

The Entomological Section.

President—The Rev. Preb. A. P. WICKHAM, F.E.S., East Brent Vic., Burnham.

Treasurer—Mr. H. DOIDGE, The Bank, High Street, Taunton.

Secretary and Recorder—Mr. H. H. SLATER, Brooke House, Cannington.

THE Annual Meeting was held at Taunton Castle on Saturday, March 24th. All the officials were re-elected, and the Treasurer's balance amounted to £3 11s. 8d., after paying for nine new mahogany drawers in, and alterations to the carcass of, one of the Cabinets in the Museum. The Treasurer's and Secretary's accounts were passed, and various field-meetings arranged, some of which did not come off on account of the impossibility, this unkind season, of forecasting a tolerable day for them.

LEPIDOPTERA.

Amongst Lepidoptera very little of interest has resulted, but Mr. A. R. Hayward has taken one *Micro* new to the county, viz. *Depressaria pallorella*, Zell., which occurs at flowers of the Greater Knapweed in June. It is worth mention that Mr. C. J. Perrens took last year a specimen of *Caradrina exigua* at the Bridgwater Brick Ponds (28.VIII.23).

HYMENOPTERA.

Not a single Ichneumon is on record for Somerset. It was the only group of Hymenoptera of any importance which was passed over in the "Victoria County History" of 1906. The following is a first instalment, for the identification of which I desire to express my thanks to Mr. G. T. Lyle, who informs me that, owing to his restricting his work to the *Braconidae* group, he had some of them named by Mr. Claude Morley;

which latter gentleman has kindly consented to act as our referee for the Ichneumons in future.

Ichneumonidae.

Coelichneumon leucocerus, Grav. Withycombe, West Somerset, 1910 (H.S.).

C. lineator, Fabr. Stawell, Bridgwater, 1911 (H.S.).

Ichneumon confusorius, Grav. Stawell, 1911 (H.S.).

Herpestomus brunneicornis, Gr. Crook's Peak, 4.v.14 (Rev. S. O. Ridley).

Mezotinus obnoxius, Gr. Withycombe, 12.vi.10 (H.S.).

Cryptus obscurus, Gr. Stawell, 1911 (H.S.).

Cratocryptus parvulus, Gr. Frome, 2.vii.14 (S.O.R.).

Glyphionemus brevis, Gr. Cheddar, 19.viii.11 (Hudd).

Pimpla investigator, Fab. Stawell, 1.ix.12 (H.S.).

P. maculator, Fab. Cannington, 7.vii.16 (H.S.).

P. turionella, Linn. Shapwick, 29.v.12 (H.S.). Also Crook's Peak, v.14 (S.O.R.), and Leigh Woods, "Aug." (Hudd).

Lisonota bellator, Gr. Crook's Peak, 26.iv.14 (S.O.R.).

Prometheus sulcator, Gr. Crook's Peak, 8.vi.14 (S.O.R.).

Homocidus dimidiatus, Schr. Cheddar, 19.viii.11 (Hudd).

Exyston brevipetiolatum, Th. Cheddar, 19.viii.11 (Hudd).

Lathrolestes unguularis, Thms. Leigh Woods, "Oct." (Hudd).

Campoplex falcator, Fab. Stawell, vii.1911 (H.S.).

C. myrtillus, Desv. Shapwick, 22.vii.11 (H.S.).

Phobocampa crassiuscula, Gr. Ex. *Halias prasinana* pupa. Stawell, bred, 1911 (H.S.).

Anilasta ruficincta, Gr. Flax Bourton, ix (Hudd).

Nemeritis rufipes, Bdg. Crook's Peak, 1.v.14 (S.O.R.).

Ophion luteus, Linn. Stawell, 5.vii.12 (H.S.).

Paniscus melanurus, Th. Crook's Peak, 26.vi.14 (S.O.R.).

Braconidae.

Apanteles triangulator, Herm. Ex. larva of *Pseudoterpna cytisaria* (?) "N. Som. 1914" (Hudd).

Microgaster alvearius, Spin. Ex. larva of *Pseudoterpna cytisaria* (?) "N. Som. 1914" (Hudd).

M. minutus, Rim. Ex. larva of *Cleora glabraria*, W. Som. 1911 (H.S.).

M. crassicornis, Ruthe. Ex. larva of *Eupithecia campanulata*, Limpley Stoke, 11.v.14 (Robertson).

Macrocentus abdominalis, Fab. Host, date, and captor not mentioned.

APIDÆ.

The following are excerpts from a list, sent by Dr. R. C. L. Perkins, F.R.S., to Mrs. Jermyn, of Aculeates named by him for the late Col. Jermyn and are all Somerset records :

Bombus soroënsis, Fabr. Crewkerne, Aug. 1924 (Dr. Perkins).

B. muscorum, L. (♀ and probably ♂). Shapwick, 1923 (Col. Jermyn).

B. latreillellus, Kirb. Ashcott, 1923 (T.J.).

Psithyrus distinctus, Perez. Weston-s.-M., 1923 (T.J.).

Andrena varians, Rossi. Minehead and Wembdon, 1923 (T.J.).

A. spinigera, K. Wembdon, 1923 (T.J.) (= *A. trimmerana*, K.).

Vespidæ.

Odynerus lævipes (). Shapwick, 1923 (T.J.).

Salix obtusiventris (). Crewkerne, 1924 (Dr. Perkins).

Mr. A. H. Martineau, F.L.S., of Crewkerne, is kindly undertaking the reporting of the Aculeata in the Colonel's place, and Dr. Perkins has been good enough to agree to act as referee.

MALLOPHAGA (Bird-lice).

