

Some Notes on collecting Lepidoptera at Repton, 1921.

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THE outstanding feature of 1921, here as elsewhere in England, has been of course the exceptional dryness of the season. The month of August was here very wet, but almost every other month was abnormally dry and warm. The effect upon Lepidoptera as a whole was undoubtedly bad from the collector's point of view, though a few species found the conditions favourable to an exceptional increase of numbers. It might, perhaps, be expected that a very dry season would operate in various ways. Larvae that feed on the young spring foliage, particularly *e.g.* numerous Tortricid larvae that feed in rolled leaves, escaped the usual amount of mortality caused by heavy rain in washing them off their foodplant or drowning them in accumulations of moisture between the rolled-up leaves and multiplied accordingly; but their successors that feed later in the season found their usual pabulum notably diminished in amount and succulence by the drought and therefore fared ill. Again, a mild winter is always unfavourable to those species that pass it either as pupae underground or as hibernating larvae; they are exposed, without the intermission provided by snow or frost, to the attacks of their numerous enemies; apart from this it is probable that many pupae perished owing to the sunbaked ground having become so hard that the imagines were unable to emerge, and this cause may have operated to a considerable extent in diminishing the numbers of many of the larger species, especially among the Noctuidae and Geometridae.

The unusual numbers of the Small Copper Butterfly, *Polyommatus Phlaeas*, must have attracted general observation; where it is normally common it simply swarmed and it was constantly in evidence even where, in normal seasons, scarcely a specimen is to be seen. Another species that occurred here in amazing numbers was the local Tortrix, *Heterogynon Paleana*. So far as I know, it has only been observed in the county in the neighbourhood of the railway banks near Willington Station. Here it is not usually very common. The larva feeds in tubularly joined leaves of plaintain, knapweed and other lowgrowing plants and in early May these plants along the railway banks were covered with the larvae, which I have only seen there in very small numbers in previous years. The whole of the railway banks were burnt to cinders before May was out and vast numbers must have perished, but in spite of this a grass field adjoining was literally alive with the moths in June. Other species usually common at the same time and place were, however, for the most part, quite scarce.

The season has produced three species not hitherto recorded for the County. These are *Paedisca Semifusca*, *Stigmonota Coniferana* and *Sitotroga Cereatella*. Of the first of these a considerable number of larvae was found feeding in the joined terminal leaves of willow and osier at Repton. Not expecting the species here, I mistook the larvae for the allied *P. Solandriana* and therefore did not keep a large number of them but those I collected produced specimens of most of the well-marked varieties of the species. It is mostly a fen insect and no doubt something of a survival in the Trent Valley, where such other fenland insects as *Helotropha Leucostigma* and *Phibalapteryx Vittata* still linger in small numbers.

Coniferana may have escaped notice in Repton Shrubs but only one specimen was taken, though I worked hard for the species subsequently. The attention paid to the

fir trees there was, however, productive of a couple more specimens of the rare *Paedisca Rubiginosana*, first recorded for the county in 1918. Of *S. Cereatella* two freshly emerged specimens were taken in a grocer's store at Repton in October. These would seem to belong to an abnormal second brood, as Meyrick gives the time of appearance for this species as June only. Two other new records for the county list must be added. Mr. S. Hooke, of Poolsbrook, gave me a pair of *Peronea Mixtana* taken in October, 1920, on the moors above Chesterfield. No doubt this species would be found to be widely distributed on the heathery uplands of North Derbyshire if searched for, but it is one that readily escapes casual observation. The other record came to light through some correspondence with the Rev. R. E. E. Frampton who found amongst his notes of insects taken when he lived at Winshill a record of a specimen of *Peronea Hastiana* bred in 1900 from a larva taken in or near Repton Shrubs. This species might reasonably be expected to occur here, but up to the present it has eluded my search.

Besides those already mentioned a few insects were taken not hitherto recorded in the Repton area, though observed elsewhere within the County. A specimen of *Eupithecia Indigata* and one of *Argyrolepis Cnicana* were taken in the Shrubs. Both these insects had previously been recorded from Little Eaton by the late Mr. Hill. But a more remarkable occurrence was that of the butterfly *Nisoniades Tages*. Mr. F. Druce, who is residing temporarily at Willington, showed me a boxful of insects taken about Willington and Repton, including the Shrubs, in July and August. Amongst them was a specimen of *N. Tages*. Unfortunately Mr. Druce had not kept exact data and could not be certain either of the date or of the precise locality, but so far as his recollection went, he believed the insect came from a spot in or near the Shrubs. *Tages* occurs freely in May in some of the Dales, Dovedale,

Darley Dale, Lathkill, etc., but has not hitherto been reported elsewhere in the County ; moreover, even if the specimen were taken early in July, this would seem to point to a second brood, for it is in good condition, and whilst second broods of *Tages* are not very unusual in the south of England and indeed have been reported from several places this year, such an occurrence so far north as Derbyshire must be regarded as very abnormal. The only other insect of special interest amongst those taken by Mr. Druce was *Eubolia Bipunctata*, of which a specimen came to light at Willington. This insect occurs on the limestone in Miller's Dale and elsewhere, not very commonly, and has also been taken at Little Eaton. A specimen came to light at Repton Hall in 1908, and the occurrence of these two specimens so far from their regular haunts is remarkable.

The exceptional season has been responsible for second and even third broods in species normally single-brooded and the Journals devoted to Entomology have published many reports of these. Besides those already mentioned two others have come to my notice here. In early October a freshly emerged specimen of *Ourapteryx Sambucata* to light came in my house and on the 31st of that month a specimen of *Crambus Culmellus* was observed in a meadow. The first of these two occurrences is not without precedent in warm seasons, except perhaps in a locality so far north, but I have never seen any previous record of a second brood among the Crambids, though several members of the genus have a very extended emergence period throughout the summer months. As the specimen was perfectly fresh, it would seem reasonable to suppose that it had emerged subsequently to a severe frost that had occurred a few days previously. Of rare local insects *Eupithecia Pusillata* was again to be found freely in the Shrubs and *Scoparia Ulmella* was to be taken rather earlier than usual on its three pet tree trunks,

but not, this year, in large numbers. A specimen of *Cryptoblabes Bistriga* was taken in the Shrubs and some black *Eupithecia Castigata* were taken, from one of which a brood of larvae was obtained. This is believed to be a constant mutation and it will be interesting to see whether these breed true to type, although, of course, in the case of an insect taken at large, it is impossible to know whether the male parent was also black. Amongst other insects of some interest *Clepsia Rusticana* occurred rather freely on Breadsall Moor, whence it had been previously reported by Mr. Hill and *Argyrolepis Subbaumanniana* was common in the Via Gellia in June.