

CARADOC and SEVERN  
VALLEY FIELD CLUB.

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RECORD OF BARE FACTS  
FOR THE YEAR 1940.

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*A List of the More Noteworthy  
Observations made by Members  
of the Caradoc and Severn  
Valley Field Club and others.*

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1941.

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Members are requested to send notes of any occurrences they consider worthy of record, as early as possible, to the proper Referee. Records in departments not named above may be sent to the Secretary.

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The names and addresses of Meteorological observers appear in that report.

# ARCHAEOLOGY

This year there is little to report. The war has cancelled most archaeological activities, but I should like to congratulate the Caradoc Club on the continuation of its good work, and on the widening of the scope of its studies. One would imagine that, with so much excavation in progress in connection with shelters and so forth, quite a number of objects of archaeological interest must be unearthed, and it is a pity if these are not to be properly recorded. I would suggest that members might keep a look-out for such finds, and report them promptly when they occur, securing them, if possible, for the local museum.

In this connection I am glad to learn that the charge made for admission to Rowley's House is no longer levied, and our Shrewsbury Museum is now free to the public; also that the iron spearhead from Coneybury Farm, Bridgnorth, has been presented to it by Mr. Percy Roberts.

Last July the Rev. J. E. Gordon Cartlidge reported that a sword had been found beside an ancient road at Hydraulic Bank, Oakengates; the British Museum authorities consider it to be a short sword of the late seventeenth or early eighteenth century.

Mr. L. C. Lloyd has sent for my inspection a small handled cup, said to have been unearthed near Shrewsbury, which was recently exhibited to the Club; it is identical with pottery made by an old woman in Lewis for visitors to the island. Newbury Museum possesses a tea set modelled by her which comprises cups of the same design.

**PREHISTORIC.**—Preliminary excavations carried out by Mr. W. J. Varley and Mr. B. H. St. J. O'Neil in the great hill-fort at Old Oswestry in 1939-40 have resulted in important discoveries, which were described in an interim report to the Society of Antiquaries on 28th November, 1940; this will probably be published shortly in the *Antiquaries Journal*. The work is now suspended till peace returns.

**ROMAN.**—Miss Kathleen M. Kenyon, F.S.A., has published the report on her excavations at Viroconium, 1936-7, in *Archaeologia*, Vol. LXXXVIII (1940), pp. 175-227; it is splendidly illustrated, with large-scale plans and sections. In her summary on p. 179, Miss Kenyon says that the work on the defences has shown that Viroconium began as "a first century city of modest size and with simple defences, succeeded by a much larger city in the second century, with a more grandiose wall." The Claudian legionary camp has not yet been located, but "excavation on the baths site revealed that there was all over a sprinkle of early occupation, certainly pre-Flavian, and possibly Claudian. . . . The pottery makes it quite clear that occupation at Viroconium does date back probably to Claudian times."

It is good news that Professor D. A. Atkinson's long-deferred report on his 1923-7 excavations at Wroxeter is to be published within the next few months.

**OBITUARY.**—The year 1940 saw the passing of two of Shropshire's most active archaeologists, whose services will be sorely missed.

Mr. John Arthur Morris, who received the honour of Fellowship of the Society of Antiquaries shortly before his death, combined with his wide interests and vigorous personality a technical knowledge and skill which he devoted generously to the preservation of many of our ancient buildings. His work in connection with our Roman City was of outstanding value.

The researches of Mr. Herbert C. Jones into the early history of the Clun region of south-west Shropshire produced results of importance far beyond their local interest. Thanks to his work, in conjunction with his friend, Mr. T. Hamar, and supplemented by earlier records made for me by Mr. J. Cooper and the Clunbury scholars, a whole new chapter can be added to British pre-history. By their fieldwork and by the careful mapping and recording of every flint implement or other early object found, new light has been thrown on the movements and story of early man in our country, the evidence for which is preserved in the Clun Town Hall Museum, the crowning achievement of Mr. Jones's activities. We trust that Mr. Hamar will continue to carry on the good work, that he may find sympathetic local co-operation, and that in the end the records may be worthily published.

I should like to add a reference to the helpful information relating to sites in the Ellesmere region that was given me by the late Mr. A. A. Thompson, through whose instrumentality the antiquities formerly in Ellesmere Town Hall were safely transferred to Shrewsbury Museum on permanent loan when the Ellesmere Museum was dismantled.

Let us hope that, when happier times come again, younger members will be forthcoming to carry forward the devoted work of our friends who have passed on.

LILY F. CHITTY.

## FOLKLORE AND CUSTOM

Mrs. L. H. Hayward's report, which deals mostly with unrecorded Shropshire dialect words, will, it is hoped, be published in next year's *Transactions*.

## BOTANY

In my first report as botanical referee, it is pleasant to record that, despite the distractions of wartime and the contributions that many members are making towards the country's war effort, botanical studies continue to engage the active attention of members of the Club. Evidence of this is provided by the large number of records which have been sent in. Owing to the necessity for exercising economy in paper and print, only the most notable records can be printed this year, and the botanical report is thus considerably shorter than it otherwise would have been. This is regrettable, but in the circumstances unavoidable. Those who have sent in lists may rest assured that their work has not been done in vain, for their reports have been carefully examined and any new information therein contained has been entered in the Club's MS. *Flora*. This work, which is at present in the charge of Mr. L. C. Lloyd, is being completed and brought up to date, in readiness, it is hoped, for publication when happier times return. Miss H. F. Leeke is giving valuable help in copying some of the MS. sheets which, through constant addition, emendation and interlineation, have acquired a somewhat forbidding aspect.

The chief botanical event of the year so far as Shropshire is concerned was the discovery of one small plant of *Cephalanthera grandiflora* Gray (White Helleborine) on Wenlock Edge by Dr. S. E. Chandler, of the Imperial Institute, London. This orchid has not previously been recorded in the county, although its congener, *Cephalanthera ensifolia* Rich. (Narrow-leaved White Helleborine) has been recorded from a

few stations in the past. Dr. Chandler spent a short holiday at Church Stretton during part of July and August, and was a welcome visitor at one of the Club's excursions; he has kindly prepared a list of some of the plants which he observed during his stay in the county, and this has proved of great interest and usefulness.

Others who have contributed records and notes, and to whom the best thanks of the Club are due, are Miss H. F. Leeke, Pontesbury; Mrs. Wynne-Corrie, Shrewsbury; Miss G. LLOYD, Leaton Knolls; Miss N. M. Mackenzie, Shrewsbury; Mrs. L. H. Hayward, Ticklerton; Miss V. O. Lloyd, Shrewsbury; Mr. J. Barlam Johnson, Shrewsbury; Mr. R. S. Lucas, Bridgnorth; Dr. M. Gepp, Shrewsbury; Dr. D. H. Robinson, Harper Adams College; the Rev. E. R. Sequeira, Uffington. Mr. Dallman has been good enough to assist several members over problems of identification.

By the death of the Rev. E. R. Sequeira, Vicar of Uffington, the Club has lost the services of a keen botanist, who contributed many useful records; his genial presence will be sadly missed from botanical field meetings, at which he was a regular and popular attendant.

A number of Shropshire records are contained in Mr. A. Wilson's paper, "Further notes on the altitudinal range of British plants," which appeared in *The North-Western Naturalist*, March-June, 1940. Those records which add to our knowledge of plant distribution in the county are quoted below.

ELLEN R. LLOYD.

## PHANEROGAMIA

### *Brassica campestris* L. (agg.).

The Smooth-leaved Charlock is becoming widespread in parts of the county, and is more difficult to destroy by spraying with copper sulphate than *Sinapis arvensis* L., the Common Charlock (*Robinson*).

### *Raphanus Raphanistrum* L.

XI. A bad weed of light arable land in the Eyton-on-Weald-Moors district and other parts of the county (*Robinson*). Dr. Robinson adds that he cannot agree that this plant is "sparse" in the county. The note in last year's *Record* stated that it was "sparsely recorded," and there was no intention of implying any actual rarity. Records of widespread plants such as this are required in order that their distribution in the county may be accurately determined.

### *Reseda lutea* L.

IV. Pontesbury, on rubbish tip (*Miss Leeke*). Not previously recorded for this division of the county.

### *Viola lutea* Huds.

IV. Stiperstones, near Minsterley (*Miss Mackenzie*). Not previously recorded for this division of the county.

### *Lychnis alba* Mill x *dioica* Mill.

IV. Near Weeping Cross, Shrewsbury (*Miss Leeke* and *Mrs. Wynne-Corrie*). This hybrid, with rose-pink flowers, is apparently not rare, but it is infrequently recorded.

**Malva sylvestris L.**

- VII. Uffington, a form with blue flowers (*Sequeira*). The blue-flowered form of the Common Mallow has also been observed at Shrewsbury (Division IV) by Miss V. O. Lloyd and L. C. Lloyd. It does not appear to be particularly rare, but has not been recorded previously. Out of half-a-dozen popular floras consulted, only one (Hooker's *Student's Flora*, third edition, 1884) mentions blue flowers; this gives the colour of the flowers in *M. sylvestris* as "pale purple or blue," as though one were as common as the other. Further observations would be welcome.

**Rubus fissus Lindl.**

- VI. Clun Forest, up to 1,430 feet (*Wilson*). Not previously recorded for this division of the county.

**Sorbus Aria Crantz.**

- IV. Westcott Hill (*Miss Leeke*). Not previously recorded for this division of the county.

**Konrathus ruber DC.**

- IX. Madeira Walk, Church Stretton; on wall, evidently a garden escape; observation of spread from this centre would be interesting (*Chandler*). Previously recorded only for Wenlock Abbey (Division VIII) and Ludlow Castle (Division X); both records date from Leighton (1841) and are unconfirmed since.

**Clechorium Intybus L.**

- III. Near Gobowen; one plant, which the finder dug up and transferred to her garden! (*E. R. Lloyd*).  
 XII. Tasley; found in former years, but site not visited lately (*Lucas*). Not previously recorded for this division of the county.

**Cnicus lanceolatus Willd.**

- III. A remarkable fasciated form of this thistle, found near Oswestry by *Mr. J. H. Owen*, is described and illustrated in the Club's *Transactions* for 1940 (p. 110).

**Melampyrum pratense L. (agg.).**

- X. Bringewood Chase (*Chandler*). Not previously recorded for this division of the county.

**Primula vulgaris Huds. x veris L.**

- IV. Pitch Hill, Habberley, and The Nills, Pontesbury (*Miss Leeke*). This is the False Oxlip, a hybrid between the Primrose and the Cowslip; there are not many previous records of its occurrence in the county.

**Cynoglossum officinale L.**

- XIII. Worfe Valley, Burcote, Worfield (*Lucas*). Not previously recorded for this division of the county.

**Asperugo procumbens L.**

- IX. Little Stretton; in hedge, subsequently destroyed by weeding. (*Chandler*). Previously recorded only for Divisions VIII (near Buildwas) and X (Ludlow).

**Linaria minor Desf.**

- IV. Hook-a-gate railway line (*Johnson*). Not previously recorded for this division of the county.

**Prunella vulgaris** L.

- IV. The Oaks, Pontesbury, a form with rose-pink flowers (*Miss Leake*). Plants with white flowers are not uncommon, but the pink form has not been recorded previously.

**Stachys arvensis** L.

- IX-X. Wenlock Edge (*Chandler*). Not previously recorded for this district.

**Polygonum lapathifolium** L.

- VI. Clun Forest, up to 1,470 feet (*Wilson*). Not previously recorded for this division of the county.

**Daphne Laureola** L.

- IV. Maddox Coppice, Minsterley (*Miss Machenzie*). Not previously recorded for this division of the county.

**Epipogum aphyllum** Sw.

- X. A thorough search of the habitat of this very rare orchid was made by *Dr. S. E. Chandler* in August, 1940, but without success. The plant was last found here in 1892 by *G. C. Druce*.