These are being steadily worked at by Mr. Coldstream Tuckett, none having been as yet recorded from the county. To introduce the subject, his foreword says, "Their food consists of the feathers, or hair, of their host, and exfoliated particles of skin. The classification of the group, and its determination into genera and species, is still in the melting-pot, but in all probability there are some 400-500 known species in Somerset. In many cases the same species occurs on different hosts; for instance, *Trinoton querquedula* occurs on most of

our wild ducks. On the other hand the same species of bird may have as guests several different species of Mallophagon, as the domestic fowl, which harbours at least five species, of which four are in this list. In conclusion, it would be of the greatest help if others interested in ornithology or entomology would only forward to me or to Mr. Slater either the fresh bodies of dead birds picked up, or a tube containing the parasites, if any. They are entirely harmless as far as humans are concerned."

Order *Anoplura*, Leach—Suborder *Mallophaga*, Nitzsch.
Super family *Amblycera*, Kellogg.

*Menoponidæ.**Host.*

- Menopon ridibundum*, Denny. Shelduck, Sand Point, 2.IX.22.
M. gallinæ, L. Domestic fowl, Tickenham, 4.VI.22.
M. stramineum, Nitzsch. Domestic fowl, Tickenham, 4.VI.22.
M. pici, Denny. Green Woodpecker, Cadbury Camp, near Clevedon, 10.VI.22.
M. eury sternum, Nitzsch. Magpie, Barrow Gurney, 14.I.22.
M. minus, Piaget. Little Owl, Portishead, 5.XII.22.
Colpocephalum subæquale, N. Rook, Flax Bourton, 12.V.23.
C. decimfasciatum, Bois and Lac. Heron, Brockley Combe, 5.IV.23.
C. ochraceum, N. Grey Plover, Ringed Plover, Dunlin, Portishead, various dates.
C. scopularium, Neumann. House Sparrow, Redhill, 10.I.22.
Myrsidea cucullaris, N. Starling, Bullock's Bottom, Portbury, 8.III.22.
M. gonophaea, Burmeister. Rook, Flax Bourton, 12.V.23.
M. anathorax, N. Jackdaw, Barrow, 1.V.23.
Dennyus truncatus, Olfers. Swift, Blagdon, 22.V.23.
Trinoton querquedula, L. Teal, 27.X.21, Barrow.
Pseudomenopon tridens, N. Moorhen, Portishead, 5.X.23.

Super-family *Ischnocera*, Kellogg.

Trichodectidæ.

- Trichodectes caprae*, Gurl. Goat, Cannington, 21.X.21.

- T. canis*, Degeer. Dog, Barrow, 22.XI.21.
T. mustelae, Schrank. Stoat, Cadbury Camp, 14.VI.22.
T. subrostratus, N. Cat, Portishead.

Goniodyne.

- Goniodes dissimilis*, N. Domestic fowl, Cannington, 3.VIII.23.
Gonicotes bidentatus, Scopoli. Wood Pigeon, Portishead, n.d.
Lipeurus heteroglyphus, N. Domestic fowl, Cannington,
 3.VIII.23.
L. squalidus, Denny. Duck spp., Barrow, various dates.

Philopterine.

- Philopterus latifrons*, N. Cuckoo, Redhill, n.d.
P. sturni, Schrank. Starling, Portbury, 8.III.22.
P. guttatus, N. Magpie, Jackdaw, Rook, see above.
P. corvi, L. Corvus spp., as above.
P. subflavescens, Geoffroy. Many passerine birds.
P. gonothorax, Giebel. Larus spp., Portishead and Barrow.
P. melanocephalus, N. Arctic Tern, Burnham, 7.VIII.
P. dentatus, Scopoli. Anas spp., Barrow.
P. turdi, Denny. Thrush, Tickenham, n.d.
P. merulae, Denny. Blackbird, Tickenham.
P. cephalus, Denny. Sandpiper, Portishead.
P. auritus, Scop. Green Woodpecker, Cadbury Camp,
 10.VI.22.
P. conicus, Denny. Lapwing, Portishead.
P. variabilis, Denny. Dunlin, Portishead, various dates.
P. fuliginosus, Kellogg. Grey Plover, Burnham, 29.X.23.
P. platyrhyncus, N. Tawny Owl, Cadbury Camp, 4.VIII.21.
Degeerella nebulosa, Burm. Starling, Portbury, 8.III.22 ;
 Bullfinch, Failand, 13.II.20.
D. punctata, N. Black-headed Gull, Barrow, n.d.
D. obscura, Burm. Dunlin, Portishead, various dates.
D. rufa, Burm. Sparrow Hawk, Charterhouse, 4.VIII.23.
D. juncea, Scop. Lapwing, Portishead, n.d.
D. (brevipes), Piaget. Curlew Sandpiper, Portishead.
D. (cordata), Osborn. Curlew, mouth of R. Axe, 23.XI.23.
D. hiaticulae, Muller. Ringed Plover, Portishead.
D. straminea, Denny. Green Woodpecker, Cadbury Camp,
 10.VI.22.
D. vanelli, Denny. Grey Plover, Burnham, 29.X.23.

ODONTATA (Dragon-flies).

I have had no reports on these, nor have I come across anything of interest except

Sympetrum danae, Sülzer (*Scoticum*, Don.).

This has once previously been taken in Somerset by Messrs. W. J. Lucas and C. A. Briggs, who found it at Pinkery ("Pinkworthy") Pond, a source of the Barle on the extreme Barnstaple side of Exmoor, on August 21st, 1899. It is not however mentioned in W. J. Lucas' work, "British Dragonflies." I took it at Priddy Ponds on Mendip (three males) on September 17th, 1924. Occurring in the extreme west, and far to the east, in Somerset, it will doubtless be found in intermediate localities. It would seem to be a pond, rather than a stream insect.

