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NATURAL HISTORY SOCIETY.

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## PREFACE.

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More than ten years having elapsed since the publication of the last volume of these Transactions, a word or two of explanation is perhaps called for.

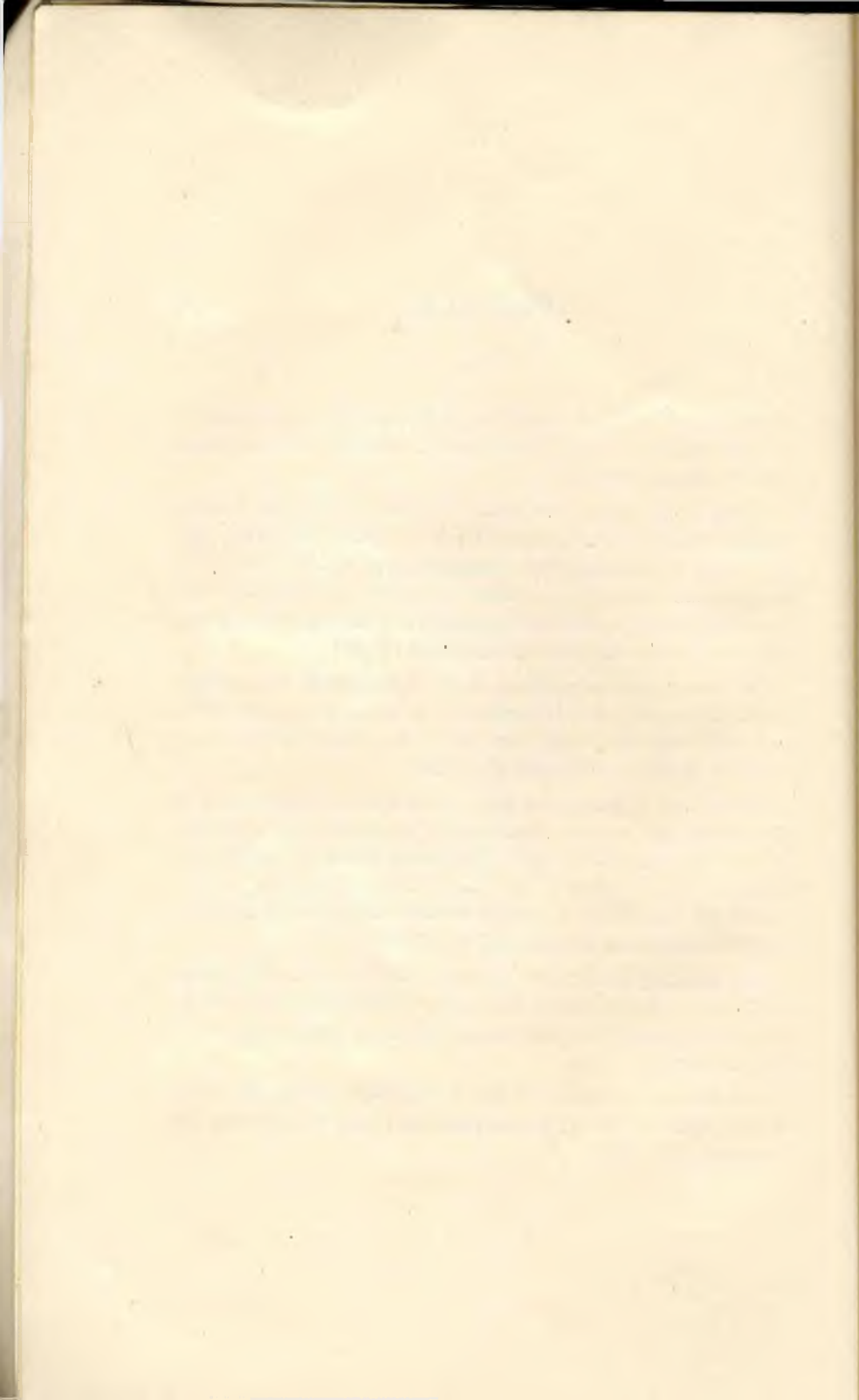
Owing to the Great War (1914-1918) the work of the Carlisle Natural History Society was carried on under difficulties, and for a time its meetings were suspended, but with the advent of more normal times it was able to resume its activities with increased vitality, and at the present time is stronger in membership than at any time since its formation in 1893.

The heavy cost of printing made it impossible to continue publication earlier, and although some of the papers now presented were read some years ago, they have been either re-written, or carefully edited and brought up-to-date.

The Society is glad to be able to continue the publication of Mr. Routledge's work on Cumberland *Lepidoptera*, now complete to the end of the *Geometrae*. The groups of smaller moths will follow in later volumes. Mr. Day's list of *Coleoptera* is now completed, and totals a greater number of species than anticipated by him when commencing it in 1909.

The untimely death of Mr. Dunlop (killed in action, May 19th, 1917), was a severe loss to the Society, which feels honoured in being able to include in this volume the last paper he read before the Members.

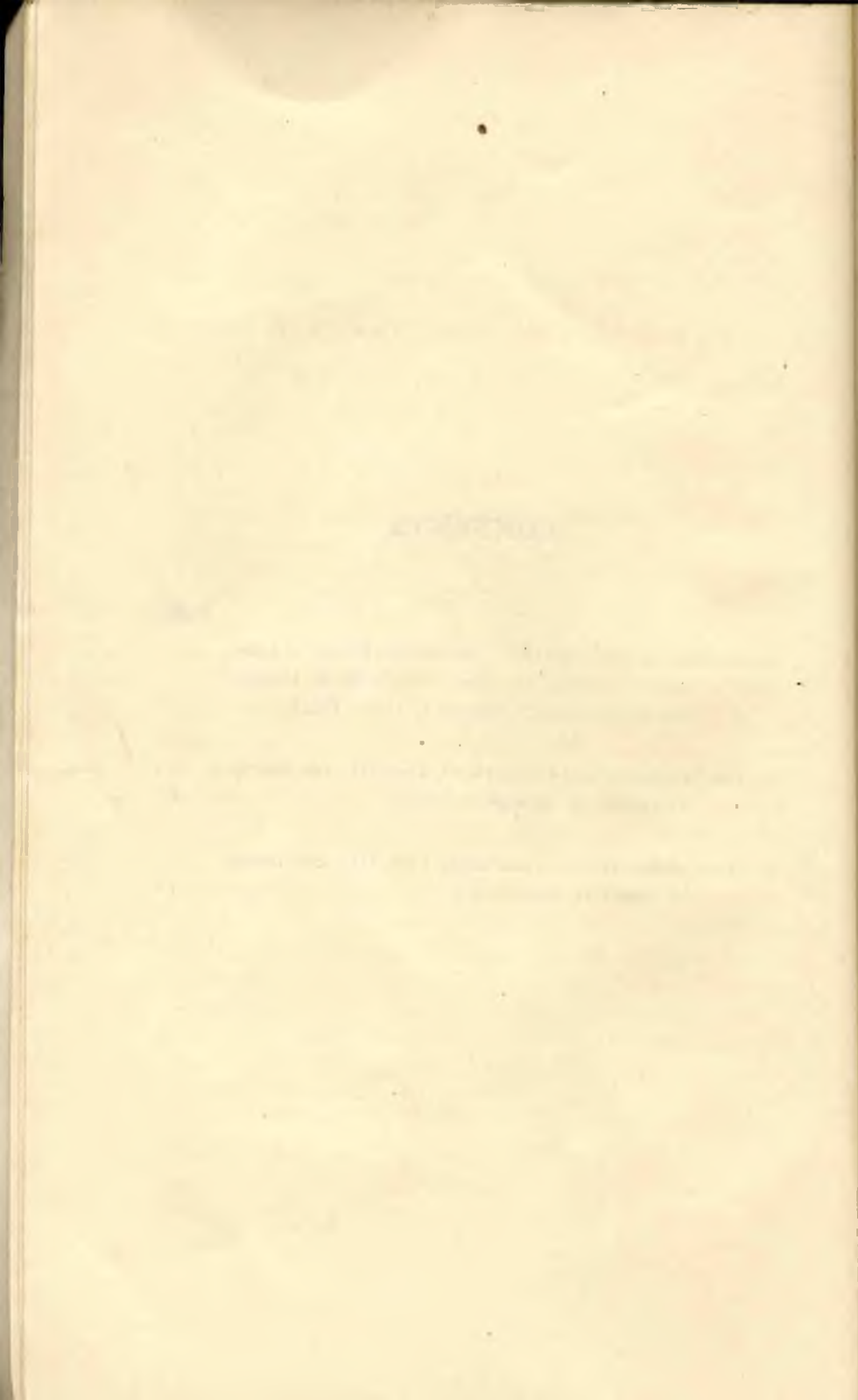
The date of publication of Vol. I. was 1909, of Vol. II., 1912. A few copies of Vol. II are on hand, and may be had from the Librarian, Mr. Hope.



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# LAKELAND ORNITHOLOGY.

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By ERIC B. DUNLOP.

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## PREFACE.

At the outbreak of hostilities between the Central European Powers and the Allied Nations, in 1914, Lieutenant Eric B. Dunlop was in Manitoba, Canada, where he had spent a year in furtherance of his studies on the incubation habits of birds, a study in which he was specially interested, and had hoped to solve some of the problems presented by the extraordinary manner in which some species maintain their succession.

He desired to spend two or three years in Canada, was loth to leave his work unfinished, but his sense of duty to the Motherland brought him to England in 1916 with the 78th Regiment of Canadian Grenadiers, from which regiment he transferred to the Border Regiment.

He joined the 1st Battalion at Monchy, in April, 1917, and in less than one month after setting foot in France made the great sacrifice on May 19th, 1917.

Before leaving for France he asked the writer to take charge of the M.S. of his paper on "Lakeland Ornithology, 1892-1913," a paper which was designed to bring the bird section of the "Fauna of Lakeland" (H. A. Macpherson, 1892), up-to-date, and to publish it, if and when possible, in the "Transactions of the Carlisle Natural History Society," before which Society it was read in 1913.

Until this year (1923), the Society has been unable to print, and consequent on such long delay much additional matter and information relating to the bird-life of Lakeland has accumulated.

To omit the many important occurrences since the paper was written would greatly discount its value, therefore the Council of the Society requested the writer to undertake the compilation of the notes and records of Lakeland bird-life subsequent to 1913.

Having in mind the form of the original paper, the writer has endeavoured to follow as well as possible without adding to the author's own notes.

For this reason the additions take the form of an *Appendix*.

The writer wishes to thank Messrs. Arthur Astley, T. L. Johnston, J. F. Peters, F. H. Day, D. G. Garnett, W. Nichol, Rev. E. U. Savage, and Miss Marjory Garnett, for their invaluable assistance.—L.E.H.

## LAKELAND ORNITHOLOGY, 1892—1913.

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In the twenty-one years which have elapsed since the publication of the late Rev. H. A. Macpherson's "*Vertebrate Fauna of Lakeland*," many changes have taken place in the avifauna of the area; some species which were then rare are now common, and, conversely, some which were then common are now not nearly so plentiful. Again, several species which had not then occurred in our area have been added to its fauna, and in one or two cases birds have bred in Lakeland which had not previously been recorded as doing so. Many rare and interesting visitors have also put in an appearance, which, though they had occurred before, had only done so exceptionally.

I propose in this paper to review the subject generally, as it is impossible in the time at my disposal to give anything like a detailed account. I hope, however, to refer to all the marked features of the bird-life of Lakeland in the period under notice, but it must be clearly understood that in no respect is this an exhaustive treatise. In the future, I hope to deal with the subject more fully.

Subsequent to the publication of the "*Fauna of Lakeland*," the Rev. H. A. Macpherson continued to work hard at the Natural History of Cumberland, Westmorland, and Lancashire North of the Sands, even after he left the North of England and went to Pitlochry he still recorded, in the zoological publications, the occurrence of rare birds in Lakeland. However, most unfortunately for Natural History in this district, and the science of ornithology as a whole, he died in 1901; since his death Mr. Thorpe and Mr. Hope have kept a most useful Natural History Record Bureau, to which all naturalists are invited to contribute. To anyone dealing with the vertebrate fauna of this area, the Bureau is invaluable, and my thanks are most sincerely due to these gentlemen for generously placing it at my disposal.

This paper is based on personal observation and experience, information derived from the Natural History Record Bureau, and also that supplied by numerous friends and correspondents.

**The Raven.**—Commencing with the Raven, this species still holds its own among the hills. It is much persecuted however. A curious incident occurred in 1912. A fox hunted by the Blencathra Hounds, and hard pressed, took refuge in a Raven's nest in Dead Craggs on Skiddaw. I was informed that this nest had previously been robbed.

Macpherson, in the *Fauna*, says :—" Mr. J. A. Harvie-Brown has elsewhere drawn attention to the habit which obtains in some regions of Ravens assembling numerous to roost together in some favoured locality. A single hint that such a rendezvous of Ravens may formerly have been adopted in Lakeland is supplied by a remark in Mrs. Howard's *Reminiscences*, in the course of which the lady remarks of Corby: ' the farthest point is called the Raven Clint, as Ravens flock there for shelter.' " As a matter of fact, Ravens do gather to roost in numbers in a secluded valley in Lakeland at the present day. What interest this fact would have aroused in the author of the "*Fauna of Lakeland*" if this had been known to him.

**The Jackdaw** remains as numerous as ever. I have noted several cases of its adapting old Magpies' nests to its breeding requirements.

On December 20th, 1902, Mr. Thorpe observed a Jackdaw in Carlisle with a curious malformation of the beak, the lower mandible bent down and recurved. It managed the difficult task of feeding by twisting its neck around, and scooping along in the crevices between the setts with the upper mandible inverted.

**The Rook** is still too numerous in Lakeland, and nothing but good would result if its numbers were reduced. In 1904 a pair adopted a Magpie's nest of the previous year to their breeding purposes.

In 1904, Mr. R. Graham and Mr. Leighton recorded that a pair of Rooks had built their nest between two

chimney-pots on one of the cottages at Holme Head. There was a small rookery adjoining, and the nest was built of similar materials to those in the normal site.

**The Carrion Crow** likewise is too plentifully represented with us. A reduction in its numbers would certainly benefit the farmers. Mr. Ritson notes that this species sits more closely when the nest is situated in the centre of a wood than when the position is more exposed.

**The Magpie** in most portions of Lakeland is a common bird, but Mr. F. W. Smalley tells me that on our Southern border it is scarce; keepers no doubt being responsible.

On August 23rd, 1911, just after 6 p.m., on the West side of Lake Windermere, I saw an interesting sight. Three Magpies (all adult, I think), were in a dead larch, chattering to each other, and hopping from branch to branch in playful pursuit of one another. They occasionally uttered a few low notes which might almost be described as a warble, then the loud alarm chatter would be uttered, and various other modulations of the voice. Now and then two birds would touch beaks as though fondling one another. They were full in the rays of the declining sun, and looked very beautiful. One bird flew into a neighbouring larch, and tried to pull off a twig. They then flew down on to the ground, near by, one by one, and hopped about; a single bird occasionally flying up about a yard. One bird picked up a bracken stalk, and ran after the others with it in its beak. Various noises were being uttered the whole time. They were all obviously *playing*, an unusual episode in the lives of adult animals.

**The Stonechat** occurs on our coast-line throughout winter. It is much rarer inland at that season. I have only one record of its occurrence in winter at Troutbeck, Windermere. Mr. Britten notes it also from Great Salkeld.

**The Whinchat** occurs plentifully on most of our lower-lying ground. During May, 1912, I observed a pair at an elevation of well over a thousand feet on the fell, and from their behaviour I had no doubt that they were nesting. I saw them at the same place more than once.

**The Wheatear** arrives with us from the 24th to the end of March. The latest record I have of one is October 24th, 1908. This bird fell from a Sparrow Hawk's talons, and had just been killed. Mr. F. W. Smalley informs me that he sees the Greenland Wheatear (*Saxicola oenanthe leucorhoa*) on both Spring and Autumn migrations near Silverdale, and also, of course, the common race.

**The Blackbird.**—Numerous pied varieties of the Blackbird have been reported. On May 24th, 1906, I saw a cock Blackbird hatching eggs and covering newly emerged young.

**The Missel Thrush** is often referred to as the Mountain Thrush, and, as the name suggests, they are frequently to be seen on the fells, late summer and autumn being the time at which they chiefly resort to the high ground. They may be seen on the fell tops as early as the beginning of July. On June 2nd, 1910, I saw and heard a Missel Thrush-singing from a rock end, at an elevation of fully 1,500 feet.

**The Song Thrush.**—In September I have also noted the Song Thrush far up the fells, no doubt in search of bilberries. In mid-winter practically all the Song Thrushes leave the Troutbeck Valley for about a month. Mr. Arthur Astley has noted the same thing in Langdale. At Bowness-on-Windermere D. G. Garnett tells me that most of the Thrushes disappear for a time, but there is always a fair number of the birds present; Bowness is more sheltered than the other localities mentioned.

A remarkable case of perseverance in nesting came under my notice some time ago. A Song Thrush made a nest and laid, for some reason she forsook; later she laid again in the same nest, these eggs were destroyed, but not to be deterred, she laid again, and successfully reared a brood at the third attempt.

A Song Thrush ringed at Windermere on February 5th, 1912, was recovered at Kilkee, Co. Clare, Ireland, on February 6th, 1913.

**The Ring Ouzel** is decidedly more numerous on the Pennines than on the fells of the Lake District. On August 5th, 1910, I saw about 30 birds of this species in a flock on the fells above Appleby.

**The Redstart** has occurred to me on April 16th for the first time, twice, in 1902 and 1906. This is my earliest date. The bird sings very early in the mornings, commencing considerably sooner than the Thrushes. For instance, on May 26th, 1910, a Redstart was singing at 2-10 a.m., whereas the Thrushes did not "strike up" till about 2-45.

**The Willow Wren** is one of our most numerous summer migrants. On May 2nd, 1908, I saw one in an unexpected situation—in a mountain ash just beneath the crags at Bannerdale Head on Saddleback.

**The Wood Wren** is distinctly plentiful in the Windermere District and elsewhere, but Mr. Smalley tells me that it is rare near Silverdale.

**The Grasshopper Warbler** has only once occurred to me at Troutbeck, Windermere. This was on July 14th, 1908.

**The Pied Flycatcher** continues to hold its own. I have noted it in many localities. The late Miss Armitt, who had exceptional opportunities of observing this species, as it bred in the nesting-boxes in her garden, gives April 21st—25th as the usual time of arrival, and this is, I think, about correct. Mr. T. L. Johnston, however, noted one at Wetheral, on April 16th, 1904.

**The Common Wren.**—The amount of vitality in the Common Wren is amazing. I have noted it far up on the fells in the middle of winter, with snow lying deep, where one would have thought it would soon have perished, but far from this it did not appear to be even inconvenienced. On September 17th, 1910, a Wren was seen at the Cairn, on the summit of Ill Bell.

**The Crossbill** occurs with us occasionally. In November, 1903, a flock was noted at Thurstonfield, and it was still there in the following December. There are also other records in the next few years, but the largest immigration of recent times took place to these islands in the summer and autumn of 1909. I first noted the species near Windermere, on November 17th of that year; there was a flock of about a score. Two birds in green plumage were very tame, and allowed me to walk within three yards of them without

exhibiting the least alarm. I frequently saw Crossbills in this locality until the following February, after that I missed them, and they had no doubt changed their quarters, though some were reported not far away on March 2nd. I made rather an unusual observation on this species on December 20th, 1909; on this date snow was lying, a flock of about twenty Crossbills was noted feeding in some larches, whilst watching them on two occasions I saw a bird take snow from the proximal end of a branch and eat it. One of the birds took several mouthfuls.

Crossbills were again noticed in the Troutbeck Valley, on August 14th, 1910; these birds were not noted again until August 23rd, 1911, when they were present in a wood on the West side of Lake Windermere. When shooting there with the late Mr. Broadley Smith, I noticed them on various occasions that autumn, and they were still about on January 30th, 1912.

Other localities in which I noticed Crossbills were the lower slopes of Skiddaw, on the Keswick face, the date being October 22nd, 1911, and Crosthwaite, south of Bowness, on December 13th, 1911.

Since January 30th, 1912, I have not noted the species in the district, and it appears as if the majority of them, if not all, had departed; this is usually the case within a year or two of their arrival, for in England they have never become permanent residents in any area, however suited it may appear to their habits, and though they may breed in a district for more than one year.

**The Chaffinch.**—In 1906, I noted a very exceptional nesting-site for a Chaffinch, this bird built her nest in a barn, on the top of a beam, and within a couple of inches of the slates; she carried the nesting material in through the open window. There were plenty of normal sites close by.

**The Tree Sparrow.**—On June 12th, 1907, I saw, at Troutbeck, Windermere, a Tree Sparrow. This is the first record for Westmorland. Mr. Smalley informs me he has one record for Silverdale, which is just over our borders.

**The Bullfinch.**—In Summer and autumn the Bullfinch is frequently noted feeding on the seeds of the Welsh Poppy. In the fall of the year I have more than once noted this species far up on the fells. For instance a female Bullfinch was seen on the heather in the centre of a large allotment on Wansfell, the snow lying 6 inches deep on the level, on December 7th, 1909; lower down in a ghyll with a few trees at the sides were eight more.

It is interesting to note that Macpherson, in the "Fauna of Lakeland," remarks on the probability of the Northern Bullfinch (*P. major*) visiting Britain, though it had not then been recorded as doing so. This bird is now well-known to occur frequently in this country.

**The Hawfinch** is one of those species referred to at the commencement of this paper as having greatly increased in recent years. In 1892, only two nests had been recorded for Lakeland, both at Dallam. It now nests in numbers there and at various other places. Among other records, a young bird was shot at Ambleside in the summer of 1906, which had evidently not long quitted the nest. The species had been noted in the Langdales a year or two previous to this. A flock of about 25 were seen on a lawn not far from Windermere last summer, and further South I have information of a flock of 50 being seen in winter. The first recorded nesting of this species in Cumberland was a nest with three young, and also a forsaken nest with two eggs in Netherby Hall Orchard, on July 21st, 1907.

**The Corn Bunting.**—In 1911, the Corn Bunting was noted as being very plentiful near Brough, in Westmorland. Mr. Britten saw a small flock of Corn Buntings at Nunwick, on January 8th, 1904. It is well established as a nesting species in Cumberland.

**A Reed Bunting** was seen in an unexpected place on March 3rd, 1911, *i.e.*, at the top of Kirkstone Pass, running about on the road. It was misty, and no doubt the bird was lost.

**The Swallow.**—My earliest date for the arrival of the Swallow is April 9th, 1900, a single bird flying over Applethwaite Common. Mr. H. E. Rawson, however, saw a Swallow over

Windermere Lake, on March 29th, 1905, which is exceptionally early; a still earlier record is that of Mr. Nichol, who saw a single bird on March 24th, 1903. There have been some late departures noted; Mr. Thorpe saw this species on November 4th and 5th, 1903; while Mr. Hume Wilson informs me that a Swallow remained about Rigmaden, where it was bred, all last autumn, and finally perished on December 4th. Swallows as also House Martins have certainly decreased considerably with us during recent years.

**Waxwings** occasionally occur with us, one was picked up dead in Crosthwaite (Keswick) Churchyard a few years ago, and another shot down the Winster Valley, below Bowness-on-Windermere.

On April 22nd, 1911, at Troutbeck, I saw two birds of this species, they were wild and were not seen again, though I believe they had been about for some time previously. This is a very late date for the occurrence of the Waxwing.

Recently I have had over a dozen Waxwings reported to me from both near Carlisle and Southern Westmorland; there has evidently been a large influx of these birds (1913).

**The Tits.**—Of the Tits there is nothing very noticeable to remark upon. I have searched for the recently reported Willow Tit, but have not found it in southern Lakeland, nor has Mr. Smalley, at Silverdale. It has been recorded from Dumfriesshire, however, and it is no doubt only a question of time until it is found within our bounds.

**Great Grey Shrike.**—On January 18th, 1911, I received from the Rev. H. H. Kemble a Great Grey Shrike, which had been shot on the west side of Windermere Lake, on January 16th. On dissection it proved to be a female. One or two others have also been recorded recently. Mr. T. L. Johnston has information of one haunting a locality near Carlisle this Winter.

**Grey Wagtail.**—My dates of first arrival of the Grey Wagtail in the Troutbeck Valley are 1905, March 11th; 1908, March 28th; 1910, March 7th; 1911, March 11th; 1912, March 9th. In 1909, the last one noted was seen on November

21st. During the Winter of 1908-9, a single bird of this species came to The Howe, Troutbeck, throughout the winter months, this is, of course, exceptional.

**The White Wagtail** is occasionally noted in Cumberland, but is no doubt commonly overlooked on account of its similarity to the Pied Wagtail. On April 14th, 1903, Mr Hope and Mr. Johnston saw a bird of this species at Wetheral in company with some Pied Wagtails. Again, on May 9th, 1907, I shot two on the margin of the Eden, on the Carlisle side of Rockcliffe. Mr. Smalley tells me he sees them at Silverdale on both migrations.

**The Pied Wagtail** leaves the higher valleys during winter, but is seen at lower elevations. It returns to the valleys about Mid-March, though sometimes earlier than this.

In 1904, a Pied Wagtail hatched and reared its young in a hole in one of the firing mounds at the rifle range, at Cummersdale. It was pointed out to Mr. Hope by Sergt.-Major Francis, who first noticed it during the firing at the Cumberland Rifle Meeting the previous week. Some hundreds of rounds were fired within two feet of the nest.

**The Yellow Wagtail.**—Macpherson, in the "Fauna," accuses Dr. Gough of error in describing the Yellow Wagtail as "common" at Kendal, for in his (Macpherson's) opinion, "Ray's Wagtail is a decidedly scarce summer visitant to Lakeland." My experience confirms Gough's, for wherever there is a piece of flat, alluvial land, there it is usual to find a pair or more of Yellow Wagtails.

**Meadow Pipits** leave the higher fells during winter, but return towards the end of March. They are to be found on the lower ground throughout the winter. The earliest date on which I happen to have heard this bird in song is March 25th.

**The Skylark** is often looked upon as a bird of the lowland meadows, but it is also to be found on the fell tops. I have frequently seen and heard it pouring forth its song above the plateaux on top of such mountains as High Street and Harter Fell. No doubt it nests up there, though I do not happen to have found it doing so.

**The Kingfisher.**—Macpherson states that the Kingfisher does not very frequently ascend to the becks which drain the snow-broth from the falls. According to my experience this statement is not correct, for in autumn this species regularly ascends the becks with which I am best acquainted, though it is absent during the greater part of the year. A Kingfisher, which had somewhat lost its bearings, was seen by Mr. T. L. Johnston, on August 21st, 1904. It was flying along Blencowe Street, in the City of Carlisle.

**A Roller** was obtained near Brampton, on June 17th, 1907. Mr. L. E. Hope saw this bird.

**Swifts** usually arrive about the first of May. My latest date, at Troutbeck, is September 17th, 1904. The late Mr. W. I. Beaumont, a good naturalist, saw one in the Leven Valley, two miles below the exit from Windermere, on November 15th, 1903, as he recorded in the "Field" at the time.

**The Great Spotted Woodpecker** is a species which it is pleasing to be able to speak of as having greatly increased during the past twenty years. Macpherson writes in the "Fauna": "In the Southern portions of Lakeland, this Woodpecker is known only as a rare winter visitant from the Continent." At the present day there are numerous localities in the area mentioned, where it undoubtedly nests annually. It also nests in woods on the slopes of the Pennines, and Mr. Hope thinks it has greatly increased in Cumberland. On May 27th, 1911, I examined a nest which contained six young. This species is also on the increase in other areas, for instance in the southern half of Scotland.

**The Green Woodpecker** is a scarce bird with us, I have only seen one near Windermere. Mr. A. Broadley Smith informs me that some time ago he saw one there. The late Miss Armitt had a local specimen, so she informed me. Mr. Hume Wilson has seen one near Rigmaden. In Cumberland Capt Farrer has taken a clutch of eggs belonging to this species near Keswick.

**The Cuckoo.**—In August, 1903, a young Cuckoo made its temporary home for about three weeks on the South side of Eden Bridges, in the City. It spent its time between the trees on

the Bitts, and on the grass and flower-beds in the Park on both sides of the road leading from Rickergate to the Bridge. Mr. Thorpe saw the bird several times. It was last noted on August 31st. It was quite fearless, and allowed a close approach; the Park-keeper considerably affording it his protection.

**The Kestrel** occasionally takes possession of a Raven's old home. In 1911 Ravens forsook a nest after being disturbed by a keeper. Crows then sucked the eggs, subsequently I found a clutch of five Kestrels' eggs in it. Mr. H. Britten once shot a Kestrel in the act of striking a Woodpigeon, in fact, both birds were killed by the shot.

