guyzance.	68
Impatiens parviflora DC. Small Balsam. By the Coquet near Guyzance.	68

Rancunculus lenormandii F. W. Schultz. Lenormands Water Crowfoot. Near Hunter House in the Derwent Valley.	66
Diploxix tenuifolia (L.) DC. Perennial Wall Rocket. Near Cambois.	67
Hippuris vulgaris L. Mare's Tail. Small pond near Lanehead (Coanwood).	67
Trifolium scabrum L. Rigid Trefoil. E. side of Holy Island.	68
Narthecium ossifragum (L.) Huds. Bog Asphodel On Carter Fell at approx. 1,800 ft.	67
Scabiosa columbaria L. Small Scabious. Old lime quarry to the N. of Thorngrafton Common; old lime quarry near Sewing Shield; Alien near Staward Station; Thornbrough lime quarry (67). Dunstanburgh (68).	67, 68
Lycopodium selago L. Fir Clubmoss Carter Quarry.	80
Trifolium arvense L. Hare's-foot. N. bank of the Breamish near Brandon; forestry road between Callaly and Thrunton.	68
Oenanthe aquatica (L.) Poir. Fine-leaved Water Dropwort. One plant on the N. bank of the Breamish near Brandon.	68
Calystegia silvatica (Kit.) Griseb. var. zonata Beauverd. Near Allenheads.	67
Blysmus compressus (L.) Panz ex Link. Broad Blysmus. By the N. Tyne near Shilburnhaugh.	67
Chaenorhinum minus (L.) Lange. Small Toadflax. On a track by the Smales Burn, near Ridge End.	67
Aethusa cynapium L. Fool's Parsley. As a weed in Brandling Allotments, Jesmond, Newcastle.	67
Calystegia pulchra Brummett and Heywood. By the roadside near Alder Cottage, Ovington.	67
Clinopodium vulgare L. Wild Basil. Bank of Tyne near Styford.	67
Geranium endressii Gay. Near Hunter House in the Derwent Valley.	66
Sagina ciliata Fr. Ciliate Pearlwort. On the sand dunes, S. of Blyth.	67
Taxus baccata L. Yew. Allen Banks.	67
Epilobium nerterioides Cunii. S. bank of the N. Tyne E. of Shilburnhaugh (67). Enormous amounts by the Black Burn, near Midgehoime (70).	67, 70
Gentianella campestris (L.) Borner. Field Gentian. Bank of E. Alien near Dirt Pot; by the Smales Burn.	67
Valerianella locusta (L.) Borner sensu lata . Felwort. Old mine heaps near Ramshope; roadside near Roughside (66). Fields near Staward Station; lime quarry N.W. of Dirt Pot in E. Allendale; Thornbrough lime quarry; Fallowfieldslead mine (67). G. A. & M. Swan.	66, 67