**Cephalanthera grandiflora** Gray.

- IX-X. Wenlock Edge, on summit between Eaton and Westhope; one plant only (*Chandler*). Not previously recorded in the county.

**Orehis incarnata** L.

- IX. Horderley, still present but maintaining a precarious existence; more correctly named *O. latifolia* L. *vera* (*Gepp*).

**O. purpurella** Stephenson.

- IV. Shelve district; still present in some quantity in its only known habitat in the county (*Gepp*).

**Ophrys muscifera** Huds.

- VIII. Still present in its old habitat near Broseley, but only one plant found (*Gepp* and *L. C. Lloyd*).

**Allium vineale** L.

- VIII-IX. Church Stretton (*Chandler*). Not previously recorded for Division IX.

**Butomus umbellatus** L.

- III. Canal side, near Gobowen; one plant only (*E. R. Lloyd*). Not previously recorded for this division of the county.

## FILICES

**Ceterach officinarum** Willd.

- VII. Uffington, one plant only; also at Withington (*Sequeira*). Not previously recorded for this division of the county.

## ZOOLOGY

Several records of unusual interest are contained in this year's report. The Garden Dormouse is recorded in Shropshire for the first time, and a Risso's Grampus stranded near Abersoch in October is an addition to the Welsh fauna.

Among the more unusual bird records are Black Redstarts at Aberystwyth in November and December; a Waxwing at Welshpool in April; a Hoopoe at Aberffraw (Anglesey) in March; a Merlin at Oakengates in May; a probable Osprey at Pulverbatch in April; a Great Northern Diver at Sansaw in November (the first recorded in Shropshire since 1863); a Grey Phalarope at Aberystwyth in November; A Spotted Redshank taken in the Dee Estuary in September, 1935; and a Great Skua at Aberystwyth in November. Two flights of half-a-dozen Buzzards were seen near Wellington in May. Wild Geese visited the region in unusually large numbers during the winter, and a flock of 100 (probably Bean) was seen at Ellesmere at the end of January. A Pink-footed Goose was taken at Machynlleth. Gadwall are recorded from Anglesey in 1929 and 1936, and Snew were seen at Aberdovey and Dolgelly. A number of Cormorants haunted the Severn around Leaton Knolls in January.

Most summer migrants arrived early. Early dates are recorded for the Wheatear and Chiffchaff, while two arrivals in the Oswestry district—Yellow Wagtail on April 8th and Garden Warbler on April 19th—are the earliest ever recorded in Shropshire. Swallows, House Martins, Swifts, Cuckoos and Sandpipers arrived at about the usual time; the Sand Martin was early, and the Tree Pipit, alone among our summer visitors, seems to have been a few days late. Redshanks returned early to their nesting-grounds in the county, while Curlews are recorded as wintering here.

Some notable breeding vagaries have been recorded. On May 8th *four* young birds, all about the same age, were found in a Woodpigeon's nest at Presteigne (Radnorshire)—a phenomenon not previously recorded in the annals of ornithology. In the Oswestry district a Whitethroat built its nest in a field of oats, and at Millichope a Nightjar's nest was found with *three* hard-set eggs. Four Swallows hatched in the third week of May in the Oswestry district were exceptionally early.

### Effects on Bird-Life of the Severe Winter of 1939-40

A detailed report on the effects upon the bird-life of the region of the severe winter of 1939-40 has been compiled by Mr. L. C. Lloyd from the observations of numerous observers. It is too long to be printed here, but it is hoped that it may be placed before the Club in the form of a paper. In the meantime, a brief summary of the conclusions is appended.

Species very seriously affected, in some districts almost exterminated, were the Long-tailed Tit and the Goldcrest. The following birds were also seriously affected, and considerably reduced in numbers: Starling, Skylark, Wagtails, Tree-Creeper, Blue and Marsh Tits, Wren, all the Thrushes (especially the Redwing and Song Thrush), Robin, Heron, Woodpigeon, several waders (especially the Redshank) and the Moorhen.

Birds less seriously affected, but showing some reduction in numbers in certain districts, include the House Sparrow, Great Tit, Blackbird, Hedge Sparrow, Lapwing, Pheasant and Partridge. Corvidae (the Crow family), Fringillidae (Finches and Buntings), the Nuthatch, the Kingfisher, Woodpeckers, Owls and Hawks appeared to be little affected.

Geese, Ducks, Cormorants and Gulls appeared inland in much larger numbers than usual.

H. E. FORREST.

## MAMMALS.

**Pipistrellus pipistrellus** (Pipistrelle Bat). *L. C. Lloyd*—March 23rd, first seen, Shrewsbury.

**Mustela putorius** (Polecat). *Bible*—Towyn district, only two trapped, 1940.

**M. erminea** (Stoat). *Owen*—February, one received in partial winter dress, Oswestry district.

**M. nivalis** (Weasel). *Bible*—November 21st, one seen, Aberdovey.

**Lutra lutra** (Otter). *Forrest*—February, during cold spell, one came up Severn repeatedly above Station Bridge, Shrewsbury.

**Halichoerus grypus** (Grey Seal). *Bible*—One seen Aberdovey; June 4th, August 11th and September 11th; on last occasion it was eating a Salmon.

**Sciurus vulgaris** (Red Squirrel). *Bible*—September 20th, one seen Aberdovey.

**Apodemus sylvaticus** (Long-tailed Field Mouse). *Elliott*—May 29th, one being played with by cat, sat up on its haunches and washed its face while cat looked on; action probably subconscious and perhaps due to some injury it had received.

**Glis glis** (Garden or Squirrel-tailed Dormouse). A male taken near Ludlow and reported in *The Field*, January 4th, 1941, is the first of this species recorded in the county. It is a Continental species, introduced into this country at Tring (Herts.) about fifty years ago by Lord Rothschild.

**Mus norvegicus** (Brown Rat). *Owen*—White Rat received from Cynynion, Oswestry; at least eight white specimens killed on this farm last three years.

**Grampus griseus** (Risso's Grampus). *Western Mail*—October 27th, one 11 ft. 6 in. long cast ashore near Abersoch; head sent to British Museum; new to Welsh fauna.

## BIRDS

**Turdus viscivorus** (Mistle Thrush). *Bible*—Solitary one, Aberdovey, October 21st and November 3rd. *Chignell*—February 22nd, song first heard, Cressage.

**T. philomelus** (Song Thrush). *Potts*—March 26th, nest with two eggs, Coalport. *Elliott*—March 22nd, nest completed, Dowles; November 11th, in song, Dowles. *L. C. Lloyd*—February 20th, song first heard, Shrewsbury. *Miss E. P. Leach* in *British Birds*, January, 1941—One ringed at Wolverley (Worcs.), December 11th, 1939, recovered at Shifnal March 23rd.

- T. musicus** (Redwing). *Potts*—October 29th, vast numbers by Beggar Hill Brook. *Bible*—October 26th, small flock, Aberdovey. *Harrison*—October 20th, flocks passing over Ludlow, 10-30 p.m. *Elliott*—October 24th, parties passing over Dowles; flock of fifty, 5 p.m.
- T. pilaris** (Fieldfare). *Owen*—Much scarcer than usual, Oswestry district; many passed on instead of staying; began to reappear in early April, often in much larger flocks than usual; more than 400 counted in one flock near Halston, April 20th; last seen, small flock, Perry Moor, May 8th. *Elliott*—March 25th, flock of thirty, Kerry; April 24th, flock of fifty, Kerry; November 17th, calling, Dowles. *Harrison*—October 22nd, large numbers at Craven Arms.
- T. merula** (Blackbird). *Bible*—November 1st, influx, Aberdovey. *Potts*—March 28th, completed nest, near Broseley. *L. C. Lloyd*—March 24th, song first heard, Shrewsbury. *Chignell*—April 4th, song first heard, Cressage.
- Oenanthe oenanthe** (Wheatear). *Bible*—March 19th, two males near Wellington; several at Aberdovey on 28th; numbers at Barmouth, April 10th; October 17th, several still at Towyn. *Owen*—April 2nd, first seen, Oswestry district; passing until May 4th.
- Saxicola rubetra** (Whinchat). *Owen*—April 27th, Oswestry district, several.
- Phoenicurus phoenicurus** (Redstart). *Elliott*—April 17th, Dowles. *Disney*—April 30th, female, Haughmond. *Owen*—April 27th, Oswestry district, several. *Elliott*—September 1st, adult male, Dowles.
- P. ochrurus** (Black Redstart). *Duncan Macdonald* in *British Birds*, May—One seen, Aberffraw, Anglesey, March 18th. *Salter*—November, one on College Hall, Aberystwyth, where it has been seen for several years about this time; another on December 2nd.
- Erithacus rubecula** (Robin). *L. C. Lloyd*—February 8th, mated; February 23rd, building; March 18th, three eggs. *Chignell*—February 20th, in song, Cressage.
- Luscinia megarhyncha** (Nightingale). *Potts*—April 21st, two, Lloyd's Coppice, Ironbridge. *Shrewsbury Chronicle*—April 22nd, one reported at Marnwood; not confirmed on visit by *Gepp* and *L. C. Lloyd*. *Elliott*—April 28th, Dowles. *Slack* and *Lloyd*—May 12th, two heard at Sheinton.
- Sylvia communis** (Whitethroat). *Owen*—April 17th, Oswestry district; August 13th, nest which young had left very recently found in tuft of Common Tare in field of oats, about thirty yards from nearest fence; nests of any birds in standing grain are exceedingly rare. *Elliott*—April 23rd, several, Newtown. *Miss V. O. Lloyd*—April 24th, Shrewsbury; and *Chignell*—Cressage. *Harrison*—April 25th, Ludlow. *Bible*—April 26th, Aberdovey; many on 28th. *Disney*—April 28th, Shawbury. *Furley*—May 5th, Llangollen.
- S. curruca** (Lesser Whitethroat). *Owen*—April 16th, Oswestry district. *Elliott*—May 3rd, Dowles; May 5th, Kerry. *Holmes*—May 18th, one heard, Pulley Common.
- S. atricapilla** (Blackcap). *Elliott*—April 24th, Kerry. *Potts*—April 27th, pair at Marnwood, Ironbridge. *Owen*—April 20th, Oswestry district; May 18th, four young about three days old and one addled egg; rather early.