**The Osprey.**—A Raptore which was flying over Lake Windermere in April, 1904, was seen to fall towards the lake from a great height. When it reached the lake it was unable to rise, although it had used its wings all the way down; it was captured in a landing-net and killed. It was then seen that it had the claws of either foot firmly clasped together, so that it could not separate them. This was recorded in "The Field," the editor of that paper suggested that the bird was an Osprey, but on writing to the owner he informed me that the bird was a Buzzard. However, I have examined an Osprey taken near Appleby, in 1886, which is not recorded in the "Fauna of Lakeland."

**Merlin.**—Col. Robinson, of Elterwater, informs me that at the last Merlin's nest he knew of near Langdale, he found several Swallows which the birds had taken.

**Golden Eagle.**—I have more than once in recent years had the Golden Eagle reported to me as having been seen in the Lake District by people who ought to be able to recognise this species.

**Common Buzzard.**—The earliest date for Buzzards' eggs which I have noted is April 15th, but I am told by a good naturalist that he has seen them as early as April 5th. In 1909 a young bird of this species left the nest, on my visiting it, on August 13th, a remarkably late date. They begin to patch their eyries up before the end of February.

Much interest has been aroused in recent years by the unusual behaviour of a Buzzard on the fells near Windermere. I propose to give an account of this bird, its history not having been made public previously. The first reference to this bird in the local papers appeared in the "Westmorland Gazette" for June 13th, 1903. The Rev. W. H. Bartholomew then wrote that whilst walking on the fells a Gyr-Falcon had made a pounce on his little dog, and that two years previously, in 1901, the same thing had occurred at the same place. Another letter appeared referring to a communication to the "Spectator," which had appeared in 1901 on the subject, the bird was here correctly named a Buzzard. Mr. F. P. Barnard then wrote saying that in 1901 he had been swooped at by these birds (there appears to have been a pair then) about sixty times whilst ascending the fell. Canon Rawnsley then wrote suggesting that the bird was an Eagle. So far as I am aware, no further reference to this bird appeared until 1908, when a letter appeared in the "Field" concerning him. In 1909 he was much in the limelight; a paragraph appeared in the "Sunday Chronicle," headed "Attacked by a Kestrel," and a gentleman from Bradford, who had also been swooped at, wrote to a local paper that "there is little doubt about it being a Kestrel, the bird measuring about four feet across the wings, and having the vicious mouth of that predatory bird." He also said he would be a good thing if some good shot would free the district from this "foul-fiend usurper."

But the pinnacle of fame was reached when, in 1910, the "Daily Dispatch" headed a column in heavy type "Clergyman's fight with *Great Bustards*, Exciting adventure in the Lake District, Savage Birds beaten off with Stick." One paragraph reads: "As the encounter was assuming a perilous phase, the clergyman, being single-handed in the combat, thought it best to retire, and so he beat a hasty retreat." The Reverend gentleman's photograph appeared in the paper, it being stated that he "narrowly escaped serious injury."

A gentleman, evidently with a sense of humour, then wrote suggesting that the birds were not *Great Bustards*, but

Red-legged Partridges ; even this suggestion was taken seriously by one correspondent.

In 1912, a correspondent wrote to the " Manchester Guardian " stating that he had been swooped at by this bird ; this is, I think, the last that has appeared in the papers concerning this bird.

As I have known this fine bird for some years, it may be of interest to give an account of it from personal observation. The first time I saw him was on July 6th, 1903. It did not swoop at me, but flew over and struck at two sheep. This trait had evidently not been noticed by the writers of the various letters, probably most of them were too frightened to notice anything, but concentrated all their energies on escaping from the " foul-fiend usurper."

In the following year, on May 1st, I saw the bird strike a sheep six times in about five minutes. In July, 1906, it swooped near me in the same locality.

Then on May 23rd, 1908, as I was walking along the same fell, I saw a Buzzard soaring about; going to investigate the possibility of a nest, the first thing the bird did was to swoop at a sheep; he then came and swooped within a few yards of me. As he turned to soar up again over my head, some sheep's wool fell from his talons and floated down. He swooped at me at least fifty times altogether. When coming from the North he usually attained a fair height, and then, with half-closed wings, came directly towards me to within two or three yards, when he soared right up, and with a sharp turn came absolutely perpendicularly down, straight at my head to within a yard or two, when he soared up again. The perpendicular drop with half-closed wings was magnificent. He then settled on a rock end and seemed quite composed, attending to his toilet. On my moving on he recommenced, and in addition to swooping at me, he twice struck at sheep. His method of doing this is usually to sail down towards the animal, hold his wings over his back, parallel to one another, then drop and strike the sheep with his claws on the back, immediately flying on.

After walking some distance another Buzzard appeared, and I was sure there was a nest in the vicinity, and eventually found it; getting to it the bird stooped within a yard of me, indeed I thought he would strike me. The other bird did not come near, but sailed about mewling.

On June 14th, when I visited the locality (the birds had forsaken their eggs, the nest having been blown off the ledge) the Buzzard was circling about; after awhile it struck at sheep twice, going off for a minute or two, he eventually returned and struck two sheep in rapid succession, the sheep being in fact only about twenty yards apart, he went straight from one to the other. I had my glasses on him. He flew along low down, and then getting above and behind the sheep, he held his wings back, and glided to them, striking them with his claws from behind on the rump, and then flying on. As he came up to the sheep he was so low down that he appeared to be below the level of the top of the brackens; these were only 18 inches high. He did not swoop at me.

On April 4th, 1909, I was in his haunt, and he swooped at me repeatedly. It is interesting to note that this habit of his was not restricted to the nesting season, for on October 31st, 1909, when walking across his haunt, I saw him. He sailed about for a time without coming near, and then made a half-hearted stoop to within about twenty yards of me, a little later he made two stoops to within two yards of me, coming past with a great rush. He then rose to a good height, finally making a perfectly magnificent stoop from fully 200 yards above me. He closed his wings, so that the shoulders were only just separated from the sides, and with his legs an inch or two from his body, he dropped headlong to within two yards of me, then passing over my head with a regular roar of wind. Subsequently he sailed round, calling for a little while, and then disappeared. On March 6th, 1910, he again swooped many times. My last note of him is on April 28th, 1911, when he struck a sheep on the rump, and stooped at me many times. He was still there, however, in 1912, though I did not happen to see him.

There is thus no doubt this bird inhabited this locality

for eleven years, 1901 to 1912, and probably he was considerably older than that. He was a very dark bird, and evidently a cock.

**The Rough-legged Buzzard.**—Mr. J. M. Charlton tells me of one or two Rough-legged Buzzards which have occurred near our eastern border in recent years.

**The Honey Buzzard.**—In October, 1908, a Honey Buzzard was shot at Scotby, and is now in Carlisle Museum. Another was trapped in Cumberland last summer, and, as for some time later a bird of this species was seen about the same locality, there cannot be much doubt that they would have nested if left alone.

**A Shag** was picked up dead at Crosby-on-Eden on January 1st, 1908.

**The Cormorant.**—I have several records of the Cormorant occurring on Windermere Lake in Winter, and on July 30th, 1910 I saw three flying up the lake together, and have also seen a Cormorant which was shot there in full breeding plumage.

**The Gannet.**—Mr. J. M. Charlton informs me that seven Gannets were seen flying over near Bampton, together, on October 13th, 1914.

**The Common Heron.**—Macpherson says that probably only at Dallam are Herons called "Cranes," but I have constantly heard them called Cranes and Jenny Cranes elsewhere, and F. W. Smalley says they are referred to as Johnny Cranes at Silverdale.

**The Night Heron.**—On December 10th, 1903, an immature female Night Heron was found dead on the Island at Grinsdale, by Mr. Jackson, of Newtown. Mr. Jackson stated that he saw what he thought was the same bird about the same place nearly three weeks previously, and went down in the hope of seeing it again. He was surprised to find it dead on this date. Another was obtained on the Eden, and, curiously enough, close to the same place, three years previously. Both were females.

**The Common Bittern.**—On November 29th, 1906, a Bittern was caught by a dog among reeds on the margin of Derwent-

water. Also a bird is in my possession shot in Parsonage Bay, Bowness, in January, 1888. It had been about the locality for some time.

**The Grey Lag Goose.**—One of the most remarkable features of bird-life in this part of the country, in recent years, is the extraordinary increase in the numbers of the Grey Lag Goose.

Macpherson writes : " Since Heysham's time, the Grey Lag has continued to be the rarest of the Grey Geese which visit Lakeland," and Mr. Nichol did not see one in the flesh until 1891.

At the present time it is present in hundreds, and probably equals all other Grey Geese on the Solway in numbers.

**The Bean Goose.**—Up to the date of the publication of the Fauna, the Bean Goose was the Common Grey Goose of the faunal area, then the Pink-footed went ahead, and became more plentiful than the other species, and now the Grey Lag has taken a commanding position, in point of numbers. These changes are most interesting, and difficult to account for.

**The White-fronted Goose** has never been common, though on one occasion Nichol saw a very large flock.

**The Brent Goose** is also far from plentiful, though it occurs in larger or smaller numbers in most winters on the Solway.

**The Barnacle Goose** is probably on the increase, despite the efforts made to reduce its numbers. Mr. T. L. Johnston noted their arrival this winter on September 21st ; a flock of about 30 birds.

**Whooper Swan.**—The remarkable occurrence of Whooper Swans on the Eden, in Carlisle, is well known, and I do not propose to give an account of them, more particularly as Mr. Hope has already done so in his paper on the Ducks and Geese of the Solway, (published in Vol. II. of these Transactions).

**Bewick's Swan.**—Nichol has on several occasions in recent years noted Bewick's Swan on the Solway. It is recorded in the " Field," for February 11th, 1905, that a male and female Bewick's Swans, each weighing 10 lbs. 6 ozs. were shot out of a flock of five on January 30th previous, at the head of

Ullswater, by Mr. D. H. Marshall's (of Patterdale Hall) keeper.

**The Sheld-Duck.**—In winter I have more than once seen the Sheld-Duck on Windermere, and also once on Ullswater. Mr. J. F. Peters informs me that he saw a pair of birds of this species on May 13th, 1912. They were reported to have hatched young at the South end of the lake some years ago, and Col. Turner tells me that a number of Sheld-Ducks nest at Finsthwaite Tarn. He has seen the young there.

Mr. Smalley states that one or two pairs nest in the limestone clinks at Silverdale, quite away from the sea, and that a pair nests near Hawes Water there.

**The Mallard** sometimes occur in numbers on Monkhill Lough. I saw 200 there on January 19th, 1913. On January 9th, 1904, Nichol saw the largest flock he has ever seen on the Solway; he estimated their numbers at about 1,500.

**The Gadwall.**—In 1911, a bird, said to be a Gadwall, was reported in the local papers. On inspecting it I found that it was a Goldeneye.

**The Shoveler** nests in various parts of the district. Mr. F. W. Smalley tells me he once saw nine pairs together in the Winster Valley. At the beginning of February, 1907, I saw a bird of this species in the flesh, which had recently been shot on Windermere.

**The Pintail** occurs with some regularity on the Solway during the winter months. This species is bred at Netherby, and one full-winged bird I saw there was very tame.

**The Teal** breeds in small numbers in many localities throughout our area. Mr. Sharpe, of Halton Hall, tells me he once shot 39 at one discharge of his punt-gun, in Morecambe Bay. A hand-reared Teal, marked at Netherby, in 1908, was shot at Lough Derg on September 28th of the same year. An adult Teal, marked by Sir R. Graham, at Netherby, on July 24th, 1912, was recovered at Rathkeele, Co. Limerick, on February 28th, 1913.

**The Wigeon.**—Monkhill Lough was noted as being a great resort of the Wigeon by Macpherson; on December 7th, 1905, I saw between 400—500 there. Mr. Sharpe informs me that it

has greatly increased in Morecambe Bay, and thinks the formation of new marsh by the silting up of the Bay accounts for this, for more food is now obtainable. Capt. Farrer found a nest of this species at Bassenthwaite, on April 22nd, 1903. Many Wigeon stay there during the summer. He has since found two other nests, both of which were destroyed by floods. This species had not previously been proved to nest in Lakeland. A Wigeon marked by Sir R. Graham, at Netherby, at the end of February, 1909, was recovered in Mr. W. E. de Winton's duck-decoy, at Orierton, Pembrokeshire, on December 13th of the same year.

**The Pochard.**—Macpherson says, in the Fauna, that he never saw more than 20 Pochards together in Lakeland. Mr. Thorpe and Mr. Hope, however, on January 18th, 1905, counted not less than 200 on Talkin Tarn, and Mr. Arthur Astley has seen 40 on Rydal. On April 21st, 1908, Miss Armitt told me she had seen five Pochards on Rydal a few days previously, and on April 18th, 1911, I saw a pair of these birds on Esthwaite. It has, as yet, not been proved to breed in our area. My earliest date in the autumn is September 27th, 1909.

**The Tufted Duck** has not been proved to breed in Lakeland, though there cannot be much doubt that it has done so. Mr. J. F. Peters informed me that he saw a pair of birds of this species on Windermere on May 13th, 1912; whilst on May 11th, 1911, I saw a pair of Tufted Duck on the small piece of water known as Priest Pot, at Esthwaite, and found what I took to be their empty nest.

**The Scaup.**—In the Winter, 1906-7, I noted great numbers of Scaup Ducks in the Carlisle gameshops, occasionally between 20—30 in one shop. On May 16th, 1909, I found the remains of a male bird by the side of Ullswater.

**The Goldeneye** has been noted on Thirlmere by me on May 1st, and I believe Mr. Evelyn Rawson has seen it in the district in the middle of summer.

**The Long-tailed Duck.**—Macpherson had no record of the Long-tailed Duck from any of the Lakes. Two have been shot on Windermere, an adult male in nearly full winter dress, there being a few traces of the summer plumage showing. The other is in female dress,

**The Eider Duck.**—On June 2nd, 1904, Mr. Thorpe saw two Eider Ducks at Silloth; they flew twice off the Golf Links, and then went straight East.

**The Common Scoter** is sometimes seen on the Solway in great numbers, and occurs occasionally on Windermere.

**The Velvet Scoter.**—In November, 1905, W. Nichol saw a pair of Velvet Scoters near Silloth on several occasions.

**A Goosander**, which I shot near Windermere, on January 4th, 1911, contained a trout that would have approached  $\frac{1}{2}$ lb. in weight when newly taken. On March 31st, 1913, I saw three Goosanders on Ayle Tarn, Hartsop, a fine adult drake, and two in female dress. Mr. Britten has seen them on the Eden, at Nunwick, as late as April 19th. It is interesting to note that the local historian, Machell, states that at Angle Tarn "Grevyes" (Goosanders) bred in his day.

**The Smew.**—Macpherson was unable to trace the Smew in the heart of the Lake District. I have several from Windermere, and Colonel Robinson showed me two shot on Elterwater. On January 19th, 1913, Mr. T. L. Johnston and I saw a Smew, on Monkhill Lough, a female or immature male, it was in company with two Goldeneyes, and rose when they rose, and flew and pitched with them. One that Macpherson saw there did not consort with other fowl. I have also various other records of this species in recent years.

**The Red-crested Pochard.**—One of the most interesting additions to our Fauna since the publication of Macpherson's work is the Red-crested Pochard; this was obtained at Small Water in October, 1896, and was recorded by Macpherson.

**The Stock Dove** has undoubtedly increased in our area. I have noted it at many points. For instance, on March 21st, 1911, I saw two Stock Doves flying about the crags at Ennerdale, and last March I saw about 20 birds in two flocks near Fingland. On September 29th, 1911, I noted as many as 25 feeding together on stubble near Kendal.

**The Turtle Dove.**—In 1912, Mr. J. B. Cairns recorded that the Turtle Dove nested near Carlisle.

**The Black Grouse.**—It is, I think, certain that the Black Grouse is on the increase, at all events in the southern portion of our area. On our shooting they increased considerably a few years ago, but have rather decreased again, owing to unfavourable breeding seasons. Major Higgin-Birket states they have increased on his ground, and Mr. R. D. Holt thinks the same holds good for his estate. These are in the Windermere district.

**The Quail.**—I have several records for the Quail in Cumberland in recent years, but do not happen to have met with it myself.

**The Red-legged Partridge.**—Mr. G. Bolam informs me that Red-legged Partridges occasionally turn up at Alston, but he has not traced the source from which they come.

**The Corncrake** has certainly decreased in some portions of Lakeland, as it has done elsewhere in England, but on the west coast, near Drigg, it still abounds.

In 1908, I shot one from a bed of rushes, at a height of about twelve-hundred feet, an unusual elevation for this species. I had previously flushed a bird at the same place, and it appeared to have taken up its quarters there.

**The Spotted Crake.**—Mr. C. F. Archibald has recorded several Spotted Crakes from Rusland, in "The Zoologist." On October 6th, 1910, the late Mr. Broadly Smith, with whom I was shooting, shot a Spotted Crake from a small snipe bog at Staveley, Kendal. Mr. Evelyn Rawson informed me that he had got two there some years previously, the only ones he knew of in the Windermere District. Several have been obtained in the neighbourhood of Carlisle in recent years, one at Allonby, September, 1903; one Burgh, 1910; also one at Carlisle, 1896.

**The Coot.**—I have found the Coot breeding on Elterwater, Rydal, Skeyles Water, and Esthwaite, in the southern portion of Lakeland. In winter, large flocks appear on Windermere.

**The Dotterel** still nests on our mountains. On May 9th, 1907, as Mr. Thorpe, Mr. Hope and I were leaving Rockcliffe Marsh, we saw a trip of about a dozen Dotterel; they allowed me to walk within gunshot, but I did not fire, though I had my

gun with me at the time. When they rose, they flew round us in a semi-circle at a distance of several hundred yards, and then disappeared from sight, probably pitching on the Marsh again.

On April 28th, 1903, Messrs. Mann had two Dotterel brought to them shot near Allonby. This is an early date, and was the second consecutive year this species had been recorded from the Solway; previous to 1902 it had not been noted since 1895.

On April 22nd, 1904, Nichol observed three Dotterel; this is easily the earliest date of arrival for this species on the Solway.

**The Oyster Catcher** occasionally occurs on our inland lakes. Mr. Peters tells me he saw one in February, 1912, on Windermere, and Mr. Astley has seen it at Elterwater in spring.

**Lapwings** appear to leave the Pennines, after the breeding season, later than they quit the hills above Windermere. This is doubtless accounted for by the colder and more exposed haunts on the Eastern side. A Lapwing, marked on Rockcliffe Marsh on May 20th, 1912, was recovered at Meltingford, Co. Kilkenny, on December 4th, 1912.

**The Golden Plover** nests at many points on the Pennines. A few nest in the Saddleback area. I have only noted this species in the Troutbeck Valley once or twice; on these occasions the weather was misty, and they were no doubt lost on migration.

**The Turnstone.**—On May 22nd, 1903, Jas. Smith, of Drumburgh, noticed two adult Turnstones in full nuptial dress there.

**A Grey Phalarope** was seen on November 19th, 1904, near the Solway Light, Silloth, by Mr. Nichol; it was also noted on the preceding day. One was shot there on December 12th, 1908.

**The Great Snipe.**—In the Autumn of 1911 a Great Snipe was recorded in the "Field," from Shap, by Mr. W. H. M. Peterkin. On my writing to him, he replied: "There is not the slightest doubt the bird which I shot is the Great Snipe. I have been interested in bird-life for many years, and several of my naturalist friends have seen the bird and confirm my

opinion. It was shot in a heather-field, about four miles from Shap, and weighed, the day after, 6'18 ozs. This, I understand, is rather a small weight for this bird. I have had the bird set up, and is now in my possession. The tail feathers are 16 in number, and it is considerably more mottled on the breast and underparts than the Common Snipe."

**The Jack Snipe** has been reported more than once as occurring in Cumberland in Summer. I have searched carefully for it, but have not found it at that season.

**The Dunlin.**—Macpherson had no record of the Dunlin occurring on our Lakes in winter. I have twice noted it on Windermere. The first occasion was on December 31st, 1908, there were four of them together. Again, on February 5th, 1912, a single bird was seen.

**The Common Sandpiper.**—The latest record I have of the Common Sandpiper, on Windermere, is September 1st. Mr. Britten, however, saw one at Nunwick, on October 5th, 1903, an exceptionally late occurrence; the first he saw that year appeared on April 8th, which is earlier than usual.

**The Black-tailed Godwit.**—Last Spring the Black-tailed Godwit occurred to Nichol at Skinburness. This is the only time he has met with this species on the vernal migration.

**The Curlew.**—Of the Curlew, Macpherson states that it comes on to the moors where it breeds, towards the end of March. This however, is about a month later than they usually appear on their breeding grounds. As in the case of the Lapwing, Curlews remain longer on the hills above Appleby than they do in the vicinity of the Lakes, the cold, helm wind being probably partially responsible for this. For instance, in 1909 I could not find any Curlews on a breeding ground near Windermere on July 22nd, all having departed; yet, on August 6th, they were still to be seen on the Pennines above Appleby, and in this locality they had not left on August 30th, 1910.

**The Whimbrel.**—On May 17th, 1908, Mr. Thorpe, Mr. Hope and I, saw four Whimbrel pass over Windermere Lake, whistling loudly. In 1914, Mr. T. L. Johnston saw a few Whimbrel on Rockcliffe Marsh as late as June 3rd, whilst he noted the same

species, no doubt on the return journey, at Skinburness, on August 6th.

**The Redshank.**—Macpherson records that at the time of the publication of his "Fauna," the Redshank nested inland in both Cumberland and Westmorland, but only a few pairs did so. Since then this bird has greatly extended its breeding range with us, as it has elsewhere in England. Mr. Hope found it breeding at Castlecarrack, in 1903. They nested at Esthwaite in 1906, and have increased there since. The late W. Duckworth told me that he found a few pairs of Redshanks breeding at Brampton in 1906, and I have found its nest there myself. In 1910, I saw these birds on the Pennines above Brough, they were stated to have appeared first in 1906; they appeared above Appleby about the same time. On the hills above Windermere one or two pairs breed; they were first seen in 1908. I have frequently seen them by the shores of Windermere, but have not found the nest. This species occasionally occurs at the same place in mid-winter. The Rev. D. A. Scott first saw them at Mungrisdale in 1912, one pair bred; in 1913 two pairs were undoubtedly breeding, though their nests were not found.

**The Black Tern** has occurred fairly frequently in recent years.

On June 9th, 1904, Mr. Thorpe saw a Black Tern, an adult in nuptial dress, at Stanwix; it was also seen by Mr. Hope on three successive days. Immature birds were shot in 1903-4, one on Burgh, and one on Rockcliffe. Mr. H. W. Robinson has recorded this species from Ravenglass more than once. On August 5th, 1912, Mr. J. F. Peters saw two Black Terns on Windermere Lake. He is well acquainted with this species abroad. This is the first record for the Lakes.

**The Sandwich Tern** has decreased greatly at Walney during recent years, owing to the interference of man. In fact, at one time it ceased to nest there, but does so at the present time in small numbers. At Ravenglass, owing to the protection afforded it by Lord Muncaster, it has greatly increased;

no doubt many of the Walney birds have gone there, and the numbers will also have been augmented by the large numbers of young successfully reared. Ravenglass has become a great resort of ornithologists and bird-photographers, many well-known naturalists having stayed there to study the birds in recent years. Some of the photographers had no respect for the Terns, keeping them off their eggs for long periods at a stretch, with the result that the Black-headed Gulls took advantage of the opportunity, and sucked them. I have myself seen a large colony of Sandwich Terns lose all their eggs as a result of a photographer giving the birds no opportunity to settle down. The result of this is that in 1913 all leave to photograph the birds was stopped. The Sandwich Tern colonies, of which there are a number at Ravenglass, do not resort to the same place for nesting purposes from year to year, but move about, no colony being found at the same spot as in the previous year. Two single eggs hatched on June 2nd, 1912, the following day I was photographing, at these nests, having hidden up. An old bird flew in with a fish in its beak, it had fed its young one just previously with another fish. On its arrival it screamed, but as neither the chick nor the bird covering it made any response, after standing a few moments, he took the wisest course, and swallowed it himself. This bird then changed places with the one that was covering the young one. After a while a bird flew in (which I could not be sure) with a fish, and held it towards the chick previously fed; the chick reached up from beneath its parent's scapular feathers and appeared to wish to take the fish, but the adult did not let it have it. The bird with the fish then went and made as if to offer it to the other chick (I photographed him in the act) but did not let this youngster have it, though he was obviously anxious to eat it. The bird with the fish then flew off. I saw a similar incident later in the season at another nest. What the bird's object could be in offering the fish to the chicks, and then not allowing them to have it, is difficult to suggest. In this species, as in the Common Tern, the nest is added to as incubation

progresses. A nestling Sandwich Tern, ringed at Ravensglass on June 30th, 1909, was recovered near Silloth on August 20th following.

**The Common Tern and Arctic Terns** still nest at Walney, but at Ravensglass, the Common, alone, is found; there being no satisfactory proof that the Arctic has occurred there.

The Common Tern occurs on Lake Windermere on both vernal and autumnal migrations.

**The Great Crested Grebe.**—In 1911, I had the pleasure of recording, for the first time, the breeding of the Great Crested Grebe in Lakeland. On September 5th, that year, I saw an old bird with two young threequarters grown. I believe it had nested in previous years, and as it is carefully protected, ought to increase steadily.

**The Red-necked Grebe.**—There are several recent records of Red-necked Grebe. I shot one in Piel Wyke Bay, on Windermere, on February 5th, 1912, and one was sent to me from the same lake in 1907.

**The Black-necked and Slavonian Grebe.**—Up to the publication of the "Fauna," Macpherson never saw a local specimen of the Eared Grebe, but on the publication of the Victoria History two had been obtained. Several have occurred since, one was got on the Solway in August, 1912, with many signs of immaturity about it, and there is a possibility that it was bred in the neighbourhood. I shot a bird of this species near Windermere, on August 27th, 1910. Mr. Rawson has a Slavonian Grebe shot on Windermere, on January 14th, 1905, and one was shot at Skinburness on February 21st, 1912.

**Leach's and Storm Petrels.**—Many Fork-tailed Petrels have been recorded, and Mr. Peters informed me that he saw a Storm Petrel on Windermere last autumn.

## APPENDIX.

BY L. E. HOPE, F.L.S.

(READ FEBRUARY 1ST, 1923).

**Hooded Crow, *Corvus cornix*.**—Apparently the Hooded Crow is rare in central Lakeland. The writer only remembers two in the eastern part of the area, which were killed by a keeper, near Dufton, in 1896. Mr. A. Astley has seen one example taken near Kirkby Lonsdale, in December, 1921. Mr. T. L. Johnston says it occurs more or less annually in winter on the Solway Marshes. Mr. J. F. Peters records three occurrences—April 13th, 1910, at Windermere; January 10th, 1915, at Buttermere; and March 25th, 1921, at Windermere.

**Magpie, *Pica pica*.**—Dunlop does not refer to the roosting habits of the Magpie, but he and the writer in the winter of 1912, visited a roosting place of the species near Kirkbride, Carlisle, where at least one hundred birds habitually gathered at night in a tall hedgerow. Other roosting places of Magpies are also known in the Solway district.

**Starling, *Sturnus vulgaris*.**—The Starling is exceedingly common, both as a nesting species and migrant. The vast flocks mentioned by Macpherson still come to Carlisle in possibly larger numbers, certainly in as large; whilst the roosting places are more numerous. The gregarious habit seems to persist in some degree throughout the year. The Rev. E. U. Savage, in "British Birds," Vol. xvi., p. 78, notes that a large flock frequented the neighbourhood of Dalston, in May, June and July, of 1922. Amongst a number shot from this flock some were birds in breeding condition, whilst others were young males or females of the previous year. Those in breeding condition might be only temporary members of the flock, but it certainly appears that many Starlings do not breed in their first spring, but, on the other hand, it is well-known that some do.

**Golden Oriole.** *Oriolus oriolus*.—A young male Golden Oriole was picked up dead in the Vicarage Garden, at Brathay, Westmorland, by the Rev. T. H. Baines. It had been seen the previous day, and had succumbed to the cold, wintry weather which prevailed at this date, May 16th, 1909.

**Hawfinch.** *Coccothraustes coccothraustes*.—Though not yet well-known in the Carlisle district, the Hawfinch is steadily increasing. It has been seen in several kitchen gardens around Carlisle, and the writer picked up the remains of a male bird in his garden, at Stanwix, in November, 1915. It had probably been killed by a cat. It now nests regularly at Levens. Miss Marjory Garnett records a flock of eighteen or more seen near Windermere, on March 11th, 1918.

**Goldfinch.** *Carduelis carduelis* and *C.c. britannica*.—The protection afforded to Goldfinches by the "Wild Birds' Protection Act" in Cumberland appears to have had a very beneficial effect. This beautiful little bird, the chief object of the attention of the bird-catcher, amateur and professional, after being nearly extinguished, is now to be found in nearly all its old haunts, and in many new ones, nesting regularly in orchards and gardens around Carlisle. Mr. Arthur Astley says it was unknown in the Windermere district until a few years ago. Both he and Miss Marjory Garnett report small flocks and pairs in that district in the winter and spring of 1921-22. Mr. T. L. Johnston saw a flock of over forty birds at Thurstonfield in April, 1921. Similar large flocks are recorded from South of Carlisle in autumn and spring. These may be continental migrants.