SIPHONAPTERA (APHANIPTERA)—Fleas.

I am taking the opportunity, when Diptera and Hymenoptera records are scarce, to introduce the first instalment of the Pulicidæ of Somerset, which amount to about one-third of the species recorded for Britain. There are several continental species, however, occurring on hosts (especially Bats) found in Britain, which have not yet been recorded here. I should be very grateful for any help in extending my researches, especially for information and facilities respecting hollow trees, caves, or ruins frequented by bats. Moreover, if any of our ornithological cousins would favour me with birds' nests of any but the commonest birds, *taken just after the young birds have left them*, and enclosed in hole-less paper bags, I might be able to breed a number of additional species. House Martins are afflicted with a large number of species—*i.e.* four!

I am much indebted to Dr. Jordan, of Tring, for naming the following species for me.

Xenopsylla cheopis, Rothsch. One specimen, Barrow, near Bristol, 1921, from Mr. C. Tuckett. A wanderer from hot countries to British ports, inhabiting rats, especially the Alexandrine rat. This species carries bubonic plague, pro-

- ducing, no doubt, the awful epidemics of this disease at pilgrim-frequented shrines in India. No doubt it was an agent in the Black Death or Plague of London, in the XIV Century. Originally described by the late Hon. Charles Rothschild from the Sudan.
- Pulex irritans*, L. The too-well-known domestic species. Not recorded officially from Somerset till now!
- Archaeopsylla erinacei*, Bouché. Common on the hedgehog, sometimes in surprising numbers. Cannington, 2.VIII.22. On this occasion probably 300-400 of this insect fell from one chloroformed hedgehog.
- Ctenocephalus canis*, Curtis. Common on dog and cat. Wembdon, 12.I.24.
- Spilopsylla cuniculi*, Dale. Abundant on wild rabbit, and especially noticeable on their ears. Fiddington, 28.III.22. Also occurs on the Wild Cat in Scotland.
- Ceratophyllus gallinulæ*, Dale. On many wild birds (especially in their nests). On Blackbird (C. Tuckett) and Thrush (Capt. Troup). Given to me in 1923, but no date or locality to either.
- C. gallinæ*, Schreak. Very common on domestic fowls, and in their houses. (Also on cattle in Cowsheds, Cannington, 5.V.22).
- C. penicilliger*, Grûbe. A common species on field mice and voles—also on the stoat, after eating them. Short-tailed Field Mouse, Cannington, 29.XII.21. On Bank Vole, Wembdon, 1.VIII.23 (Capt. Troup).
- C. fasciatus*, Bosc. On rat and house mouse, occasionally on field mice, weasel and stoat, Cannington (on brown rat), 25.IX.22.
- C. mustelæ*, Dale. On many small mammals. Short-tailed Vole (*Microtus agrestis*), Cannington, 15.VIII.21.
- Ctenophthalmus agyrtes celticus*, Jord. and Roths. On many small mammals. Cannington, 31.I.22 and 13.IV.23, both on Long-tailed Field Mouse (*Apodemus sylvaticus*).
- Leptopsylla musculi*, Dugès. On house mouse. Cannington, 27.VII.23.
- Ichnopsylla octactenus*, Kolenati. On bats. From Pipistrelle Bat. Cannington, 26.I.24.

- I. simplex*, Roths. Rare ; usually on Natterer's Bat only, but I have taken it from the Whiskered Bat (Cannington, 25.IX.23), and also from the Lesser Horse-shoe Bat (Cheddar, 5.III.21) which latter, as Dr. Jordan informs me, is a new host for the species.
- I. hexactenus*, Kolenati. On bats. From Whiskered Bat. Cannington, 5.III.21.

TRICHOPTERA (Caddis Flies).

I have taken over the Trichoptera from Colonel Jermyn, and Miss E. Mabel Lee and I have been devoting some attention to them this year. The eccentricities of the climate seem to have suited them, and they have been in evidence in greater numbers than usual. We have not been far afield, however, and the following is the result in new species :

Phryganea varia, Fab. Turf Moor, 12.VIII.24. (Prebendary Wickham).

Micropterna lateralis, Steph. Street, 14.VI.24 (E.M.L.).

Silo nigricornis, Pict. Cannington Brook, 7.VI.24 (H.S.).

Molanna angustata, Curt. Street, 28.VI.24 (E.M.L.).

Adicella reducta, McLach. Cannington Brook, 26.VII.24 (H.S.).

Tinodes assimilis, McLach. Cannington Brook, 1.IX.24 (H.S.).

Agapetus delicatulus, McLach. Cannington Brook, 1.IX.24 (H.S.).

Mr. M. E. Moseley has been kind enough to examine and name the above, and has also offered to act as permanent referee for the Section as far as the Trichoptera and Ephemeridæ are concerned. I am sorry, however, to have to add that the record of *Leptocerus commutatus*, McL., in last year's report has to be deleted. That insect and *L. albifrons* are much alike, and Mr. Moseley has obtained fresh material this year, and on re-examining the insects has decided that none of ours are *L. commutatus*, but all of the latter species.

COLEOPTERA (Beetles).

The following has been sent to me by Miss Joyce Barrington,

who lately distinguished herself by taking a Second Class in the Cambridge Science Tripos.

“Owing to the bad weather throughout the year, and the frequent absences of the Recorder from the district, very little collecting has been done this season. It is, however, regrettable that members taking part in the excursions, and collecting in other branches of entomology, do not send more specimens of Coleoptera, either to the Secretary or to the Recorder, for identification and inclusion in the records. There is a great deal of work yet to be done in the county, and it is only by co-operation that we can hope to obtain anything like an adequate knowledge of its fauna. As complete data as possible should be sent with specimens—date, locality, and, if possible, food plant or lurking-place. My thanks are due to Capt. Troup, who assists in every way possible, and to the Secretary, who frequently hands over specimens of his own collecting.