- S. borin** (Garden Warbler). *Owen*—April 19th, Oswestry district; earliest date ever recorded in Shropshire. *Elliott*—May 2nd, Dowles; May 4th, Kerry.
- Phylloscopus collybita** (Chiffchaff). *Holmes*—March 19th, seen, Kingsland, Shrewsbury. *Bayley*—March 21st, Millichope. *Bible*—March 22nd, Aberdovey, and *Potts*—Ironbridge. *Furley*—March 23rd, Llangollen, and *Potts*—Coalport. *Leeke*—March 24th, Pontesbury; *Potts*—Broseley; *Corbett*—Longnor, and *Elliott*—Kerry. *Chignell*—March 25th, Cressage. *Slack*—March 26th, Condober. *Harrison*—March 27th, Bitterley. *Elliott*—March 29th, Dowles. *Dodwell*—April 5th, Nesscliffe; April 6th, Hawkstone. *Owen*—April 11th, Oswestry district; scarce here for some years. *Bible*—September 21st, singing, Aberdovey; October 17th, several seen, Towyn. *L. C. Lloyd*—September 8th, last heard, Shrewsbury. *Elliott*—September 20th, Dowles; September 22nd, Kerry. *Harrison*—October 21st, last heard, Ludlow.
- P. trochilus** (Willow Warbler). *Owen*—April 1st, Oswestry district. *Slack*—April 3rd, Cressage. *Dodwell*—April 5th, Bomere. *Bible*—April 8th, Aberdovey. *Potts*—April 9th, Benthall Edge, several. *Disney*—April 10th, Hawkstone, and *Furley*—Llangollen, a few, many on 13th. *Elliott*—April 12th, several, Dowles. *Harrison*—April 13th, Bitterley. *Forrest*—the one which comes regularly to my garden, Bayston Hill, first heard April 24th; on August 4th, during drought, one came with other birds to bath in garden. *L. C. Lloyd*—August 27th, last heard, Shrewsbury. *Owen*—September 23rd, last heard, Oswestry district. *Elliott*—July 29th, at least fifty smaller Warblers, Long-tailed Tits and Blue Tits flying over Dowles valley; "by far the largest assemblage of Warblers I can remember"; August 4th, in song, Dowles.
- P. sibilatrix** (Wood Warbler). *Harrison*—April 21st, Ludlow. *Elliott*—April 24th, Kerry. *Furley*—April 26th, many, Llangollen.
- Acrocephalus schoenobaenus** (Sedge Warbler). *Owen*—April 23rd, Oswestry district. *Bible*—April 29th, Aberdovey. *Disney*—April 30th, Sundorne, Shrewsbury.
- Regulus regulus** (Goldcrest). *Chignell*—March 12th, in song, Cressage. *Miss V. O. Lloyd*—October 14th, one or two, Shrewsbury; first seen this year. *Bible*—November 8th, one, Aberdovey.
- Troglodytes parvulus** (Wren). *Potts*—April 5th, nest one egg, Coalport.
- Cinclus cinclus** (Dipper). *Elliott*—March 25th, pair with nest, Kerry.
- Aegithalos caudatus** (Long-tailed Tit). *Bible*—November 14th, party of nine; in winter, seem to go off some distance during day, but return each night to same roosting place. *Elliott*—March 22nd, one seen; March 30th, pair with nest found, Dowles; no others seen during year that I could say were a different family.
- Parus major** (Great Tit). *L. C. Lloyd*—January 4th, in song, Shrewsbury; also January 25th and subsequently. *Chignell*—February 11th, song first heard, Cressage. *Bible*—August 14th, two or three, Aberdovey.
- P. caeruleus** (Blue Tit). *Bennett*—May, nest of fourteen eggs in old pump in garden, Pontesbury. *Bible*—Very few survived frost in West Merioneth. *L. C. Lloyd*—February 6th, song first heard, Shrewsbury. *Chignell*—March 12th, song first heard, Cressage.
- Sitta europaea** (Nuthatch). *Bible*—August, often seen Machynlleth by Mrs. Ruck; also at Plas Penhelig, Aberdovey, by Miss Winsor.

- Certhia familiaris** (Tree Creeper). *Bible*—November 30th, one on telegraph pole, Aberdovey.
- Prunella modularis** (Hedge Sparrow). *Bible*—October 6th, one returned to garden, Aberdovey; October 21st, singing. *L. C. Lloyd*—February 21st, song first heard, Shrewsbury. *Chignell*—February 22nd, in song, Cressage. *Owen*—May 25th to June 16th, "brooding" empty nest, near Oswestry; no eggs laid; see full account in *British Birds*, October.
- Motacilla alba** (White Wagtail). *Bible*—April 23rd, one, Aberdovey; usually a few, Tonfanau, early May.
- M. cinerea** (Grey Wagtail). *Elliott*—February 25th, pair along stream, Dowles.
- M. flava** (Yellow Wagtail). *Owen*—April 8th, Oswestry district; earliest date ever recorded in Shropshire. May 12th, six eggs; rather early. *Slack*—April 12th, Cressage.
- Anthus trivialis** (Tree Pipit). *Elliott*—April 24th, Kerry. *Owen*—April 25th, Oswestry district. *Slack*—April 26th, Cressage.
- A. pratensis** (Meadow Pipit). *Bible*—September 22nd, decided movement southwards, Aberdovey; October 22nd, many on the hills.
- Lanius collurio** (Red-backed Shrike). *Owen*—May 24th, two pairs located, nests ready, Oswestry district; one had five eggs of very beautiful pink type, June 6th, and raised three young (two eggs infertile); another pair raised five young, which left nest June 23rd; another had four young, and two others had uncertain number, probably three each. *Hughes*—June 27th, male seen, Hope Valley. *Bible*—August 20th, party of four, Gogerddan, Aberystwyth.
- Bombycilla garrula** (Waxwing). *Verdon*—April, one came to grounds of Llanerchydol, Welshpool; watched at close quarters.
- Muscicapa grisola** (Spotted Flycatcher). *Potts*—April 24th, Broseley. *Elliott*—May 12th, pair, Dowles; quite usual for male and female to arrive together; May 16th, Kerry; July, nest with eggs inside dog-muzzle hanging on post in wheelwright's shop, Kerry. *Owen*—July 9th, watched adult catching white butterflies and feeding them whole to young, which had left nest a day or two earlier; quite unusual diet; same evening watched Swallows and Martins mobbing Flycatcher, using bare, dead branch of felled tree as perch; have seen this twice with Shrikes but never before with Flycatcher.
- M. hypoleuca** (Pied Flycatcher). *Elliott*, April 25, Kerry; *Harrison*, June, watched feeding young, Ludlow district. *Gepp*, pair nested Totterton Hall, Lydbury North.
- Hirundo rustica** (Swallow). *Bible*—April 2nd, one reported, Aberdovey. *Blower*—April 3rd, one, Craven Arms; two on 4th. *Owen*—April 8th, Oswestry district. *Potts*—April 14th, one, Willey. *L. C. Lloyd*—April 17th, one, Shrewsbury, and *Chignell*—Cressage. *Potts*—April 18th, Coalbrookdale, and *Disney*—About forty over Sunderne Pool; also *Young*—Conover. *Bible*—April 17th, one, Aberdovey; 22nd, small parties passing east all day. *Elliott*—April 19th, Craven Arms. *Potts*—April 20th, Cwm Head. *Bayley* April 21st, Millichope, and *Harrison*—Ludlow. *Potts*—April 24th, Broseley. *Lavender*—April 25th, Bishop's Castle. *Cottam*—April 27th, St. Martin's. *Furley*—April 27th, Llangollen. *Forrest*

and others—Decided diminution in numbers last few years; September 3rd, party of a hundred came 4-30 p.m. Bayston Hill, and settled on wires; stayed till dusk flying round and feeding; mostly young birds. *Tomlinson*—Reared three broods in same nest in coalshed, Sundorne, Shrewsbury. *Potts*—August 5th, gatherings of fifteen to twenty on telegraph wires near Morville and Monkhopton; September 22nd, one or two still about, Broseley. *L. C. Lloyd*—September 15th, main body left Shrewsbury, with Martins; September 27th, nearly all gone; October 26th, one young bird seen. *Cottam*—September 26th, last seen, Oswestry. *Bible*—September 28th, last seen, Aberdovey. *Owen*—May 24th, four young about three days old; my earliest record for Swallows hatching; incubation period just over fifteen days; another laid her fifth egg on June 21st; four hatched, July 7th (one infertile); young out on support of nest, July 27th. Another nest had five eggs laid August 11th to 15th; these had not started to hatch when they were jolted out of the nest on August 30th. The first young roosted in nest and on support until August 14th. The two nests were barely a yard apart. In this case the incubation period seems rather long.

***Delichon urbica*** (House Martin). *Musson*—April 19th, two, Yockleton. *Stant*—April 20th, Meole Brace. *L. C. Lloyd*—April 21st, two or three, Shrewsbury, and *Chignell*—Cressage. *Owen*—April 24th, Oswestry district. *Furley*—April 25th, one, Llangollen; a few on 27th. *Harrison*—May 6th, Ludlow. *Bible*—May 9th, Towyn, and *Elliott*—Dowles. *L. C. Lloyd*—September 15th, diminution noticed, Shrewsbury; September 27th, nearly all gone. *Potts*—September 22nd, still about a dozen at Broseley. *Cottam*—September 26th, last seen, Oswestry. *Blower*—October 1st, last seen, Craven Arms. *Mackenzie*—October 2nd, two, Shrewsbury. *Harrison*—October 13th, last seen, Ludlow.

***Riparia riparia*** (Sand Martin). *Forrest*—April 1st, Mount sand-pit, Shrewsbury. *Bible*—April 2nd, Aberdovey. *Owen*—April 8th, Oswestry district.

***Chloris chloris*** (Greenfinch). *Chignell*—February 22nd, in song, Cressage. *L. C. Lloyd*—February 25th, in song, Shrewsbury; April 20th, still in flock, Shrewsbury.

***Carduelis cannabina*** (Linnet). See Chaffinch.

***C. carduelis*** (Goldfinch). *Elliott*—January 24th, two, Dowles. *Bible*—November 24th, one in garden, Aberdovey.

***C. spinus*** (Siskin). *Elliott*—January 24th, flock of twelve, Dowles. *Chignell*—February 2nd, flock by riverside, Cressage. *Furley*—February, flocks, Llangollen, during cold spell.

***C. linaria*** (Lesser Redpoll). *Furley*—February, flocks, Llangollen, during cold spell. *Forrest*—August 6th, during drought, one came to bird bath in garden, Bayston Hill.

***Fringilla coelebs*** (Chaffinch). *Bible*—February 15th, in song, Aberdovey; October 14th and 16th, decided eastward movement of Chaffinches and Linnets. *Miss V. O. Lloyd*—February 26th, in song, Shrewsbury. *Chignell*—March 10th, in song, Cressage. *Rope*—December 2nd, in song, near Shrewsbury. *Mackenzie*—November 15th, flock of nine hens; December 5th, flock of ten cocks, Shrewsbury.

- F. montifringilla** (Brambling). *Stack*—January 29th, several, Cressage. *Mackenzie*—December 31st, about fifty rose out of bracken, Haughmond Hill.
- Emberiza calandra** (Corn Bunting). *Bible*—Never seen now, Aberdovey and Aberystwyth; formerly common.
- E. citrinella** (Yellowhammer). *Chignell*—February 22nd, in song, Cressage. *Bible*—November 28th, several, Aberdovey.
- E. schoeniclus** (Reed Bunting). *Owen*—Eggs in nest on Perry Moor laid May 20th to 24th; young hatched June 5th, four early and one later; these disappeared June 7th, New nest, one egg, June 12th, and the four eggs hatched June 27th. This gives an incubation period of twelve days in each case for *this particular bird*; the accepted period for the species is approximately fourteen days.
- Sturnus vulgaris** (Starling). *Forrest*—February 9th, one ringed at Rositten (Germany) recovered in Belle Vue, Shrewsbury.
- Pyrhocorax pyrrhocorax** (Chough). *Bible*—January, two or three, Aberdovey; on 25th one pecking vigorously at foot of tree and turf of bank; April 10th, one found dead, Tonfanau.
- Pica pica** (Magpie). *Bible*—December, as many as thirty-eight seen to go into roosting place, Plas Penhelig, Aberdovey, in ten minutes. *Elliott*—May 29th, one chattering excitedly and pecking at its own reflection in window, Dowles; mate nearby taking no part.
- Corvus corone** (Carrion Crow). *Owen*—April 27th, four young at least three days old, Penygwili; rather early. *Elliott*—March 31st, seven together, Dowles.
- C. Corax** (Raven). *Elliott*—January 4th and April 25th, pair seen, Kerry. "I am told they nested regularly here until a year or so back; the nest was in tall pine trees."
- C. frugilegus** (Rook). *Dodwell*—April 7th, four eggs in nest, Shrewsbury; one unspotted pale blue, others only four or five spots on pale blue ground.
- Alauda arvensis** (Skylark). *L. C. Lloyd*—February 23rd, song first heard, Shrewsbury. *Chignell*—February 22nd, song first heard, Cressage.
- Lullula arborea** (Woodlark). *Bible*—September 15th, Aberdovey; much scarcer of late years.
- Apus apus** (Swift). *Dodwell*—April 30th, several over Sundorne Pool. *Bible*—May 2nd, Aberdovey; several 6th; more 9th and 12th. *Furley*—May 3rd, two, Llangollen. *L. C. Lloyd*—May 4th, several, Shrewsbury. *Cottam*—May 5th, Oswestry, and *Mackenzie*—Shrewsbury. *Gepp*—May 6th, Coton Hill, Shrewsbury. *Harrison*—May 8th, Ludlow. *Stant*—May 7th, twelve, Bicton. *Forrest*—Pair which nest regularly in roof of house, Bayston Hill, arrived May 9th. *L. C. Lloyd*—August 2nd, diminution, Shrewsbury; August 16th, one over Mere Pool, Shrewsbury. *Potts*—August 5th and 6th, left Brosley. *Mackenzie*—August 4th, last seen, Shrewsbury. *Ridgeway*—August 6th and 7th, most left Whitchurch; last seen August 10th. *Harrison*—August 4th, last seen, Ludlow. *Owen*—August 12th, last seen, Oswestry district. *Weaver*—Bulk left Shrewsbury, August 9th, but large gathering circling over Severn on 14th; one seen on 18th.