**Siskin.** *Spinus spinus*.—The winter visitations of the Siskin to North and East Cumberland, are fairly regular in character, but variable in numbers. Rev. E. U. Savage saw a flock numbering over one hundred individuals at Raughton Head, on December 11th, 1922.

**Chaffinch.** *Fringilla coelebs*.—A very late date for nesting of Chaffinch is recorded by Miss Corder, at Skelwith Bridge, Ambleside, a nest with four eggs on November 1st, 1920.

**Tree Sparrow.** *Passer montanus*.—Always local in our area, but some large colonies in favoured places. Mr. T. L. Johnston

reports a newly-established colony of Tree Sparrows nesting in thick fir trees near Bowness-on-Solway. In Westmorland there is a flourishing colony at Sizergh Castle. Miss Marjory Garnett saw several with Chaffinches feeding in a farm yard near Kendal, in March, 1922.

**Crossbill**, *Loxia curvirostra*.—The most recent records of Crossbills for central Lakeland are a fine male found dead near Ambleside, on October 29th, 1919, and some seen near Keswick the same autumn, reported by Mr. A. Astley.

**Shore-Lark**, *Otocorys alpestris*.—Mr. W. Nichol, of Skinburness, shot a party of four Shore-Larks near Silloth, on February 23rd, 1908.

**Skylark**, *Alauda arvensis*.—The late Eric Dunlop's opinion that the Skylark nests on the tops of the mountains in central Lakeland is confirmed by Mr. A. Astley, who found it nesting on Red Screes, high above Kirkstone Pass, and in other similar situations.

**White Wagtail**, *Motacilla alba*.—In "British Birds," Vol. xi., page 43, Mr. H. W. Robinson records the nesting of a pair of White Wagtails near Grasmere, in 1917. He saw the old birds feeding the young.

**Yellow Wagtail**, *Motacilla vaiei*.—This Wagtail is not uncommon in suitable situations in North and West Cumberland, and Mr. A. Astley confirms Dunlop's statement as to its status in the Lake district.

**Nuthatch**, *Sitta caesia*.—Rev. E. U. Savage states that a pair of Nuthatches bred in an orchard at Whitbarrow, Westmorland, in 1916, and that a pair were seen near Boot, in January of 1921, and another pair nested for some years near Wither-slack (H. W. Robinson).

**Goldcrest**, *Regulus regulus*.—Our resident birds of this species suffered very badly from the severe weather conditions of early 1917. Mr. A. Astley says the same of his district, where it is now picking up in numbers again.

**Great Grey Shrike**, *Lanius excubitor*.—Mr. A. Astley saw a Great Grey Shrike at Loughrigg Tarn, Langdale, in November, 1915. One was shot at Ambleside two years ago.

**Waxwing, *Ampelis garrulus*.**—The winter of 1921-22 was characterised by a great visitation of Waxwings to Britain. Several flocks of 30 to 40 birds were seen near Carlisle, and it is to be regretted that many were ruthlessly slaughtered. A single bird took up its residence in some large hawthorns, in Chiswick Street, Carlisle, near the heart of the City, from March 22nd to 24th. A single bird was seen by the writer on March 26th, in his garden, at Stanwix.

**Lesser Whitethroat, *Sylvia curruca*.**—The Lesser Whitethroat was regarded by Macpherson as a rare bird in Lakeland, but it may have been overlooked. At the present time (1922) the species is well represented around Carlisle. Mr. Geo. Bolam reports it nesting at Alston, in 1916, and successive years. Mr. F. H. Day found it nesting near Carlisle in 1920-21 and 22, where also Mr. B. Johnston and Mr. E. Blezzard have met with nests. Mr. A. Astley had no record of it for Ambleside before 1920, where a pair nested in that and successive years.

**Garden Warbler, *Sylvia simplex*.**—Macpherson thought that the Garden Warbler was less common than the Blackcap throughout Lakeland. Mr. A. Astley says that Garden Warblers far outnumber Blackcaps in his district, and our experience in both Penrith and Carlisle districts confirms his opinion.

**Grasshopper Warbler, *Locustella naevia*.**—This Warbler is much less common in the Carlisle district than twenty years ago when it could be heard in several favoured localities in the summer months. Mr. A. Astley, on the other hand, says it was unknown in the Ambleside neighbourhood until 1921, when a pair nested on the margin of Elterwater Tarn.

**Yellow-browed Warbler, *Phylloscopus superciliosus*.**—At 7-30, on the morning of October 14th, 1920, Mr. W. Nichol, of Skinburness, saw a small bird sitting on a stake-net in the River Waver, between Grune Point, Skinburness, and Cardurnock. He had difficulty in making it rise, and observed it carefully at a few yards distance. He saw clearly *two yellow bars on the wing* and the light eye stripe.

**Song Thrush, *Turdus musicus* and *T. m. clarkii*.**—In "British Birds," Vol. xv., page 209, Mr. A. Astley notes the occurrence

of the continental or type form of the Song Thrush at Ambleside. Few observers, as yet, distinguish the continental from the British form, but it probably occurs over the whole area.

**Redbreast**, *Erithacus rubecula melophilus*.—Although such a common and well-known bird, it is seldom that any variation of plumage is noted in the Redbreast. A beautiful albino was seen for many weeks during summer and autumn of 1922, near Carlisle. The breast had a pale rosy tinge.

**Pied Flycatcher**, *Musicapa atricapilla*.—Mr. H. W. Robinson records in "British Birds," Vol. ix., page 121, a large increase in this species (1915). Cumberland does not appear to be quite so attractive to the Pied Flycatcher, which is somewhat local in its distribution.

**Great Spotted Woodpecker**, *Dryobates major*.—All competent observers throughout the area agree that the Great Spotted Woodpecker is steadily increasing in numbers. There is scarcely a suitable locality in the whole of Lakeland where it has not become a resident.

**Green Woodpecker**, *Picus viridis*.—During recent years the Green Woodpecker has nested in central Lakeland. Mr. A. Astley says a pair came to the Windermere district in 1919, and has nested each year since.

**Wryneck**, *Inyx torquilla*.—On June 27th, 1909, Mr. Jas. Smith, of Drumburgh, picked up dead by the railway side, probably killed by telegraph wires, an adult female Wryneck, which from the condition of its underparts had been incubating. In "British Birds," Vol. xiv., page 43, Rev. E. U. Savage reports that a Wryneck was seen in Dallam Tower Park, Westmorland, on April 4th, 1920.

**Hoopoe**, *Upupa epops*.—On October 6th, 1913, whilst shooting rabbits in a turnip field, at Blitterlees, near Sillioth, Mr. J. Slack shot a female Hoopoe. In April, 1894, a fine Hoopoe, also a female, was shot on Drumburgh Moss. (The latter is mentioned by Macpherson in the Victoria History of Cumberland).

**Scops Owl**, *Otus scops*.—In Vol. ii., page 100, of "British Birds," is recorded the shooting of a Scops Owl, at Broomrigg, near Armathwaite, by Capt. W. H. Parkin, on November 6th, 1907.

**Golden Eagle, *Aquila chrysaetus*.**—During the winter of 1920-21, more than one Golden Eagle spent some time at the northern end of the Pennines, but chiefly within the borders of Northumberland. On October 15th, 1920, Mr. W. Nichol, of Skinburness, saw an Eagle pursued by a party of Rooks, to which it paid little attention, it flew slowly across the Solway in a North-westerly direction. Mr. Nichol thought that it was a Spotted Eagle, but though he is such a good observer, the specific identity of the bird could hardly be determined.

**Common Buzzard, *Buteo buteo*.**—Mr. J. F. Peters, Windermere, informs me that the Buzzard has increased in numbers since 1914 (a fact we find shared by a few other species, owing to less persecution during the war), and that more pairs have resorted to the ancestral habit of nesting in trees. The usual clutch of eggs for the Buzzard in the Lake district is three, but the writer has seen four, and Mr. Peters says that in 1909 he saw a clutch of five, and three eyries with four eggs.

**Sparrow Hawk, *Accipiter nisus*.**—In 1920, Mr. T. L. Johnston found a pair of Sparrow Hawks had built their nest on the top of an old Magpie's nest in a hawthorn bush, near Drumburgh.

**Hobby, *Falco subbuteo*.**—An immature male Hobby was shot at Melkinthorpe, Westmorland, on August 25th, 1899. Rev. H. A. Macpherson afterwards procured this bird for Carlisle Museum.

**Cormorant, *Phalacrocorax carbo*.**—During recent years the Cormorant has been almost a pest on the River Eden during the greater part of the year. On the lakes, according to Mr. A. Astley and Miss M. Garnett, it has become too numerous to be welcome. It has extensive breeding haunts on the Scottish side of the Solway.

**Gannet, *Sula bassana*.**—The occurrence of the Gannet on the inland waters of our area is so exceptional that the fact that Mr. Peters saw one fishing in the deeper waters of Lake Windermere, on June 7th, 1914, is of more than passing interest.

**Grey Geese**, *Anser sp.*.—Wild Geese, grey or black, seldom visit the interior of Lakeland, except when flying high over on passage. Miss Marjory Garnett, however, saw a goose, probably a Pink-footed Goose, on March 11th, 1920, in a field near Lake Windermere. On January 5th, 1917, Mr. D. G. Garnett saw eight Grey Geese on Windermere.

Two species of grey visit the Solway Marshes in great numbers—the Pink-footed and Grey Lag Geese; whilst two other British species are now very much in the minority—The Bean and White-fronted. In 1914 a beautiful albinistic Pink-footed Goose of a creamy colour was killed on Rockcliffe Marsh; whilst a similar variety of the Bean Goose was obtained on the same marsh in January, 1916.

**Snow Goose**, *Chen hyperboreus nivalis*.—Four or five Snow Geese frequented the Solway Firth during the winter of 1920-21. Two or perhaps three of these were obtained. One shot on the River Dee, on February 18th, proved to be an immature Greater Snow Goose. On November 13th, 1921, Mr. Jas. Storey, of Anthorn, near Bowness-on-Solway, wrote that he had seen a skein of Snow Geese on that day. Mr. Storey is a good observer, a life-long wildfowler, and knows his birds. In September of 1922, Miss S. Mounsey-Heysham reported that two white Geese, with some dark colour on the wing ends were with a flock of Pink-footed Geese on Rockcliffe Marsh. Mr. T. L. Johnston, who saw one of these birds with a flock of Pink-footed Geese on the same marsh, on the 13th of October, has no doubt that it was a Snow Goose.

**Red-breasted Goose**, *Branta ruficollis*.—After the foregoing records, and the positive evidence of the visitations of Snow Geese to the Solway, one is not surprised to hear of the visit of a Red-breasted Goose, and especially when such a good and reliable observer as Mr. W. Nichol is the recorder. Mr. Nichol says: "I saw a Red-breasted Goose in company with Barnacles, on Long Newton Marsh, in November, 1918." Mr. Nichol's knowledge of the ducks and geese of the Solway is unequalled.

**Whooper Swan, *Cygnus cygnus*.**—Both Miss Marjory Garnett and Mr. A. Astley record small and large parties of Whoopers passing over Windermere and Langdale in winter. Mr. Astley saw a flock of about thirty birds over the latter place in November 30th, 1917. Miss Garnett saw a flock of twenty-two fly down the lake on March 24th, 1922.

**Bewick's Swan, *Cygnus bewicki*.**—On the 17th of November, 1921, the writer watched at a distance of twenty yards two adult Bewick's Swans on the River Eden. They spent the greater part of that day within the boundaries of the City of Carlisle, but were wild and restless. Two Bewick's Swans were reported by Miss M. Garnett on Lake Windermere from February 26th to March 8th, 1922.

**Wigeon, *Mareca penelope*.**—In 1922 a pair of Wigeon nested on an inland lough near Carlisle. Mr. T. L. Johnston saw both adults and young, but failed to locate the nest. In 1921, he also saw a pair of these ducks at the same place, where they possibly nested. He saw the male alone during the nesting season, when the female was possibly incubating.

**Pintail, *Dafila acuta*.**—The Pintail is a much more common duck on the Solway at the present time than it was at the date of publication of the "Fauna of Lakeland," a fact which may be partly attributed to the successful hand-rearing of the species at Netherby by Sir Richard Graham. Three pairs nested on Bowness Flow in June, 1917, but it does not seem to have spread. Mr. T. L. Johnston says this duck was numerous on the Solway during the winter of 1916-17.

**Tufted Duck, *Nyroca fuligula*.**—Macpherson's opinion that this duck would be found nesting in Lakeland sooner or later has been fully justified. Two pairs nested near Carlisle in 1922, as recorded by Mr. F. H. Day in "British Birds," Vol. 16, page 109. Mr. T. L. Johnston saw a pair of Tufted Ducks on a sheet of water near Carlisle, in May, 1911, but through an accident was not able to continue observations that year. In 1912, he again saw a pair on the same lough, and later in the year saw the adults with their brood. The writer saw both the pairs of birds which nested near Carlisle in

1922, one nesting site was, to his knowledge, occupied at least three years before the locating of the nest in 1922. Miss Garnett and Mr. Peters both state that this duck was the commonest diving duck on Windermere for many years, being only rivalled by the Goldeneye. Mr. Peters saw a nest and six eggs by a tarn near Windermere, in 1914. It continues to nest in the same locality. Two pairs nested on a mountain tarn in North Westmorland, in 1920 (Rev. E. U. Savage, B.B., Vol. xvi., page 167).

**Long-tailed Duck, *Clangula hyemalis*.**—Visits of the Long-tailed Duck to the Lakes or inland waters of Lakeland are far from common, but it is a regular winter visitor to the Solway. Mr. A. Astley says that a single Long-tailed Duck, a female, was seen and watched for an hour on Windermere, on November 10th, 1922. Hardy, of Ambleside, has a pair stuffed, which he shot on Windermere years ago. These appear to be the only records for central Lakeland.

**Velvet Scoter, *Oedemia fusca*.**—The occurrence of the Velvet Scoter on the Solway is so frequent as to call for no special comment. Its visits to the inland waters and lakes have also been more frequent in late years. Four were seen by Rev. E. U. Savage on the River Kent, near Levens Bridge, on January 31st, 1917. One was shot on Windermere by T. Battersby on February 24th the same year, and another by the same person on November 14th, 1918. Two were seen on Foulshaw Moss, January 1st, 1918, by Rev. E. U. Savage. Two were seen near Sampool, River Kent, on November 2nd, 1919. Four were seen on Windermere on May 22nd, 1920, by Mr. J. F. Peters, a very unusual date for the occurrence of this species on the lakes. Two were seen on Windermere, November 25th, 1921; and one, a female or immature male, on Windermere, November 22nd to December 2nd, 1922, by Miss M. Garnett.

**Heron, *Ardea cinerea*.**—It is pleasing to record that in the centre of Lakeland, by the side of one of its loveliest lakes, a long extinct Heronry has been revived. Mr. A. Astley states that in 1918 a single pair nested, and in 1921 the colony consisted of four pairs.

**Bittern**, *Botaurus stellaris*.—In January, 1922, Sir Richard Graham, of Netherby, saw a Bittern on one of his duck ponds. It was not molested, but a few days later, January 9th, he found the bird amongst reeds in an exhausted condition, from which it did not recover. He presented the bird, which proved to be an adult male, to the Carlisle Museum. In December, 1921, another Bittern was killed at Windermere.

**Glossy Ibis**, *Plegadis falcinellus*.—Mr. T. Lightfoot, of Carlisle, partridge shooting in the early morning of September 16th, 1921, flushed a strange bird from a roadside duck-pond, at Moorhouse, Carlisle. The temptation to shoot was too great and the first recorded Glossy Ibis for Cumberland was secured. It was an adult in winter dress, and eventually was presented by Mr. T. F. Marriner to the Carlisle Museum.

**Stone Curlew**, *Oediconemus oediconemus*.—On March 27th, 1909, Mr. D. Losh Thorpe saw a Stone Curlew standing on a small islet near the junction of the Rivers Caldew and Eden, at Carlisle. He immediately returned home for his binoculars, but on his return the bird flew on to the "Sauceries" adjoining the Public Park. He had a good view of it. On March 18th, 1922, Mr. W. Nichol saw the second Cumberland Stone Curlew on Long Newton Marsh.

**Green Sandpiper**, *Totanus ochropus*.—The nesting of the Green Sandpiper in Westmorland is recorded in "British Birds," Vol xi., page 103, by Mr. H. W. Robinson and Rev. E. U. Savage.

**Dotterel**, *Eudromias morinellus*.—Dunlop, referring to the Dotterel, in 1913, in Lakeland, says: "It still breeds in our mountains." Mr. J. F. Peters, in 1923, repeats this assertion, and produces proof in the shape of a photograph of nest and eggs taken May 27th, 1922.

**Common Gull**, *Larus canus*.—A pair of Common Gulls nested on Long Newton Marsh, at the estuary of the River Wampool, in 1914. Mr. Jas. Storey and Mr. T. L. Johnston saw the birds first on the 30th of May, and located the nest. A few days later the writer photographed the nest and eggs, both were typical. This is the first record for the nesting of this Gull on the Southern side of the Solway Firth.

**Herring Gull, *Larus argentatus*.**—Although the Herring Gull has been noticed during the last twenty years on Bowness Flow during nesting time, it has never been abundant. About four pairs nest there, and they do not seem to increase. Mr. T. L. Johnston has located nests during the past three or four years. A few pairs also nest in the colony of Lesser Black-backed Gulls, at Foulshaw.

**Great Black-backed Gull, *Larus marinus*, and Lesser Black-backed Gull, *Larus fuscus affinis*.**—There is a small colony of the Great Black-backed Gull on the Cumberland side of the Solway. It has not increased during the last twenty years, and near to it, what was once a flourishing colony of Lesser Black-backs, has been sadly depleted by egg collectors, and by the people for food. Mr. H. W. Robinson records a pair of Great Black-backs nesting in South Westmorland ("British Birds," Vol. xvi., page 139), also a new colony of Lesser Black-backs near Carnforth. The writer found the nest of a pair of the lesser species on Burgh Marsh, on May 13th, 1922. Odd nests of this Gull have now been found on all the grass marshes of the English Solway. In winter our British Lesser Blackbacks generally move southward, and birds marked in Westmorland have been noted through the "British Birds" marking scheme as far South as Cadiz, and on the Mediterranean side of Spain, at Valentia.

**Glaucous Gull, *Larus glaucus*.**—Miss M. Garnett saw an immature Glaucous Gull in company with Herring Gulls, near Windermere, from January 30th to February 3rd, 1922. It was in the snowy dress of a bird passing into maturity. On March 28th, 1922, Mr. J. Storey shot a Glaucous Gull, an immature male, near Anthorn. It was in advanced immature dress showing few of the pale, brownish feathers of the young bird.

**Sabine's Gull, *Xema sabini*.**—The second recorded Cumberland example of this beautiful small Gull was obtained by Mr. J. Storey, at Anthorn, Bowness, on October 8th, 1921; an immature male in the dress of the first year. It could fly, but was literally covered above and below by a sticky mixture of oil and tar, as many sea birds were at this time.

**Little Tern**, *Sterna minuta*.—There are several thriving colonies of Little Terns in the County of Cumberland, but it seldom occurs inland even on migration ; one was obtained at Sizergh Castle, Westmorland, in September, 1917. Two were seen on Windermere, on September 8th, 1918, by Mr. J. F. Peters.

**Great Skua**, *Catharacta skua*.—Up to the date of the " Fauna of Lakeland," the Great Skua had been obtained on the Solway once, recorded by T.C. Heysham, in 1833, and Macpherson had never handled a local example in the flesh. The second example was obtained at Silloth by W. Nichol, on April 8th, 1908, an immature female. A third example was picked up dead on the Solway Coast, near the viaduct, by Water Bailiff J. Poole, on September 24th, 1914, and proved to be an immature male. Another, a nearly adult female, was sent to Carlisle Museum by Mr. J. Storey, who found it near Anthorn, on June 12th, 1913.

**Buffon's Skua**, *Stercorarius longicaudus*.—An adult male Buffon's Skua was shot by Mr. J. Storey, near Anthorn, Bowness, on October 10th, 1919. It was in perfect plumage, except that the two long central tail feathers, from which it takes its specific name, were missing. The Rev. E. U. Savage found the remains of an adult Buffon's Skua on the beach at Drigg, on June 11th, 1914.

**Common Guillemot**, *Uria troile*.—The Common Guillemot occasionally wanders, or is blown inland, by gales. One was shot on Windermere, on December 26th, 1919. On the 7th of May, 1922, Mr. Moore Kitchen picked up dead, on the shore at Allonby, a very good example of the variety known as the " Ringed or Bridled " Guillemot.

**Storm Petrel**, *Thalassidroma pelagica*, and **Leach's Petrel**, *Oceanodroma leucorhoa*.—As in Macpherson's time, the Storm Petrel, the smaller of the two dark coloured Petrels which visit the Solway, continues to be the less frequent visitor.

Mr. H. W. Robinson saw two near Carnforth, in October, 1917, following a " wreck " of the species that month, and Mr. W. Nichol picked up the remains of one which had been eaten by some carnivore on the beach at Silloth, on November 5th, of the same year. One, an adult female, was picked

up in a dying condition on the Wigton Road, near Carlisle, on October 18th, 1918. Mr. Moore Kitchen, of Allonby, found one washed up on the beach at Allonby, on October 8th, 1918, and Mr. J. F. Peters saw one on Windermere, on November 8th, 1913.

A Leach's or Fork-tailed Petrel, which flew against the leg of Mr. Walter Sutton when standing in Scotland Road, Carlisle, proved on dissection to be a male. This occurred on November 17th, 1908.

**Frigate Petrel**, *Pelagodroma marina hypoleuca*.—It has now been established by Messrs. Witherby & Lowe that the Cumberland example of the White-faced or Frigate Petrel found dead on Walney Island, November, 1890, is the more Northern form, *P. m. hypoleuca*, ranging to the Canary Islands.

**Manx Shearwater**, *Puffinus puffinus*.—Amongst the derelicts washed up on the shore at Allonby, Mr. Moore Kitchen has found several Manx Shearwaters. Three of these which he presented to Carlisle Museum, the dates are May 9th, 1915 (two), and August 2nd, 1922.

**Fulmar Petrel**, *Fulmarus glacialis*.—The Fulmar is far from being a common visitor to the Solway, but Mr. M. Kitchen has picked up two or three on the beach at Allonby. One was found in October, 1917; he had previously found the decomposed remains of another. The Rev. E. U. Savage found one washed up dead at Drigg, on June 15th, 1914.

**Great Northern Diver**, *Colymbus immer*.—The largest of the three local divers is a fairly frequent winter visitor to the Lakes. Mr. Peters records several between 1916 and the present winter, particularly in 1916, when three were present between December of that year and January, 1917.

**Black-throated Diver**, *Colymbus arcticus*.—Miss M. Garnett saw a Black-throated Diver on Windermere, on February 10th 1922. On January 9th, 1915, T. Battersby shot a female bird of this species on Windermere and another on January 6th, 1920.

**Red-throated Diver**, *Colymbus stellatus*.—A bird of this species was shot on Windermere, on February 24th, 1910, and erroneously recorded as a Black-throated Diver (B.B., Vol. XI., page 189).

Rev. E. U. Savage saw a Red-throated Diver on Ullswater, near Pooley Bridge, on May 7th, 1919, and Miss M. Garnett saw one on Windermere, on March 10th and 11th, 1922.

**Great Crested Grebe, *Podiceps cristatus*.**—The Great Crested Grebe was first found nesting in the lake district in 1908, by Mr. J. F. Peters. In 1922, he saw four nests with eggs on the same tarn (which shall be nameless). It nests in more than one place, and is probably more numerous than is generally supposed.

**Red-necked Grebe, *Podiceps griseigena*.**—On February 14th, 1922, Mr. M. Kitchen picked up an adult female Red-necked Grebe on the beach at Allonby.

**Black-necked Grebe, *Podiceps nigricollis*, and Slavonian Grebe, *Podiceps auritis*.**—A female Black-necked Grebe was shot on Windermere, on January 8th, 1918 (D.G.G.) "British Birds," Vol. XII. page 22. Another was picked up at Allonby, on February 14th, 1922 (same day as the Red-necked Grebe). A Slavonian Grebe, in immature dress, was shot on Windermere, on December 19th, 1914 (D.G.G.).

**Turtle Dove, *Streptopelia turtur*.**—This small Dove has nested frequently near Carlisle in recent years, notably at Floriston. In May, 1919, Mr. A. Sutton showed the writer a nest with two eggs near Scotby, where we also saw the birds. The writer has reason to believe that it bred in the Nature Reserve of Kingmoor in 1916. Mr. T. L. Johnston saw a single bird at Anthorn, on May 18th, 1919, and the Rev. E. U. Savage saw one in the Kent Valley in mid-June, 1919.

**Quail, *Coturnix coturnix*.**—During and since Macpherson's time, the Common Quail has not been much in evidence in Lakeland, either as a nesting species or on migration. One was seen at Sampool, South Westmorland, during the last week of October, in 1920 (Rev. E. U. Savage).

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**Osprey, *Pandion haliaetus*.**—Since going to press, Miss S. Mounsey-Heysham has reported to me the occurrence of an Osprey near Lynefoot, on May 16th, 1923. This bird had apparently frequented the estuary of the river Esk for sometime, and finally fell a victim to the zeal of a cottager in protecting his hen coops.

It is an adult female.

# THE LEPIDOPTERA OF CUMBERLAND.

## PART III. (MOTHS).

(CONTINUED FROM VOL. II., PAGE 183).

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BY GEORGE B. ROUTLEDGE, F.E.S.

(Read December 7th, 1922).

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Owing to the limited space at my disposal, I am unable to give as full details of localities, etc., as in the former parts of this Catalogue of the Lepidoptera of Cumberland. With some of the more abundant species, localities are omitted altogether, and it may be taken that such species have been found freely throughout the County. Species which are scarce, or of more restricted range, are treated in more or less detail. As in former lists, full use has been made of the work of the late Mr. T. C. Heysham (published in *Stephen's Illustrations*), whose records have been found by local naturalists to be entirely reliable, and, dating as they do to the early half of last century, have a historical interest well worth preserving. Advantage has been taken of Mr. H. A. Beadle's *List of Keswick and District* (published in the Ent. Record, 1895, Vol. vi. p.p. 276-283), and of Mr. F. H. Day's article in the *Victoria History of Cumberland* (1900). Various members of the Society have also contributed notes—the Rev. H. D. Ford, of Thursby, from the Carlisle District; and Mr. H. Britten, from the Parish of Great Salkeld. I have also consulted the lists in the *Cumberland and Westmorland Association's Transactions*, 1881-1883, compiled by George Dawson and George Mawson.

The order and arrangement followed is that of South's *Synonymic List* (and as given in the *Victoria History*), and the nomenclature that of South's *British Moths*, Vol. ii.

There are 203 species of *Geometrae* recorded as having occurred in the County. The following species recorded in *Stephen's Illustrations*, 1828-34, have not been met with since:—*Ephyra annulata*, *E. orbicularia*, *Leptomeris strigilaria*, *Semiothisa notata*,

The following species recorded from the County are not recorded from the mainland of Scotland:—*Angerona prunaria*, *Hygrochroa syringaria*, *Ennomos fuscantaria*, *Apocheima hispidaria*, *Boarmia abietaria*, *B. roboraria*, *Geometra vernaria*, *Ephyra annulata*, *E. orbicularia*, *Hyria muricata*, *Asthena testaceata*, *A. blomeri*, *Euchoeca oblitterata*, *Acidalia ornata*, *A. immutata*, *A. strigilaria*, *Bapta bimaculata*, *Selidosema ericetaria*, *Aspilates ochrearia*, *Eupithecia pusillata*, *E. dodoneata*, *Lobophora sexalidata*, *Xanthorhoe unangulata*, *Coremia quadrifasciaria*, *Eucosmia certata*, *Euphyia picata*, *Lygris reticulata*, *Mesotype virgata*.

Recorded from the Isle of Arran:—*Angerona prunaria*, *Acidalia immutata*, *Selidosema ericetaria*.

Doubtfully recorded from Scotland:—*Nemoria viridata*, *Hemithea strigata*.

Local or rare in Scotland:—*Pachys strataria*, single record from Thornhill, Dumfries; *Hemerophila abruptaria*, one from Stenhouse, Kincardineshire; *Ephyra porata*, local; *Asthena luteata*, local; *Acidalia interjectaria*, uncommon; *Bapta temerata*, one from Corsemalzie, Wigtownshire; *Eupithecia expallidata*, Perthshire and Aberdeenshire, rare; *Triphosa dubitata*, in the south, rarely met with.