“Of the new records the following are perhaps the most interesting; *Callidium variabile*, L. An uncommon Longicorn. A specimen was sent by Mr. Wallace Macmillan, found in a piece of wainscot oak in a furniture factory at Castle Cary. Though the species does occur in England, it is very probable that this specimen was imported from the Continent in the timber.

“An interesting example of Weevils attacking an unaccustomed food-plant was brought to my notice by the Secretary during the summer. He was shown a plant of *Buddleia globosa*, of which the leaves were being demolished by some pest. On examination he found that beetles were the culprits, and sent them to me for identification. I found two species of *Cionus*—*C. scrophulariæ*, L., and *C. blattariæ*, F., whose normal foods belong to the order *Scrophulariaceæ*—figwort, mulleins, etc. *Buddleia globosa* used to be classified in this order, but has now been removed to the natural order *Loganiaceæ*. Evidently the Weevils have not yet accepted the new classification, and join issue with the botanists.” (As a curious coincidence, certain Lepidoptera—e.g. *Cucullia verbasci*,—which normally feed on *Scrophulariaceæ* plants, also eat *Buddleia globosa* freely. H.S.). “A similar occurrence of these beetles, and

of an allied species, *C. pulchellus*, Hbst., was reported by Mr. James J. Walker in *E.M.M.*, Sept., 1914.

“Several small Water-Beetles have been added to the list this season, of which *Hydroporus obsoletus*, Aub., and *H. oblongus*, Steph., are rare. *H. melanarius* affects mossy holes amongst *Sphagnum*, and was found in such situations at Priddy-on-Mendip. Here, too, *Gyrinus minutus*, F., was taken in some numbers, and also *G. elongatus*, Aub., and its variety *angustatus*.

“*Hydrochares caraboides* turned up in some numbers this year in the flood-waters at the edge of peat-holes at Shapwick. I had not previously taken this species in the county.

Further records are—

Bidessus geminus, F. Shapwick, 22.VIII.24.

Deronectes latus, Steph. Cannington Brook, 5.VII.24.

D. 12-pustulatus, F. Kilve, 5.IX.24; Cannington, 24.VI.24.

Hydroporus angustatus, Stm. Shapwick, 18.VI.24; N. Petherton, 22.VIII.24.

H. obsoletus, Aubé. Priddy, Mendip, 9.IX.24.

H. tristis, Pk. Priddy, Mendip, 9.IX.24.

H. melanarius, Stm. Priddy, Mendip, 9.IX.24.

H. oblongus, Steph. Shapwick, 22.VIII.24.

Agabus unguicularis, Th. Shapwick, 22.VIII.24.

A. paludosus, F. Charterhouse-on-Mendip, 9.IX.24.

Copelatus agilis, F. Turf Moor, 16.IV.24; N. Petherton, 22.VIII.24.

Rhantus grapii, Gyll. Turf Moor, 16.IV.24; N. Petherton, 22.VIII.24.

Gyrinus minutus, F. Priddy, 9.IX.24.

Orectochilus villosus, Müll. Cannington Brook, 5.VII.24.

Berosus luridus, L. Petherton Levels, 22.VIII.24.

Hydrochares caraboides, L. 22.VIII.24.

Callidium variabile, L. 7.VII.24.”

HENRY SLATER.

The Ornithological Section.

President and Chief Recorder—The Rev. F. L. BLATHWAYT, M.B.O.U.,
Melbury Osmund Rectory, Dorchester, Dorset.

Vice-Presidents—Lt.-Colonel J. W. GIFFORD and Lt.-Colonel A. E. LASCELLES.

Secretary and Treasurer—Mr. H. ST. GEORGE GRAY, Taunton Castle, Taunton.

THE 1924 Annual Meeting of the Section was held at the Somerset County Museum on March 11th, when the Rev. F. L. Blathwayt, President, occupied the chair.

The Treasurer presented the financial statement for 1923, which showed a balance in hand on December 31st of £17 14s. 7d. There was also on deposit at the bank the sum of £26 18s. 6d. set aside as the Somerset Egg Cabinet Fund.

The officers of the Section were re-elected; and Mr. Lewis R. W. Loyd was appointed an additional Recorder for East Somerset. The membership was reported as seventy-two ordinary members and one honorary member.

The Tenth Report on Somerset Birds (1923), edited by the President, was sent out to the members of the Section at the end of February, 1924. It consisted of thirty-eight folios, type-written, and was by far the longest annual report issued by the Section. It included for the first time a list of members (with addresses), covering three pages. Copies of most of the reports can still be obtained at prices ranging from 1s. 6d. to 4s., but the stock of No. III (pt. 1) and No. V (for 1918) is exhausted. Report No. I became incorporated in No. II which covers the period, 1865–1912.