- Caprimulgus europaeus** (Nightjar). *Hulse*—May 23rd, one flushed, Benthall Edge. *Bible*—June 3rd, Aberdovey. *Bayley*—Four nests found, Millichope district, one with three hard-set eggs. Nest at Netchwood, Ditton Priors, destroyed in timber-felling.
- Dendrocopos major** (Greater Spotted Woodpecker). *Ormiston*—March 10th and 11th, one visited garden, London Road, Shrewsbury.
- D. minor** (Lesser Spotted Woodpecker). *L. C. Lloyd*—February 23rd, one watched on tree, Wenlock Road, Shrewsbury.
- Upupa epops** (Hoopoe). *Duncan Macdonald* in *British Birds*, May—March 18th, one watched among sand-dunes, Aberffraw, Anglesey.
- Cuculus canorus** (Cuckoo). *Disney*—April 13th, reported, Haughmond. *Dodwell*—April 13th, seen, Baschurch. *Forrest*—April 15th and 21st, Bayston Hill. *Bayley*—April 16th, seen, and April 21st, heard, Millichope. *Elliott*—April 19th, Dowles. *Potts*—April 20th, Ironbridge and Cwm Head; and *Chignell*—Cressage. *Harrison*—April 21st, Ludlow, and *Price-Streiche*—Church Stretton, and *Lavender*—Bishop's Castle; and *Young*—Condover; and *Mackenzie*—Leominster. *Owen*—April 23rd, Oswestry district. *Potts*—April 24th, Broseley; *Bible*—Aberdovey; and *Elliott*—Kerry. *Cottam*—June 25th, last heard, Oswestry. *Miss V. O. Lloyd*—July 2nd, last heard, Shrewsbury. *Elliott*—July 6th, last heard, Dowles.
- Syrnium aluco** (Tawny Owl). *L. C. Lloyd*—June 13th, one on flagpole, Old Market Hall, Shrewsbury, 3-45 a.m., hooting continually. *Gepp*—June 25th, one in Car Park, Shrewsbury, 10-20 p.m.
- Athene noctua** (Little Owl). *Forrest*—February 7th, one sent to me from Churchstoke by Mrs. A. R. Jones. *Bible*—December 12th, one, Aberdovey.
- Buteo buteo** (Buzzard). *Salter* was told by Mr. Arthur Parry that thirty to forty Buzzards had been seen at one time soaring over the hills above Llandinam; the late Capt. Nanney Wynn had seen twenty at once over Cader Idris. *Parkinson*—May 3rd, two parties of five or six soaring over Ercall Hill, Wellington.
- Falco aesalon** (Merlin). *Bible*—January 30th, one flying low, Aberdovey; December 30th, another. *Miss E. P. Leach* in *British Birds*, January, 1941—One ringed at Sedbergh, Yorks., June 23rd, 1938, as young recovered at Oakengates, May 3rd.
- Milvus letinus** (Kite). *Miss D. Raihes*—Three young reared in protected area in Wales; two in one nest, and one in another.
- Pandion haliaetus** (Osprey). A bird watched by *Miss S. Young* near Pulverbatch on April 21st appears to have been this species, from her description.
- Phalacrocorax carbo** (Cormorant). *Mrs. Alcock*—Seen on Severn, Leaton Knolls, during early cold spell. *Forrest*—Told by Mr. Pugh, a local fisherman, that there was a flock of twenty-five at Fitz on February 25th, and another smaller flock near; they had been there some time. Mr. Humphrey Sandford tells me that flocks of twenty-five to thirty often come to the Severn in this region in hard weather. *Gepp*—August 26th, one by Severn, Shrewsbury, eating eel. *Owen*—February 21st, six flying to Halston pool; a frequent occurrence during recent years.

- Ardea cinerea** (Heron). *Walker*—Thirteen occupied nests on larger island, two on smaller island, Sundorne Pool. *Bible*—Very few at Penmaendyfi this year.
- Botaurus stellaris** (Bittern). *Bible*—March, one on Dovey Estuary.
- Anser fabalis** (Bean Goose). *Tower*—January 30th, 12-50 (mid-day), flock of about a hundred flying south-west over Ellesmere and calling loudly. *L. C. Lloyd* saw skein of fifteen over Abbey Church, Shrewsbury, flying south-west about same time. From the full description supplied, the Ellesmere flock was most probably this species. *Mrs. Alcock* also saw geese on the Severn at Leaton Knolls in January. *Bible*—January 20th, many on Borth Bog, twenty in one flock. *Mrs. Richards* saw about a hundred Wild Geese at Doigelly that week.
- A. brachyrhynchus** (Pink-footed Goose). *A. Cadman*—March 4th, examined one killed Machynlleth.
- Cygnus olor** (Mute Swan). *Walker*—Three pairs nested Sundorne Pool. *Forrest*—July 22nd, marked increase in numbers on Severn, Shrewsbury, all adults. Not until November did any young birds appear, and then only five or six. Nearly a hundred birds altogether.
- Tadorna tadorna** (Sheld Duck). *Bible*—See under Great Black-backed Gull.
- A. acuta** (Pintail). *Bible*—Flocks on Dovey Estuary in winter; 245 on January 9th, 107 on February 10th, 175 on December 8th.
- A. penelope** (Wigeon). *Bible*—October 29th, large flock sheltering from wind, Aberdovey. *Chignell*—March 30th, at least one pair still on Betton Pool.
- A. strepera** (Gadwall). *A. Newstead* in *North-Western Naturalist*, p. 65—One in Chester Museum obtained Anglesey, January 10th, 1929; another February 7th, 1936.
- Nettion crecca** (Teal). *Miss E. P. Leach* in *British Birds*, January, 1941—One ringed Pembroke, December 21st, 1938, recovered at Shrewsbury, October 31st.
- Nyroca fuligula** (Tufted Duck). *Mrs. Alcock*—February 20th, two on Severn, Leaton Knolls. *L. C. Lloyd*—April 6th and 8th, two pairs on Mere Pool, Shrewsbury, but did not stay; first ever seen here.
- Clangula glaucion** (Goldeneye). *Bible*—November 25th, two, Dovey Estuary.
- Mergus albellus** (Smew). *Bible*—January 15th, female shot, Dovey Estuary. March 8th, *Mrs. Richards* saw four Smew with Goldeneyes and Wild Geese, Dolgelly.
- M. serrator** (Red-breasted Merganser). *Bible*—About twenty to thirty on Dovey Estuary during winter; left about February 15th, returned November 18th.
- Columba palumbus** (Wood Pigeon). *Forrest*—February 7th, very light-coloured (creamy-grey) variety sent me by Mr. A. Hinksman from Forton, Montford Bridge. *Chignell*—February 13th, cooing, Cressage. *A. M. Wilson* in *British Birds*, June—May 8th, four young, all same size and apparently same age, in nest at Presteigne, Radnorshire; unprecedented. *Owen*—August 9th, one shot had crop crammed with nothing but slugs; two others killed same time full of grain—all old birds. September 17th, killed young bird full of acorns; very early.

- C. oenas** (Stock Dove). *Chignell*—March 25th, song first heard, Cressage. *Owen*—October 18th, one shot, full of blackberries. *Elliott*—March 13th, cooing, Kerry.
- Streptopelia turtur** (Turtle Dove). *Owen*—April 26th, many in Oswestry district; last seen September 28th. *Slack*—May 4th, Cressage. *Elliott*—May 23rd, Clunton. *Stevenson*—This year only nine came to garden, Bicton Heath, where they feed with domestic Pigeons; two on May 1st—all left first week in August. *Bible*—None seen last two years, Aberdovey district.
- Coturnix coturnix** (Quail). *Owen*—September 21st, one shot near Maesbury; another reported near Ellesmere previous week.
- Rallus aquaticus** (Water Rail). *Furley*—February, several Llangollen during cold spell. *Bible*—December 12th, Aberdovey.
- Crex crex** (Corncrake). *Cottam*—May 13th, Ardleen. *Potts*—Early June, reported heard at Worthen; another reported found dead. *Owen*—May 2nd, Oswestry district; slight increase in several localities this summer. *Bible*—November 16th, one seen, Towyn; had been there about a fortnight, but not seen again. *The Ellesmerian*, July, 1940—Calling continually in grounds of Ellesmere College for nearly a fortnight, early June.
- Charadrius apricarius** (Golden Plover). *Young*—February 21st, large flock, Norton, Condober; remained till mid-March. *L. C. Lloyd*—March 10th and December 15th, flocks of forty to sixty with Lapwings, near Weeping Cross, Shrewsbury.
- Vanellus vanellus** (Lapwing). *Slack*—March 9th, still in flocks, but March 13th, egg found and others reported. *Young*—February 10th to 19th, several at Norton, Condober. *Elliott*—June 18th, a pair, evidently with young, trying to decoy away a pair of Partridges too near for their liking by mobbing and settling in front and running a short distance ahead, Welshpool.
- Haematopus ostralegus** (Oyster-catcher). *Bible*—April 14th, 200-300, Aberdovey.
- Phalaropus fulicarius** (Grey Phalarope). *Bible*—November, one seen, Aberystwyth.
- Scolopax rusticola** (Woodcock). *Potts*—April 9th, one found dead, Benthall Edge. *Bible*—During frost in January, one alighted close to observer, Aberdovey; another flew into wire-netting. *Harrison*—June, one seen, Ludlow district. *Slack* and *L. C. Lloyd*—May 12th, a number, Sheinton.
- Gallinago gallinago** (Snipe). *Young*—March 17th, drumming, Condober; next heard April 24th. *Harrison*—April 5th, drumming, Bitterley. *Mackenzie*—January 7th, one, Pulley Common. *Owen*—May 7th, fourth egg; May 26th, all hatched. *Harrison*—October 29th, seen flying at Bitterley; unusual at this time of year.
- G. gallinula** (Jack Snipe). *Furley*—February, several at Llangollen during cold spell.
- Erolia maritima** (Purple Sandpiper). *Bible*—Early November, small flock at Aberystwyth, noted by Dr. Salter.
- Tringa hypoleuca** (Common Sandpiper). *Dodwell*—April 13th, Marton Pool. *Owen*—April 17th, Oswestry district. *Furley*—April 21st, Llangollen. *Bible*—May 1st, Aberdovey. *Forrest*—July 15th, one killed by telegraph wires, near Shrewsbury.