### GEOMETRAE.

**Ourapteryx sambucaria**, L. Not uncommon in July and August throughout the County. "Sparingly in most of the woods in the vicinity of Carlisle" (Heysham, Steph. Illust., iii., p. 32). Keswick (G. Wailes, Steph. Illust. iii., p. 175), and (Beadle, Ent. Rec., xiv., p. 206).

**Epione parallelaria**, Schiff. "Flosches," near Durdar (Heysham, Steph. Illust., iii., p. 204). Carlisle district (G. Dawson). West Cumberland, rather rare (Mawson).

**E. apiciaria**, Schiff. Local and not common, Hayton and Hayton Moss (Routledge). Carlisle (Day). Nealehouse near Thursby (Heysham, Steph. Illust., iii., p. 204). Great Salkeld

(Britten). Keswick, not rare (Beadle, Ent. Rec., xiv., p. 206). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61).

**Opisthograptis luteolata**, L. Common in May and June in lanes and hedges. "Pretty common in the hedges about Carlisle," (Heysham, Steph. Illust., iii., p. 174).

**Venilia maculata**, L. Great Wood at Keswick, "ground colour of a purer yellow (not inclining to orange), spots blacker than southern specimens" (Beadle). In several woods at Keswick (Beadle, Ent. Rec., xiv., p. 206). Seathwaite (M. C. Dixon, Ent. Rec., xiv., p. 49). Keswick (Barrett's Brit. Lep., vi., p. 355). Scale Hill Wood near Lorton (Mawson). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61).

**Angerona prunaria**, L. Keswick (Mawson). Has not been noticed in other parts of the County. No records from the mainland of Scotland. Recorded from the Isle of Arran.

**Metrocampa margaritaria**, L. Common in woods in July and August. Rockcliffe, Davidson's Bank, near Carlisle, &c. (Heysham, Steph. Illust., iii., p. 176).

**Ellopiopsis prosapiaria**, L. Not uncommon in fir woods throughout the County. Great Orton (Heysham, Steph. Illust., iii., p. 177).

**Eurymene dolabraria**, L. Not common. Five specimens near to Dalston Low Mill (Dawson). Orton (T. Gilbertson). Great Corby and Heads Nook (Thwaytes). One specimen at Castlecarrock, June 3rd, 1909 (Routledge, Entom., xlii., p. 185). Barron Wood (Heysham, Steph. Illust., iii., p. 206). Great Salkeld, three specimens (Britten). Keswick (W. Greenip). Seathwaite (Thwaytes). West Cumberland, uncommon (Mawson). One specimen recorded from Darlington, Durham, and one at Meldon Park, Northumberland. Occurs at Killin, Perthshire (Entom., xlviii., p. 63).

**Hygrochroa (Pericallia) syringaria**, L. Not common. Carlisle (Armstrong, Ent. W. Int., viii., p. 30). Great Corby (Thwaytes). Carlisle and Hayton (Routledge). Newbiggin Wood, rare (Day). Woodside, near Wreay (Heysham, Steph. Illust., iii., p. 172). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 100). No records from Scotland.

- Selenia bilunaria**, Esp. Sparingly in most districts. Rockcliffe (Heysham, Steph. Illust., iii., p. 169). Var. **juliaria**, Haw. Summer brood, occurs occasionally. Upperby and Dalston Vale (Heysham, Steph. Illust., iii., p. 327).
- S. lunaria**, Schiff. Rare. Carlisle (Dawson). Blackwell and Bunkers Hill (Day). Thursby (Ford). Hayton (Routledge). "Nettleton" (Netherton) between Brisco and Durdar (Heysham, Steph. Illust., iii., p. 169). Barron Wood (R. Cartmel, "Substitute," 1856, p. 43). Keswick (Beadle). Derwentwater (Marshall, Entom., vi., p. 242). Cockermouth (Robinson, Ent. W. Int., ix., p. 61). West Cumberland, scarce (Mawson).
- S. tetralunaria**, Hufn. Rare. Carlisle (Dawson). Barron Wood, under **S. illustraria**, Hb. (Heysham, Steph. Illust., iii., p. 185). Keswick (Beadle). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 86). Occurs more commonly in our southern counties. Rare in Scotland.
- Gonodontis bidentata**, Clerck. Occurs in most districts in fair numbers. No records of ab. **nigra**, Prout.
- Crocallis elinguaris**, L. Not uncommon in most districts. Durdar (Heysham, Steph. Illust., iii., p. 162). Cumberland (Barrett's Brit. Lep., vii., p. 77).
- Ennomos erosaria**, Bork. Rare. Carlisle and Great Corby (Thwaytes). Thursby (Ford). Penrith and Great Salkeld (Britten). Keswick (Beadle, Ent., Rec., xiv., p. 206). West Cumberland, rather scarce (Mawson). Occurs more frequently in our southern counties; also recorded from the South of Scotland.
- E. alniaria**, L. Carlisle (Dawson). Thursby (Ford). Cummersdale (Heysham, Steph. Illust., iii., p. 165). Great Corby (Thwaytes). Hayton, one specimen, September, 1891 (Routledge). Great Salkeld, scarce (Britten). West Cumberland, rare (Mawson). Cumberland, scarce (Barrett's Brit. Lep., vii., p. 63).
- E. fuscantaria**, Haw. West Cumberland, scarce (Mawson). Occasionally found in Cumberland (Barrett's Brit. Lep., vii., p. 67). Found in the South of England, and extends northwards to Durham and Northumberland. Apparently unknown in Scotland.

- E. quercinaria**, Hufn. Thursby (Ford). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 74). Occurs more frequently in the South of England ; extends to Scotland.
- Himera pennaria**, L. Common and easy to find after dark by searching with a lantern. Black Hall Woods (Heysham, Steph. Illust., iii., p. 161). Cumberland (Barrett's Brit. Lep., vii., p. 81).
- Phigalia pedaria**, Fab. Larvae usually more abundant than the perfect insects in most districts. Armathwaite (Heysham, Steph. Illust., iii., p. 327).
- Apocheima (Nyssia) hispidaria**, Fab. Rare. Carlisle, one taken in March, 1892 (C. Eales, Ent. Rec., iii., p. 125). Thursby (Ford). Lazonby (Britten). Keswick (Greenip). West Cumberland, rare (Mawson). Rare in Westmorland, and not recorded from Scotland.
- Lycia (Biston) hirtaria**, Clerck. Thursby (Ford). Keswick, uncommon (Greenip). West Cumberland, not uncommon (Mawson). Cumberland, rarely taken (Barrett's Brit. Lep., vii., p. 123 ; South's Brit. Moths, ii., p. 300).
- Pachys (Amphidasys) strataria**, Hufn. Not common. Rickerby Park, Kingmoor, Newbiggin Woods (Dawson). Heads Nook (Routledge and Thwaytes). Cummersdale (Heysham, Steph. Illust., iii., p. 327). Kingmoor and Barron Wood (Day). Keswick, rare (Beadle). West Cumberland, rather uncommon (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 127). Only a single record in Scotland from Thornhill, Dumfries.
- P. betularia**, L. Moderately common, type form prevailing. Cummersdale, Orton, &c. (Heysham, Steph. Illust., iii. p. 159). The black form, ab. **doubledayaria**, Mill., is seldom found. Carlisle, one bred in 1895 (Leighton). Great Corby, 1911 (Thwaytes). Flimby Wood (Swainson). Keswick and Penrith (H. A. P. Mawson, Entom., xxxii., p. 49). The first record in England of the black variety was between 1848 and 1850 ; and the first record for Westmorland in 1870 (Entom., xxxiv., p. 215).

- Hemerophila abruptaria**, Thunb. Rare at Keswick (Greenip, Ent. Rec., vi., p. 281). One record from Kincardineshire, Scotland.
- Cleora jubata**, Thunb.; **glabraria**, Hb. Local. Barron Wood, July 25th, 1856 (Armstrong, Ent. W. Int., ii., p. 5). Barron Wood and Newby Cross, under **C. teneraria**, Hb. (Heysham, Steph. Illust., iii., p. 327). Barron Wood (J. B. Hodgkinson, Ent. W. Int., vi., p. 156). Barron Wood (Day and Dawson). Keswick, rare (Beadle). Cumberland (South's Brit. Moths, ii., p. 312; Barrett's Brit. Lep., vii., p. 171).
- C. lichenaria**, Hufn. Orton Moss (Heysham, Steph. Illust., iii., p. 182). Durdar (Day). Gelt Wood (Routledge). Keswick (Greenip). West Cumberland, rather scarce (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 126). Caterpillar feeds on lichens on trees.
- Boarmia repandata**, L. Found in all localities in the County. Heskett Moss (probably Tarn Wadling) (Heysham, Steph. Illust., iii., p. 201). Ab. **destrigaria**, Haw. Hayton, Hayton Moss, &c. (Routledge).
- B. gemmaria**, Brahm. Found in all localities. Ab. **perfumaria**, Newman. The dark slaty grey form, not uncommon, Hayton Castlecarrock, &c. (Routledge).
- B. abietaria**, Schiff. Newbiggin, Newby Cross, Orton (Dawson). West Cumberland (Mawson). Occurs mostly in the South of England, and more rarely in Gloucestershire and Monmouthshire. Repton district of Derbyshire (Entom., xlix., p. 142). Not recorded from Scotland.
- B. roboraria**, Schiff. Mr. C. G. Barrett records one specimen which he had seen from Cumberland (Barrett's Brit. Lep. vii., p. 199). Perhaps a doubtful record (Cumberland), no precise locality being given, confirmation wanted. No records from Scotland.
- Tephrosia bistortata**, Goeze; **crepuscularia**, Dup. Keswick (Greenip, also recorded by G. Wailes, Steph. Illust., iii., p. 192). Beadle records that at Keswick "it is very common in the larch woods in April and May, and very variable; some specimens are suffused with leaden grey with few marks, others are very richly marked, some being very brown,

others grey, there is also a banded form " (Ent. Rec., xiv., p. 206). Portinscale, near Keswick (H. A. P. Mawson, Entom., xxxii., p. 137). Barron Wood (Heysham, Steph. Illust., iii., p. 328). West Cumberland, rather rare (Mawson).

**T. crepuscularia**, Hb.; **biundularia**, Esp. Not uncommon. Orton, Durdar (Day). Carlisle (Ford). Hayton, Hayton Moss, &c. (Routledge). Lazonby (Britten). Barron Wood (Heysham, Steph. Illust., iii., p. 328). Keswick (G. Wailes, Steph. Illust., iii., p. 191). Portinscale, near Keswick (H. A. P. Mawson, Entom., xxxii., p. 137). Scale Hill (Wilkinson, Ent. Rec., xix., p. 212). West Cumberland, plentiful (Mawson).

**T. punctularia**, Hb. Occurs not uncommonly at Lazonby (Britten). Barron Wood (Steph. Illust., iii., p. 193). Keswick, rare (Beadle). West Cumberland, scarce (Mawson).

**Gnophos obscurata**, Hb. Barron Wood (Heysham, Steph. Illust., iii., p. 266). On Barrow Mountain, near Keswick (Beadle). West Cumberland rare (Mawson). St. Bees (Barraud), Entom., xl., p. 56).

**Pseudoterpna pruinata**, Hufn. Found near furze and broom, not uncommon. Cobble Hall, near Carlisle, and Durdar (Heysham, Steph. Illust., iii., p. 180). Cumberland (Barrett's Brit. Lep., vii., p. 281).

**Geometra papilionaria**, L. Carlisle district (Ford). Carlisle, Durdar, Orton, Kingmoor (Day). Woods near Newbiggin, Rockcliffe, &c. (Heysham, Steph. Illust., iii., p. 178). Walton, Hayton Moss (Routledge). Keswick (G. Wailes, Steph. Illust., iii., p. 178). Fairly abundant at Portinscale (Beadle). West Cumberland, rather plentiful (Mawson).

**G. vernaria**, Hb. Orton (Barrett's Brit. Lep., vii., p. 287). West Cumberland, rather uncommon (Mawson). One specimen at Higham, near Bassenthwaite in 1900. (O. Whittaker, Entom., xxxiii., p. 356). Not recorded from Scotland.

**Nemoria viridata**, L. On some of the mosses in Cumberland (Barrett's Brit. Lep., vii., p. 92; South's Brit. Moths, ii., p. 107). Barron Wood (Heysham, Steph. Illust., iii., p. 316). Only doubtfully recorded from Scotland.

- Iodis lactearia**, L. Common in some districts, rare in others, a woodland species. Barron Wood (Heysham) and Keswick (G. Wailes, Steph. Illust., iii., p. 317) under **Chlorissa putataria**, Esp. Near Bassenthwaite (Whittaker, Entom., xxxiii., p. 356). West Cumberland, plentiful (Mawson).
- Hemithea strigata**, Müll. Keswick (Greenip). Cumberland (Barrett's Brit. Lep., vii., p. 303). Its occurrence in Durham, Northumberland and Scotland, is doubtful.
- Ephyra porata**, L. Found in woods in Cumberland (Barrett's Brit. Lep., vii., p. 308; South's Brit. Moths, ii., p. 136). Rare in Scotland.
- E. punctaria**, L. Carlisle district (Ford). Orton, Wreay, Durdar (Day). Hayton, Hayton Moss in June, rare (Routledge). West Cumberland, scarce (Mawson).
- E. annulata**, Schulze; **omicronaria**, Hb. Great Orton (Heysham, Steph. Illust., iii., p. 199). Recorded from Yorkshire, where it is far from rare. No records from Scotland.
- E. orbicularia**, Hb. Heskett Moss (probably Tarn Wadling) (Heysham, Steph. Illust., iii., p. 328). Occurs in the southern counties. No records from Scotland.
- E. pendularia**, Clerck. Carlisle district (Ford). Orton, scarce (Day). Hayton Moss, two specimens, July 6th, 1911, and June 16th, 1913 (Routledge). Keswick (Beadle). West Cumberland, scarce (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 328; South's Brit. Moths, ii., p. 140).
- Hyria muricata**, Hufn. Barron Wood and Rose Castle (Heysham, Victoria Hist. of Cumb., i., p. 132). Keswick, not uncommon in some of the peaty bogs (Beadle). Cumberland (Barrett's Brit. Lep., vii., p. 332). More common on the Westmorland mosses. Not recorded from Scotland.
- Asthena luteata**, Schiff. Carlisle district (Ford). Orton, scarce (Day). Hayton Moss, one specimen, June 8th, 1911 (Routledge). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, rare (Mawson). In Scotland it is local and rare in Clydesdale; occurs also in Perthshire. In the North of England is chiefly found among alder.
- A. candidata**, Schiff. Cummersdale (Heysham, Steph. Illust., iii., p. 328). Newby Cross, Kingmoor, very local (Day).

- Keswick, sparingly (Beadle). West Cumberland, common (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 201).
- A. testaceata**, Don. ; **sylvata**, Hb. Rose Castle (Heysham, Steph. Illust., iii., p. 301). Keswick, rare (Beadle). Occurs chiefly in the South of England. No record from Scotland.
- A. blomeri**, Curt. Barron Wood in 1859 (Hodgkinson, Ent. W. Int., vi., p. 156). Cumberland (Barrett's Brit. Lep., viii., p. 207, South's Brit. Moths, ii., p. 222). No records from Scotland.
- Euchoeca (Eupisteria) obliterata**, Hufn. Occurs sparingly near Newby Cross (Thwaytes). Carlisle district and St. Bees (Ford). Lazonby, more abundant (Britten). Cumberland (Barrett's Brit. Lep., viii., p. 210). No records from Scotland.
- Venusia cambrica**, Curt. Carlisle district (Ford). Newby Cross (Wilkinson). Gelt Wood and Hayton, found at rest in the day time on tree trunks (Routledge). Keswick, rather rare (Beadle). Near Lodore (Day). West Cumberland, common (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 195).
- Acidalia (Ptychopoda) dimidiata**, Hufn. Generally distributed throughout the county.
- A. bisetata**, Hufn. Common along hedgerows. Cumberland (Barrett's Brit. Lep., viii., p. 16).
- A. interjectaria**, Bdv. ; **dilutaria**, Hb. ; **osseata**, Haw. Keswick (Beadle and Ford). West Cumberland, plentiful (Mawson). Rarely in Cumberland (Barrett's Brit. Lep., viii., p. 32).
- A. virgularia**, Hb. Cummersdale (Heysham, Steph. Illust., iii., p. 308). Carlisle (Day). Hayton, Castlecarrack (Routledge). Great Salkeld (Britten). Keswick (Beadle). West Cumberland, scarce (Mawson).
- A. (Craspedia) ornata**, Scop. Keswick, in August, 1903 (Wootton, Ent. Mo. Mag., xv., p. 15). " This specimen differs from southern specimens in its markings, the prettily laced spots near the margins of its fore and hind wings being distinctly narrower than usual, so that it forms a probably local variety " (C. G. Barrett). Found usually in the South of England. No records from Scotland.

- A. (*Leptomeris*) *marginepunctata***, Göze ; ***promutata***, Gn. St. Bees (Ford and Barraud). West Cumberland, uncommon (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 45).
- A. (*Ptychopoda*) *subsericeata***, Haw. Carlisle district (Dawson). Widely distributed throughout England and Wales, rare in Scotland. Only recorded from the Solway. Occurs at Witherslack (Westmorland) in June, uncommon (Forsyth, Entom., xxxviii., p. 199).
- A. (*Leptomeris*) *immutata***, L. Carlisle district (Ford). Barron Wood (Heysham, Steph. Illust., iii., p. 308). West Cumberland, scarce (Mawson). (Keswick, Beadle in Ent. Rec., xiv., p. 206, withdraws this species from his previous records, and says "that it does not occur at Keswick").
- A. (*Leptomeris*) *remutaria***, Hb. Common in woods throughout the County in May and June.
- A. (*Pylarge*) *fumata***, St. Common on the mosses among willow bushes. Orton, Todhills, Bolton Fell, Bowness Moss (Day). Hayton and Cumwhitton Mosses, &c. (Routledge). Keswick (Beadle). Cumberland in June (Steph. Illust., iii., p. 313). Cumberland (Barrett's Brit. Lep., viii., p. 62).
- A. (*Leptomeris*) *strigilaria***, Hb. Barron Wood and Rose Castle (Heysham, Steph. Illust., iii., p. 318), recorded under ***Timandra variegata***, St. Also see Barrett's Brit. Lep., viii., p. 75 ; Humphrey and Westwood's Brit. Moths, ii., p. 79). Cumberland (Meyrick's Lep., p. 243). The principal locality for this species is the Warren, Folkestone, Kent. Not recorded from Scotland.
- A. (*Ptychopoda*) *aversata***, L. The typical form, which is dark banded, is rare. Castlecarrock, one specimen, July 14th, 1915 (Routledge). Ab. ***spoliata***, Stgr. (form without the dark bands) is the prevailing form ; some of our specimens are greyish white, others ochreous.
- A. (*Ptychopoda*) *inornata***, Haw. Carlisle, one specimen (Wilkinson). Castlecarrock, Hayton Moss, railway cutting at Cowran, in July, not uncommon. Cumberland (Barrett's Brit. Lep., viii., p. 69). West Cumberland, rather scarce (Mawson). Very like the plain form of **A. *aversata***, but distinguished by its generally smaller size, and more silky appearance.

- Cabera pusaria**, L. Generally distributed and common in and near woods. Blackhall Woods (Heysham, Steph. Illust., iii., p. 196).
- C. exanthemata**, Scop. Generally distributed and common. Black Hall Wood and Cummersdale (Heysham), and Keswick, &c. (G. Wailes, Steph. Illust., iii., p. 197). Cumberland (Barrett's Brit. Lep., vi., p. 362).
- Bapta temerata**, Hb. Keswick (Beadle, Ent. Rec. vi., p. 281). Derwentwater (Beadle, Ent. Rec. xiv., p. 206). West Cumberland, rather scarce (Mawson). Cumberland (Malcolm, Entom., xxxvi., p. 143; Barrett's Brit. Lep., vi., p. 365; South's Brit. Moths, ii., p. 281). This species is far more frequent in the South of England than in the North. There is a record of one specimen from Wigtownshire in Scotland.
- B. bimaculata**, Fab. Cumberland (Barrett's Brit. Lep., vi., p. 367; South's Brit. Moths, ii., p. 265). No locality given, confirmation wanted. Has been recorded from North Lancashire and Westmorland. No records from Scotland.
- Semiothisa (Macaria) notata**, L. Kirkandrews-upon-Eden (Heysham, Steph. Illust., iii., p. 320). Local and uncommon in the Lancaster district. Inverness and Ross, in Scotland.
- S. liturata**, Clerck. Not uncommon in fir woods. Near Carlisle (Heysham, Steph. Illust., iii., p. 321). Carlisle district (Day and Ford). Bolton Fell (Thwaytes, Entom., xxx., p. 250). Hayton, Hayton Moss, Gelt Wood, &c. (Routledge). Great Salkeld (Britten). Keswick (Beadle). West Cumberland, not uncommon (Mawson).
- Thamnonoma (Halia) wauari**, L.; **vauaria**, L. Common in gardens, the larva feeds on the foliage of gooseberry and currant. Rockcliffe, Scotby, &c. (Heysham, Steph. Illust., iii., p. 194).
- Chiasmia (Strenia) clathrata**, L. Locally common. Durdar (Heysham, Steph. Illust., iii., p. 303). Carlisle district (Ford). Wreay, Silloth (Day). Railway banks at Cowran in July (Routledge). St. Bees (Barraud). Drigg (Day). Cumberland (Barrett's Brit. Lep., vii., p. 7).
- Lozogramma (Phasiane) petrarica**, Hb. Common where bracken (*Pteris aquilina*) is plentiful. Rockcliffe, Orton, &c. (Heysham, Steph. Illust., iii., p. 259).

**Numeria pulveraria**, L. Not common, only occasionally seen. Carlisle district (Ford). Wreay, Orton, Kingmoor (Day). Hayton, Gelt Wood, Hayton Moss (Routledge). Rose Castle (Heysham, Steph. Illust., iii., p. 195). Keswick, occurs in the Great Wood (Beadle). Watendlath (Beadle, Ent. Rec., xiv., p. 206). West Cumberland, not common (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 27).

**Scodionia fagaria**, Thunb.; **belgiaria**, Hb. Frequents mosses. Bowness Moss, Drumburgh Moss, Bolton Fell (Day). Great Salkeld (Britten). Nealhouse, near Thursby, under **Maesia favillacearia**, Hb. (Heysham, Steph. Illust., iii., p. 327). Cumberland (Barrett's Brit. Lep., vii., p. 31; South's Brit. Moths, ii., p. 332).

**Selidosema ericetaria**, Vill. On heaths and mosses. Ullswater in Cumberland (South's Brit. Moths, ii., p. 326). Fairly common at Witherslack. Recorded from the Isle of Arran (1882) has not been noted from the Mainland of Scotland.

**Ematurga atomaria**, L. Common on all the heaths and mosses throughout the County. Abundant on all the heaths near Carlisle (Heysham Steph. Illust., iii., p. 148). Nealhouse near Thursby, under **Fidonia carbonaria** (Heysham, Steph. Illust., iii., p. 327). Keswick, "the male varies from grey and reddish brown to black, one taken entirely black in 1893" (Beadle, Ent. Rec., vi., p. 281).

**Bupalus piniaria**, L. Common in fir woods in June. Of the male insect the white North English form only occurs. Justice Town, Newby Cross, Floses (near Durdar), &c. (Heysham, Steph. Illust., iii., p. 147).

**Perconia (Aspilates) strigillaria**, Hb. Locally abundant on mosses. Orton, Durdar, Bolton Fell (Day). Dalston, occurs in the Big Wood (Ford). Nealhouse, near Thursby, Barron Wood, recorded under **Aspilates respersaria**, Hb. (Heysham, Steph. Illust., iii., p. 328). Great Salkeld (Britten). West Cumberland, uncommon (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 40).

**Aspilates ochrearia**, Rossi. Carlisle district (Ford Entom., lii., p. 167). Silloth (Barrett's Brit. Lep., vii., p. 44). West Cumberland, scarce (Mawson). Cumberland (South's Brit.

Moths, ii., p. 332). This species is found in the southern counties of England. Odd specimens from Delamere (Cheshire). No records from Scotland.

**Abraxas grossulariata**, L. Generally common in gardens.

**A. sylvata**, Scop. Locally common where wych elm (*Ulmus montana*) occurs. Carlisle district (Ford). Wreay (Day). Gelt Wood in June (Routledge). Barron Wood, Armathwaite (Heysham, Steph. Illust., iii., p. 246). Great Wood and St. Herbert's Island, Keswick (Beadle). Seathwaite (M. C. Dixon, Ent. Rec., xiv., p. 49). Gilsland (Chas. Atkinson). Wythop (Whittaker, Entom., xxxiii., p. 356). Cockermouth (W. Robinson). Holmrook (Day). West Cumberland, very common (Mawson). Cumberland (Barrett's Brit. Lep., vii., p. 269; South's Brit. Moths, ii., p. 260).

**Ligdia adustata**, Schiff. Several taken in Fawe Park, Keswick (Beadle, Ent. Rec., vi., p. 281). Not uncommon in the southern English counties. Found in Scotland in the south-east, Arran and the Hebrides.

**Lomaspilis marginata**, L. Common amongst willows, especially in woods. Cummersdale, Tarn Wadling, &c. (Heysham, Steph. Illust., iii., p. 315).

**Hybernia rupicaprararia**, Hb. Common along hedgerows in January and February by searching with the aid of a lantern after darkness has set in. Little Orton (Heysham, Steph. Illust., iii., p. 315).

**H. leucophaearia**, Schiff. Not common, appears in February. Orton, Newbiggin, Upperby, Burgh (Day). Carlisle district (Ford). Brampton, Hayton Moss (Routledge). Great Salkeld (Britten). Keswick, very common and variable (Beadle). West Cumberland, not uncommon (Mawson).

**H. aurantiaria**, Esp. Not uncommon in October and November. Carlisle (Day). Thursby (Ford). Netherton (between Brisco and Durdar) recorded under **H. prosapiaria**, L. (Heysham, Steph. Illust., iii., p. 155). Hayton and Castlecarrock (Routledge). Keswick, very common (Beadle). West Cumberland, rather scarce (Mawson).

**H. marginaria**, Bork. Common in February, March and April. Little Orton, recorded under **H. capreolaria**, Esp. (Hey-

- sham, Steph. Illust., iii., p. 154). Var. **fuscata**, Mosley. Occasionally near Carlisle (Day).
- H. defoliaria**, Clerck. Common in the autumn in and near woods. Little Orton (Heysham, Steph. Illust., iii., p. 155).
- Anisopteryx aescularia**, Schiff. Not uncommon in March. Keswick (G. Wailes, Steph. Illust., iii., p. 152).
- Cheimatobia brumata**, L. Very abundant throughout the County from October to February. Very destructive in orchards. Little Orton (Heysham, Steph. Illust., iii., p. 275). A small, purplish brown form, by Mr. James Edmondson, reared in January, 1882, from caterpillars found in Cumberland feeding on sweetgale (*Myrica gale*) was described as a new species under the name **C. myricaria**, Cooke (Entom., xv., p. 57).
- C. boreata**, Hb. Not uncommon. Durdar, Armathwaite (Day). Carlisle district (Ford). Hayton Moss (Routledge). Keswick, abundant in the woods (Beadle). Cockermouth (Mawson, Entom., ii., p. 152). Cumberland (Barrett's Brit. Lep., viii., p. 388). Caterpillar feeds on birch (*Betula*).
- Oporabia (Epirrita) dilutata**, Bork. Abundant in and near woods in October and November. Barron Wood (Heysham), and Keswick (G. Wailes, Steph. Illust., iii., p. 274).
- O. filigrammaria**, H-S. Found on the moors, etc., in September. Hayton, not common (Routledge). Keswick, not uncommon (Beadle). West Cumberland, common (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 384).
- O. autumnata**, Bork. Barron Wood (J. B. Hodgkinson, Entom., xiii., p. 243). Cockermouth (Mawson, Zool., 1859, p. 6354). Cumberland, Carlisle (South's Brit. Moths, ii., p. 189).
- Malenydris (Larentia) didymata**, L. Common everywhere in the County in July and August. Barron Wood (Heysham, Steph. Illust., iii., p. 328).
- M. multistrigaria**, Haw. Common in March and April throughout the County.
- M. salicata**, Hb. Local. Black Hall Wood (Heysham, Steph. Illust., iii., p. 218). Thursby (Ford). Hayton, Castle-carrock and Tindale Fells (Routledge). Keswick (Greenip, Ent. W. Int., i., p. 164). Found on many of the surrounding

hills at Keswick (Beadle). Watendlath (Beadle). Skiddaw (Hodgkinson, Ent. W. Int., vi., p. 156). Seathwaite (M. C. Dixon, Ent. Rec., xiv., p. 49). Sprinkling Tarn (Day). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, not plentiful (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 174).