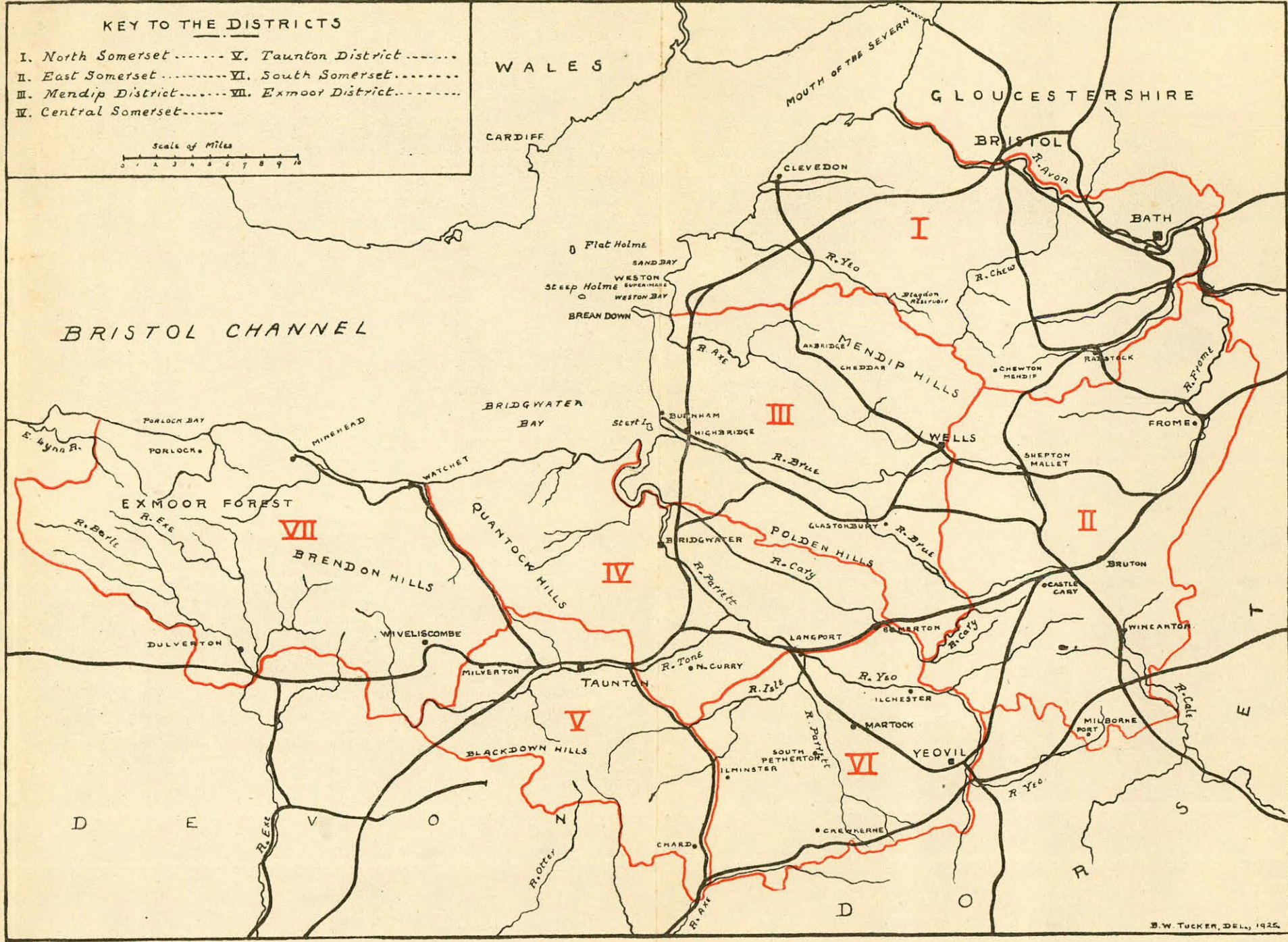
The Section has decided to *print* the Eleventh Report on Somerset Birds for 1924, adopting the same size of page as the *Proceedings* of the Society. This report, which will be limited to 150 copies, will contain the Map of the County showing the seven Ornithological Districts,—drawn by Mr. B. W. Tucker, F.Z.S. A copy of this map is also included here (Plate III).

As the other sections have mentioned the activities of the South-Western Naturalists' Union at its second annual gathering held at Taunton last Whitsuntide, it will not be necessary to enlarge upon the subject here.

No books were purchased during the year, but a few ornithological works, chiefly relating to India, were given to the Library by Lt.-Colonel A. E. Sealy.

In the afternoon of October 7th, after the morning meeting of the Section, Mr. Henry Balfour, F.R.S., F.Z.S., lectured in the Municipal Hall at a joint meeting with the Taunton Field Club, on "The Life History of the Gannets of the Bass Rock." The lecture was illustrated by a large series of lantern slides reproduced from excellent photographs taken by Mr. Lewis Balfour (the lecturer's son). Both lecturer and photographer were cordially thanked. The members of the Section were afterwards entertained to Tea at Taunton Castle by the Taunton Field Club.

H. ST. GEORGE GRAY.



B.W. TUCKER, DEL., 1925.

MAP OF SOMERSET SHOWING THE ORNITHOLOGICAL DISTRICTS.

The Botanical Section.

President—Mr. J. W. WHITE, F.L.S.

Committee—Dr. H. DOWNES, F.L.S., Mr. N. G. HADDEN, Miss I. M.

ROPER, F.L.S., Mr. H. S. THOMPSON, Dr. W. WATSON, A.L.S.

Secretary and Treasurer—Mr. W. D. MILLER, Audrey, Burnham-on-Sea.

THE annual general meeting was held at the Museum, Taunton Castle, on January 29th, 1924. Dr. Downes presided over a good attendance. The usual business was transacted, and the report of the Committee was adopted. The accounts were passed showing a balance in hand of £13 11s. 6d., and of this sum £3 was voted to the Library Committee of the Parent Society, £1 to the Sharpham Moor Plot fund, and an amount not exceeding £1 1s. 0d. to the expenses connected with the visit of the South Western Naturalists' Union to Taunton.

A field day was held on May 29th to Ham Hill. By the courtesy of Lord Curzon the party was shown over the grounds of Montacute House. They are extensive, and a considerable part is occupied by turf and yew hedges, while palms and half hardy shrubs appear to do well. The party then walked to Ham Hill, and were the guests to tea of the local members of the Parent Society at the finely situated Prince of Wales Hotel, returning to Montacute Station on foot. Generally the flora was in a backward state, but there was ample material for discussion, and opportunity to acquire accurate knowledge of common but often difficult species. Among plants not previously recorded from the district *Geranium pyrenaicum*, *Arabis hirsuta*, and *Vicia sylvatica* were noticed.