- T. ochropus** (Green Sandpiper). *Owen*—Single birds about in several places, Oswestry district, until April 5th; returned July 23rd; party of four (probably family) present several days from August 4th.
- T. totanus** (Redshank). *Slack*—March 12th, Cressage; earliest return date known here. *Owen*—Only five pairs on ground, Oswestry district, where more than thirty pairs nested in 1938; first noted March 13th; first nest of four eggs completed April 23rd; last seen July 20th. *Elliott*—May 10th, pair evidently nesting near railway between Hanwood and Yockleton; seen on several occasions.
- T. erythropus** (Spotted Redshank). *A. Newstead in North-Western Naturalist*, p. 65—One in Chester Museum obtained by Mr. D. Wild on Dee Estuary, September 21st, 1935.
- T. nebularia** (Greenshank). *Bible*—The Greenshank which "chums up" with a Redshank at Aberdovey each year was last seen March 10th; returned November 10th; seen with the Redshank November 25th.
- Numenius arquata** (Curlew). *Mackenzie*—March 26th, calling, Minsterley. *Chignell*—April 18th, Cressage. *Young*—April 21st, numerous, Pulverbatch. *Bible*—June 28th, returned to Dovey Estuary from nesting places. *Owen*—Of recent years have begun to winter here; January 2nd, heard calling, Pool Quay; January 5th, seen, Oswestry Racecourse; January 16th, heard, Llanymynech; January 19th, one seen and others heard; January 21st, near Oswestry; January 24th, three near Oswestry; after January 25th they seemed to leave district, but began to return in some numbers February 25th. *Elliott*—February 21st, passing over, Kerry.
- N. phaeopus** (Whimbrel). *Bible*—May 3rd, passing over Aberdovey, afternoon and 10-30 p.m.; also on later dates in May.
- Sterna albifrons** (Lesser Tern). *Gepp*—August 24th to 26th, Tern, believed this species, seen on Severn, Shrewsbury, below Welsh Bridge. *L. C. Lloyd*—August 30th, Tern (probably same bird) seen on Severn by English Bridge, Shrewsbury. *Bible*—May 19th, Aberdovey.
- Larus ridibundus** (Black-headed Gull). *Bible*—July 2nd, hundreds returned to Dovey Estuary from nesting colonies. *L. C. Lloyd*—January 1st to April 13th, single birds and parties up to seventy seen on Severn, Shrewsbury; November 13th to December 31st, single birds and parties up to fifteen. *Thomas*: November, last week, about thirty on Severn above the Weir, Shrewsbury.
- L. canus** (Common Gull). *Bible*—January, during frost, one seen devouring remains of Redshank, Aberdovey.
- L. argentatus** (Herring Gull). *Elliott*—November 18th, passing down river, Dowles.
- L. marinus** (Great Black-backed Gull). *Bible*—June is the season when the young Shield Ducks are brought down from the hills to the Dovey Estuary, and none know this better than the Great Black-backed Gulls. They lie in wait for the young Ducks as they come floating down on the ebb tide and gobble them up.
- Stercorarius skua** (Great Skua). *Bible*—November 11th, Dr. Salter noted an adult in the harbour, Aberystwyth.

- Colymbus glacialis** (Great Northern Diver). *Huxley*—November 6th, a nearly adult one killed against telegraph wires at Sansaw, near Shrewsbury; not recorded in Shropshire since 1863. *Bible*—December 15th, one on Dovey Estuary.
- C. septentrionalis** (Red-throated Diver). *Bible*—November 30th, two, Aberdovey; December 27th, one.
- Podiceps cristatus** (Great Crested Grebe). *Walker*—Two pairs nested, Sundorne Pool.

## REPTILES AND AMPHIBIANS

- Lacerta vivipara** (Common Lizard). *Ellicott*—July 6th, one on trunk of plum tree sought cover in small cavity three feet up, Dowles; the first seen for many years in Wyre Forest area.
- Anguis fragilis** (Blind Worm). *Owen*—May 9th, first noted, Oswestry district. *Elliott*—March 18th, first noted, Dowles.
- Tropidonotus natrix** (Grass Snake). *Harrison*—June, a number seen, Ludlow district.
- Rana temporaria** (Frog). *Mackenzie*—March 5th, in cleaning out lily pond, found four hibernating in bottom mud; put them back; March 12th, spawn in pond. *Owen*—March 18th, spawn, Maesbury; "As far as I could see, frogs alone of our batrachia, amphibia and reptiles, were cut down greatly by the frost." *Elliott*—March 13th, spawn, Dowles.
- Bufo vulgaris** (Toad).—*L. C. Lloyd*—April 6th, many dead (run over) in Sutton Road, Shrewsbury, near pool; April 8th, much spawn in pool.
- Molge vulgaris** (Common Newt). *Mackenzie*—March 26th, one curled up behind stone in rockery, Shrewsbury; June 14th, two swimming in pond. *L. C. Lloyd*—April 6th, two at bottom of post-hole in garden, Shrewsbury.

## FISHES

- Morone labrax** (Bass). *Bible*—August to October, large number of small Bass caught on long lines in Dovey Estuary, where they have been very scarce of late years.
- Pleuronectes platessa** (Plaice). *Bible*—July 5th, one 2½ lb. caught on a fly in Dovey Estuary.

## CRUSTACEA

- Potamobius pallipes** (Crayfish). *Owen*—Not uncommon in River Perry near Oswestry.

# MOLLUSCA

## CEPHALOPODA

*Sepia officinalis* (Cuttlefish). *Bible*—June, one caught off Aberdovey by Mr. J. A. Henry while trawl fishing; first caught here within living memory.

The following are recorded by *J. T. Wattison* and *L. C. Lloyd* :—

## GASTROPODA

*Hydrobia jenkinsi* (Smith). Shrewsbury, dead shells in flood rejectamenta of River Severn.

*Bithynia tentaculata* (Linn.). Berrington Pool.

*Valvata piscinalis* (Müll.). Shrewsbury, dead shells in flood rejectamenta of River Severn.

*V. cristata* Müll. Berrington Pool, abundant. Curiously enough, this generally not uncommon shell does not appear to have been recorded in the county previously.

*Limnaea truncatula* (Müll.). Bomere Pool. Marsh near Bomere Farm. Berrington Pool. Smoky Hole, Wenlock Edge.

*L. palustris* (Müll.). Marsh near Bomere Farm. Mere Pool, Shrewsbury.

*L. stagnalis* (Linn.). Pool near Betton Strange.

*L. pereger* (Müll.). Shrewsbury, pool in Sutton Road. Mere Pool, Shrewsbury. Plentiful in old iron boiler used as drinking trough, Belvidere, Shrewsbury.

*Physa fontinalis* (Linn.). Berrington Pool. Bomere Pool. Shomere Pool.

*Planorbis planorbis* (Linn.). Berrington Pool.

*P. carinatus* Müll. Pool near Betton Strange.

*P. vortex* (Linn.). Shrewsbury, dead shells in flood rejectamenta of River Severn.

*P. albus* Müll. Bomere Pool. Shrewsbury, dead shells in flood rejectamenta of River Severn.

*P. crista* (Linn.). Pool near Betton Strange.

*P. contortus* (Linn.). Berrington Pool.

*P. complanatus* (Linn.). Pool near Betton Strange.

*P. spirorbis* (Linn.). Marsh near Bomere Farm. Shrewsbury, dead shells in flood rejectamenta of River Severn.

*Succinea putris* (Linn.). Preston Boats, Shrewsbury.

*Cochlicopa lubrica* (Müll.). Shrewsbury, dead shells in flood rejectamenta of River Severn. Belvidere, Shrewsbury.

*Ena obscura* (Müll.). Belvidere, Shrewsbury.

*Goniodiscus rotundatus* (Müll.). Shrewsbury, dead shells in flood rejectamenta of River Severn. Buildwas. Causeway Wood, Ruckley.

*Arion circumscriptus* Johnston. Preston Boats, Shrewsbury.

- Clausilia rugosa* Drap. Buildwas. Lincoln Hill, Ironbridge. Belvidere, Shrewsbury.
- Marpessa laminata* (Mont.). Buildwas.
- Helicella caperata* (Mont.). Lincoln Hill, Ironbridge.
- Trichia hispida* (Linn.). Shrewsbury, dead shells in flood rejectamenta of River Severn. Lincoln Hill, Ironbridge. Smoky Hole, Wenlock Edge. Buildwas. Causeway Wood, Ruckley.
- Cepaea nemoralis* (Linn.). Coalbrookdale.
- Euconulus fulvus* (Müll.). Margin of Berrington Pool.
- Zonitoides nitidus* (Müll.). Margins of Berrington and Bomere Pools.
- Retinella nitidula* (Drap.). Causeway Wood, Ruckley.
- Oxychilus alliarius* (Miller). Belvidere, Shrewsbury. Blakeway, near Harley.
- Vitrea crystallina* (Müll.). Lyd Hole, Pontesford.
- Vitrina pellucida* (Müll.). Sutton, Shrewsbury.
- Agrionimax agrestis* (Linn.) ? var. *violacea* Gassies. Preston Boats, Shrewsbury.
- A. laevis* (Müll.). Preston Boats, Shrewsbury.
- Limax maximus* Linn. Lincoln Hill, Ironbridge.

#### PELECYPODA

- Anodonta cygnaea* (Linn.) Berrington Pool, up to 6 in. long.
- Sphaerium corneum* (Linn.) Pool near Betton Strange. Pool in Sutton Road, Shrewsbury.
- S. lacustre* (Müll.) Mere Pool, Shrewsbury. Pool in Sutton Road, Shrewsbury.
- Pisidium* sp. Many shells belonging to this difficult group have been collected in various localities, but await determination before they can be recorded.

# ENTOMOLOGY.

The year 1940 has been generally rather better from the entomological point of view than many of its predecessors, though restrictions of various kinds have severely cut down field work and collecting, especially the collection of moths by light. There was a very distinct increase in the *Vanessidae*, Peacocks, Red Admirals, Small Tortoiseshells being very abundant in July and August, and *Commas* were also fairly common.

I have received lists of forty-six additions to the Shropshire Diptera from Mr. C. H. Wallace Pugh, and thirty-three additions to the Coleoptera from Mr. James Hignett, and some very interesting notes on the Hymenoptera from Mr. J. H. Owen, of Oswestry.

Hibernated *Vanessidae* were out early, the first record being a Comma on March 4th from Mr. J. Steele Elliott at Dowles. The first Peacock recorded was March 18th by Miss Mackenzie at Shrewsbury, followed by a record from Mr. Potts, at Broseley, on March 25th.

There was another infestation of cabbage plants by Large and Small Whites (*P. brassicae*, L. and *rapae*, L.). March 6th was the first record (Mackenzie) for *P. rapae*, L., and April 22nd for *P. brassicae*, L., and during the summer both species were very abundant, in spite of the large percentage of caterpillars which were "ichneumoned." Of three lots of larvae collected at intervals of a fortnight for observation purposes, 60 per cent of the first, 73 per cent of the second, and 65 per cent of the third hundred were "ichneumoned." In addition to the cabbage tribe, the Nasturtium was another favourite food plant.

I must record my thanks to all those who have sent me their observations.

W. J. v M. PENDLEBURY,  
*Referee for Entomology.*

## LEPIDOPTERA.

- C. edusa** F. (Clouded Yellow). July 14th, Dowles (*J. S. Elliott*).
- C. elpenor** L. (Elephant Hawk). Several larvae feeding on Enchanter's Nightshade (*Circaea lutetiana*), which is nowhere mentioned as a food plant (*Pendlebury*).
- S. tetralunaria** Hufn. (Purple Thorn). August 12th, Broseley (*Potts*).

## COLEOPTERA

(Additions to the Shropshire List)

### STAPHYLINIDAE.

- Atheta fungivera* Th.
- Falagaria thoraeica* C.
- Gyrophæna manca* Er.
- G. laevipennis* Kr.
- Gabrius appendiculatus* Sh.
- G. stipes* Sh.
- Gauropterus fulgidus* F.
- Leptacinus parumpunctatus* Gy.
- Lesteva heeri* Fv.
- L. pubescens* Mn.