**Entephria (Larentia) caesiata**, Lang. Found on walls and rocks in mountain districts, etc., in July and August. Castle-carrock Fell (Routledge). Newby Cross, Caldbeck, Lodore (Day). Keswick (Ford). Common in the Great Wood and Cat Crag at Keswick (Beadle). Keswick (G. Wailes, Steph. Illust., iii., p. 296). Skiddaw (Hodgkinson). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, not plentiful (Mawson). St. Bees (Barraud). Cumberland (Newman's Brit. Moths, p. 111; Barrett's Brit. Lep., viii., p. 185).

**E. flavicinctata**, Hb. Keswick (Greenip, Ent. W. Int., i., p. 164; Ent. Rec., vi., p. 281). Keswick, also near Buttermere and Wasdale Head (Dawson). West Cumberland, difficult to obtain (Mawson). Cumberland, June, 1827 (Steph. Illust., iii., p. 296; Humphrey & Westwood's Brit. Moths, ii., p. 68; Newman's Brit. Moths, p. iii).

**Amoebe (Larentia) olivata**, Bork. Carlisle district (Ford). Nealhouse, near Thursby, July 16th, 1831 (Heysham, Steph. Illust., iii., p. 328). Hayton (Routledge). Keswick (Greenip Ent. W. Int., i., p. 164). Common in many places as the Great Wood, Ashness Wood, and the sides and gills of Skiddaw (Beadle, Ent. Rec., vi., p. 281). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, not uncommon (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 192).

**A. viridaria**, Fab. Common throughout the County.

**Perizoma (Emmelesia) affinitata**, St. Scarce and local. Davidson's bank, near Carlisle (Heysham, Steph. Illust., iii., p. 297). Newbiggin, Newtown (Wilkinson). Dalston, in Big Wood (Ford). Hill Ends, near Armathwaite, under **E. turbaria**, Steph. (Heysham, Steph. Illust., iii., p. 298). Keswick, taken sparingly in various woods (Beadle, Ent. Rec.,

vi., p. 281). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, scarce (Mawson).

**P. alchemillata**, L. Commoner than the last species. Carlisle district (Ford). Durdar, Upperby (Day). Hayton, Castlecarrock (Routledge). Keswick, plentiful on the Borrowdale Road (Beadle). Cockermouth (Robinson). West Cumberland, scarce (Mawson). Eskdale (Barraud).

**P. flavofasciata**, Thunb.; **decolorata**, Hb. Orton (Day). Carlisle district (Ford). Hayton, Castlecarrock (Routledge). Keswick (G. Wailes, Steph. Illust., iii., p. 297). Keswick, taken occasionally (Beadle). West Cumberland, rather scarce (Mawson). St. Bees (Barraud). Caterpillar feeds on the flower buds and immature seeds of the Red Campion (*Lychnis dioica*), and the White Campion (*L. vespertina*).

**P. albulata**, Schiff. Common in meadows where the yellow rattle (*Rhinanthus crista-galli*) grows. Rose Castle (Heysham Steph. Illust., iii., p. 299). Insect occurs in May and June, caterpillar feeds on the seeds of its food plant.

**P. taeniata**, St. Rare and local, found in the darkest and wettest woods Flimby, near Maryport (Hodgkinson, Entom., xxviii., p. 141; South's Brit. Moths, ii., p. 212). Keswick (Greenip, Ent. W. Int., i., p. 164). Rare at Stone-thwaite (Beadle, Ent. Rec., vi., p. 282). Lake district (Barrett's Brit. Lep., viii., p. 239). Cumberland in June (Steph. Illust., iii., p. 299; Humphrey & Westwood's Brit. Moths, ii., p. 70). Cumberland, 4 specimens in 1827 (Wood's Index Entomologicus, p. 111).

**P. bifasciata**, Haw.; **unifasciata**, Haw. Rare. Hayton, one specimen in August, 1892 (Routledge). Keswick, rare (Greenip, Ent. Rec., vi., p. 282). Keswick (Beadle Ent. Rec., ix., p. 91). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 237). Caterpillar feeds in the seed capsules of *Bartsia odontites*.

**P. minorata**, Tr. Keswick (Greenip, Ent. W. Int., i., p. 164). Not so common as formerly, occurs on several mountains (Beadle, Ent. Rec., vi., p. 282). Derwentwater and Seathwaite (Barrett's Brit. Lep., viii., p. 233). Honister Crag (Day). Cumberland, under **E. ericetata**, Curt. (Steph.

Illust., iii., p. 299). Cumberland (South's Brit. Moths, ii., p. 210). Lake district of Cumberland, July, 1888 (Dawson, Entom., xxi., p. 230). West Cumberland, plentiful (Mawson). Caterpillar feeds on seeds of Eyebright (*Euphrasia officinalis*) in September.

**P. blandiata**, Schiff., **adaequata**, Bork. Keswick (Greenip, Ent. W. Int., i., p. 164). Watendlath, Borrowdale and near Friars Crag (Beadle, Ent. Rec., vi., p. 282; ix., p. 91). Rosthwaite (Day). West Cumberland, common (Mawson). Cumberland, in June, under **E. trigonata**, Steph. (Steph. Illust., iii., p. 299; Humphrey & Westwood's Brit. Moths, ii., p. 70). Cumberland (Entom., xlv., p. 175; South's Brit. Moths, ii., p. 211; Barrett's Brit. Lep., viii., p. 243). Caterpillar in September feeds on seeds of Eyebright (*Euphrasia officinalis*).

**Eupithecia venosata**, Fab. Scarce. Orton (Thwaytes). Newby Cross (Heysham, Steph. Illust., iii., p. 328). Castlecarrack, one specimen (Routledge). Keswick, not very common (Beadle, Ent. Rec., vi., p. 282). West Cumberland, scarce (Mawson). Harrington (Swainson).

**E. pulchellata**, St. Not uncommon. Orton (Day). Hayton, Castlecarrack (Routledge). Fairly plentiful at Keswick (Beadle). West Cumberland, common (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 42). Caterpillar lives in the flowers of the Foxglove (*Digitalis purpurea*), and feeds upon the stamens and immature seeds.

**E. oblongata**, Thunb. Not common. Carlisle (Day). Thursby (Ford). Castlecarrack, one specimen (Routledge). Rose Castle (Heysham, Steph. Illust., iii., p. 328). Keswick, not common (Beadle). West Cumberland, met with occasionally (Mawson).

**E. succenturiata**, L. West Cumberland, not common (Mawson). Lake District (Stainton's Manual). Widely distributed over England and Wales, once reported from Ayrshire, Scotland. Caterpillar found on Mugwort (*Artemisia vulgaris*), Tansy (*Tanacetum vulgare*), and Yarrow (*Achillea*).

**E. subfulvata**, Haw. Not uncommon. Ab. **oxydata**, Tr. Also occurs in the County. Caterpillar feeds on the leaves of the common Yarrow (*Achillea millefolium*).

- E. scabiosata**, Bork. Thursby (Ford). Not common in Scotland.
- E. plumbeolata**, Haw. Orton, common in meadows (Day). Castlecarrack, Hayton, Hayton Moss (Routledge). West Cumberland, not common (Mawson).
- E. pygmaea**, Hb. Orton, Bolton Fell (Day). Castlecarrack, Hayton Moss, Cowran railway banks (Routledge). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 98; South's Brit. Moths, ii., p. 245).
- E. helveticaria**, Bdv. West Cumberland, rare (Mawson). Occurred at Grange, N. Lancashire, 1922 (A. E. Wright). Recorded from Scotland.
- E. satyrata**, Hb. Carlisle district (Ford). Orton, Wreay (Day). Hayton Moss (Routledge). Common at Watendlath on knapweed flowers (Beadle, Ent. Rec., xiv., p. 206). Cumberland (Barrett's Brit. Lep., ix., p. 91).
- E. castigata**, Hb. Orton (Day). Castlecarrack, Hayton, Hayton Moss (Routledge). Great Salkeld (Britten). West Cumberland, plentiful (Mawson). Derwentwater (Marshall, Entom., vi., p. 242).
- E. fraxinata**, Crewe. Rare. Hayton Moss (Routledge).
- E. pusillata**, Fab. Cardew Mire (Heysham, Steph. Illust., iii., p. 328). Keswick, taken by W. Greenip (Beadle). West Cumberland, rare (Mawson). No records from Scotland.
- E. indigata**, Hb. Orton, Newby Cross (Day). Gelt Wood (Routledge). Keswick, several taken (Beadle).
- E. nanata**, Hb. Common on heaths in the County. Carlisle district (Ford). Bolton Fell, Bowness Moss, &c. (Day). Hayton Moss, Gelt Wood (Routledge). Great Salkeld (Britten). Keswick (Beadle). West Cumberland, plentiful (Mawson). St. Bees (Barraud). Caterpillar feeds on ling and heather.
- E. vulgata**, Haw. Common in the County, "Sprunston" (Sprunston, near Durdar) (Heysham, Steph. Illust., iii., p. 285).
- E. expallidata**, Dbl. Keswick, one specimen, taken on the Isthmus (Beadle, Ent. Rec., vi., p. 282). West Cumberland, rare (Mawson). Rare in Scotland.

- E. absinthiata**, Clerk. Common. Carlisle (Day). Newby Cross (Heysham, Steph. Illust., iii., p. 328). Castlecarrack, &c. (Routledge). Great Barrock (Barrock Fell) and Black Hall Wood (Heysham, Steph. Illust., iii., p. 286), recorded as **E. elongata**, Haw. West Cumberland, not uncommon (Mawson).
- E. goossensiata**, Mab.; **minutata**, Dbl., Gn. On heaths. Orton (Day). Carlisle district (Ford). Hayton Moss (Routledge). West Cumberland, rare (Mawson).
- E. assimilata**, Dbl. Carlisle, taken in gardens (Day). Hayton, Castlecarrack, &c. (Routledge). Keswick, taken occasionally (Beadle). West Cumberland, rare (Mawson).
- E. tenuiata**, Hb. Newby Cross (Day). Castlecarrack (Routledge). West Cumberland, rare (Mawson).
- E. lariciata**, Frr. Found in larch woods. Orton (Day). Hayton (Routledge). Common in fir woods above Lodore (Beadle). West Cumberland, plentiful (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 71).
- E. abbreviata**, St. Durdar, Newby Cross, Orton (Day). Hayton, Gelt Wood (Routledge). Keswick, common at sawtooth bloom (Beadle). Derwentwater (Marshall, Entom., vi., p. 242). West Cumberland, plentiful (Mawson).
- E. dodoneata**, Gn. Carlisle district (Ford). Rare in Cumberland (Barrett's Brit. Lep., ix., p. 135; South's Brit. Moths, ii., p. 248). Not recorded from Scotland.
- E. exigua**, Hb. Carlisle, frequently taken (Day). Rose Castle (Heysham, Steph. Illust., iii., p. 328). Hayton, Castlecarrack (Routledge). Keswick, several taken (Beadle). West Cumberland, plentiful (Mawson).
- E. sobrinata**, Hb. Hayton (Routledge). Keswick, on the fell behind Bowness House by W. Greenip (Beadle). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 143).
- Eucymatoge togata**, Hb. One specimen in Gelt Wood in 1889 (Warne). West Cumberland, rare (Mawson). Caterpillar feeds on the immature seeds in spruce fir cones.

**Gymnoscelis (Eupithecia) pumilata**, Hb. Carlisle, very few taken (Day). Keswick, not common (Beadle). West Cumberland, uncommon (Mawson).

**Chloroclystis (Eupithecia) rectangulata**, L. Carlisle district, scarce (Day). Hayton, Castlecarrack (Routledge). Barron Wood (Heysham, Steph. Illust., iii., p. 328). Keswick, scarce (Beadle). West Cumberland, plentiful (Mawson).

**Lobophora sexalisata**, Hb. Orton, Durdar (Day). Hayton Moss, in early June (Routledge). Tarn Wadling (Heysham, Steph. Illust., iii., p. 328). Keswick (Greenip, Ent. W. Int., i., p. 164). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 401). Local or rare in Northumberland, Durham and Westmorland. No records from Scotland.

**L. halterata**, Hufn. Orton, not uncommon (Day). Castlecarrack, two specimens in May, 1915 (Routledge). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 398; South's Brit. Moths, ii., p. 155). Not recorded from the South of Scotland, but found more or less frequently from Perthshire to Sutherlandshire.

**L. viretata**, Hb. Keswick, taken by W. Greenip (Beadle). Near Lodore, April 27th—May 23rd, 1902 (Beadle, Ent. Rec., xiv., p. 206). Scale Hill (Wilkinson, Ent. Rec., xix., p. 212). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 406). Rare in Scotland.

**L. carpinata**, Bork. Not uncommon in April and May. Orton, Durdar, Keswick (Day). Carlisle district (Ford). Hayton, Hayton Moss, Castlecarrack, Gelt Wood (Routledge). Castle Head and other woods at Keswick (Beadle).

**Thera juniperata**, L. Carlisle district (Ford). Near Bassen-thwaite, fairly common (Whittaker, Entom., xxxiii., p. 356). West Cumberland, uncommon (Mawson). Found in Scotland in the Solway district, Hawick, &c.

**T. cognata**, Thunb.; **simulata**, Hb. Keswick, occurs among juniper, as on the fell behind Barrow Falls (Beadle, Ent. Rec., vi., p. 282). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 360). Widely distributed in Scotland.

- T. obeliscata**, Hb. Widely distributed throughout the County. Barron Wood, Orton under **Thera fulvata**, Fab. (Heysham, Steph. Illust., iii., p. 272). (The true **Thera variata**, Schiff., the caterpillar of which feeds on spruce fir, has not occurred in the County. See article by L. B. Prout, Entom., xlv., 1912, pp. 241-6). **T. obeliscata** feeds as a rule on Scot's pine.
- T. firmata**, Hb. Frequently taken in fir woods. Durdar (Day). Hayton, Hayton Moss, Gelt Woods (Routledge). Keswick (Beadle). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, rare (Mawson).
- Hydriomena ruberata**, Fr. Not common. Orton, Kingmoor (Day). Hayton, Hayton Moss, Castlecarrock (Routledge). Great Salkeld (Britten). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., ix., p. 367). Caterpillar feeds on sallow and willow.
- H. impluviata**, Schiff. Low Hesket (Heysham, Steph. Illust., iii., p. 328). West Cumberland, not uncommon (Mawson). Caterpillar feeds on alder, and the moth appears in May and early June.
- H. furcata**, Thunb.; **sordidata**, Fab. Common throughout the County. Very variable. Great and Little Orton (Heysham, Steph. Illust., iii., p. 225).
- Mesoleuca (Melanthia) bicolorata**, Hufn. Found where alder is plentiful. Newbiggin, American Wood at Carlisle (Day). Carlisle district (Ford and Hodgkinson). Hayton, Castlecarrock (Routledge). Keswick, occasionally in woods on the west side of the lake (Beadle). West Cumberland, scarce (Mawson). Ab. **plumbata**, Curtis, American Wood at Carlisle, rare (Day). Near Carlisle, recorded as **Zerene plumbata** (Hodgkinson, Zool., 1845, p. 889).
- M. ocellata**, L. Not uncommon, Carlisle district (Ford). Orton, Durdar, Silloth (Day). Durdar (Heysham, Steph. Illust., iii., p. 222). Hayton, Hayton Moss, Gelt Wood, Castlecarrock (Routledge). Common in woods on the Isthmus, and in Ashness Woods, at Keswick (Beadle). West Cumberland, not uncommon (Mawson). St. Bees (Barraud).
- M. albicillata**, L. Found in woods, not common. Carlisle district (Ford). Orton, Newby Cross, Wreay (Day). Woods

round Carlisle, in June (Dawson). Hayton (Routledge). Barron Wood, Armathwaite (Heysham, Steph. Illust., iii., p. 250). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, uncommon (Mawson). More frequent in the South of England. Local in the South of Scotland.

**Eulype (Melanippe) hastata**, L. Orton, plentiful in 1856. "Flies at noon over the wettest part of the moss, and when on the wing, slow and easily captured" (Armstrong, Ent. W. Int., ii., p. 5). Orton, Hethersgill (Dawson). Orton, two specimens in 1901 (Thwaytes). Bowness Moss (Day). Barron Wood (Armstrong, Ent. W. Int., ii., p. 4). Keswick, "the ordinary form occurs on marshy lands at the head of the lake" (Beadle). Cumberland (Barrett's Brit. Lep., viii., p. 94; South's Brit. Moths, ii., p. 202). West Cumberland, rather rare (Mawson).

**Xanthorhoe (Melanippe) tristata**, L. Local and not common. Hayton, Cowran railway banks, Cumwhitton Moss (Routledge). Gelt Woods, rare (Day). Orton, Hethersgill, Gelt (Dawson). Keswick, taken by W. Greenip (Beadle). Cumberland (Barrett's Brit. Lep., viii., p. 97).

**X. unangulata**, Haw. Rare. Keswick, one specimen taken by the late Mr. James Edmondson, whose collection is now in the Keswick Museum (Beadle, Ent. Rec., vi., p. 282). Cumberland (Barrett's Brit. Lep., viii., p. 215; South's Brit. Moths, ii., p. 200). West Cumberland, rare (Mawson). Not recorded from Scotland.

**X. rivata**, Hb. Local and uncommon. Carlisle district (Ford). Orton (Dawson). Hayton (Routledge). Keswick, plentiful (Beadle). West Cumberland, uncommon (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 101; South's Brit. Moths, ii., p. 197). Commoner in the South of England. In Scotland, local and rare in Roxburghshire, Clydesdale and Arran.

**X. sociata**, Bork. Common throughout the County. Cargo, Cummersdale, Kingmoor, &c. (Heysham, Steph. Illust., iii., p. 224).

- X. montanata**, Bork. Common throughout the County. Rose Castle (Heysham, Steph. Illust., iii., p. 219).
- X. galiata**, Hb. Local. Honister Crag (Day). Keswick, not uncommon (Beadle). Skiddaw (Hodgkinson, Ent. W. Int., vi., p. 156). Seathwaite (M. C. Dixon, Ent. Rec., xiv., p. 49). West Cumberland, rare (Mawson). St. Bees (Barraud).
- X. fluctuata**, L. Common throughout the County. Kingmoor, Hill Ends (near Armathwaite), &c. (Heysham, Steph. Illust., iii., p. 220).
- Anticlea badiata**, Hb. Carlisle district (Ford). Orton, Durdar, Dalston, &c. (Day). St. Nicholas, Carlisle (Heysham, Steph. Illust., iii., p. 328). Hayton, Hayton Moss, Castlecarrock (Routledge). Keswick, fairly plentiful (Beadle). West Cumberland, rather uncommon (Mawson).
- A. nigrofasciaria**, Gozè. Not common. Carlisle district (Ford). Blackwell, Orton, Cummersdale (Day). Newbiggin Wood (Heysham, Steph. Illust., iii., p. 238). Hayton, Castlecarrock (Routledge). Keswick, rather rare (Beadle). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, uncommon (Mawson).
- Coremia munitata**, Hb. Netherton, near Durdar (Heysham, Steph. Illust., iii., p. 215). Hayton, Castlecarrock Fell (Routledge). Keswick (Greenip, Ent. W. Int., i., p. 164). Common on Skiddaw and other mountains (Beadle). Great Salkeld and Sty Head (Day). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 154).
- C. designata**, Hufn. Not uncommon. Carlisle district (Ford). Wreay, Orton (Day). Hayton, Hayton Moss, Castlecarrock (Routledge). Keswick, fairly plentiful (Beadle). Cockermouth (Robinson). West Cumberland, not infrequent (Mawson).
- C. ferrugata**, Clerck; L. Carlisle (Day). Newtown, near Carlisle (Heysham, Steph. Illust., iii., p. 217). Hayton, and Cowran railway banks, two specimens (Routledge). Keswick (Beadle). West Cumberland (Mawson).
- C. unidentaria**, Haw. Widely distributed and commoner than the last species. Both the type form (black-banded) and

*ab. corculata*, Hufn. (purple-banded form) are equally common. Belle Vue, near Carlisle (Heysham, Steph. Illust., iii., p. 215).

**C. quadrifasciaria**, Clerck. Rare. Orton (Heysham, Steph. Illust., iii., p. 216). First and only specimen at Honister in 1894 (Beadle, Ent. Rec., vi., p. 282). Close to Derwentwater, near Lodore (Beadle, Ent. Rec., xiv., p. 206). West Cumberland, uncommon (Mawson). No records from Scotland.

**Camptogramma bilineata**, L. Common throughout the County. *Ab. infuscata*, Gump., of frequent occurrence.

**Coenocalpe (Phibalapteryx) vittata**, Bork.; *lignata*, Hb. Local and not common. Carlisle, scarce at light (Day). Hayton Moss, several in July, 1897 (Routledge). Keswick (Beadle). Close to Derwentwater, plentiful in three localities, both broods occurred (Beadle, Ent. Rec., xiv., p. 206). West Cumberland, rare (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 341).

[**C. aquata**, Hb. Recorded as having been taken in Cumberland, in 1882, by Mr. Bankhart. For references see Ent. Rec., xii., J. W. Tutt, pp. 35, 36; J. C. Moberly, p. 82; L. B. Prout, pp. 84, 85. Barrett's Brit. Lep., viii., p. 250.]

**Triphosa dubitata**, L. Found in the autumn, and after hibernation in the spring. Carlisle district (Ford). Durdar (Heysham, Steph. Illust., iii., p. 263). Hayton, not uncommon in cellars, Castlecarrack (Routledge). Keswick, is taken occasionally (Beadle). West Cumberland, rare (Mawson).

**Eucosmia (Calocalpe) certata**, Hb. Not uncommon among *Berberis*. Castlecarrack, in May and June (Routledge). Keswick, rare (Beadle). West Cumberland, rare (Mawson). Recorded from the Tweed district of Scotland.

**E. undulata**, L. Uncommon. Orton, June 22nd, 1912 (Murray, Entom., xli., p. 140). Carlisle district, Dalston, &c. (Ford, Entom., li., p. 214). Hayton Moss, one specimen, July 15th, 1912 (Routledge, Entom., xli., p. 171). West Cumberland, rare (Mawson). Only recorded from the extreme South of Scotland.

**Cidaria siterata**, Hufn. Found in the autumn, and in the spring after hibernation. Orton, Kingmoor (Day). Carlisle dis-

trict (Ford). Hayton, rare (Routledge). Barron Wood (Heysham, Steph. Illust., iii., p. 254). Keswick, common about oak (Beadle). Cockermouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, common (Mawson). Cumberland (Barrett's Brit. Lep., viii., p. 253).

**C. miata**, L. In autumn and spring after hibernation. Carlisle, at light (Day). Thursby (Ford). Hayton and Castlecarrock (Routledge). Newby Cross, Orton, Blackhall Wood (Heysham, Steph. Illust., iii., pp. 218, 253). Keswick, common on oak (Beadle). West Cumberland, common (Mawson).

**Euphyia (Cidaria) picata**, Hb. Little Orton (Heysham, Steph. Illust. iii., p. 226); recorded under **Harpalyce biangulata**. Haw. West Cumberland, rare (Mawson). Its range in England, as given in various books, does not appear to have been noted beyond Worcestershire on the western side, and Norfolk on the eastern side. No record from Scotland.

**C. corylata**, Thunb. Orton Durdar, Wreay (Day). Hayton, Castlecarrock, Gelt Wood (Routledge). Carlisle district, one example approaching var. **albocrenata**, Curtis (Ford). Barron Wood (Heysham, Steph. Illust., iii., p. 227). Keswick not uncommon (Beadle). West Cumberland, frequently (Mawson).

**C. truncata**, Hufn. Carlisle (Ford). Orton, Durdar, Wreay (Day). Hayton, Castlecarrock, Gelt Wood (Routledge). Ab. **commanotata**, Haw., Upperby; ab. **centumnotata**, Haw., St. Nicholas, Carlisle; ab. **perfuscata**, Haw., Newby Cross (Heysham, Steph. Illust., ii., p. 230, 231 and 238). Keswick (Beadle). West Cumberland (Mawson).

**C. immanata**, Haw. Commoner than the last species, single brood in the year. Ab. **marmorata**, "Cuddock" (Currock) (Heysham, Steph. Illust., iii., p. 229).

**Lampropteryx (Cidaria) suffumata**, Hb. Locally common. Near Carlisle (Day and Ford). Newby Cross (Heysham, Steph. Illust., iii., p. 234). Hayton, Castlecarrock (Routledge). Keswick (Beadle). West Cumberland, frequent (Mawson). Ab. **piceata**, St. Hayton (Routledge). Little Orton (Heysham, Steph. Illust., iii., p. 328).

**Lygris (Cidaria) reticulata**, Fab. Great Wood, Keswick, taken by the late James Edmondson (Beadle, Ent. Rec., vi., p. 282). Cumberland (Meyrick's Lep. p. 203). Occurs elsewhere only in Westmorland, North Lancashire, and North Wales. No records for Scotland.

**Eustroma (Cidaria) silaceata**, Hb. Orton, Gelt Wood, scarce (Day). Newby Cross (Heysham, Steph. Illust., iii., p. 226). Hayton, Hayton Moss, Castlecarrack, in May and June (Routledge). Great Wood, Keswick (Beadle). Cocker-mouth (W. Robinson, Ent. W. Int., ix., p. 61). West Cumberland, rather rare (Mawson). Ab. **insulata**, Haw. Hayton Moss (Routledge).

**Lygris (Cidaria) prunata**, L. Not uncommon in gardens. Durdar, Cummersdale (Day). Carlisle district (Ford). Newby Cross (Heysham, Steph. Illust., iii., p. 233). Hayton, Castlecarrack (Routledge). Keswick (Beadle). West Cumberland, not rare (Mawson).

**L. testata**, L. Carlisle district (Ford). Orton Durdar, &c. (Day). Newby Cross, Little Orton, recorded as **Cidaria achatinata**, Hb. Garriestown Bridge, near Floriston (Heysham, Steph. Illust. iii., p. 241). Hayton, Hayton Moss, Castlecarrack Fell, &c. (Routledge). Common at Keswick, and on Skiddaw, "on Skiddaw many specimens showed a great deal of brown colour, those taken on Ullock Moss being larger and tinged with pink colour" (Beadle, Ent. Rec., v., p. 301). Cocker-mouth (Robinson). West Cumberland, uncommon (Mawson).

**L. populata**, L. Carlisle, in gardens (Day). Thursby (Ford). "Cuddock" (Currock) (Heysham Steph. Illust., iii., p. 240). Hayton, Hayton Moss, Gelt Wood, Castlecarrack Fell (Routledge). Great Salkeld (Britten). Keswick, common (Beadle). Cocker-mouth (Robinson). West Cumberland, frequent (Mawson). St. Bees (Barraud). Cumberland (Barrett's Brit. Lep. viii., p. 298). Ab. **musauaria**, Frr. Gelt Wood, one specimen (Routledge). Keswick (Beadle, Ent. Rec. ix., p. 118).

**Cidaria fulvata**, Forst. Not uncommon along hedgerows. Rockcliffe, Blackhall, &c. (Heysham, Steph. Illust., iii., p. 221).

- Lygris (Cidaria) associata**, Bork. ; **dotata**, Gn. Found in gardens Carlisle (Day). Hayton, Castlecarrock (Routledge). Barron Wood, recorded as **Electra spinachiata**, Hb. (Heysham, Steph. Illust., iii., p. 328). Keswick, not common (Beadle). West Cumberland, scarce (Mawson). St. Bees (Barraud).
- Cidaria pyraliata**, Fab. ; **dotata**, L. Carlisle (Day). Cummersdale (Heysham, Steph. Illust., iii., p. 243). Hayton, &c. (Routledge). Keswick, not very plentiful (Beadle). West Cumberland, scarce (Mawson).
- Pelurga comitata**, L. Carlisle, common at light (Day). Hayton, one specimen (Routledge).
- Ortholitha (Eubolia) cervinata**, Schiff. Local and scarce. Hayton, one specimen (Routledge). Keswick, taken occasionally (Beadle). West Cumberland, uncommon (Mawson).
- O. limitata**, Scop. Common everywhere in July and August. Durdar, Kingmoor (Heysham, Steph. Illust., iii., p. 212).
- [**O. moeniata**, Scop. A European species of which a specimen was taken on one of the high hills near Barron Wood, by Mr. Reeves. This specimen was afterwards in the collection of Mr. C. S. Gregson, and ultimately passed into Mr. Sydney Webb's collection. At the sale of his collection it was purchased by Mr. Cooper, in February, 1920. The specimen was recorded in the Entom. Annual 1855, p. 64 ; Newman's Brit. Moths, p. 196 ; Barrett's Brit. Lep. ix., p. 15 ; South's Brit. Moths, ii., p. 145].
- O. plumbaria**, Fab. Not uncommon on heaths and waste places. Barron Wood (Heysham, Steph. Illust., iii, p. 210).
- Mesotype virgata**, Rott. A few on the sandhills at Drigg, June, 1915 (Day). Coast of Cumberland (Barrett's Brit. Lep. ix., p. 5). Doubtful record from Scotland.
- Carsia paludata**, Thunb. Not uncommon on some of the moors. Gelt Wood, Hayton Moss, Walton Moss (Routledge). Lazonby Fell (Day). Keswick, taken by W. Greenip (Beadle). Cumberland (Barrett's Brit. Lep. viii., p. 426).
- Anaitis plagiata**, L. Not very common ; caterpillar feeds on St. John's wort (*Hypericum*). Carlisle district (Ford). Hayton, Cowran, Castlecarrock (Routledge). High Heskett

(Heysham, Steph. Illust., iii., p. 245). Keswick, not very plentiful (Beadle). On the coast at Drigg (Day).