On June 19th a large party met at Ashcott Station, after a short visit to the river bank and railway siding at Highbridge. From Ashcott a walk of one mile eastward occupied four

hours—with a short interval for lunch in the open—there being much of interest on the way. Some of the party visited the newly acquired Sharpham Moor Plot, where Mr. Thompson pointed out several good plants. Fine weather allowed of *al fresco* tea, and the return was made by the same route. Among plants noticed were *Galium vaillantii*, *Carex filiformis*, *Cnicus palustris* × *pratensis*, *Pinguicula lusitanica*, *Drosera longifolia*, *Stellaria palustris*, *Osmunda regalis* and *Rhamnus frangula*. The commoner peat moor plants were in profusion, though the late season was noticeable. Fine weather, the presence of several good botanists and an excellent tea combined to make the outing a pleasant and successful one.

On July 17th a small party drove over, *via* Blagdon, to Bewley Down near Chard. The Down consists of undulating slopes rising to 800ft. and partially wooded. There are the usual Blackdown bogs, the porous Greensand discharging its moisture where it lies on the impervious Lias, and the flora is identical with that of similar bogs nearer Taunton: it is however unusually rich and appears to lack no member of this plant association. The absence of *Wahlenbergia hederacea* on Blackdown in Somerset may be remarked, though it is so frequent on similar ground (though of older formation) in the west of the County, and occurs locally on the Peat Moor. Dr. Downes reports that the plant is found not infrequently on the Devon side of the Blackdowns, where the Greensand overlies the Trias, and suggests the deduction that *Wahlenbergia* is calcifuge in constitution. All the sundews were present, including *D. obovata*. *Radiola millegrana*, *Scirpus setaceus*, a white flowered form of *Scutellaria minor* were noticed, and a form of *Carex fulva* bearing constantly only a single very short fertile spike adjacent to the male one. On this occasion observations were impeded by heavy rain all day. The party was most hospitably entertained to tea by Miss Beviss at Wambrook, and drove back by Staple Fitzpaine, collecting *Scleranthus annuus* and *Trifolium fragiferum* on the way.

In June the South Western Naturalists' Union, under the Presidency of Prof. C. Lloyd Morgan, F.R.S., honoured Taunton by a visit. Among other activities of the Union, successful

botanical excursions were undertaken to Bathpool, to Blue Anchor and Minehead, and to Britty Common and Widcombe Moor.

Meteorologically the season has been adverse to field botany, an exceptionally late spring being followed almost at once by persistent wet weather continued into late autumn. Plants in flower on March 1st throughout Britain were less than 60 per cent. of a normal year, and more than one summer visit to the peat moors proved abortive owing to the flooded heath and brimming rhines. While certain species must have had a hard struggle to mature their seed, it is quite possible that others may have benefited by comparative rest and ample moisture, and observations in the coming season may be usefully directed to any such results. Luxuriant vegetative growth has been remarkable throughout the summer.

In spite of difficulties much good work has been done, and some 300 notes have been sent in. Of these a selection follows:—

Draba muralis L. (9) Limestone cleft between Charterhouse and Priddy. *H. S. Thompson.*

Sisymbrium sophia L. (3) Kingston Mills, Taunton. *W. Watson.*

Erysimum orientale Mill. (8) Berrow. *Miss Stewart.*

Teesdalia nudicaulis Br. (4) Re-discovered in what was probably Sowerby's old station. A few small plants over a very limited area. *H. Downes and W. D. Miller.*

Silene noctiflora L. (9) Cornfield on high ground above Wraxall. *N. Y. Sandwith.*

Malva moschata L. var. *heterophylla* Lej. (3) Orchard Portman. *W. Watson.* (10) Roadside, Keynsham. *H. S. Thompson.*

Geranium sanguineum L. (9) Cheddar Gorge. *B. A. Lowe.*

G. pyrenaicum Burm. fil. This species has been reported from six new stations in County divisions (3), (4) and (10). Dr. Downes noticed it on a hill top on the disused Fosse Way, near Radstock, at least a mile from any dwelling, and suggests the possibility of it being a Roman introduction.