**SILPHIDAE.***Clambus pubescens* Rd.**SCYDMAENIDAE.***Euconnus nanus* Sc.*Euthia schaumii* Kw.**PSELAPHIDAE.***Bythinus burrelli* Dy.**TRICHOPTERYGIDAE.***Pteryx suturalis* H.*Millidium minutissimum* Lj.**COCCINELLIDAE.***Anatis ocellata* L.**MONOTOMIDAE.***Monotoma bicolor* Va.*M. longicollis* Gy.**LATHRIDIIDAE.***Corticaria pubescens* Gy.**PTINIDAE.***Eurostus hilleri* Rh. One example of this recent importation,  
Maesbrook Mill, November 6th, 1938.**BOSTRYCHIDAE.***Rhizopertha dominica* F.**CHRYSOMELIDAE.***Mniophila muscorum* Kh.**OEDEMERIDAE.***Oedemera nobilis* Sp.**MORDELLIDAE.***Anaspis latipalpis* Sy.**CURCULIONIDAE.***Phytobius canaliculatus*, Fk.**IPIDAE,***Pityophthorua pubescens* Marsh.

Collected in Oswestry district by J. Hignett.

**STAPHYLINIDAE.***Atheta orbata* Er.*Tachyusa flavitarsis* Sahub.*Lesteva luctuosa* Fv.*Anthophagus testaceus* Gn.**CRYPTOPHAGIDAE.***Atomorla umbrina* Gy.**CHRYSOMELIDAE.***Psylliodes napi* F. var. *Hignetti* Donis. Described from examples  
taken in the Oswestry district.

Collected in the Oswestry district by Mr. H. Donisthorpe.

Our thanks are again due to Mr. Donisthorpe for kindly verifying  
all the above species.

## DIPTERA

(Additions to the Shropshire List)

## BIBIONIDAE.

*Scatopse picea* Mg. 1 pair on tree trunk, 22nd September.

## TIPULIDAE.

*Dieranomyia didyma* Mg. 1 m., Penygwely, 11th June.*Amalopis littoralis* Mg. 2 f., Candy Wood, 3rd June.*Erioptera macrophalma* Lw. Occasional, June to September, Whixall, Morda.*E. griseipennis* Mg. In numbers, Morda Brook, May.*E. fuscicenta* Edw. 3 m., Morda, 3rd May.*Adelphomyia fuseula* Lw. 5 m., August, Morda, Llanforda, Whixall.*Idioptera verralli* Bergr. 1 m., 1 f., Morda, 7th June.*I. pulchella* Mg. Whixall Moss, Fenns Moss, May to June.*I. trimaculata* Ztt. Occasional, Penygwely, May.*Dactylolabis frauenfeldi* Egg. 1 m., Alberbury, 31st May.*Tipula cava* Riedel. Breidden, Whixall Moss, July.*T. hortulana* Mg. 5 m., 1 f., Candy Wood, Morda, May to June.*T. pabulina* Mg. 1 m., 1 f., Candy Wood, 3rd June.*T. macrocera* mtt. Penygwely, among rushes, April.*T. luteipennis* Mg. Whixall Moss, Llanforda, marshy ground, October.*Pseudolimnophora sepium* Verr. Morda, Whixall, July.

## LEPTIDAE.

*Atherix ibis* F. River Vyrnwy, Maesbrook, 2nd June (*H. Donisthorpe*).

## ASILIDAE.

*Dioctria atricapilla* Mg. 1 f., Maesbrook, 2nd June (*H. Donisthorpe*).

## EMPIDIDAE.

*Drapetis setigera* Lw. 1 pair, cut grass, 15th April.*Pachymeria femorata* F. 1 m., Penygwely, 5th June.

## DOLICHOPODIDAE.

*Doliehopus campestris* Mg. 1 m., Llanforda, 15th July.*D. urbanus* Mg. 2 m., Penygwely, 16th June.*D. simplex* Mg. 2 m., Rednal, Breidden, June to July.*Gymnopternus celer* Mg. 1 m., Melverley, 22nd July.*Chrysotus laesus* W. 1 m., July.*Porphyrops nemorum* Mg. 1 m., River Vyrnwy, Maesbrook, 14th July.*P. rivalis* Lw. 1 m., Maesbrook, 3rd June.*Syntormon denticulatus* Ztt. Fairly common, early spring and autumn.*S. sulcipes* Mg. Penygwely, Llanforda, occasional.*Xiphandrium auctum* Lw. Uncommon, Whixall Moss, Llanforda.*Campsicnemus marginatus* Lw. 2 m., 2 f., River Vyrnwy, Maesbrook, 30th June.*Achalus cinereus* Wlk. 1 m., River Tern, Walcot, 8th May.*Teuchophorus pectinifer* Kow. 2 m., 3 f., Llanforda, July, August.*T. spinigerellus* Ztt. 1 m., 1 f., Llanforda, July.

## TACHINIDAE.

*Melinda gentilis* Stein. 2 m., Candy, August to September.*Sarcophaga incisilobata* Pand. 3 m., June to July.*S. offuscata* Schin. 1 m., Craigryhiw, 12th June.

**MUSCIDAE.**

*Lispa nana* Meq. 1 pair, Maesbrook, wet mud, 30th June.

**PSILIDAE.**

*Psila fimetaria* L. Fairly common.

*Tetrapsila obscuritarsis* Lw. 1 f., May.

**SAPROMYZIDAE.**

*Sapromyza rorida* Flin. Very common.

*S. sordida* Hal. Occasional, July.

*S. lupulina* F. Wrekin, June to July, on wood sage (*A. E. Cragg*).

**HELOMYZIDAE.**

*Chaetomus flavotestaceus* Ztt. 1 f. on manure, 7th April.

**EPHYDRIDAE.**

*Scatella stenhammeri* Ztt. 1 pair, Caemor Wood, stagnant water, 14th April.

All taken at or near Oswestry by C. H. Wallace Pugh unless otherwise stated.

**HYMENOPTERA.**

NOTES BY MR. J. H. OWEN, OSWESTRY, 1940.

Effect of frost on injurious insects nothing like what was expected. Craneflies alone seemed to be much affected, which looks as though the frost caught the leather-jackets.

I counted 27 queen wasps on one fence, May 5th. Later, nests were very abundant. Out of 78 examined:—

- 1 *Vespa norvegica* ;
- 9 *V. sylvestris* ;
- 21 *V. germanica* ;
- 47 *V. vulgaris*.

Three points seem worth noting: (1) Very small size of workers in *V. vulgaris*; (2) how greatly *V. vulgaris* preponderated—usually *V. germanica* is in at least equal numbers round here; (3) how very late the wasps were in starting queen cells in the ground nests. Only one *V. sylvestris* nest in the ground (four in 1938). Some of the nests were huge: one *V. germanica* of twelve tiers, 27th September; another of fourteen tiers—the largest of this species I have ever seen—25th September. Quite a number of nests were working strongly in October. Not so many nests as usual eaten by Badgers: two at one spot only five feet apart—both *V. vulgaris*.

Various kinds of bumble bees were also very common, and many nests were found: several of *B. venustus* were raided by Field Voles. In one case a bumble bee took over the nest of a Flycatcher and adapted it to her own purposes (*B. agrorum* I think), but I did not discover that bees had taken over the nest until another enemy had ousted them.

August 28th, queen bumble bee (*B. lapidarius*) so covered with mites that she was unable to rise from grass.

October 11th, nest of *B. venustus* still working, but only one queen in it when I examined it.

**HOMOPTERA-HEMIPTERA**

*Trichophora sanguineolenta* L. (Scarlet Hopper). Lloyd's Coppice, Ironbridge, on Aspen (*P. tremula* L.), May 29th (*Mrs. Wynne Corrie*).

# GEOLOGY

Owing mainly to restricted transport facilities, little field work has been done during the past year.

During the field meeting at Ludlow on 25th July, some time was spent in collecting around Whitcliffe. More important was the inspection of the geological collections in the Ludlow Museum, where many type fossils were examined. Such an opportunity is not likely to occur again, as it is reported that many of the most important specimens are to be removed to the British Museum.

On 20th August, when the only geological excursion of the year took place at Marshbrook, many interesting specimens were found. There are good exposures of the Ordovician series up the road to Minton, and in an old quarry in Marsh Wood the same rocks were seen.

Mr. G. Potts drew my attention to a small quarry on Shirlett Common, exposing the Carboniferous (Coal Measures), and on visiting the site I found a few fossil plants, including **Lepidodendron**, **Calamite** and **Stigmaria**. I shall be grateful if members will give me news of any such small exposures or excavations known to them.

Mr. E. A. Turner has inaugurated a series of talks on Elementary Geology which have proved exceedingly interesting, and which have been greatly appreciated by the members.

J. T. WATTISON.

## METEOROLOGY

As regards the list of observers from whom records have been received, there is little change to report. Mr. J. Corfield, gardener at Coton Hall, Alveley (Capt. H. D. Wakeman Colville, R.N.), left during the year on the property changing hands. I am sorry to lose his records after a long period of years. At the Harper Adams Agricultural College, Mr. Martin A. Cross has taken the place of Mr. H. E. F. Maddrell as crop recorder, Mr. Maddrell having been seconded from the College to a post in the National Scheme of War Emergency Agricultural Production. His reports on "The Weather and the Crops" have for several years now been an outstanding feature of interest and value in our meteorological records. It is good to know that Mr. Cross is carrying on the work, and he has most kindly furnished the report which follows below. In this connection I tender again my thanks to Dr. C. Crowther, Principal of the College, and to Dr. A. D. Symons for permission to use the records from their official stations, and to Mr. Cross and Mr. H. A. Howe, who furnish the observations recorded at those stations.

In brief, 1940 was notable chiefly for the unusually severe winter weather of January, with much snow and ice and phenomenally low temperatures, with resulting long-continued difficulties of traffic, of widespread damage to water mains and house fittings, and of wreckage of trees and of postal poles and wires over large areas, when the phenomenon of a "silver frost," or rain freezing as it fell, occurred on January 26th and 27th, forming casings of ice around wires and twigs and small branches, and breaking them off by the sheer weight of ice. Several records of temperatures of some degrees below zero Fahrenheit were noted, and the frost penetrated deep into the ground, to two feet in some parts. As regards other features, sunshine was above average, especially in the latter half of the year. Rainfall exceeded the average at many, but not all, stations, and November's fall was everywhere much in excess, and a record in most parts. In Shrewsbury, at my own station, November was the wettest month recorded in my observations covering the past twenty-nine years, and the year's total was also the highest in the same period.

The summer was fine with low rainfall in June, a showery but sunny July, and a drought throughout August, giving one of the most favourable harvesting times on record. Crop yields, including vegetables and garden produce and fruits, were generally bountiful and gathered in good condition.

A full description of the year's weather, by Mr. Martin Cross, follows this introduction, and notes of much interest by other observers are also given.

## REVIEW OF WEATHER DURING 1940

**JANUARY.**—It is probable that one would have to go back to 1898 to find weather comparable with that of January, 1940, and it is doubtful whether even then such severe weather was experienced. The previous low record for 36 years was 2° F. in the screen in February, 1917. This was easily beaten on the night of Saturday, January 20th, when the thermometer dropped to —4° F. in the screen and —8° outside. The month started with continuation of December's cold weather, and the ground covered with snow to a depth of 2 inches. A slow thaw set in on the 4th, and by the 7th the ground was clear. A number of sharp frosts at night kept the ground frozen. From the 10th onwards, weather got steadily colder, on many days freezing, until the record low temperatures were attained on the 21st; on 23rd, with 30° of frost, the ground temperature was 2° below freezing point at 8 inches, and 4° below at 4 inches. These figures also have never before been approached. As a climax, snow started to fall on Friday, the 26th, and continued all Saturday, Sunday and Monday morning, blowing into deep drifts, that steadily grew worse under a strong east wind, and brought all traffic to a standstill. The depth was difficult to gauge, but was probably 12–14 inches. Frosts were recorded on all mornings save four. Nine of them were of over 20° of frost.