**Chesias spartiata**. Fues. Common in October among broom (*Cytisus scoparius*). Little Orton (Heysham, Steph. Illust., iii., p. 270).

**C. rufata**, Fab. Hayton, one specimen (Routledge). Cumberland (Barrett's Brit. Lep. viii., p. 419; South's Brit. Moths, ii., p. 151). Found in the south of Scotland, but is more frequent from Perthshire to Moray.

**Odezia (Tanagra) atrata**, L. Locally common in meadows. Caterpillar feeds in the spring on flowers of the earthnut (*Chenopodium denudatum* or *Bunium flexuosum*). Newbiggin and Blackhall Woods (Heysham, Steph. Illust., iii., p. 293). Cumberland (Barrett's Brit. Lep. ix., p. 157).

#### DOUBTFUL RECORDS.

The following species have been recorded from Cumberland in the lists published in the *Transactions of the Cumberland and Westmorland Association*, by George Dawson, Part vii., 1881-82, p.p. 41-50, and George Mawson, Part viii., 1882-83, p.p. 57-61. As they have not been confirmed by other collectors, and as many of them from their known range in Britain are unlikely to occur with us, it is thought better in the meantime to insert them in a separate list.

**Epione advenaria**. Hb. West Cumberland, rare (Mawson). No record from Westmorland or North Lancashire, very local in South Yorkshire, and confined to one locality in Derbyshire. Not recorded from Scotland.

**Tephrosia consonaria**, Hb. West Cumberland, rare (Mawson). Found chiefly in the South of England. Has occurred on fir trunks on the mosses at Witherslack and Meathop (A. E. Wright).

**T. luridata**, Bork.; **extersaria**, Hb. West Cumberland, uncommon (Mawson). Occurs locally in woods from Worcestershire southwards to Kent and Cornwall. In the Kendal district list as wanting confirmation; no recent record. No record from Scotland.

**Gnophos myrtillata**, Thunb.; **Dasydia obfuscaria**, Hb. Near Cockermouth (W. Robinson, Ent. W. Int. ix., p. 61). Only recorded from Scotland from Clydesdale northwards to Aberdeen and Ross.

**Ephyra linearia**, Hb.; **trilinearia**, Bork. West Cumberland, scarce (Mawson). Common in the south, local and infrequent in the north, its range extends to Northumberland. Old record for Kendal district. No records for Scotland.

**Acidalia (Ptychopoda) trigeminata**, Haw. Near Cockermouth (W. Robinson, Ent. W. Int. ix., p. 61). Keswick, one specimen, rare (Mawson). One record from Witherslack about 1900, B. H. Crabtree. In Scotland scarce in Renfrew. This species is often mistaken for **A. bisetata**. The figures in Newman's "Brit. Moths" were transposed.

**A. holosericata**, Dup. West Cumberland, scarce (Mawson). No records from Westmorland, North Lancashire, or Scotland.

**A. (Leptomeris) imitaria**, Hb. West Cumberland, rather uncommon (Mawson). Records from Witherslack about 1900 (B. H. Crabtree); Silverdale and Grange in North Lancashire. No record from Scotland.

**Thamnonoma brunneata**, Thunb. West Cumberland, scarce (Mawson), recorded as **Fidonia pinetaria**, Hb. Occurs mostly in Scotland. A record of one specimen taken at Grange, 1920 (J. H. Hutchinson). Recorded from Staffordshire, Wicken Fen and Bishop's Stortford (Entom. liii., p. 263).

**Pachynemia hippocastanaria**, Hb. West Cumberland, scarce (Mawson). No records from Westmorland, North Lancashire or Scotland. Occurs in the southern counties of England.

**Eupithecia insigniata**, Hb.; **consignata**, Bork. West Cumberland, rare (Mawson). No records from Westmorland North Lancashire or Scotland. Most northerly counties are Worcestershire and Suffolk.

**E. linariata**, Schiff. West Cumberland, rare (Mawson). Recorded from the Lake District (Stainton). Kendal one specimen at light (Littlewood) and Witherslack. Once from Inverurie, Scotland.

- E. haworthiata**, Dbl. ; **isogrammaria**, H-S. West Cumberland, uncommon (Mawson). Has occurred at Grange, North Lancashire, 1922 (A. E. Wright). No record from Scotland.
- E. subnotata**, Hb. West Cumberland, rather rare (Mawson). No records from Westmorland or North Lancashire. Once recorded from the South of Scotland.
- E. inturbata**, Hb. ; **subciliata**, Gn. West Cumberland, not common (Mawson). No records for Westmorland or North Lancashire. Records as far north as Shropshire, Yorkshire and Durham.
- Chloroclystis (Eupithecia) debiliata**, Hb. West Cumberland, rare (Mawson). No records for Westmorland and North Lancashire. In Scotland, in Aberdeenshire.
- Collix sparsata**, Hb. West Cumberland, uncommon (Mawson). No records from Westmorland, North Lancashire, or Scotland. Occurs as far north as Cheshire and Yorkshire.
- Melanthia procellata**, Schiff. West Cumberland, rather rare (Mawson). No records for Westmorland, North Lancashire, or Scotland.
- Anticlea cucullata**, Hufn. ; **sinuata**, Hb. Cumberland (G. Dawson). This species is found mainly in chalky districts. No records for Westmorland or North Lancashire. Two records for Scotland (Perthshire).
- A. rubidata**, Schiff. West Cumberland, rather rare (Mawson). No records for Westmorland, North Lancashire, or Scotland. Its most northerly counties are Derbyshire and Yorkshire, and recorded once from the Isle of Arran.
- A. berberata**, Schiff. West Cumberland, rare (Mawson). Not recorded from Westmorland North Lancashire, or Scotland.
- Phibalapteryx tersata**, Schiff. West Cumberland, rare (Mawson). No record for Westmorland, North Lancashire, or Scotland. Found in the southern counties, Herefordshire and South Wales.
- Scotosia vetulata**, Schiff. West Cumberland, rare (Mawson). Witherslack, 1867 (Hodgkinson, Ent. Mo., Mag. iv., p. 138) and (E. Shuttleworth, Entom. xvii., p. 8). No records from Scotland.

# THE COLEOPTERA OF CUMBERLAND.

## PART III.

(Continued from Vol. II, page 256).

By FRANK H. DAY, F.E.S.

(Read January 4th, 1923.)

In bringing to a close this Catalogue of the Beetles of Cumberland, I have to state that owing to the need for economising space as much as possible, I am unable to tabulate the localities as in former instalments, and with the same object in view, have left out localities altogether for those common and generally distributed species which have been found in all the areas of the County which have been explored.

The total number of species dealt with in this list in its entirety (including the Appendix) as occurring in Cumberland is 1,797—rather more than one-half of the number on the British list—which total, I believe, will bear favourable comparison with the lists of other Counties. It is certain, however, that many more species will be found with us, as a good deal of likely ground has not yet been worked over. I hope from time to time to publish additions to the list in subsequent Vols. of these Transactions, and shall be glad to hear from any collectors who can help in this way.

The numerous records of Mr. H. Britten are indicated by B.; M.=Mr. James Murray, and R.=Mr. G. B. Routledge. To these helpers I tender my grateful thanks, and also to other friends and correspondents who have contributed notes, duly acknowledged with the species they refer to.

Localities without an authority are my own.

## CLAMBIDAE.

**Calyptomerus dubius**, Marsh. In haystack refuse, etc., local,  
Gt. Salkeld, Langwathby (B.).

- Clambus pubescens**, Redt. Local, Gt. Salkeld (B.), Cummersdale.  
 „ **armadillo**, De G. Fairly common, Gt. Salkeld (B.), Monkhill.  
 „ **minutus**, Sturm. Common in flood refuse, etc.  
 „ **punctulum**, Beck. Gt. Salkeld (B.).

## SILPHIDAE.

- Agathidium nigripenne**, Kug. Rare, Gt. Salkeld (B.), Cummersdale.  
 „ **atrum**, Payk. On the Irthing (Bold).  
 „ **seminulum**, L. In moss and rotten wood, scarce, Edenhall (B.), Orton.  
 „ **laevigatum**, Er. In dead leaves, scarce, Gt. Salkeld (B.), Kirkhampton, Newton Marsh.  
 „ **marginatum**, Sturm. Scarce, Gt. Salkeld (B.), Silloth, Baron Wood.  
 „ **varians**, Beck. Fairly common.  
 „ **convexum**, Sharp. In moss, scarce, Gt. Salkeld (B.).  
 „ **rotundatum**, Gyll. In rotten wood, scarce, Gt. Salkeld (B.), Orton.  
 „ **nigrinum**, Sturm. Rare, R. Irthing (Bold); Gelt (Donisthorpe).  
**Liodes humeralis**, Kug. Common in fungi on tree stumps.  
 „ **glabra**, Kug. Cumberland (Ste. Man. p. 105).  
 „ **orbicularis**, Hbst. Rare, Newby Cross (M.), one swept at Orton.  
**Anisotoma dubia**, Kug. Common, var. **longipes** Schmidt, rare.  
 „ **obesa**, Schmidt. Rare, Gelt Woods (Tomlin).  
 „ **ovalis**, Schmidt. In flood refuse, not uncommon.  
 „ **calcarata**, Er. Common.  
 „ **curta**, Fairm. Rare, Wan fell (B.), Durdar, Armathwaite.  
 „ **triepkei**, Schmidt. Rare, Gt. Salkeld (B.), Dalston (M.).  
 „ **rugosa**, Steph. Carlisle (Ste. Man. p. 105), Coombe Crag on the Irthing (Bold).  
 „ **punctulata**, Gyll. Rare, Gt. Salkeld (B.).  
 „ **cinnamomea**, Pz. Eskdale (G. H. Ashe).

**Colenis dentipes**, Gyll. Local, Heads Nook, Tarn Lodge (R.),  
Gt. Salkeld (B.).

**Hydnobius punctatissimus**, Steph. Rare, Gt. Salkeld (B.).

**Triarthron maerkeli**, Schmidt. Scarce, Gt. Salkeld (B.), Eskdale  
(Fowler).

**Necrophorus humator**, Goeze. Fairly common.

„ **mortuorum**, F. Common.

„ **vestigator**, Hers. Melmerby (Rev. W. W. Mason).

„ **ruspator**, Er. Our commonest "burying" beetle.

„ **vespillo**, L. Common.

**Necrodes littoralis**, L. Local, Gt. Salkeld (B.), Penton.

**Silpha tristis**, Ill. Rather scarce but widely distributed.

„ **nigrita**, Cr. Not uncommon on roadways.

„ **obscura**, L. Summit of Skiddaw in company with *Leistus*  
*montanus* (Fowler, Vol. iii., p. 49).

„ **quadripunctata**, L. On trees, rare. Gelt Woods.

„ **opaca**, L. On roads and in moss, fairly frequent.

„ **thoracica**, L. In carrion, common.

„ **rugosa**, L. Very common.

„ **sinuata**, F. Carlisle, one specimen in carrion.

„ **atrata**, L. In moss, etc., common, var. **brunnea**, Hbst.  
common.

**Choleva angustata**, F. Local, Gt. Salkeld (B.), Gelt (R.).

„ **sturmi**, Bris. Gt. Salkeld (B.), Orton, Carlisle.

„ **cisteloides**, Frohl. Local, Gt. Salkeld (B.).

„ **intermedia**, Kr. In rabbit burrows, Gt. Salkeld (B.).

„ **spadicea**, Sturm. In dead leaves, scarce, Gt. Salkeld  
(B.), Wreay.

„ **agilis**, Ill. In dead leaves, moderately common.

„ **velox**, Spence. In dead leaves and under haystacks,  
common.

„ **wilkini**, Spence. Moderately common.

„ **anisotomoides**, Spence. In grass tufts, Gt. Salkeld (B.),  
Carlisle.

„ **fusca**, Pz. In vegetable refuse, fairly common.

„ **nigricans**, Spence. In cut grass, &c., frequent.

„ **longula**, Kell. In fungi, moderately common.

„ **coracina**, Kell. In carrion, Gt. Salkeld (B.), Geltsdale,  
Baron Wood.

- Choleva morio**, F. In dead leaves and moss, fairly common.  
 „ **grandicollis**, Er. In carrion, common.  
 „ **fuliginosus**, Er. In rabbit burrows and carrion, fairly frequent.  
 „ **nigrita**, Er. Rare, one specimen at Orton.  
 „ **tristis**, Pz. In carrion, very common.  
 „ **kirbyi**, Spence. Almost as common as the last.  
 „ **chrysomeloides**, Pz. In carrion and fungi, common.  
 „ **fumata**, Spence. In dead leaves, fungi, &c., common.  
 „ **watsoni**, Spence. Equally common.  
**Catops sericeus**, Pz. In carrion, flood refuse, &c., common.  
 „ **sericatus**, Chaud. Moderately common.  
**Colon serripes**, Sahl. Rare, Newton Reigny Moss (B.).  
 „ **viennense**, Hbst. Rare, Baron Wood, Prior Rigg (M.).  
 „ **angulare**, Er. Rare, Gt. Salkeld (B.).  
 „ **brunneum**, Lat. One specimen at Orton.  
 „ **appendiculatum**, Sahl. One swept in Wreay Woods.  
**Sphaerites glabratus**, F. Rare in carrion, Gt. Salkeld.

### SCYDMAENIDAE.

- Neuraphes elongatulus**, Müll. In moss, rare, Orton.  
 „ **angulatus**, Müll. At roots of grass, Glasson (M.), Kingmoor, Edenhall.  
 „ **rubicundus**, Muls. In cole-tit's nest Gt. Salkeld, Edenhall (B.).  
 „ **carinatus**, Muls. Rare, Edenhall (B.).  
 „ **sparshalli**, Den. Rare, Durdar (B.).  
 „ **minutus**, Chaud. Gt. Salkeld, Langwathby (B.).  
**Scydmaenus collaris**, Müll. In moss, common.  
 „ **exilis**, Er. Scarce, Edenhall (B.).  
**Euconnus hirticollis**, Ill. In moss, locally common, Orton.  
**Eumierus tarsatus**, Müll. In hedge clippings, scarce, Blackwell, Seascale.

### PSELAPHIDAE.

- Pselaphus heisei**, Hbst. In moss, not uncommon.  
 „ **dresdensis**, Hbst. In moss, locally common, Newton Reigny Moss.

**Tychus niger**, Pk. Fairly common.

**Bythinus puncticollis**, Den. Moderately common.

„ **validus**, Aub. Local, Hayton Moss (R.), Orton, Gt. Salkeld.

„ **bulbifer**, Reich. Very common in moss.

„ **curtisi**, Den. Local, Gt. Salkeld (B.).

„ **securiger**, Reich. Gilsland (Fowler, Vol. iii., p. 92), Gelt.

„ **burrelli**, Den. Cross fell (B.).

**Bryaxis fossulata**, Reich. Common in moss.

„ **haematica**, Reich. Banks of the Irthing, rare (Fowler, Vol.iii., p. 96).

„ **juncorum**, Leach. Common in moss.

„ **impressa**, Pz. Banks of Eden not far from Ambrose Holme, Oct. 23rd, 1829 (Curtis Brit. Entomology).

**Trichonyx sulcicollis**, Reich. A single specimen taken on the City walls of Carlisle by T. C. Heysham (Ste. Illus. Vol. v., p. 91).

**Bibloporus bicolor**, Den. Gt. Salkeld (B.), Edenhall, Newton Reigny Moss.

**Euplectus karsteni**, Reich. In hay, scarce, Thurstonfield.

„ **sanguineus**, Den. In straw, locally common, Langwathby (B.), Silloth.

„ **piceus**, Mots. Under pine bark, frequent.

„ **ambiguus** Reich. In moss, Newton Reigny Moss (B.), Orton.

„ **minutissimus**, Aub. Local, Gt. Salkeld (B.).

Several other species of **Euplectus** have been taken in Cumberland, which still await determination.

## TRICHOPTERYGIDAE.

**Pteryx suturalis**, Heer. In rotten wood, Gt. Salkeld (B.), Edenhall, Durdar.

**Ptinella angustula**, Gill. Under bark, Gt. Salkeld (B.).

**Trichopteryx thoracica**, Waltl. Gt. Salkeld, Baron Wood (B.), Durdar.

„ **atomaria**, De G. In moss, &c., common.

„ **grandicollis**, Man. Common.

**Trichopteryx lata**, Mots. Common.

„ **fascicularis**, Hbst. Common.

„ **sericans**, Heer. In manure, &c., Gt. Salkeld, Wanfell (B.).

„ **bovina**, Mots. Gt. Salkeld, Langwathby (B.).

„ **montandoni**, All. In rotten hay, Gt. Salkeld (B.).

„ **brevipennis**, Er. In wet moss, Edenhall, Gt. Salkeld (B.).

Mr. Britten, who has paid much attention to this family, tells me that he has several other species of this genus taken in Cumberland which he has not yet determined with certainty.

**Nephanes titan**, Newm. Common in dry dung, Gt. Salkeld (B.).

**Ptilium kunzei**, Heer. Gt. Salkeld and district (B.), Burgh.

„ **rugulosum**, All. Gt. Salkeld, Baron Wood (B.).

„ **exaratum**, All. Gt. Salkeld (B.).

„ **foveolatum**, All. Gt. Salkeld, in cut grass, &c. (B.).

„ **asperum**, Britten. Gt. Salkeld, one in an old squirrel's drey (B.).

**Ptenidium punctatum**, Gyll. Gt. Salkeld (B.), Silloth.

„ **fuscicorne** Er. Gt. Salkeld (B.).

„ **nitidum**, Heer. Gt. Salkeld (B.), Gelt, Durdar.

„ **laevigatum**, Er. Gt. Salkeld (B.).

„ **pusillum**, Gyll.=**evanescens**, Brit. Coll. Generally common.

„ **brisouti**, Matth.=**nitidum**, Bris. Banks of ponds, &c., Gt. Salkeld (B.), R. Petteril.

## CORYLOPHIDAE.

**Orthoperus atomus**, Gyll. Gt. Salkeld (B.), Orton.

## PHALACRIDAE.

**Olibrus aeneus**, F. Rather scarce, but widely distributed.

## COCCINELLIDAE.

**Subcoccinella 24-punctata**, L. Local, Gt. Salkeld (B.), Drigg.

**Hippodamia 13-punctata**, L. Rockcliffe (Ste. Illus. iv., p. 389).

„ **variegata**, Goeze. Locally common on the coast.

- Adalia obliterata**, L. Common on fir trees.
- „ **bipunctata**, L. Common on various plants.
- Mysia oblongoguttata**, L. Common on fir trees.
- Anatis ocellata**, L. Also attached to the fir, common.
- Coccinella 10-punctata**, L. Common on various trees and shrubs.
- „ **hieroglyphica**, L. Common on heather among firs.
- „ **11-punctata**, L. Fairly common on low plants.
- „ **5-punctata**, L. One in flood refuse at Cummersdale.
- „ **7-punctata**, L. Common on various plants.
- Halyzia 16-guttata**, L. Scarce, Penrith (B.), Orton, NewbyCross.
- „ **14-guttata**, L. On various trees, fairly common.
- „ **18-guttata**, L. Common on fir trees.
- „ **conglobata**, L. Recorded from Cummersdale by T. C. Heysham (Ste. Illus. iv., p. 385).
- „ **22-punctata**, L. In flood refuse, &c., not uncommon.
- Micraspis 16-punctata**, L. Cummersdale (Ste. Illus. iv., p. 377).
- Hyperaspis reppensis**, Hbst. Local and scarce, Gt. Salkeld (B.), Eskdale (Fowler), Cumrew fell.
- Scymnus nigrinus**, Kug. Locally common on fir trees, Orton, Durdar.
- „ **pygmaeus**, Fourc. One on the Silloth sand hills.
- „ **frontalis**, F. Rare, Carlisle.
- „ **suturalis**, Thunb. Common on fir trees.
- „ **testaceus**, Mots. var. **scutellaris**, Muls., less frequent than the last.
- „ **haemorrhoidalis**, Hbst. Local, Gt. Salkeld.
- „ **capitatus**, F. Baron Wood (T. C. Heysham), Carlisle (Fowler).
- Chilocorus similis**, Ross. Newton Reigny Moss (B.), Orton.
- „ **bipustulatus**, L. In moss on heaths, common.
- Exochomus quadripustulatus**, L. Armathwaite (Ste. Illus. iv., p. 375), Dalston (M).
- Rhizobius litura**, F. Common on low herbage.
- Coccidula rufa**, Hbst. Common among rushes and grass.

## ENDOMYCHIDAE.

- Mycetaea hirta**, Marsh. Under haystacks, Gt. Salkeld (B.), Carlisle.

*Alexia pilifera*, Müll. In moss, local, Gt. Salkeld.

*Endomychus coccineus*, L. Newbiggin Woods (Ste. Illus. iv., p. 399).

### COLYDIIDAE.

*Cerylon histeroides*, F. Common under bark.

### HISTERIDAE.

*Hister unicolor*, L. Local and scarce, Melmerby (W. W. Mason), Orton.

„ *cadaverinus*, Hoff. Common in carrion.

„ *succicola*, Th. Common in carrion and fungi.

„ *purpurascens*, Hbst. Burgh Marsh (Ste. Illus. iii., p. 152).

„ *marginatus*, Er. In moles' nests, Gt. Salkeld (B.).

„ *neglectus*, Germ. Scarce, Skiddaw, Drumburgh.

„ *carbonarius*, Ill. Not uncommon in carrion.

„ *bissexstriatus*, F. Local and scarce, Gt. Salkeld (B.).

„ *12-striatus*, Schr. Local, Gt. Salkeld (B.), Cumwhitton Moss.

„ *bimaculatus*, L. Widely distributed but not common.

„ *sinuatus*, Ill. Considered by Fowler to be doubtfully indigenous. The late T. C. Heysham recorded it from Sandsfield.

*Gnathoncus nannetensis*, Mars. Uncommon, Gt. Salkeld (B.), Carlisle, St. Bees Head.

*Saprinus nitidulus*, Pk. Common in carrion.

„ *aeneus*, F. Widely distributed but not very common.

*Hypocaccus quadristriatus*, Hoff. Local, Seascale.

*Pachylopus maritimus*, Steph. Common on the coast.

*Acritus minutus*, Hbst. In decaying straw, Silloth.

*Onthophilus striatus*, F. Common in refuse, &c.

### MICROPEPLIDAE.

*Micropeplus porcatus*, Pk. Under haystacks, &c., scarce, Gt. Salkeld, Monkhill, Durdar.

„ *staphylinoides*, Marsh. Scarce, Lazonby (B.), Cumwhitton Moss.

„ *margaritae*, Duv. Locally common, Orton, Silloth.

„ *tesserula*, Curt. A number swept in a ditch, Kirkhampton.

## NITIDULIDAE.

**Brachypterus pubescens**, Er. Abundant on nettles.

„ **urticae**, F. Equally common.

**Cercus pedicularius**, L. In marshy places, not very common but widely distributed.

„ **bipustulatus**, Pk. More frequent than the last.

„ **rufilabris**, Lat. Not uncommon on hawthorn flowers, &c.

**Epuraea aestiva**, L. Common on flowers.

„ **melina** Er. Locally common, Gelt Woods, Gt. Salkeld.

„ **florea**, Er. Rather scarce, Gelt (R.), Keswick, Orton.

„ **deleta**, Er. Local, Gt. Salkeld, Gelt, Cumwhinton.

„ **parvula**, Sturm. Scarce, Baron Wood (R.), Carlisle, Orton.

„ **immunda**, Er. Very rare, Orton, one specimen so determined by Dr. Joy.

„ **obsoleta**, F. Common under bark and on flowers.

„ **pusilla**, Ill. Common in fir woods.

**Omosiphora limbata**, F. In fungi, local, Gt. Salkeld, Edenhall (B.), Gilsland (Bold), Prior Rigg (M.).

**Nitidula bipustulata**, L. Common in carrion.

**Soronia grisea**, L. Common at exuding sap of *Cossus* trees.

**Omosita depressa**, L. Fairly frequent in bones and skins.

„ **colon**, L. Moderately common.

„ **discoidea**, F. Common.

**Thalycra sericea**, Sturm. Rare, one specimen at Kingmoor.

**Pocadius ferrugineus**, F. In fungi, common but local.

**Pria dulcamarae**, Scop. Rare, one specimen at Upperby.

**Meligethes rufipes**, Gyll. Local and scarce, Seascale.

„ **lumbaris**, Sturm. Common on hawthorn flowers.

„ **subrugosus**, Gyll. Local and rare, Kirkhampton.

„ **aeneus**, F. Very common.

„ **viridescens**, F. Equally abundant.

„ **brunnicornis**, Sturm. Scarce, but widely distributed.

„ **viduatus**, Sturm. On the water avens, locally common.

„ „ var. **aestimabilis**, Reitt. Occurs with the type.

„ **bidens**, Bris. Scarce, Gelt Woods.

- Meligethes umbrosus**, Sturm. Rare, one at Durdar.  
 „ **picipes**, Sturm. Abundant on flowers.  
 „ **exilis**, Sturm. Scarce, Drigg.  
 „ **erythropus**, Gyll. Rather local but not uncommon.
- Cychramus luteus**, F. Not uncommon on flowers of hawthorn and crab.  
 „ **fungicola**, Heer. One example from Gelt Woods appears to be referable to this species.
- Ips quadriguttata**, F. Recorded from Walton Wood by T. J. Bold.  
 „ **quadripunctata**, Hbst. Locally common at sap of oak and birch.  
 „ **quadripustulata**, L. Scarce but widely distributed, under fir bark.
- Pityophagus ferrugineus**, F. Under pine bark, fairly frequent.
- Rhizophagus cribratus**, Gyll. Fairly common but local under bark.  
 „ **depressus**, F. Common under pine bark.  
 „ **parallellocollis**, Gyll. In fungi, &c., local.  
 „ **ferrugineus**, Pk. Frequent under bark.  
 „ **dispar**, Pk. Common under bark.  
 „ **bipustulatus**, F. Common under bark.

### TROGOSITIDAE.

- Tenebrioides mauritanicus**, L. Carlisle, in flour mills.

### MONOTOMIDAE.

- Monotoma conicicollis**, Aub. Keswick, common in nests of *F. rufa*.  
 „ **formicetorum**, Th. Keswick, rare in nests of *F. rufa*.  
 „ **picipes**, Hbst. In garden refuse, &c., fairly common.  
 „ **quadricollis**, Aub. Local and scarce, Carlisle, Orton.  
 „ **longicollis**, Gyll. Under haystacks, not infrequent.

### LATHRIDIIDAE.

- Lathridius lardarius**, De G. Common in flood refuse, &c.  
 „ **bergrothi**, Reitt. Carlisle, one specimen 29. iv. 1907.
- Coninomos nodifer**, West. Common under haystacks.

- Enicmus minutus**, L. Common under haystacks.  
 „ **fungicola**, Th. Local, Edenhall, Langwathby, in fungi.  
 „ **transversus**, Ol. Generally common.  
 „ **testaceus**, Steph. In fungi on tree stumps, local, Gt. Salkeld, Kingmoor.  
 „ **brevicornis**, Man. Rare, Newton Reigny Moss.  
**Cartodere ruficollis**, Marsh. Abundant under haystacks, but local.  
 „ **filiformis**, Gyll. Rare, Gt. Salkeld (B.).  
**Corticaria pubescens**, Gyll. In flood refuse, moderately common.  
 „ **crenulata**, Gyll. Local, Seascale, Carleton.  
 „ **denticulata**, Gyll. More frequent than the last.  
 „ **serrata**, Pk. Carlisle, one specimen on the wing in 1922.  
 „ **fulva**, Com. In haystacks, local, Gt. Salkeld.  
 „ **elongata**, Gyll. Very common in hay, &c.  
 „ **fenestralis**, L. Rare, Baron Wood.  
**Melanophthalma gibbosa**, Hbst. Abundant.  
 „ **fuscata**, Hum. Also a common species.