Vicia sylvatica L. (4) Hill side above Montacute. *H. Downes.*

V. sepium L. f. *alba* Rouy. (3) Staplegrove. *Mrs. Watson.*

Lathyrus aphaca L. (2) Watchet. *W. Watson.*

- Chrysosplenium alternifolium* L. (3) Bishop's Lydeard. Mrs. Watson.
- Sedum dasyphyllum* L. (4) Coat, Martock; (5) Long Sutton. H. Downes.
- Caucalis latifolia* L. (10) Waste ground, Brislington. Miss Roper.
- Hieracium maculatum* Sm. (10) Old pit heaps, Midsomer Norton. H. Downes.
- Sambucus ebulus* L. (6) Roadside hedge, above Staple Common. N. G. Hadden. (3) Thurlbeare. General Frith.
- Valerianella carinata* Lois. (3) Walls at Mill Cross, Kingston; Cotford and Upper Cheddon. W. Watson.
- Senecio vulgaris* L. var. *radiatus* Koch. (2) Porlock shingle. N. G. Hadden. (8) Highbridge Station. W. D. Miller.
- S. sylvaticus* L. (10) Grayfield Wood, Hallatrow. Miss Roper.
- Onopordum acanthium* L. (8) River bank, Bason Bridge. W. Watson.
- Jasione montana* L. With white flowers. (2) Hedgebank near Elworthy. W. Watson.
- Verbascum lychnitis* L. \times *thapsus* L. (2) A plant which appears to be this hybrid was gathered in the Bossington locality for *V. lychnitis* in August by Mrs. White. N. G. Hadden.
- V. blattaria* L. (9) A fine colony of tall plants in thicket near Bleadon. Flowers white with pale violet-pink flush, especially the underside of the two small upper lobes. H. S. Thompson.
- Chenopodium bonus-henricus* L. (5) By the river, Long Load; (6) Roadside, Churchinford. H. Downes.
- Empetrum nigrum* L. (2) There are many plants along the Cloutsham Langcombe Head road. Although local on Exmoor, it is still plentiful near Dunkery Beacon and there are small patches on Horner Hill; in Horner Woods, near Yealscombe; near Whitestones on Porlock Hill; on Yearnor Moor; and near the top of Haddon Hill. (div. 1). N. G. Hadden.
- Ophrys muscifera* Huds. (10) Wellow. H. Downes.
- Habenaria viridis* Br. (9) In great quantity in rough pasture near Shipham. H. S. Thompson.
- Allium oleraceum* L. (3) Wembdon Hill. E. J. Hamlin.

- Paris quadrifolia* L. (3) Fivehead Hill. *W. S. and Mrs. Parry.*
- Juncus compressus* Jacq. (4) Stoke-under-Ham; (8) Hornblotton, by side of Fosse Way. *H. Downes.* (3) Corfe. *W. Watson.*
- Wolffia arrhiza* Wimm. (3) Pond near Cannington Park. *E. J. Hamlin.*
- Eriophorum gracile* Roth. (4) Discovered by Mr. Marshall in 1915 this plant has since been rather elusive. On June 23rd this year it was seen in some quantity and fine condition near the original spot. It flowers some weeks later than *E. angustifolium* with which it grows. *W. D. Miller.*
- Carex pairaei* F. Schultz. (10) In some plenty over Pennant grit near Keynsham. C. E. Salmon remarks that in his experience it is as widely distributed as *contigua*. *N. Y. Sandwith.* Widely divergent authoritative statements have been made with regard to the classification and nomenclature of the *C. muricata* group of sedges. There should be ample material in Somerset for an exhaustive examination of most of the points involved.
- C. pallescens* L. (8) Ashcott Moor and Sharpham Moor Plot. Tall in both places. *H. S. Thompson.*
- C. extensa* Good. (9) On the coast between Portishead and Walton Bay. *H. J. Gibbons.*
- C. vesicaria* L. (4) Between Muchelney and Langport, in the marshes beside a rhine; abundant. *H. Downes.*
- Alopecurus bulbosus* Gouan. (8) In sub-maritime pasture by R. Brue near Highbridge. Mr. H. J. Gibbons noted the plant there in 1923. *N. Y. Sandwith.*
- Gastridium lendigerum* Gaud. (3) Plentiful on roadside between Shoreditch and Corfe. *General Frith.*
- Asplenium marinum* L. (9) Cave at Charlescombe, near Clevedon. *W. Watson.*
- Polypodium vulgare* L. var. *serratum* Willd. (4) Crimchard, Chard. *W. Watson.* (9) Tyntesfield, Wraxall. *Miss Roper.*
- Ophioglossum vulgatum* L. (6) Culmhead. *W. Watson.*
- Botrychium lunaria* Sw. (3) Cothelstone. *E. J. Hamlin.* (6) Culmhead. *Miss Roper.*
- Equisetum palustre* L. var. *polystachium* Weigel. (6) Chard Common. *W. Watson.*

Lycopodium alpinum L. (1) Bye Common above Winsford.

Mrs. Browning. The discovery of a third station for this species suggests that it may be more widely distributed than has been supposed.

The outstanding record is the addition of the long-sought *Carex vesicaria* to the County flora by Dr. Downes. Dr. Watson records a number of stations for critical varieties of *Viola arvensis*, *Polygonum aviculare* and various grasses. There is an absence of notes on critical genera, except by members of the Committee, but it is hoped that other members will consider the possibility of attempting something in the nature of special work.

Among plants which are extending their area at this time may be mentioned *Lepidium draba*, *Geranium pyrenaicum* and probably *Linaria minor*. As was expected *Spartina townsendi* has taken firm hold on the Gore Sands at Burnham. *Asplenium septentrionale*, after suffering severely in the drought of 1921, has re-asserted itself in its Porlock locality.

The following is a short list of species whose scarcity warrants absolute protection :—

<i>Teesdalia nudicaulis.</i>	<i>Pinguicula vulgaris.</i>
<i>Dianthus deltoides.</i>	<i>Scirpus holoschoenus.</i>
<i>Saxifraga hypnoides.</i>	<i>Carex digitata.</i>
<i>Antennaria dioica.</i>	<i>Lycopodium selago.</i>
<i>Vaccinium vitis-idaea.</i>	<i>L. alpinum.</i>
<i>Oxycoccus quadripetala.</i>	<i>Asplenium septentrionale.</i>
<i>Andromeda polifolia.</i>	

Botanists will have learnt with deep regret of the death of Mr. James Britten, F.L.S., for forty-five years Editor of the *Journal of Botany*. An obituary notice appears in the *Journal* for December, 1924.

It may be of interest to state that during the last five years about 2,000 new stations have been recorded in connection with 860 species and varieties.

The County Herbarium continues to benefit by the generous work of Mr. Cowan. The number of members is at present 57.

Dr. Watson has made a large number of important vice-County records of Cryptogamic plants, and publishes the following notes :—

MOSSES.

The following are new vice-County records :

Phascum floerkeanum, Staplegrove.

Ulota ludwigii, Combe St. Nicholas.