**FEBRUARY.**—Arctic conditions continued until 3rd February, the thaw starting on the Saturday evening. The roads were extremely dangerous on the Sunday, 4th. The thaw continued for six days until with the exception of deep drifts, the ground was clear. The ground never started to thaw for forty-one days until February 23rd. On the 9th it froze all day, and winterly conditions continued until the 19th, snow falling on the 12th, 14th, 16th and 18th. Ploughing was not possible until 24th. The sunshine total of 18.9 hours was the lowest ever yet recorded for any month. The rainfall of 2.16 inches was slightly more than average.

**MARCH.**—Although, from an agricultural point of view, the month provided poor growing weather, the mean maximum of 49.6° was 2° higher than the average for thirty years, and the minimum just normal. The month started with dry, sunny weather with very sharp frosts at night, aiding the future tilth on late-ploughed land. From 10th till Easter,

weather was wet and sunless, and snow storms on the morning of 14th just covered the ground. From Easter until the end of the month the days were sunnier with high winds, especially at night, gales being recorded on the nights of 28th, 30th and 31st. Rainfall totalled 2.20 inches, which is 22 per cent more than average. Sunshine was the third lowest in fifteen years. There were seventeen frosts. A display of the Aurora was observed on the evening of the 25th.

APRIL.—During the month there was a marked lack of sunshine, and some very sharp frosts kept the soil temperature so low that for the first three weeks growing conditions were very bad. During the last week, temperatures eased, and growth was very rapid, and at the same time there was a marked increase in rainfall, over 2 inches falling in the last five days. The heaviest fall in one day was .87 inch on 26th, following thunder in the evening. There were also heavy thunderstorms on 10th and 30th. There were eleven frosts, doing little damage except to discolour young barley shoots. Snow fell on 15th, 16th, 17th.

MAY.—The first fortnight was fine, but with very variable temperatures and some slight frosts. A thunderstorm on 15th brought a change when .97 inch rain was recorded, another thunderstorm was experienced on 28th, and thunder was also heard on 17th, 23rd, 26th, 27th and 29th. On the whole, it was excellent growing weather. The coldest night, with 23° frost on the grass, did localised damage to early potatoes and runner beans; slight frosts on seven days; more than average sunshine.

JUNE.—First half of the month dry with only slight showers. Highest maximum of year 85° recorded on June 9th, temperatures generally high, with one slight ground frost. Average maximum, 67.7°, average minimum 44.4°.

JULY.—A showery month; total rain of 3.4 inches was .71 inch more than average. Heaviest rain fell during second week, when 1.70 inches were measured. Sunshine was well above normal, 191.5 hours, being 25.8 hours more than the average.

AUGUST.—Provided the most ideal harvest weather for many years, the driest since the records were first taken. The rainfall of .31 inch was 2.4 inches less than average. There were six slight ground frosts. A moderate gale on 21st. Sunshine 3 hours more than average.

SEPTEMBER.—Rain recorded after a dry spell of thirteen days on 5th, but only slight showers recorded before end of

month. Weather ideal for stubble cleaning. Rainfall .61 inch less than thirty-one years' average of 1.93 inches. Sunshine 42 hours was most recorded in September since 1929; strong gale on 17th, causing some structural damage. Ground frosts were recorded on fourteen mornings, most severe being 6 degrees of frost.

OCTOBER.—The dry weather came to an end in the early days of the month, and heavy rain was experienced, the heaviest fall being 31st, with .91 inch. The total rainfall was 1.14 inches more than the average. Sunshine and temperatures were a little above average. There were thirteen ground frosts, a grass minimum of 13° being registered on 12th. Wind rose to gale force on 9th.

NOVEMBER.—The wettest November on record. The total rainfall of 5.97 inches being 3.68 inches more than a twenty-year average. The heaviest fall was 1.04 inches on 21st. Sunshine was above average by 2.7 hours. There were nine sunless days. There were sixteen ground frosts, the most severe being 15° on 30th. Gales recorded on 2nd and 20th.

DECEMBER.—Very variable weather with very cold nights; twenty-two frosts were recorded; rainfall was 69% below average. Maximum and minimum temperatures were below average, and sunshine, 7.8 hours, above. Sleet was experienced on two occasions. The year closed with a number of bitterly cold nights, and a slight fall of snow in the evening of 31st; wind reached gale force twice on 6th and 14th. Visibility was less than 27 yards on 25th.

(Signed) MARTIN A. CROSS,  
Crop Recorder.

*Burwarton (Mr. A. E. Skerritt).*

January's weather was the most outstanding of 1940. Snow and then rain, turning to ice, fell to a depth of 4½ inches. This was disastrous to trees, especially oaks. Branches started to fall on the 29th with the weight of ice on them, and were doing so for several days. This month was disastrous also for the vegetables: broccoli, sprouts and winter cabbage were killed through being encased in ice; spinach being the only vegetable here to stand it. Apart from this, potato crops were very good, and soft fruit good. Apples poor on account probably of heavy crops in the two years previous.

*Totterton (Major Whitaker).*

Great fall of rain, and a silver frost on January 26th and 27th. Probably the driest August on record in these parts, and a record rainfall in November. Quite a good harvest, with apples and plums above the average. A good wild pheasant year. Partridges very scarce, probably due to lack of insect life in August.

*Bishop's Castle (Canon H. J. Smith).*

34° of frost recorded January 21st, and hard frost all the week; a thaw on 27th till evening, then rain froze as it fell, and did great damage to trees and shrubs. Following the severe winter, we had abundance of blossom, and surprisingly good apple crops.

*Ticklerton (Brig.-Gen. Tyler).*

January and February were noted for extreme cold, holly, laurel and garden greens being destroyed, the last named being also ravaged by rooks and pigeons, of which there are undoubtedly too many about. Thunderstorms were few, and none of a severe nature. It was very hot at times in August, but otherwise temperatures were normal, with probably a cooler autumn than usual. Fruit crops were good, and about on an average. Farm crops appear to have been excellent. The dry weather of August and September delayed autumn ploughing, the ground being too hard.

*Longden (W. Swire, Esq.).*

Apples and pears quite good, but would not keep, and went mildewy, possibly owing to lack of rain; having been keeping much better since December. Wheat, oats and barley all good. Some roots, planted late, were poor owing to the drought, and potato crop on the farm was poor.

*Worthen (Dr. Hunter).*

34° of frost recorded on night of January 20th-21st, at 3 feet above ground on a north wall.

*Diddlebury (V. S. Wrigley, Esq.).* The "ice-rain" on night of January 27th did amazing damage to trees, and was very hard on bird life. A wonderful harvest time followed by an abnormally wet November. I should describe 1940 as being an excellent year for crops generally, with exceptionally good weather for harvesting most of them.

*Bromfield (Mr. F. Brayshaw).*

Hay and grain harvests good. Damsons good; other fruits, especially apples, only fair.

*Oakly Park (Mr. Berry).*

Frost on January 21st "10° below zero Fahr."

*Sansaw (Mr. McWilliam).*

Owing to the very severe winter conditions, the fruit crop was poorer than usual here. Strawberries did very poorly, and some varieties of gooseberries were light. Apples a fair crop, but pears "nil." Outdoor figs were a complete failure.

*Whitchurch (Mr. Sowden).*

The farm and fruit crops have been very good on the whole.

*Wem (Mr. Chard).*

The August drought had a bad effect on runner beans.

*Shrewsbury, Monkmoor (Mr. Howe).*

January—Severe frosts 11th to 23rd; snow five days. February—Snow four days; cold spell 11th to 18th. March—Snow four days. April—Sleet one day; hail one day; thunder three days. May—Hail one day, thunder three days. June—Dry and sunny; thunder three days. July—Thunder five days. August—A dry and warm month. September—Gale one day. October—Gale one day. November—Exceptionally wet; hail two days. December—Gale one day; thunder one day.

*Harnage Grange (Col. Pollitt).*

1940 was an almost ideal year for grain. There was well-distributed rainfall till mid-July, and then fine dry weather till mid-October. Other crops were adversely affected by the drought in August and September.

Month	TEMPERATURES, HARPER ADAMS COLLEGE						No. of days with frost	
	Highest	Date	Lowest (in screen)	Date	Lowest (on grass)	Date	In screen	On grass
January... ..	48°	7th	-4°	21st	-8°	21st	27	27
February ... ..	55°	27th	14°	29th	7	13th	15	15
March ... ..	60°	18th	20°	7th	14°	7th	8	17
April ... ..	65°	27th	24°	11th	16°	17th	4	11
May ... ..	69°	16th, 18th	33°	20th	23°	20th	0	7
June ... ..	85°	9th	40°	14th	28°	14th	0	1
July ... ..	76°	1st	37°	29th	29°	13th	0	1
August ... ..	80°	31st	37°	28th	23°	28th	0	6
September ... ..	81°	4th	32°	27th	22°	30th	0	14
October ... ..	62°	6th, 7th	27°	28th	13°	12th	2	13
November ... ..	57°	2nd	28°	15th, 28th	15°	30th	4	16
December ... ..	54°	16th	25°	13th	17°	13th	9	22
Total ... ..	—	—	—	—	—	—	69	150

Month	TEMPERATURES, SHREWSBURY (MONKMOOR)						No. of days with frost	
	Highest	Date	Lowest (in screen)	Date	Lowest (on grass)	Date	In screen	On grass
January... ..	50°	7th	0°	21st, 22nd	—8°	21st	23	30
February ... ..	56°	27th	17°	13th	5°	13th	15	20
March ... ..	61°	18th	20°	7th	12°	7th	9	16
April ... ..	67°	27th	25°	18th	15°	17th	5	7
May ... ..	71°	5th	35°	7th, 20th	27°	20th	0	5
June ... ..	85°	8th, 9th	43°	14th	32°	26th	0	0
July ... ..	76°	1st	41°	29th	31°	29th	0	0
August ... ..	80°	17th, 31st	38°	28th	26°	28th	0	1
September ... ..	82°	4th	35°	22nd	24°	22nd, 25th	0	10
October ... ..	63°	6th	27°	12th, 28th	16°	28th	2	14
November ... ..	58°	2nd, 20th	23°	30th	12°	30th	2	15
December ... ..	55°	16th	24°	13th	12°	22nd	7	27
Total ... ..	—	—	—	—	—	—	63	145

### SUNSHINE IN 1940, as recorded at Harper Adams College.

Month	Total Hours	Sunniest Day		Sunless Days No.	Days with less than 1 hour No.
		Hours	Date		
January ... ..	52.8	5.1	17th	14	3
February ... ..	18.9	3.7	12th	18	4
March ... ..	83.3	10.5	28th	12	4
April ... ..	96.1	8.2	16th	1	5
May ... ..	180.8	14.6	19th	1	3
June ... ..	265.2	14.8	5th	2	2
July ... ..	191.5	10.9	23th	0	1
August ... ..	171.3	12.6	2nd	1	1
September ... ..	174.6	11.8	4th	0	2
October ... ..	71.8	8.5	7th	6	9
November ... ..	56.2	6.8	27th	9	1
December ... ..	44.9	5.2	8th	14	4
Total ... ..	1407.4	—	—	78	39

### SUNSHINE IN 1940, at Monkmoor, Shrewsbury.

Month	Total Hours	Sunniest Day		Sunless days No.	Days with less than 1 hour No.
		Hours	Date		
January ... ..	42.0	5.9	17th	16	2
February ... ..	29.0	4.9	5th	12	6
March ... ..	107.7	10.9	28th	4	5
April ... ..	109.7	11.7	16th	3	2
May ... ..	183.8	14.2	18th	2	2
June ... ..	280.1	15.0	5th	1	2
July ... ..	186.6	11.3	29th	1	2
August ... ..	158.5	12.1	2nd	2	1
September ... ..	174.0	11.2	4th	3	2
October ... ..	69.0	8.3	7th	9	4
November ... ..	63.5	7.0	22nd	10	1
December ... ..	35.5	5.6	19th	16	4
Total ... ..	1439.4	—	—	79	33

## EXTREMES RECORDED

					<i>inches</i>
Greatest rainfall in twenty-four hours—					
Oakly Park, February 3rd	...	...	...	...	1.86
Oswestry (Cross Street), January 27th	...	...	...	...	1.60
Greatest fall during the year—					
Wellington (Reservoir)	...	...	...	...	39.67
Oswestry (Cross Street)	...	...	...	...	39.51
Oswestry (Mount Reservoir)	...	...	...	...	39.28
Least total rainfall during the year—					
Bishop's Castle (The Mount)	...	...	...	...	28.36
Cosford Waterworks	...	...	...	...	28.72
No other record returned of less than 30 inches.					