### CUCUJIDAE.

- Laemophloeus pusillus**, Schön. Gt. Salkeld (B.), Carlisle (M.).  
 An imported species.  
 „ **ferrugineus**, Steph. Local, Gt. Salkeld (B.),  
 Silloth Docks, perhaps introduced in grain  
 cargoes.  
**Brontes planatus**, L. Carlisle, a number of specimens in 1906  
 among imported timber.  
**Silvanus surinamensis**, L. Carlisle, Silloth, an introduced species.  
**Cathartus advena**, Waltl. Silloth docks, also introduced.

### BYTURIDAE.

- Byturus tomentosus**, F. Common on flowers.

### CRYPHAGIDAE.

- Telmatophilus carieis**, Ol. On marshy ground, rather local,  
 Easby, Gt. Salkeld.  
**Antherophagus nigricornis**, F. Widely distributed, but not  
 common.  
 „ **pallens**, Gyll. Somewhat infrequent, Gelt, Sil-  
 loth.

- Cryptophagus lycoperdi**, Hbst. Local, Baron Wood (B.).
- „ **setulosus**, Sturm. In fungi, not uncommon.
- „ **pilosus**, Gyll. In hay and straw, fairly common.
- „ **punctipennis**, Bris. Local, Gt. Salkeld.
- „ **saginat**us, Sturm. Moderately common.
- „ **umbratus**, Er. Local, Gt. Salkeld (B.), Carlisle.
- „ **scanicus**, L. Common.
- „ „ var. **patruelis**, Sturm. Of rare occurrence, Carlisle.
- „ **badius**, Sturm. In garden refuse, Gt. Salkeld (B.), Carlisle.
- „ **dentatus**, Hbst. Locally common in *Boleti*.
- „ **pallidus**, Sturm. In haystacks, common.
- „ **cylindrus**, Kies. Rare, Gt. Salkeld (B.).
- „ **acutangulus**, Gyll. Scarce, Carlisle.
- „ **cellaris**, Scop. Local, Gt. Salkeld (B.), Silloth.
- „ **affinis**, Sturm. Common.
- „ **pubescens**, Sturm. In wasps' nests, local, Gt. Salkeld (B.).
- „ **bicolor**, Sturm. Local, Gt. Salkeld, Newton Reigny Moss.
- „ **hirtulus**, Kr. Langwathby (B.).
- „ **subdepressus**, Gyll. Gt. Salkeld (B.).
- Micrambe vini**, Pz. Common.
- „ **villosa**, Heer. Scarce, Drigg (M.), Carlisle.
- Henoticus serratus**, Gyll. Coombe Wood, Armathwaite (T. C. Heysham).
- Paramecosoma melanocephalum**, Hbst. Common in flood refuse.
- Atomaria diluta**, Er. Rare, Gt. Salkeld (B.).
- „ **fimetarii**, Hbst. Rare, Carlisle.
- „ **nigriventris**, Steph. Uncommon, Silloth.
- „ **umbrina**, Gyll. Scarce but widely distributed.
- „ **elongatula**, Er. Rare, Baron Wood.
- „ **badia**, Er. Rare, Orton.
- „ **fuscipes**, Gyll. Fairly common.
- „ **nigripennis**, Pk. In hay barns, local, Gt. Salkeld.
- „ **munda**, Er. Locally common, Gt. Salkeld.
- „ **impressa**, Er. Banks of the Irthing, rare (Bold).

**Atomaria fuscata**, Sch. Very common.

„ **atra**, Hbst. Anthorn, a few specimens in tidal refuse.

„ **pusilla**, Pk. Common in hay.

„ **atricapilla**, Steph. Fairly common.

„ **berolinensis**, Kr. Of occasional occurrence, Gt. Salkeld, Edenhall, Carlisle.

„ **mesomelas**, Hbst. In reedy places, Gt. Salkeld, Newton Reigny.

„ **apicalis**, Er. Common.

„ **analís**, Er. Very common.

„ **ruficornis**, Marsh. In flood refuse, &c., Carlisle, Seascale.

**Ephistemus gyrinoides**, Marsh. Common in flood refuse.

### SCAPHIDIIDAE.

**Scaphisoma agaricinum**, L. Scarce, Edenhall (B.).

„ **boleti**, Pz. Widely distributed, Orton, Wetheral, Gt. Salkeld.

### MYCETOPHAGIDAE.

**Typhaea fumata**, L. Common in hay, &c.

**Triphyllus suturalis**, F. Locally common in fungi, Gt. Salkeld.

**Mycetophagus quadripustulatus**, L. Local, Gt. Salkeld, Edenhall.

„ **atomarius**, F. Penrith (Varty-Smith).

„ **multipunctatus**, Hell. Local, Gt. Salkeld.

### DERMESTIDAE.

**Dermestes vulpinus**, F. Carlisle, among bones from the Soudan (L. E. Hope).

„ **lardarius**, L. Common but local, Gt. Salkeld, Carlisle.

**Attagenus pello**, L. In houses, widely distributed but not common.

**Tiresias serra**, F. Scarce and local, Gt. Salkeld (B.).

**Florilinus musaeorum**, L. Local, Tarn Lodge (R.), Gt. Salkeld.

### BYRRHIDAE.

**Byrrhus pilula**, L. Common.

„ **fasciatus**, F. Rather scarce, Carlisle, Keswick, Cumrew fell.

„ **dorsalis**, F. Scarce, Gelt, Castlecarrock.

**Cytilus varius**, F. Common in moss.

**Morychus aeneus**, F. Local, Baron Wood, Gt. Salkeld.

**Simplocaria semistriata**, F. In flood refuse, &c., common.

**Aspidiphorus orbiculatus**, Gyll. Rare, Carlisle.

### GEORYSSIDAE.

**Georyssus pygmaeus**, F. Common on mud by streams.

### PARNIDAE.

**Elmis aeneus**, Müll. On mossy stones in streams, common.

„ **volkmari**, Pz. Local, Tarn Lodge (R.), Gt. Salkeld.

„ **parallelopipedus**, Müll. River Irthing (Bold), Gt. Salkeld.

„ **subviolaceus**, Müll. Scarce, Cross fell (B.).

„ **cupreus**, Müll. River Irthing (Bold), Cross fell, Gt. Salkeld.

„ **nitens**, Müll. River Eden at Gt. Salkeld.

**Limnius tuberculatus**, Müll. In running streams, common.

**Parnus luridus**, Er. Common on the marshy edges of ponds.

„ **ernesti**, Gozis. Also common.

„ **striatellus**, Fairm. Several taken at Silloth.

### HETEROCERIDAE.

**Heterocerus marginatus**, F. Common on the sandy banks of streams and on the Solway marshes.

„ **britannicus**, Kuw. On the Solway marshes, scarce.

### LUCANIDAE.

**Sinodendron cylindricum**, L. Widely distributed, occurs in old ash trees.

### SCARABAEIDAE.

**Onthophagus nutans**, F. Recorded from Armathwaite by T. C. Heysham in Stephens "Illustrations," Vol. iii., p. 176.

„ **fracticornis**, Preys. Scarce, but widely distributed.

„ **nuchicornis**, L. Aiket Gate (T. C. Heysham), Wastdale (W. C. Hewitson).

**Aphodius erraticus**, L. Local, Carlisle, Keswick, Gt. Salkeld.

„ **subterraneus**, L. Rockcliffe Marsh. (T. C. Heysham).

„ **fossor**, L. Fairly common.

„ **haemorrhoidalis**, L. Local, Gt. Salkeld.

„ **foetens**, F. Moderately common, Castlecarrock (R.), Gt. Salkeld, Talkin Tarn.

**Aphodius fimetarius**, L. Very common.

- „ **scybalarius**, F. Locally common, Seascale.
- „ **ater**, De G. Common.
- „ **granarius**, L. Carlisle (T. C. Heysham).
- „ **nitidulus**, F. Locally common, Drigg.
- „ **sordidus**, F. Rockcliffe (T. C. Heysham).
- „ **rufescens**, F. Locally common, Gt. Salkeld, Drigg.
- „ **lapponum**, Gyll. Common on the fells in sheep dung.
- „ **foetidus**, F. Very scarce, Sty Head Pass.
- „ **porcus**, F. Scarce, Cairn Bridge (R.), Gt. Salkeld (B.).
- „ **pusillus**, Hbst. Fairly common, Tarn Lodge (R.), Carlisle, Gt. Salkeld.
- „ **merdarius**, F. Very common.
- „ **inquinatus**, F. Fairly common, Carlisle, Brampton, Drigg, Gt. Salkeld.
- „ **tesselatus**, Pk. Wan fell, not scarce in winter in sheep dung.
- „ **conspurcatus**, L. Local and scarce, Gt. Salkeld (B.), Carlisle.
- „ **punctato-sulcatus**, Sturm. Very common.
- „ **prodromus**, Brahm. Common.
- „ **contaminatus**, Hbst. Very common.
- „ **obliteratus**, Pz. Local and not very frequent, Gt. Salkeld.
- „ **luridus**, F. Local but not uncommon, Silloth, Keswick, Gt. Salkeld.
- „ **rufipes**, L. Fairly common, Tarn Lodge (R.), Carlisle, Silloth.
- „ **depressus**, Kug. Moderately common, Seascale, High Pike, Gt. Salkeld.

**Aegialia sabuleti**, Pk. On the sandy banks of streams, fairly frequent.

- „ **arenaria**, F. Common on the sandhills of the coast.

**Geotrupes typhoeus**, L. Local, Wan Fell, near rabbit burrows.

- „ **spiniger**, Marsh. Common and widely distributed.
- „ **stercorarius**, L. Also a common insect.
- „ **sylvaticus**, Pz. The commonest of the genus, especially on the fells.

**Geotrupes vernalis**, L. Common, but local, Sty Head Pass to Wastdale, Bowscale fell, Burnmoor Tarn.

**Trox sabulosus**, L. Local, Wan fell, in the desiccated carcasses of rabbits.

„ **scaber**, L. Gt. Salkeld, in birds' nests (B.).

**Hoplia philanthus**, Füss. Rather local but common, although of somewhat erratic appearance.

**Serica brunnea**, L. Common.

**Melolontha vulgaris**, F. The cockchafer is not particularly common in this County.

„ **hippocastani**, F. Local and scarce, Gilsland (Bold), near Ullswater.

**Phyllopertha horticola**, L. Common, sometimes exceptionally so.

**Anomala frischeri**, F. Common on the coast, the blue form, **cyanea**, Torre, occurs very rarely.

**Gnorimus nobilis**, L. Carlisle (T. C. Heysham).

### EUCNEMIDAE.

**Throscus dermestoides**, L. Widely distributed, but not very common.

### ELATERIDAE.

**Lacon murinus**, L. Of fairly frequent occurrence.

**Cardiophorus thoracicus**, Er. Baron Wood (T. C. Heysham); this species has not occurred in the British Isles for many years, and may be extinct.

**Cryptohypnus maritimus**, Curt. On the banks of the R. Eden at Gt. Salkeld, local and scarce.

„ **riparius**, F. Common.

„ **sabulicola**, Boh. Very rare, one at Gt. Salkeld in 1911.

„ **dermestoides**, Hbst. Common by streams, the var. 4.-**guttatus**, Lap., equally so.

**Elater balteatus**, L. Common in pine woods.

**Melanotus rufipes**, Hbst. Moderately common in rotten wood.

**Athous hirtus**, Hbst. Common, especially in gardens.

„ **longicollis**, Ol. Rose Castle (T. C. Heysham).

„ **haemorrhoidalis**, F. Very common.

„ **vittatus**, F. Local, Baron Wood, Seathwaite, Seascale.

**Limonium cylindricus**, Pk. Rather local but fairly common.

„ **minutus**, L. Occurs not infrequently, Kirkbampton,  
Gt. Salkeld.

**Sericosomus brunneus**, L. Of wide distribution, but not common.

**Adrastus nitidulus**, Marsh. Common but rather local, Tarn  
Lodge (R.), Wreay.

**Agriotes sputator**, L. Moderately common, Carlisle, Gt. Salkeld.

„ **obscurus**, L. Very common.

„ **lineatus**, L. Not uncommon on the Solway Marshes  
and along the coast, scarcer inland.

„ **sobrinus**, Kies. Scarce, on the R. Irthing (Bold),  
Wreay.

„ **pallidulus**, Ill. Very common.

**Dolopius marginatus**, L. Common.

**Corymbites pectinicornis**, L. Somewhat local, but common at  
times.

„ **cupreus**, F. Fairly common and widely distributed,  
var. **aeruginosus**, F., common on the mountains.

„ **tessellatus**, F. On marshy ground, not infrequent.

„ **quercus**, Gyll. Common in woods, var. **ochropterus**,  
Steph., occurring along with the type.

„ **holosericeus**, F. Rare, one specimen at Seascale.

„ **impressus**, F. Local and scarce, Gilsland (Bold),  
Orton, Baron Wood, var. **rufipes**, Schil., recorded  
from Baron Wood by Donisthorpe and Britten.

**Campylus linearis**, L. Common.

## DASCILLIDAE.

**Dascillus cervinus**, L. In grassy places, fairly common.

**Helodes minuta**, L. Common on herbage in damp places.

„ **marginata**, L. Fairly common in same situations.

**Microcara livida**, F. Common, but rather local in the Carlisle  
district.

**Cyphon coarctatus**, Pk. Fairly common on various plants.

„ **nitidulus**, Th. Common.

„ **variabilis**, Thunb. Common.

„ **punctipennis**, Sharp. Common on marshy ground.

„ **pallidulus**, Boh. Common.

„ **padi**, L. Fairly frequent but rather local.

**Hydrocyphon deflexicollis**, Müll. Stream sides, local, R. Irthing, Borrowdale, Matterdale.

### LAMPYRIDAE.

**Lampyris noctiluca**, L. Widely distributed but not a common species, Tarn Lodge (R.), Orton, Keswick, Eskdale.

### TELEPHORIDAE.

**Podabrus alpinus**, Pk. Common in and near woods.

**Ancistronycha abdominalis**, F. Local, Gelt Woods, R. Irthing, &c.

**Telephorus rusticus**, Fall. Common in woods and on the Solway Marshes.

„ **lividus**, L. Common; var. **dispar**, F., equally so.

„ **pellucidus**, F. Common.

**nigricans**, Müll. Common, especially the var. **discoideus**, Steph.

„ **obscurus**, L. Local and confined to the Lake district, Keswick, Sty Head, Ullswater.

„ **litturatus**, Fall. Rather local, Orton, Lanercost, Keswick.

„ **darwinianus**, Sharp. Common on the Solway Marshes.

„ **figuratus**, Man. Common in meadows.

„ **bicolor**, F. Common on trees and shrubs.

„ **haemorrhoidalis**, F. Common in woods and hedges.

„ **pallidus**, Fall. Local, Cumrew fell (R.), Gt. Salkeld (B.), Sty Head, Kingmoor.

„ **flavilabris**, Fall. Common on marshy ground.

„ **thoracicus**, Ol. Local and scarce, Gt. Salkeld (B.), Davidson's bank (T. C. Heysham).

**Rhagonycha unicolor**, Curt. Rare, Borrowdale (J. W. Allen), Wreay Woods.

„ **fulva** Scop. Very common on thistles, &c.

„ **testacea**, L. Baron Wood (T. C. Heysham).

„ **limbata**, Th. Very common on trees and bushes.

„ **pallida**, F. Common in hedges and on trees.

**Malthinus punctatus**, Fourc. Fairly common on oak and other trees.

„ **frontalis**, Marsh. On the Scot's pine, not very common.

**Malthodes marginatus**, Lat. Common in woods.

„ **mysticus**, Kies. Rare, Gelt Woods.

„ **flavoguttatus**, Kies. In woods, not uncommon locally.

„ **dispar**, Germ. Widely distributed but not common.

„ **pellucidus**, Kies. On long grass in woods, common.

„ **minimus**, L. On marshy ground, not infrequent.

„ **guttifer**, Kies. Rare, Orton, Gelt.

„ **atomus**, Th. Occurs sparingly in numerous localities.

**Malachius bipustulatus**, L. Common in woods.

„ **viridis**, F. Baron Wood (T. C. Heysham).

**Anthocomus fasciatus**, L. Rose Castle (T. C. Heysham).

**Dasytes aerosus**, Kies. Fairly frequent in woods.

**Haplocnemus impressus**, Marsh. Under bark, scarce, Baron Wood (R.), Gt. Salkeld (B.), Durdar.

**Phloeophilus edwardsi**, Steph. Local, Gt. Salkeld, Orton, Durdar.

## CLERIDAE.

**Tillus elongatus**, L. Baron Wood (T. C. Heysham).

**Necrobia ruficollis**, F. Fairly common, Penrith (B.), Carlisle, Drigg.

„ **violacea**, L. On bones, Baron Wood, Gt. Salkeld.

„ **rufipes**, De G. Scarce, Carlisle.

## PTINIDAE.

**Ptinus sexpunctatus**, Pz. Carlisle, in old houses (T. C. Heysham).

„ **fur**, L. Fairly common in houses.

„ **subpilosus**, Müll. Under bank, scarce, Gt. Salkeld (B.).

„ **tectus**, Boield. Gt. Salkeld (B.), Carlisle (M.).

**Niptus hololeucus**, Fall. In houses, frequent.

„ **crenatus**, F. Tarn Lodge (R.), Gt. Salkeld.

**Trigonogenius globulum**, Sol. Carlisle.

**Hedobia imperialis**, L. Local and scarce, Thursby (M.), Gt. Salkeld (B.). Carlisle.

**Mezium affine**, Boield. Melmerby (Rev. W. W. Mason).

**Gibbium scotias**, F. In houses, scarce, Carlisle.

## ANOBIIDAE.

**Dryophilus pusillus**, Gyll. On larch trees, locally common.

**Priobium castaneum**, F. In dead wood, fairly frequent.

**Anobium domesticum**, Fourc. Very common.

„ **paniceum**, L. Gt. Salkeld (B.), Carlisle (M.), Stanwix,  
in bird seed.

**Xestobium tessellatum**, F. West Walls, Carlisle (T. C. Heysham).

**Ernobius mollis**, L. Not common, Tarn Lodge (R.), Carlisle.

**Ochina hederæ**, Müll. On ivy, Gt. Salkeld, Wreay Woods,  
Lanercost.

### BOSTRICHIDAE.

**Bostrichus capucinus**, L. A number of this imported species  
taken in Carlisle in the summer of 1912.

### LYCTIDAE.

**Lyctus canaliculatus**, F. On oak timber, scarce, Carlisle.

### CISSIDAE.

**Cis boleti**, Scop. Common in fungoid growths on trees, &c.

„ **micans**, Hbst. Local and scarce, Gt. Salkeld (B.).

„ **hispidus**, Pk. A few taken at Gt. Salkeld.

„ **bidentatus**, Ol. Common in fungi on old trees.

„ **alni**, Gyll. On tree stumps, scarce, Tarn Lodge, (R.),  
Port Carlisle.

„ **nitidus**, Hbst. Fairly common.

„ **lineatocribratus**, Mel. Rare, Gt. Salkeld (B.).

„ **punctulatus**, Gyll. Locally common in *Polyporus* on pine  
trees, Orton.

„ **festivus**, Pz. In dead wood, &c., scarce, Carlisle and district.

**Octotemnus glabriculus**, Gyll. Common in *Boleti* and *Polypori*.

### CERAMBYCIDAE.

**Aromia moschata**, L. Local and scarce, Keswick and district.

**Asemum striatum**, L. In pine woods, fairly common of late  
years.

**Callidium violaceum**, L. Rare, Eskdale (Canon Fowler), Carlisle.

„ **alni**, L. Rose Castle (T. C. Heysham).

**Clytus arcuatus**, L. Rare, Baron Wood (T. C. Heysham), two  
specimens at Carlisle in 1911 in a timber yard.

„ **arietis**, L. Of fairly frequent occurrence.

**Cerambyx heros**, Scop. Carlisle, several specimens; an imported  
species.

- Rhagium inquisitor**, F. Fairly common in oak and other trees.  
 „ **bifasciatum**, F. Common in decaying timber.  
**Toxotus meridianus**, L. Local and not common, Gt. Salkeld (B.).  
**Pachyta cerambyciformis**, Schr. In and near woods, not scarce,  
 Durdar, Gelt, Baron Wood.  
**Strangalia quadrifasciata**, L. Baron Wood (T. C. Heysham),  
 Eskdale (G. H. Ashe).  
 „ **armata**, Hbst. Local, Carlisle district (T. C. Heysham),  
 Eskdale (M.), Keswick and district.  
 „ **melanura**, L. Rare, one specimen in Wreay Woods.  
**Grammoptera tabacicolor**, De G. On flowers, not infrequent,  
 but local.  
 „ **ruficornis**, F. Common on hawthorn.

### LAMIIDAE.

- Acanthocinus aedilis**, L. Occasionally in Carlisle, probably  
 introduced in timber.  
**Leiopus nebulosus**, L. On oak and other trees, widely distributed  
 but not very common.  
**Pogonochaerus bidentatus**, Th. Widely distributed, but not of  
 frequent occurrence.  
 „ **dentatus**, Fourc. Gilsland (Bold), Keswick (G.  
 Wailes).  
**Saperda scalaris**, L. Scarce, Cockermouth (Stephens), Gelt  
 Woods, Baron Wood.  
 „ **populnea**, L. Locally common on aspen, Orton, Durdar,  
 Newton Reigny, Kingmoor.  
**Tetrops praeusta**, L. Local on mountain ash, Baron Wood.  
**Stenostola ferrea**, Schr. One specimen in Baron Wood (B.).  
**Oberea oculata**, L. Baron Wood (T. C. Heysham).

### BRUCHIDAE.

- Bruchus rufimanus**, Boh. Gt. Salkeld (B.), Cummersdale (T. C.  
 Heysham).  
 „ **pisi**, L. Carlisle, in flour mills.  
 „ **obtectus**, Say. Carlisle, 1914, in beans, probably im-  
 ported.

## CHRYSOMELIDAE

- Donacia crassipes**, F. Upperby (T. C. Heysham).  
 „ **dentata**, Hopp. Cumberland (T. C. Heysham).  
 „ **versicolora**, Brahm. Local, Gt. Salkeld, Thurstonfield, Cumwhinton.  
 „ **dentipes**, F. Locally common, Derwentwater, Newton Reigny Moss.  
 „ **obscura**, Gyll. Local, Derwentwater, Newton Reigny Moss.  
 „ **impressa**, Pk. Rare, one specimen near Keswick in 1905.  
 „ **simplex**, F. Fairly common on yellow iris.  
 „ **sericea**, L. Common on marshy ground.  
 „ **discolor**, Pz. Common in bogs in high districts.  
 „ **affinis**, Kunz. Local and scarce, Borrowdale.
- Haemonia appendiculata**, Pz. One specimen at Gt. Salkeld in 1911 (B.).  
 „ **species ?** Talkin Tarn (E. J. Pearce, E.M.M., 1922, p.93).
- Zeugophora subspinoso**, F. Rare, Orton.
- Lema lichenis**, Voet. Generally common.  
 „ **melanopa**, L. Widely distributed, and not uncommon.
- Crioceris asparagi**, L. Woodside (T. C. Heysham).
- Clythra quadripunctata**, L. In the nests of *Formica rufa*, Keswick.
- Cryptocephalus aureolus**, Suf. Locally common in the flowers of buttercup, &c., Seascale, Bolton Fell.  
 „ **fulvus**, Goetz. Scarce, Burgh (T.C. Heysham), Seascale (M.), Orton, Durdar.  
 „ **pusillus**, F. Local and scarce, Orton.  
 „ **labiatus**, L. Common on birch, &c.
- Timarcha tenebricosa**, F. Apparently rare, Cleator Moor (M.).
- Chrysomela marginata**, L. Rare, Burgh Marsh (T. C. Heysham), Gt. Salkeld (B.).  
 „ **staphylea**, L. Common.  
 „ **polita**, L. Common on damp ground.  
 „ **orichalcia**, Müll. Coombe Wood, Armathwaite (T. C. Heysham).  
 „ **varians**, Schal. On *Hypericum*, local, Gelt Woods, Gt. Salkeld.

- Chrysomela graminis**, L. Sandsfield (T. C. Heysham).  
 „ **menthrasti**, Suf. Cumberland (Stephens).  
 „ **fastuosa**, Scop. On *Galeopsis*, local, Cardew Mire  
 (T. C. Heysham), Port Carlisle, Bowness Moss.  
 „ **hyperici**, Forst. On *Hypericum*, not uncommon.  
**Melasoma aeneum**, L. On alders by streams, Gelt, Baron Wood.  
 „ **populi**, L. Scarce, Baron Wood (T. C. Heysham),  
 Prior Rigg (M.), Allonby, Etterby Scaur.  
**Phytodecta rufipes**, De G. Armathwaite (T. C. Heysham).  
 „ **olivacea**, Forst. Common on broom; var. **nigricans**,  
 Weise, occasionally taken.  
 „ **pallida**, L. Eskdale district (Binstead).  
**Gastroidea viridula**, De G. In marshy places, local, Gt. Salkeld,  
 Derwentwater.  
 „ **polygoni**, L. Common on low herbage.  
**Phaedon tumidulus**, Germ. Common on hedge banks, &c.  
 „ **armoraciae**, L. On the edges of ponds, fairly common.  
 „ **cochleariae**, F. On watercress, locally abundant.  
 „ **concinus**, Steph. Scarce, Silloth, Drigg, Newton  
 Marsh, a maritime species.  
**Phyllodecta vulgatissima**, L. On willow, locally common.  
 „ **vitellinae**, L. Abundant on osier and aspen.  
**Hydrothassa aucta**, F. Frequent on low herbage, &c.  
 „ **marginella**, L. Common.  
 „ **hannoverana**, F. Locally abundant, on *Caltha*  
*palustris*, Gt. Salkeld, Langwathby.  
**Prasocuris junci**, Brahm. Common on brooklime.  
 „ **phellandrii**, L. Common on marsh marigolds.  
**Luperus rufipes**, Scop. Generally common on birch.  
 „ **flavipes**, L. Fairly common, but somewhat local.  
**Lochmaea capreae**, L. Local and scarce, Hayton Moss (R.),  
 Orton.  
 „ **suturalis**, Th. Very common on *Calluna*.  
 „ **crataegi**, Forst. On hawthorn, fairly common.  
**Galerucella viburni**, Pk. On Guelder rose, locally common, Orton.  
 „ **nymphaeae**, L. Local, Tarn Lodge (R.).  
 „ **sagittariae**, Gyll. On marshy ground, common.  
 „ **lineola**, F. On willows, local, Carleton, Cumwhitton  
 Moss.

- Galerucella californiensis**, L. Local, Durdar.
- „ **tenella**, L. Abundant in damp meadows, &c.
- Adimonia tanacetii**, L. Widely distributed, but seldom common.
- Sermyla halensis**, L. Hedge banks and dry ditches, common.
- Longitarsus anchusae**, Pk. Local and not common, Tarn Lodge (R.), Gt. Salkeld (B.), Wetheral.
- „ **holsaticus**, L. Local on Lousewort, Wan fell, Kingmoor.
- „ **castaneus**, Foudl. In flood refuse, rare, R. Petteril.
- „ **luridus**, Scop. Very common.
- „ **suturillus**, Duft. Widely distributed; var. **fuscicollis** Steph., also occurs, perhaps more frequently than the type.
- „ **atricillus**, L. Common.
- „ **patruelis**, Al. Rare in flood refuse, R. Petteril at Carleton.
- „ **melanocephalus**, De G. Of general distribution.
- „ **distinguendus**, Rye. Rare, Orton, Wreay.
- „ **picipes**, Steph. One or two specimens at Silloth.
- „ **pusillus**, Gyll. Fairly common.
- „ **reichei**, Al. Gilsland (Bold), a var. of **pusillus** probably.
- „ **exoletus**, L. Rare, Armathwaite (M.).
- „ **jacobaeae**, Wat. Common on ragwort.
- „ **gracilis**, Kuts. Locally common, Silloth, Carlisle.
- „ „ **var. poweri**, Al., Gt. Salkeld (B.).
- „ **succineus**, Foudl. Scarce, but perhaps overlooked, Carlisle.
- „ **ochroleucus**, Marsh. Rare, Carlisle.
- Haltica longicollis**, All. (**britteni** Shp). On heather, local, Wan fell.
- „ **oleracea**, L. (**ytensis** Shp). Common on heather throughout the County. Mr. Britten, who has closely studied this genus, tells me that **oleracea** may eventually be found to consist of two or three species. The genus is extremely difficult to understand.
- Phyllotreta undulata**, Kuts. Very common and destructive to turnips, &c.

**Phyllotreta nemorum**, L. Comparatively scarce, Carlisle and district.

„ **flexuosa**, Ill. Widely distributed on marshy ground.

„ **sinuata**, Steph. Local, Eskdale (Fowler, E.M.M., 1912, p. 286).

„ **tetrastigma**, Com. In flood refuse, scarce, Spa Well (M.), Wetheral.

„ **exclamationis**, Thunb. Fairly common.

