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v. 94/95 1982/83: http://www.biodiversitylibrary.org/item/94409

Article/Chapter Title: Records of Coleophoridae (Lep.) in North Wales

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Subject(s): moths

Page(s): Page 217, Page 218, Page 219, Page 220, Page 221, Page 222

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RECORDS OF COLEOPHORIDAE IN NORTH WALES RECORDS OF COLEOPHORIDAE (LEP.) IN NORTH WALES

By H. N. MICHAELIS*

In the records available to me, there are few from the five Watsonian vice-counties of north Wales and these are mainly from the Annual Report and Proceedings of the Lancashire and Cheshire Entomological Society from 1930 to the mid-1950s by W. Mansbridge, B. B. Snell and R. Prichard, all deceased. Records were kindly supplied by Mrs. M. J. Morgan from the cards at the UCNW at Bangor and the bulk are from my observations of species mainly reared from larvae. I am indebted to Dr. J. D. Bradley of the British Museum for his kind help with identifications.

The Watsonian vice-counties are indicated by their numbers as follows:— Merionethshire (48), Caernarvonshire (49), Denbighshire (50), Flintshire (51) and the isle of Anglesey (52). These are covered by the Ordnance Survey map sheets 23(SH) and 33(SJ) apart from an occasional mention of Cardiganshire (46) in west Wales. Months of occurrence of various stages are shown as i - xii.

The larvae in their later instars construct portable cases of silk and vegetable matter and these are moved freely around their foodplant. Leaves are attacked on the underside by the larva extruded from the case, making blotch mines with an almost central puncture; one larva will feed in a number of mines. Such mines are easily seen on plants with fair sized leaves but are more difficult to find on those with small leaves such as Thymus and Stellaria. Apart from two common species feeding on seeds of Juncaceae, larvae feeding on flowers and seeds especially those incorporating a floret in the case are more difficult to see and are to be found by the hitor-miss method of gathering a sample of seedheads; a hole in the side of seed will indicate the presence of a larva. Many species hibernate as full-fed larvae and pupate within the case; many of the hibernating larvae of salt-marsh species are frequently inundated by sea water without a noticeable diminuation of numbers, a condition noticed among some Crambinae (Pyralidae) species living in similar situations.

While it is preferable to rear moths, for cases are always a useful guide for identification, a bee-smoker is effective on a summer evening if care is taken against possible fires. For those prone to insomnia, the hour after sunrise gives good results providing there is not a heavy dew. Between 4 to 5.30 a.m. on a June or July morning many species are flying; additionaly Elachistidae, Pterophoridae, Pyralidae and to a lesser extent Gelechiidae are on the wing. Strong coffee and biscuits are a necessary, almost vital, preparation for such early activity — alcohol is mainly counter-productive.

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Coleophora lutipennella (Zell.) Widespread throughout but not plentiful; mature larvae on Quercus, v-vi.

C. flavipennella (Dup.) Easily confused with the previous species, the only authentic specimens are from 49 & 50, det J. D. Bradley; larvae on Quercus, v. & vi.

C. gryphipennella (Hbn.) Plentiful throughout; the moth flies at sunset and sunrise in vi & early vii; larvae on Rosa species including Rosa pimpinellifolia but not observed on garden roses, ix-v.

C. serratella (L.) Larvae plentiful throughout, mainly on Betula less so on Alnus, Ulmus, Corylus and Sorbus, x-v.

C. cerasivorella Packard. Larvae widespread but never plentiful, on Crataegus, Prunus spinosa and once on Prunus padus, viii-vi; the moth flies shortly after sunrise also at sunset, vii. One on P. avium in 50, 1983.

C. milvipennis (Zell.) Larvae on Betula pubescens on eastern mosses of 50 and 51. Mature larvae were found in late ix and early x, well concealed on lower leaves of smaller bushes and should be overwintered in a sleeve outside; no sign of feeding was seen in the following spring.

C. siccifolia Staint. Larvae found occasionally on upper leaves of Betula pubescens in 48, 49, 51 and Cardiganshire (46) in vii, viii & ix; it is most difficult to rear even when over-wintered out of doors. I am uncertain of the status and distribution in Britain and think it must be an uncommon species.