M. GEPP.

*February 14th, 1941.*

**TABLE No. I.**

**NAMES OF OBSERVERS AND STATIONS.**

NO.	ALTITUDE.	STATION.	OBSERVER.	LATITUDE.	LONGITUDE
	FEET.			NORTH	WEST
(1)	894	Burwarton	.. Mr. A. E. Skerritt	.. 52 28	2 34
(2)	735	Bishop's Castle (Mount)	.. F. Lavender, Esq.	.. 52 30	3 0
(3)	700	Totterton, Lydbury North	.. Major W. H. B. Whitaker	.. 52 29	2 56
(4)	698	Oswestry (Reservoir)	.. J. E. Taylor, Esq.	.. 52 51	3 5
(5)	596	Bishop's Castle (Vicarage)	.. Canon H. J. Smith	.. 52 30	3 0
(6)	582	Little Stretton	.. Mr. E. J. Marsh	.. 52 31	2 50
(7)	575	Ticklerton	.. Brig.-Gen. A. M. Tyler	.. 52 31	2 45
(8)	570	Longden Manor	.. W. Swire, Esq., C.B.E.	.. 52 39	2 51
(9)	478	Wellington (Reservoir)	.. W. Walker, Esq.	.. 52 41	2 32
(10)	398	Oswestry	.. J. R. Mackavoy, Esq.	.. 52 51	3 3
(11)	395	Harnage Grange	.. Lt.-Col. G. P. Pollitt	.. 52 37	2 38
(12)	395	Worthen	.. Dr. D. M. Hunter	.. 52 38	3 0
(13)	370	Diddlebury	.. V. S. Wrigley, Esq.	.. 52 28	2 43
(14)	350	Norton-in-Hales	.. C. Chadwick, Esq.	.. 52 56	2 27
(15)	320	Bromfield	.. F. Brayshaw, Esq.	.. 52 23	2 46

TABLE No. 2—continued.

		JAN.	FEB.	MAR.	APL.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL	Average Rain- fall
(15)	Bromfield ...	2.97	2.25	1.50	2.73	1.99	.96	3.65	.30	1.09	3.60	7.27	1.73	30.04	30.73*
(16)	Oakly Park ...	1.57	4.26	1.42	2.97	2.03	.73	3.79	.19	1.01	3.82	7.28	1.47	30.54	30.35*
(17)	Sansaw ...	.97	2.79	2.66	3.24	2.14	1.99	3.54	.25	1.91	3.96	7.18	1.47	32.10	25.70
(18)	Newport ...	2.56	2.32	2.24	3.17	2.88	.94	3.15	.40	1.12	3.49	6.72	1.80	30.79	28.43*
(19)	Whitchurch ...	2.63	2.57	2.25	2.64	2.01	1.08	5.05	.31	1.82	3.77	6.42	1.22	31.77	28.68
(20)	Wem ...	2.14	2.58	2.62	2.92	2.03	1.24	3.61	.26	2.01	4.13	6.40	1.58	31.52	
(21)	Shrewsbury (Copthorne)	2.93	2.68	2.09	3.53	3.11	1.96	2.59	.16	1.52	3.07	6.37	1.39	31.40	
(22)	Shrewsbury (Wenlock Road)	3.23	2.78	2.17	3.13	3.39	2.04	2.71	.17	1.54	3.05	7.29	1.43	32.93	
(23)	Cosford Waterworks...	3.32	2.31	1.54	3.07	2.48	.70	2.69	.31	.80	3.52	6.23	1.75	28.72	
(24)	Harper Adams College	*	2.16	2.20	4.07	2.56	1.49	3.40	.31	1.26	3.43	5.97	1.81	*	25.99*
(25)	Shrewsbury (Coton Hill)	3.24	2.50	2.07	3.81	2.80	2.50	2.39	.18	1.49	3.06	6.94	1.27	32.25	24.74*
(26)	Shrewsbury (Monkmoor)	2.80	2.53	2.10	3.75	2.78	1.99	2.62	.19	1.73	3.11	7.12	1.40	32.12	

\* Mr. Cross observes : " Impossible to estimate for January owing to drifting of snow. The fall probably 1 foot 2 inches of snow and .89 inch measured as rain."

Total for year ... 830.41  
Average for year ... 33.2

**TABLE No. 3.**  
**GREATEST RAINFALL IN 24 HOURS, WITH DATES**

	Jan.	Day	Feb.	Day	Mar.	Day	Apl.	Day	May	Day	June	Day	July	Day	Aug.	Day	Sep.	Day	Oct.	Day	Nov.	Day	Dec.	Day
(1) Burwarton ...	1.35	28	.65	18	.34	16	.67	29	.85	15	.18	14	.65	12	.07	10	.28	16	.96	31	1.20	21	.35	15
(2) Bishop's C. (Mt.)	1.09	26	.53	7	.47	18	.57	18	.85	15	.33	21	.49	20	.13	10	.20	16	.96	31	1.32	21	.19	9
(3) Totterton, L.N....	1.38	26	.60	7	.22	17	.68	29	1.10	16	.60	12	.53	10	.15	11	.28	16	.95	31	1.32	21	.20	14
(4) Oswestry (Mount Reservoir)	1.43	27	.67	18	.57	13	.87	30	.91	15	.65	21	.90	9	.12	10	.72	16	1.29	6	1.14	9	.37	9
(5) Bishop's C. Vic....	1.49	28	.63	7	.57	18	.63	18	1.02	15	.39	15	.59	9	.14	10	.29	16	1.09	31	1.39	21	.30	9
(6) Little Stretton ...	1.36	26	.58	18	.45	13	.91	18	.71	15	.50	21	.69	12	.12	10	.33	16	.92	31	1.40	21	.33	11
(7) Ticklerton Court	1.30	26	.60	17	.55	13	.80	29	1.10	13	.54	21	.68	10	.11	10	.30	16	1.05	31	1.40	21	.26	14
(8) Longdon Manor...	.70	26	.64	18	.42	13	.56	18	1.30	15	.80	12	.55	10	.15	27	.27	16	.44	16	1.40	21	.27	9
(9) Wellington Res.	1.38	26	1.38	2	.65	17	.61	29	1.22	15	.54	21	.98	10	.14	9	.34	16	.99	16	1.56	21	.42	2
(10) Oswestry (Cr. St.)	1.60	27	.74	18	.59	13	.81	30	.80	15	.66	21	.90	9	.08	28	.70	16	1.19	6	1.31	16	.37	9
(11) Harnage Grange	1.30	26	.72	18	.50	13	.58	18	.81	15	.82	14	.82	10	.15	9	.30	14	1.02	31	1.24	21	.23	10
(12) Worthen ...	1.01	26	.69	7	.53	18	1.43	27	.86	15	.61	21	1.41	11	.09	9	.34	18	.84	31	1.41	21	.23	9
(13) Diddlebury ...	1.39	27	.59	18	.40	18	.84	29	1.11	15	.49	21	.77	9	.18	10	.23	16	.92	31	1.27	21	.28	14
(14) Norton-in-Hales	1.23	27	.52	19	.47	18	.70	20	.39	16	.84	22	1.20	12	.12	21	.68	19	1.03	7	1.42	18	.33	30
(15) Bromfield ...	1.21	26	.55	18	.35	18	.62	29	.88	15	.48	21	.93	9	.06	9	.19	16	.96	31	1.33	21	.41	14
(16) Oakly Park ...	1.23	26	1.86	3	.35	18	.56	29	.95	15	.48	21	.81	9	.08	10	.18	15	1.03	31	1.30	21	.28	13
(17) Sansaw ...	.69	26	.59	6	.36	17	.84	30	.82	15	.55	10	.75	9	.08	18	.41	16	.96	6	1.24	17	.28	9
(18) Newport...	1.16	26	.64	18	.44	13	.62	30	.88	14	.51	21	.53	10	.11	9	.25	19	.95	31	1.08	21	.34	9
(19) Whitchurch ...	1.08	27	.70	18	.60	13	.70	30	.80	15	.68	21	1.03	26	.08	21	.55	16	.90	16	1.13	21	.23	9
(20) Wem ...	.21	26	.53	19	.64	27	.67	30	.88	15	.50	21	.85	10	.09	18	.57	18	.80	6	1.10	17	.30	14
(21) Shrewsbury (Copthorne)	1.25	26	.83	18	.43	13	.69	27	.86	28	.63	21	.58	10	.06	18	.29	18	.93	31	1.23	21	.21	9
(22) Shrewsbury (Wenlock Road)	1.27	26	.95	18	.46	13	.57	30	1.00	28	.67	21	.54	10	.05	18	.26	18	.98	31	1.32	21	.23	10
(23) Cosford W'works	1.11	26	.63	18	.37	17	.52	30	.98	15	.44	21	.53	10	.10	9	.17	14	1.06	31	1.15	21	.30	9
(24) Harper Adams C.	.88	19	.43	13	.87	26	.87	26	.97	15	.60	22	.57	10	.10	19	.33	19	.91	31	1.04	21	.30	9
(25) Shrewsbury (Coton Hill)	1.40	26	.73	18	.42	13	.90	26	.93	15	.85	15	.58	9	.07	10	.36	18	.96	31	1.26	21	.21	9
(26) Shrewsbury (Monkmoor)	1.27	26	.72	18	.41	13	.71	27	.82	15	.65	21	.56	10	.07	10	.41	18	.95	31	1.21	21	.22	9

**TABLE No. 4.**  
**RAINY DAYS.**

**A Rainy Day means a day on which at least 0.01 inch of rain fell.**

	JAN.	FEB.	MAR.	APL.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
(1) Burwarton ... ..	11	14	18	25	18	7	19	7	13	18	22	23	195
(2) Bishop's Castle (Mount) ... ..	11	16	14	19	14	5	18	4	16	15	22	18	172
(3) Totterton, Lydbury North ... ..	9	14	15	20	12	4	18	6	15	16	23	15	167
(4) Oswestry (Mount Reservoir) ... ..	12	18	17	23	15	8	16	8	14	16	25	19	191
(5) Bishop's Castle (Vicarage) ... ..	9	14	15	20	14	6	17	5	14	14	25	18	171
(6) Little Stretton ... ..	12	17	16	23	15	10	18	8	15	16	25	19	194
(7) Ticklerton Court ... ..	6	17	15	20	12	8	16	8	10	15	22	20	169
(8) Longden Manor ... ..	8	19	19	20	13	8	18	7	14	17	21	16	180
(9) Wellington Reservoir ... ..	3	12	14	19	11	10	18	8	15	17	21	13	161
(10) Oswestry (Cross Street) ... ..	10	18	17	22	13	9	17	8	15	15	25	18	187
(11) Harnage Grange ... ..	8	20	15	21	12	11	19	7	14	16	21	16	180
(12) Worthen ... ..	8	15	18	20	15	8	17	6	14	18	23	19	181
(13) Diddlebury ... ..	8	15	16	20	15	9	18	6	12	16	24	18	177
(14) Norton-in-Hales ... ..	9	14	19	24	14	8	22	13	13	16	24	21	197
(15) Bromfield ... ..	7	13	15	21	14	10	20	8	15	18	21	20	182
(16) Oakly Park ... ..	4	12	16	19	15	5	19	6	14	19	21	17	167
(17) Sansaw ... ..	6	9	15	21	15	9	22	7	17	18	22	18	179
(18) Newport ... ..	8	14	15	17	13	7	19	9	14	16	21	14	167