**Aphthona nonstriata**, Goeze, Scarce, Gt. Salkeld (B.), Monkhill.

**Batophila rubi**, Pk. Local and not common, Gelt Woods.

**Sphaeroderma testacea**, F. Fairly common.

„ **cardui**, Gyll. Fairly common.

These two species are so much alike that their correct determination is not always certain.

**Apteropeda orbiculata**, Marsh. On *Potentilla*, &c., not uncommon.

„ **globosa**, Ill. Rather scarce, Wetheral, Wreay, Gelt.

**Mniophila muscorum**, Koch. Local, Gt. Salkeld (B.).

**Podagrica fuscicornis**, L. Armathwaite (T. C. Heysham).

**Mantura rustica**, L. Fairly common; var. **suturalis**, Weise., scarce.

„ **obtusata**, Gyll. Not infrequent near Carlisle.

**Crepidodera transversa**, Marsh. Common.

„ **ferruginea**, Scop. Common.

„ **rufipes**, L. Local, and not very common, Cummersdale, Caldbeck (M.), Gt. Salkeld.

„ **ventralis**, Ill. Holmegate (T. C. Heysham).

„ **helxines**, L. Rose Castle (T. C. Heysham).

„ **aurata**, Marsh. Scarce, Cumwhitton Moss, Orton, Gt. Salkeld.

„ **smaragdina**, Foud. Very common on sallow.

**Hippuriphila modeeri**, L. Widely distributed.

**Chaetocnema hortensis**, Fourc. Rare, Seascale.

„ **sahlbergi**, Gyll. Rare, Newton Marsh.

**Plectroscelis concinna**, Marsh. Common.

**Psylliodes chrysocephala**, L. In gardens on cabbages, locally common.

„ **napi**, Koch. Frequently swept up on marshy ground.

„ **cuprea**, Koch. Rather uncommon, Upperby, Easby, &c.

**Psylliodes affinis**, Pk. Local, Gt. Salkeld (B.), Gelt (R.), Kingmoor.

„ **marcida** Ill. Maritime, Silloth, Seascale.

„ **picina**, Marsh. Local, Kirkbampton, Wreay, Gt. Salkeld.

**Cassida sanguinolenta**, F. Rare, Penrith (B.).

„ **flaveola**, Thunb. Widely distributed.

„ **equestris**, F. Rickerby (T. C. Heysham).

„ **viridis**, L. On thistles, common.

„ **hemisphaerica**, Hbst. Scarce, Orton, Prior Rigg.

### TENEBRIONIDAE.

**Blaps mucronata**, Lat. About houses, not infrequent.

**Heliopathes gibbus**, G. Common on the coast.

**Microzoum tibiale**, F. Common on the coast.

**Phaleria cadaverina**, F. Scarce, Seascale.

**Diaperis boleti**, L. Dalston Hall Wood (T. C. Heysham).

**Tenebrio molitor**, L. } Those two species are bred by bird fanciers  
 „ **obscurus**, F. } in large numbers, they also occur in flour mills.

**Alphitobius piceus**, Ol. Scarce, Carlisle.

**Gnathocerus cornutus**, F. In flour mills, Carlisle.

**Tribolium ferrugineum**, F. Carlisle, Silloth.

„ **confusum**, Duv. Common in flour mills.

**Latheticus oryzae**, Wat. Gt. Salkeld (B.), an introduced species.

**Helops coeruleus**, L. Canal Reservoir Carlisle (T. C. Heysham).

„ **striatus**, Fourc. Scarce, Silloth.

### LAGRIIDAE.

**Lagria hirta**, L. Apparently confined to the coast, where it is locally common,

### CISTELIDAE.

**Cistela murina**, L. Local and scarce, Gt. Salkeld (B.), Keswick.

### MELANDRYIDAE.

**Tetratoma fungorum**, L. Locally common, Gt. Salkeld.

„ **desmaresti**, Lat. Rare, Gt. Salkeld (B.).

„ **ancora**, F. Scarce, Gt. Salkeld (B.), Orton (M.).

**Orchesia micans**, Pz. Local, Gt. Salkeld (B.).

**Clinocara tetratoma**. Th. Scarce, Gt. Salkeld (B.), Gilsland, (Bold), Drigg, Carlisle.

„ **undulata**, Kr. Under bark of dead wood, local, Baron Wood.

**Conopalpus testaceus**, Ol. There are no records of the type for Cumberland, but var. **vigorsi**, Steph., is said by Stephens to have been taken in the County by Weaver.

**Melandrya caraboides**, L. In old wood, not uncommon.

**Abdera flexuosa**, Pk. Very local, Langwathby (B.).

### PYTHIDAE.

**Salpingus castaneus**, Pz. In pine plantations, not scarce.

„ **aeratus**, Muls. Widely distributed and fairly common.

„ **foveolatus**, Ljun. Local and scarce, Tarn Lodge, (R), Gt. Salkeld.

**Rhinosimus ruficollis**, L. In woods, rather scarce, Wreay, Durdar, &c.

„ **viridipennis**, Steph. Scarce, Wreay, Cummersdale.

„ **planirostris**, F. Common.

### OEDEMERIDAE.

**Oedemera lurida**, Marsh. Rare, Threlkeld (B.).

„ **nobilis**, Scop. St. Bees (G. H. Ashe).

**Nacerdes melanura**, L. Maritime, Silloth, Seascale.

### PYROCHROIDAE.

**Pyrochroa serraticornis**, Scop. Local, Burgh-by-Sands (Dixon), Drumburgh (M.), Gt. Salkeld (B.), Carlisle.

### SCRAPTIIDAE.

**Scraptia fuscula**, Müll. Rare, Gt. Salkeld (B.).

### MORDELLIDAE.

**Anaspis frontalis**, L. Very common.

„ **garneysi**, Fow. Local, Gt. Salkeld (B.).

„ **rufilabris**, Gyll. Generally distributed and common.

„ **geoffroyi**, Müll. Rather local, Carlisle, Baron Wood, Gt. Salkeld.

**Anaspis ruficollis**, F. Common.

„ **maculata**, Fourc. Very common.

„ **latipalpis**, Schil. Widely distributed, but not very frequent.

## RHIPIDOPHORIDAE.

**Metoecus paradoxus**, L. Rare, Carleton, Edmond Castle (R.).

## ANTHICIDAE.

**Notoxus monoceros**, L. Common on the sandhills at Seascale and Drigg.

**Anthicus constrictus**, Curt. (**humilis**, Brit. Coll.). Local and scarce, Seascale.

„ **floralis**, L. Common, the var. **quisquilius**, Th., has been taken at Edmond Castle by Mr. Routledge.

„ **scoticus**, Rye. Local and scarce, Allonby.

## MELOIIDAE.

**Meloe proscarabaeus**, L. Common at times, but rather local.

„ „ var. **cyaneus**, Muls., Gt. Salkeld (B.).

## ANTHRIBIDAE.

**Brachytarsus varius**, F. Rather scarce, Gelt (R.), Kirkbride, Orton.

**Areocerus fasciculatus**, De G. Carlisle (M.), an introduced species.

## CURCULIONIDAE.

**Rhinomacer attelaboides**, F. In pine plantations, fairly frequent.

**Apoderus coryli**, L. Baron Wood (T. C. Heysham).

**Attelabus curculionoides**, L. Not uncommon in the larger woods.

**Bytiscus betuleti**, F. Baron Wood (T. C. Heysham).

**Rhynchites cupreus**, L. On mountain ash, locally common, Gelt, Wreay, Baron Wood.

„ **aeneovirens**, Marsh. Widely distributed, but not common.

„ **minutus**, Hbst. On low herbage and bushes, common.

„ **nanus**, Pk. On birch, &c., Hayton Moss (R.), Orton, Cumwhitton Moss.

„ **harwoodi**, Joy. Common, the closely allied **uncinatus** Th., has not, apparently, occurred in Cumberland.

**Deporaus megacephalus**, Germ. Fairly common on willow.

„ **betulae**, L. Very common.

**Apion cerdo**, Th. Banks of the Irthing (Bold).

„ **subulatum**, Kirb. Scarce but widely distributed.

„ **ulicis**, Först. On furze, very common.

„ **genistae**, Kirb. On petty whin, local, Kingmoor.

„ **miniatum**, Germ. Scarce, Cummersdale.

„ **haematodes**, Kirb. On low herbage, common.

„ **pallipes**, Kirb. On garlic, local, Edenhall (B.), Cummersdale, Easby.

„ **viciae**, Pk. On vetch and trefoil, common.

„ **apricans**, Hbst. Very common.

„ **assimile**, Kirb. Fairly common, Tarn Lodge (R.), Wreay, Orton.

„ **trifolii**, L. Rare, but perhaps overlooked, Wreay.

„ **dichroum**, Bed. Common.

„ **nigritarse**, Kirb. Fairly common.

„ **confluens**, Kirb. Locally common on *Matricaria*, Seascale, Silloth.

„ **stolidum**, Germ. Rare, Carleton (M.).

„ **aeneum**, F. Botcherby (T. C. Heysham).

„ **radiolus**, Kirb. Wreay (R.).

„ **onopordi**, Kirb. Fairly common on thistles.

„ **carduorum**, Kirb. Common on thistles.

„ **virens**, Hbst. Common on low herbage.

„ **punctigerum**, Pk. Not infrequent on hedge banks.

„ **pisi**, F. Rather local, Gelt, Wetheral, Gt. Salkeld.

„ **aethiops**, Hbst. Common and generally distributed.

„ **ebeninum**, Kirb. Common on *Vicia* and other plants.

„ **striatum**, Kirb. On broom, common.

„ **immune**, Kirb. Carlisle district, rather infrequent.

„ **ononis**, Kirb. Abundant on restharrow.

„ **spencei**, Kirb. Common on *Vicia*.

„ **ervi**, Kirb. Generally common on hedge banks.

„ **gyllenhali**, Kirb. Not infrequent, Tarn Lodge (R.), Orton, Wreay, &c.

„ **unicolor**, Kirb. Fairly common.

„ **scutellare**, Kirb. Local on furze, Kingmoor, Seascale, Wan fell.

- Apion loti**, Kirb. Widely distributed, but not very common.
- „ **seniculum**, Kirb. Rather local, Carlisle district, Gt. Salkeld.
- „ **tenuis**, Kirb. Local and scarce, Thurstonfield (M.), Gt. Salkeld (B.), Hallbankgate.
- „ **marchicum**, Hbst. Moderately common.
- „ **affine**, Kirb. Generally common.
- „ **violaceum**, Kirb. Common on various kinds of dock.
- „ **hydrolapathi**, Kirb. Local, Orton, Kirkbride, Silloth.
- „ **humile**, Germ. Very common.
- Otiorhynchus atroapterus**, De G. Common on the coast, rare inland.
- „ **maurus**, Gyll. Not uncommon on the mountains.
- „ **scabrosus**, Marsh. Dalston (T. C. Heysham).
- „ **ligneus**, Ol. Moderately common.
- „ **picipes**, F. Very common and destructive.
- „ **sulcatus**, F. Common.
- „ **rugifrons**, Gyll. Local and scarce, Gelt, Hallbankgate.
- „ **ovatus**, L. Common.
- „ **muscorum**, Bris. Local, Carleton, Castle Carrock fell (M.), Easby.
- Trachyploeus aristatus**, Gyll. Scarce, Gt. Salkeld (B.), Carlisle.
- „ **scaber**, L. Local, Carlisle, Gt. Salkeld.
- Strophosomus coryli**, F. Very common.
- „ **capitatus**, De G. Less common than the last, Gelt, Baron Wood, Orton.
- „ **retusus**, Marsh. Moderately common, Burgh, Orton, Gt. Salkeld.
- „ **faber**, Hbst. Local and scarce, Gt. Salkeld.
- „ **lateralis**, Pk. Common on the mosses.
- Exomias araneiformis**, Schr. On the banks of streams, common at times.
- Omius mollinus**, Boh. Locally common, Cross fell (B.), Newton Marsh, Carlisle.
- Brachysomus echinatus**, Bons. Rather infrequent, Gt. Salkeld, Orton, Easby.
- Sciaphilus muricatus**, F. Common in flood refuse.

- Tropiphorus tomentosus**, Marsh. Fairly common in flood refuse, &c.
- „ **obtusius**, Bons. Not infrequent and widely distributed.
- Liophloeus nubilus**, F. Rather scarce, Carlisle, Gelt Woods, Gt. Salkeld.
- Polydrusus micans**, F. On birch, locally common, Wreay (M.), Baron Wood.
- „ **tereticollis**, De G. Moderately common.
- „ **pterygomalis**, Sch. On hazel, &c., fairly common.
- „ **flavipes**, De G. Very local, Orton, Kingmoor.
- „ **cervinus**, L. Common in early spring on various bushes.
- „ **chrysomela**, Ol. Local and rather scarce, Solway Marshes.
- Phyllobius oblongus**, L. Common in hedges.
- „ **calcaratus**, F. On various trees, common.
- „ **urticae**, De G. On nettles, common.
- „ **pyri**, L. Very common on birch, &c.
- „ **argentatus**, L. Common in hedges and on various trees.
- „ **maculicornis**, Germ. Equally common with the last.
- „ **pomona**, Ol. On low herbage, locally common.
- „ **viridiaeris**, Laich. Common on hedge banks.
- „ **viridicollis**, F. On *Centaurea nigra*, &c., locally abundant.
- Tanymecus palliatus**, F. Burgh Marsh, Skinburness, rather scarce.
- Philopedon geminatus**, F. Common on the coast, scarce inland.
- Atactogenus exaratus**, Marsh. Moderately common.
- Barynotus obscurus**, F. Of frequent occurrence.
- „ **schonherri**, Zett. Less frequent, but widely distributed.
- „ **elevatus**, Marsh. On dog's mercury, rather local.
- Alophus triguttatus**, F. Frequent in flood refuse.
- Sitones griseus**, F. Local, common at times, Silloth, Seascale, Cumwhitton Moss.
- „ **cambricus**, Steph. Infrequent, Orton, Durdar, Kingmoor Drigg.

- Sitones regensteiniensis**, Hbst. Common on broom and furze.
- „ **lineellus**, Gyll. On *Lotus corniculatus*, local, Anthorn, Silloth, Seascale.
- „ **tibialis**, Hbst. Common.
- „ **hispidulus**, F. Common.
- „ **humeralis**, Steph. Local, Silloth, Gt. Salkeld.
- „ **flavescens**, Marsh. Common.
- „ „ var. **longicollis**, Fahr. Of occasional occurrence.
- „ **puncticollis**, Steph. Widely distributed, but rather scarce.
- „ **suturalis**, Steph. Fairly common on hedge banks.
- „ **ononidis**, Sharp. Scarce, perhaps overlooked, Burgh, Port Carlisle (M.).
- „ **lineatus**, L. Common.
- „ **sulcifrons**, Thunb. Common.
- Hypera punctata**, F. Fairly common.
- „ **fasciculata**, Hbst. Very local, Seascale, on *Erodium*.
- „ **rumicis**, L. On *Rumex*, fairly common.
- „ **polygoni**, L. Occurs in tolerable numbers.
- „ **suspiciosa**, Hbst. Local and scarce, Carleton, Gelt, Orton.
- „ **variabilis**, Hbst. Rather scarce, Silloth, Newton Reigny Moss.
- „ **plantaginis**, De G. Fairly common on low herbage.
- „ **trilineata**, Marsh. Scarce, Carleton, Cummersdale, Seascale.
- „ **nigrirostris**, F. Moderately common.
- „ „ var. **ononinis**, Stev. Local, Seascale.
- Cleonus sulcirostris**, F. Common on the coast sandhills.
- Lixus paraplecticus**, L. Burgh Marsh (T. C. Heysham).
- Liosoma ovatum**, Clair. Common on low herbage, &c.
- „ „ var. **collaris**, Rye. Scarce, Carleton, Wetheral.
- Curculio abietis**, L. Common in pine plantations.
- Pissodes pini**, L. Hardly so frequent as the last.
- Trachodes hispidus**, L. Near Carlisle (T. C. Heysham).

**Orchestes quercus**, L., Common in woods on oak.

„ **scutellaris**, Gyll. Dalston (T. C. Heysham).

„ **ilicis**, F. Locally common on oak, Gt. Salkeld.

„ „ var. **nigripes**, Fow. Rare, Gt. Salkeld.

„ **avellanae**, Don. Local and rather scarce, Orton, Gt. Salkeld.

„ **fagi**, L. Common on beech.

„ **rusci**, Hbst. Common on willow.

„ **stigma**, Germ. Rather local, but fairly common.

„ **salicis**, L. Common on willow.

„ **saliceti**, F. Local, Gt. Salkeld (B.), Belle Vue (M.), Carleton.

**Rhamphus flavicornis**, Clair, Common on birch.

**Orthocetes setiger**, Beck. Local and scarce, Gt. Salkeld (B.).

**Procas armillatus**, F. var. **granulicollis**, Walt., Carlisle (T. C. Heysham).

**Grypoidius equiseti**, F. On marshy ground, fairly frequent.

**Eirrhinus bimaculatus**, F. Fairly common on the Solway Marshes.

„ **acridulus**, L. Common.

„ **aethiops**, F. Rare, Borrowdale, (B.).

**Dorytomus vorax**, F. Local, on poplar, Blackwell.

„ **tremulae**, F. Cardew Mire (T. C. Heysham).

„ **tortrix**, L. Not very frequent, Cardew Mire (T. C. Heysham), Durdar (M.), Gt. Salkeld.

„ **maculatus**, Marsh. Generally common on willows.

„ **melanophthalmus**, Pk. Local, Wanfell, Orton, Cumwhitton Moss.

„ **pectoralis**, Gyll. Fairly common.

„ **majalis**, Pk. Carlisle (T. C. Heysham).

**Bagous alismatis**, Marsh. On the water plantain, locally common, Monkskill.

„ **limosus**, Gyll. Rare, Cumwhinton, Thurstonfield.

„ **claudicans**, Boh. Local, Edenhall, Thurstonfield.

„ **glabrioris**, Dalston (T. C. Heysham).

„ „ Var. **nigritarsis**, Th. Local, Newton Reigny Moss, Thurstonfield.

**Anoplus plantaris**, Naez. Common on birch.

„ **roboris**, Suffr. Rare, Orton.

- Elleschus bipunctatus**, L. Locally common near Carlisle on  
sallows.
- Miccotrogus picirostris**, F. Scarce, Gt. Salkeld (B.), Gelt Woods.
- Miarus campanulae**, L. Blackhall Wood (T. C. Heysham).
- Gymnetron beccabungae**, L. On damp ground, not uncommon.
- „ **labilis**, Hbst. On black knapweed, fairly common.
- Mecinus pyraister**, Hbst. Common.
- Anthonomus ulmi**, De G. Local, Gt. Salkeld (B.), Port Carlisle,  
Gelt (M.).
- „ **pedicularius**, L. Fairly common on hawthorn.
- „ **pomorum**, L. Local and scarce, Tarn Lodge (R.).
- „ **rubi**, Hbst. Local and scarce, Durdar, Kirkbamp-  
ton.
- „ **comari**, Crotch. Common on *Potentilla*.
- Nanophyes lythri**, F. Eskdale (Fowler, E.M.M., 1912, p. 287).
- Cionus scrophulariae**, F. Common on figwort.
- „ **pulchellus**, Hbst. Local but widely distributed.
- Orobitis cyaneus**, L. Generally but thinly distributed, on violets.
- Cryptorhynchus lapathi**, L. On old willows, fairly frequent.
- Acalles ptinoides**, Marsh. Local and not very common, Gt.  
Salkeld (B.), Orton (M.).
- Coeliodes rubicundus**, Hbst. Common on bushes and trees.
- „ **quercus**, F. Also a common insect.
- „ **ruber**, Marsh. Widely distributed, but not common.
- „ **cardui**, Hbst. Rather scarce, Monkhill, Hallbankgate,  
Gt. Salkeld.
- „ **quadrimaculatus**, L. Very common on nettles.
- „ **geranii**, Pk. Locally common on *Geranium sylvaticum*.
- Poophagus sisymbrii**, F. Common on watercress.
- „ **nasturtii**, Germ. Rare, Gt. Salkeld (B.).
- Ceuthorhynchus assimilis**, Pk. Common.
- „ **setosus**, Boh. On Thale cress, local, Gt.  
Salkeld (B.), Carlisle.
- „ **cochleariae**, Gyll. Local and scarce, Gelt,  
Kirkbampton.
- „ **ericae**, Gyll. Common on heather.
- „ **erysimi**, F. Fairly frequent.
- „ **contractus**, Marsh. Common.

- Ceuthorhynchus cyanipennis**, Germ. Widely distributed, but not common.
- „ **timidus**, Weise, Moderately common.
- „ **quadridens**, Pz. Common.
- „ **pollinarius**, Forst. Common.
- „ **pleurostigma**, Marsh. Scarce, Orton, Monkhill, Wan fell.
- „ **viduatus**, Gyll. Eskdale (Fowler, E.M.M., 1912 p. 287), Drigg.
- „ **alliariae**, Bris. Scarce, Wreay (M.), Gt. Salkeld.
- „ **marginatus**, Pk. Blackhall Wood (T. C. Heysham).
- „ **punctiger**, Gyll. Ainstable (M.), Orton, Carlisle, Gt. Salkeld.
- „ **rugulosus**, Hbst. Very local, Oulton (M.).
- „ **euphorbiae**, Bris. Scarce, Wreay, Bowness Moss.
- „ **litura**, F. Common on thistles.
- Ceuthorhynchideus floralis**, Pk. Common on watercress, &c.
- „ **pyrrhorhynchus**, Marsh. Scarce, Blackwell, Silloth.
- „ **nigrinus**, Marsh. Rare, High Hesket.
- „ **posthumus**, Germ. Very local, Gt. Salkeld.
- „ **quercicola**, Pk. Scarce, Wan fell (B.), Orton, Cumwhitton Moss.
- „ **troglydites**, F. Common on low plants.
- Rhinoncus pericarpus**, L. Common.
- „ **gramineus**, F. Scarce, Kirkbampton, Bowness Moss.
- „ **perpendiculararius**, Reich. Moderately common in cultivated fields.
- „ **castor**, F. Common.
- Eubrychius velatus**, Beck. Locally common, Edenhall, Thurstonfield.
- Litodactylus leucogaster**, Marsh. Occurs with the last species.
- Phytobius comari**, Hbst. On marshy ground, not uncommon.
- „ **4-tuberculatus**, F. Fairly common.
- „ **canaliculatus**, Fahr. Locally common, Monkhill, Thurstonfield, Edenhall.

**Phytobius muricatus**, Bris. Local and scarce, Newton Reigny Moss.

**Limnobaris t-album**, L. Local, Wan fell, Dockray-in-Matterdale.

„ **pilistriata**, Steph. Fairly common.

**Balaninus nucum**, L. Blackhall Wood (T. C. Heysham).

„ **villosus**, F. Widely distributed, but scarce.

„ **salicivorus**, Pk. Common on willow.

„ **pyrrhoceras**, Marsh. Common on oak.

**Calandra granaria**, L. Skirwith (B.), Silloth.

„ **oryzae**, L. Common at Silloth docks and elsewhere.

**Magdalis phlegmatica**, Hbst. Pine woods, local, Orton, Durdar, Kirkbampton.

„ **carbonaria**, L. Scarce, on birch, Orton.

„ **armigera**, Fourc. Scarce, Gelt, Baron Wood.

„ **pruni**, L. Scarce and local, Baron Wood.

## SCOLYTIDAE.

**Scolytus destructor**, Ol. Local, Gt. Salkeld (B.), Carlisle.

**Hylastes ater**, Pk. Common on pines.

„ **palliatu**s, Gyll. Very common.

**Hylastinus obscurus**, Marsh. On furze, Gt. Salkeld, Orton, Seascale.

**Hylesinus crenatus**, F. Gt. Salkeld, Carlisle, not very common.

„ **iraxini**, Pz. Very common under bark of ash trees.

„ **vittatus**, F. One specimen in Carlisle.

**Myelophilus piniperda**, L. Common in pine woods.

**Phloeophthorus rhododactylus**, Marsh. Fairly common in furze and broom.

**Dryocaetes villosus**, F. Rare, one in oak near Upperby.

„ **autographus**, Ratz. Rare, one under spruce bark, Carlisle.

**Tomicus typographus**, L. Rare, two under spruce bark, Carlisle.

„ **acuminatus**, Gyll. Locally common under pine bark, Durdar, Orton, Thurstonfield.

**Pityogenes bidentatus**, Hbst. Common in pine woods.

„ **chalcographus**, L. Scarce under spruce bark, Carlisle.

**Trypodendron domesticum**, L. In oak, scarce, Wreay, Keswick.

„ **lineatum**, Ol. Local, Gt. Salkeld (B.).

## APPENDIX.

The following species are additions to the lists published in Vols. i. and ii., of these Transactions.

### CICINDELIDAE.

**Cicindela hybrida**, L. Common on the sandhills at Drigg.

### CARABIDAE.

**Calosoma inquisitor**, L. Grange in-Borrowdale (S. Campbell).

„ **sycophanta**, L. Carlisle (T. C. Heysham, Fowler, Vol. vi., p. 292), not an indigenous species.

**Leistus spinibarbis**, F. Melmerby (Rev. W. W. Mason).

**Nebria iberica**, Oliveira. Borrowdale (Andrewes, E.M.M., 1922, p. 92); I have a specimen taken on Grisdale Pike in 1913, which appears to be this species.

**Dyschirius thoracicus**, Ross. Scarce, Ravenglass.

**Acupalpus exiguus**, Dj. Scarce, in flood refuse, Cummersdale.

**Harpalus neglectus**, Dj. Not uncommon at Drigg.

„ **anxius**, Duft. One specimen at Drigg.

**Pterostichus parumpunctatus**, Germ. One at Buttermere, Aug., 1913 (J. W. Allen, Ent. Rec. 1914, p. 99).

**Anchomenus dahli**, Borre. One at Kirkbride, 15, vi., 1913.

„ **sexpunctatus**, L. Melmerby (Rev. W. W. Mason), Carleton, Cummersdale.

**Cillenus lateralis**, Sam. Not common, Anthorn, Seascale.

**Bembidium nitidulum**, Marsh. Locally common, Cumwhinton.

**Patrobus septentrionis**, Dj. Skiddaw (J. B. Hodgkinson, Ent. Wk. Int. 1859, pages 164, 165), a doubtful record.

### HALIPLIDAE.

**Haliphus heydeni**, Wehncke. Culgaith (E. J. Pearce).

## HYDROPHILIDAE.

**Helophorus 4-signatus**, Marsh. Local, Kingmoor.

„ **ytenensis**, Shp. Locally common, Kingmoor,  
Thurstonfield.

**Sphaeridium 4-maculatum**, Marsh. Common.

## STAPHYLINIDAE.

**Oxypoda amoena**, Fair. In moss, scarce, Gt. Salkeld.

**Homalota malleus**, Joy. Generally common.

„ **tomlini**, Joy. Carlisle, Newton Reigny Moss.

„ **arctica**, Th. In flood refuse, scarce, R. Gelt.

„ **incognita**, Shp. Wan fell (B.).

„ **hybrida**, Shp. In fungi, Orton.

„ **britteni**, Joy. In flood refuse, R. Eden (B.).

„ **inoptata**, Shp. In fungi, Orton, Wetheral, Gt. Salkeld.

„ **reperta**, Shp. In fungi, Orton, Durdar.

„ **cadaverina**, Bris. Eskdale (Fowler), Stonerigg, in  
carrion.

„ **subsinuata**, Er. Scarce, in garden refuse, Carlisle.

„ **ignobilis**, Shp. Gt. Salkeld (B.).

**Gyrophæna fasciata**, Marsh. Local and scarce, Orton, Penton.

„ **bihamata**, Th. Local, Gelt, Orton, Penton.

**Bryoporus rugipennis**, Pand. Rare, Skiddaw (Donisthorpe).

**Mycetoporus angularis**, Rey. Rare, Wan fell.

**Quedius nigrocoeruleus**, Rey. Eskdale (Fowler, E.M.M., 1912,  
p. 287).

**Philonthus ebeninus**, Gr. Gt. Salkeld (B.).

**Medon rupicola**, Kr. In flood refuse, Cummersdale.

**Paederus fuscipes**, Curt. In tidal refuse, local, Drigg.

**Stenus morio**, Gr. Scarce, Wan fell. (B.).

**Oxytelus fairmairei**, Pand. Uncommon, Gt. Salkeld (B.), Orton.

**Trogophloeus schneideri**, Ganglb. (**hemerinus**, Joy). Anthorn.

This is the species recorded in Vol. ii., p. 251,  
as **T. halophilus**, Kies. **T. halophilus** has  
however, occurred recently at Kirkbride, and  
so remains in our list.

**Deliphrum crenatum**, Gr. Under bark, rare, Lazonby.

**Proteinus limbatus**, Makl. In carrion, scarce, Carlisle (M.),  
Gt. Salkeld (B.), Durdar.