C. viminetella Zell. Larvae are plentiful throughout on Salix species, viii-v; the moth flies at sunset and sunrise in vi.

C. vitisella Gregson. Though Vaccinium vitis-idaea is local but well established where found in north Wales, I have found only one case in 51, while in neighbouring Cheshire (58) the moth is well established in the few places on high ground where the plant occurs. This is an interesting species to rear on a potted foodplant if the primary case is taken in iv, for it has a spring diapause while the evergreen leaves fall in iv/v until the new leaves mature. If the plant is kept out of doors, moths will emerge the following year after feeding in summer and the following spring. Sometimes pupates on upper surface of a leaf.

C. juncicolella Staint. Overwintered larvae may be beaten in 48, 49, 50 (and probably elsewhere) from heather in iv-v. The moth flies in the late afternoon but is more readily seen at sunrise.

C. orbitella Zell. Larvae are occasional in 51 on mossland Betula, ix-x; the mine is smaller than that of milvipennis and the larva seems to frequent more mature trees. To rear, it is essential to sleeve larvae on a growing branch until late iv.

C. albitarsella Zell. Larvae local on Calamintha on limestone in 49, ix-v. It was found that these larvae would not feed on Origanum (a listed food), and I have not found signs of feeding though the plant is fairly common in the area. Has the larva been reared on

Origanum for, in May, the early stages of both plants appear alike, but are easily distinguished by the scent of crushed leaves? When full grown the case is attached to a nearby stone or debris on the ground.

C. spissicornis (Haw.) Occasional moths recorded in 49 and 50, vii. The foodplant is given as Trifolium repens.

C. deauratella L. & Z. Moths occasionally taken in morning or in a light trap in 49 and 52, vii. Trifolium pratense is the recorded foodplant.

C. lineola (Haw.) Occasional full grown larvae were found on lower leaves of Marrubium vulgare on limestone in 49 and 50, v-vi. The abandoned mine turns pale brown and is a good indication of larval presence: pupation is on the main stem just above the root.

C. lithargynella Zell. Well grown larvae are fairly common but difficult to find on the undersides of leaves of Stellaria holostea in 48, 49, 50 and 52 from iv-vi. Larvae were found and reared on a "mouse-ear" Cerastium species growing in hedgerows in 50, iv. C. laricella (Hübn.) Larvae are plentiful throughout and easily beaten from established larch, iv-v.

C. lixella Zell. The moth is widespread on limestone in 49, 50, 51 and 52, usually flying in early evening; vi-vii occasionally v. In the early instars, the larva feeds on *Thymus* changing to unidentified grasses from which it cuts a further case; the few larvae found were on grasses adjacent to *Thymus* growing on small ledges or in crevices; iv/v. Larvae will feed on a selection of garden grasses (since found in 51). C. albidella (D. & S.). The characteristic pistol-shaped cases are locally common near the coast in 52 on Salix atrocinerea group and S. repens, and are occasional in 50 & 51; iv-vi. Often pupates on the upperside of leaves.

C. pyrhulipennella Zell. Widespread among Calluna and Erica on mosses and high ground and flies in the evening sun, vii. The keeled slender black case is easily beaten from the heather in v, in ix & x, cases may be found on Erica, feeding on the underside of the upper leaves; when, by hanging down, they appear opposite to the upright leaf growth — best seen by lying on the ground.

C. albicosta (Haw.). Common among Ulex europaeus and U. galii, flying in early evening. Larva in case made from part of the flower and not of the seed pod as sometimes stated; feeds on seeds and hibernates full fed, vii-iv. Usually pupates on a branch but occasionally on grass stems under the bush where it is more easily seen, iv-v.

C. saturatella Staint. Reported in Ent. Weekly Intelligencer, 2: 55 as having been found in 1856 at Llangollen (50); and from same locality by C. S. Gregson, in 1860.

C. genistae Staint. One case on Genista anglica near Cors Geirch (49) but not reared, v. A suspected mine on this local plant was seen in east 52, ix.

C. discordella Zell. Common throughout among Lotus corniculatus, vii. White blotches on leaves indicate presence of larvae.

C. striatipennella Nyl. Occasional specimens in wet places in 50, 51 and 52, vii-viii. The foodplant Stellaria was not noticed in the wetland, but Myosoton aquaticum was usually present though no larvae were found.

C. inulae Wocke. Restricted to one locality near Deganwy (50) now unfortunately destroyed by building. The long larval case was found in varying sizes on the undersides of leaves of *Pulicaria* from v-viii. Larval growth is spread over two years. It is most difficult to rear even on a potted plant, for many overwintering larvae die. Usually pupates low down on the stem of the foodplant, though occasionally on stems of other plants growing nearby.

C. troglodytella (Dup.). Occurs in all vice-counties, but is locally plentiful among Eupatorium and Pulicaria in 52, and comes to light, vii-viii. Larval cases are easily found on lower leaves of Eupatorium in iv-v. There is variation in the length of the mature cases, though they never approach the length of a mature inulae case.

C. peribenanderi (Toll). Local in 49 and 50. The cases are most easily found in ix & x, on Cirsium arvense and Carduus tenuiflorus near the sea, and are readily detected by the conspicuous whitish mines. Most larvae hibernate full-fed and must be kept outside until v. I have seen cases attached to stems of grasses, brambles and Burnet Rose occasionally during winter.

C. paripennella (Zell.). Larvae are locally common throughout on Centaurea nigra, especially on lower leaves in v & vi. The moth is rarely seen during the day but will come to light, vi-vii.

C. benanderi Kanerva. The commonest saltern Coleophora in all vice-counties, flying at sunset and after, vii-viii; larvae collected in late ix & x from seeds of Atriplex, are easily reared if kept out-of-doors until vii.

C. sternipennella (Zett.). Two specimens in vii, 1966, from waste land near Llandudno Junction saltmarsh (49), flying among Chenopodium album, and a few seen there subsequently. Identified by J. D. Bradley.

C. versurella Zell. A few moths were found on the saltmarshes of the Conwy estuary (49) in vii/viii in 1960/80, and though Atriplex littoralis and A. hastata are common there, no identified larvae have been found. Determined by J. D. Bradley. Unfortunately, the localities for this and the previous species may be destroyed by the present construction of the North Wales Expressway. However, it is possible that versurella also occurs on the Lavan sands (49). C. adspersella Ben. Locally plentiful on salterns in 49 and 50, occasional in 52, and the distribution suggests that it has long been established. The moth flies readily in early evening in vi-vii and may be found paired at sunset. The whitish larval case is found principally on Atriplex littoralis; also on seeds of Halimione and more

rarely on seeds of *Beta maritima*, from viii-x; it overwinters as a full-fed larva and the cases must be frequently submerged by high tides with no obvious effect on the subsequent numbers of moths. *C. atriplicis* Meyr. Occasional on the Conwy salterns among *Halimione* in vii, though I have not yet found the larva, Determined by J. D. Bradley. The moth emerges almost a month later than *C. adspersella* and flies over foodplant at sunset. The cases are frequently submerged by winter and spring tides.

C. artemisicolella Bruand. There is an old record in Ent. mon. Mag. 64: 76 (1928), of one taken in 1924 at Llandudno by E. G. R. Waters among Artemisia vulgaris.

C. murinipennella (Dup.). Though the foodplant Luzula campestris is widespread, the moth is uncommon in 48, 49 and 51 but may be overlooked, vi.

C. taeniipennella (H.-S.). First taken by Mrs. M. J. Morgan in 49 and later found sparingly in 52, vii. Determined by J. D. Bradley. The various species of *Juncus* on which the larva feeds are common in north Wales.

C. glaucicolella Wood. A common saltmarsh species easily bred from cases found on seeds of Juncus maritimus and J. gerardii in iv/v: the moth flies low among the rushes at sunset in vii-viii and emerges about a month later than the common C. alticolella. C. alticolella Zell. Common throughout among Juncus species from sea level to over 2,000 feet, where it flies both by day and night in vi-early vii. Larval cases are abundant in late summer and autumn feeding on the seeds; on higher ground appears to prefer those of J. squarrosus to other species.

C. tamesis Waters. One at light at Bangor (49) by Mrs. M. J. Morgan in July 1975 is our only certain record. Determined by J. D. Bradley. The larva feeds on seeds of *Juncus articulatus*, a common rush in north Wales.

C. maritimella Newman. Though I have not seen the moth in the wild, it can be reared from the seeds of *Juncus maritimus* gathered in winter on edges of salterns in 49, 50 and 52.

C. adjunctella Hodg. Bred from seeds of Juncus gerrardii gathered in winter and kept outside until v; is local in all vice-counties where the plant is well established. The larval case, which is formed partly of a floret, is very difficult to find. The moth has been taken occasionally in late vi.

C. serpylletorum Hering. As far as I know, this species occurs only on the Creuddyn limestone at Llandudno (49) and in West Cornwall. I should be glad to hear of any certain records from elsewhere. The overwintered larva is in a dark brown case made up of several leaves of Thymus drucei, set sideways one above the other. In v-vi, it mines leaves towards the end of a spray and is most easily found on ledges and in crevices where the thyme is isolated from other herbage, though it can be found with more difficulty where

the plant grows in limestone turf; yellowish brown mined leaves often indicate the presence of a larva nearby. It is essential to rear the larvae on a potted plant for enclosure usually results in death. The normal flight is uncertain, probably after dusk, and it may be smoked out in the evening in vii-viii.

C. violacea (Ström) (paripennella sensu auctt.) A typical winged case was found on Sweet Chestnut (Castanea sativa) near Llandudno (49) in ix together with two mines in which the upper cuticles were also pierced — a typical habit of this larva. I do not find Castanea listed as a foodplant though the late Basil Snell and myself frequently found cases on young saplings at Delamere, Cheshire in the 1950s.

A SECOND RECENT LOCALITY FOR ELEDONA AGRICOLA (HERBST) (COL.: TENEBRIONIDAE) IN V.C. 17. — Mr. A. A. Allen (1979, Entomologist's mon. Mag., 114 (1978): 156) has recently confirmed the presence of this species in Surrey by publishing his Box Hill locality. I can now 'add' Richmond Park by virtue of two specimens found on the 9th April this year (1983). These were both taken from a long since dead and very hard fungus at above head height on oak (TQ1872). In Fowler, 1891, Col. Brit. Isl., 5: 13 it seems that both these localities were noted last century and so have, in effect, been confirmed, since Brendell, 1975, Handb. Ident. Br. Ins., 5 (10): 6 has cited only the more recent records. — D. PRANCE, 23 Brunswick Road, Kingston Hill, Kingston-upon-Thames, Surrey.

THE WHITE SPOT: HADENA ALBIMACULA BORKH. IN SURREY.

— A specimen of this moth turned up in my light trap here on the night of 3rd June 1983. It was a female in very poor condition. The following night at Dungeness, Kent, produced several examples of this species which were in excellent condition. — G. A. COLLINS, 15 Hurst Way, S. Croydon, Surrey.

THE DEATH'S HEAD HAWK: ACHERONTIA ATROPOS L.IN 1983. — I think it is worth reporting that a fine Death's Head Hawk came to the bright lights at the Goonhilly "Earth Station", Cornwall, on June 14th, and was found by Mr. N. Exebly, who is an engineer there. — F. H. N. SMITH (Dr.), Turnstones, Perrancoombe, Perranporth, Cornwall TR6 0HX.

PELOSIA MUSCERDA HUFN.: DOTTED FOOTMAN IN KENT. — I took a male specimen of this moth on the night of 16th July 1983, during the field meeting of the British Entomological and Natural History Society at Orlestone Forest, Kent. It was attracted to the m.v. light on Brigadier Simson's sheet, and as he already possessed the species kindly offered it to me. — G. A. COLLINS, 15 Hurst Way, S. Croydon, Surrey.