Fissidens adiantoides var. *collinus*, Kewstoke. (This was given as doubtful in my "Mosses of Somerset," but Mr. Dixon has recently confirmed my determination).

Tortula ruraliformis, Minehead.

Zygodon conoideus, Dulverton.

Dicranum bonjeani var. *rugifolium*, Holford Combe.

Eurhynchium abbreviatum, Stogumber.

Other uncommon mosses noted include *Pottia starkeanum*, and *Amblyskygium filicinum* var. *vallisclausae*, Charlescombe near Clevedon. *Pottia lanceolata*, wall near Kingston. *Pleuri-dium alternifolium*, Kingston. *Tortula mutica*, Bathpool. *Trichostomum crispulum* var. *elatum*, Watchet. *Webera tozeri*, Kingston and Washford. *Brachythecium salebrosum* var. *palustre*. The latter was collected by the Rev. C. Parfitt at Bagborough in 1872, and was labelled *Eurhynchium striatum*. Mr. Dixon comments on it as follows: "The leaves are unusually denticulate and habit is very unusual." Another moss collected at the same time and at the same place was labelled *E. myosuroides* by Mr. Parfitt, but Mr. Dixon considers it to be *E. crassinervium*.

LIVERWORTS.

The following are new vice-County records :

Fossombronia wondraczeki, Buncombe Wood. (Previously recorded with doubt as spores had not been seen in former specimens collected).

Cephalozia bicuspidata var. *grandifolia*, Will's Neck. (teste Macvicar).

Cephaloziella limprichtii, Shapwick. (H. H. Knight).

Scapania rosacea, Perriton Combe, near Minehead.

S. irrigua, Horner Wood.

Cololejeunea rossettiana, Leigh Wood (detected by Mr. Knight in herbarium material).

Other uncommon hepatics noted include *Riccia glauca* var. *subinermis*, wood near Kingston. *Scapania intermedia*, Lux-

borough. *Ancura incurvata*, Watchet. *Ricciocarpus natans*, Nailsea (N. Y. Sandwith). *Marchesinia mackaii*, Leigh Wood (detected in herbarium material by Mr. Knight).

LICHENS.

The following are new vice-County records :

- Lichina confinis*, on the coast near Clevedon.
Collema glaucescens, Somerton.
C. ceranoides, Minehead Warren.
Calicium pusillum, Combe St. Nicholas.
Trachylia tigillaris, Triscombe.
Plachodium teicholytum, Staplegrave.
Lecanora sambuci, Culmhead.
Lecania syringae, Somerton.
L. cyrtella, Broomfield.
Rinodina sophodes, Grabbist Hill, near Minehead.
R. demissa, Clevedon.
R. milvina, Clevedon.
Cladonia furcata var. *spinosa*, Berrow.
Gyalecta exanthematica var. *dolichospora*, Thurlbear.
Lecidea micrococca, Curland.
L. cinerascens, Oareford.
L. nigrogrisea, Somerton.
L. furvella, on a rock at the top of Cockercombe.
Biatorina diluta, on pines at Castle Neroche.
B. synothesa, on pales and stumps at Kingston, Cushuish, Crowcombe and Ashcott.
Bilimbia naegelii, Kingston.
B. sphaeroidea, Crowcombe.
Arthonia punctiformis var. *melantera*, Huish Champflower, Curland and Somerton.
Opegrapha saxicola var. *decandollei*, Clevedon.
Verrucaria striatula, *V. maura* and its variety *memnonia*, *V. mucosa*, *V. microspora*, *V. lorrain-smithii*, and *V. macrostoma* at Clevedon.
V. mutabilis at Perriton Combe, near Minehead.
V. prominula, Combe St. Nicholas.
Porina leptalea, Huish Champflower.
Arthopyrenia rhyponota (sec. B. de Lesdain), Curland.

A. littoralis, Clevedon.

A. halodytes, Watchet.

Other noteworthy additional localities are as follows :

Physma chalazanodes, Nailsbourne. *Leptogium schraderi*, Clevedon and Goblin Combe. *L. pusillum* and *L. minutissimum*, Broomfield. *Physcia adglutinata*, Somerton. *Rhizocarpon viridiatrum*, Bagborough Knoll. *Opegrapha calcarea*, Clevedon. *Thelidium incavatum*, Goblin Combe. *Staurothele rupifraga*, Goblin Combe.

The nomenclature of Dixon's Handbook of Mosses and Macvicar's Handbook of Hepatics is followed for mosses and liverworts, whilst that of A. L. Smith's Monographs of British Lichens is generally used for lichens.

The Microscopical Section.

President—H. DOWNES, M.B., F.L.S., The Grange, Martock, Somerset.

Committee—Lt.-Col. J. W. GIFFORD, F.R.A.S., Oaklands, Chard, and WALTER WATSON, D.SC., ASSOC.L.S., Taunton School, Taunton ; together with the President and Secretary.

Secretary and Treasurer—C. R. KILLICK, M.B., Tower Hill, Williton.

THERE are twenty-one members in the Section and the whole amount subscribed has been spent in books, postage, and an annual subscription to the South-Western Naturalists' Union.

Three meetings have been held during the year, one at Taunton Castle and two at Taunton School, by the kind invitation of the Council and Headmaster of the school ; here we have had the use of the Winterstoke Library, with admirable lighting facilities and the use of the school microscopes. The subjects dealt with have been :—

The Prothallus of a Fern, also some low forms of life : *Dr. Watson.*

Colours shown by Rock-sections with polarised light : *Mr. F. G. Dowell.*

The Wings of Insects and the Mechanism of Flight : *Mr. C. M. Bedford and the Secretary.*

Sponges : *Dr. G. Forden.*

Leaves of common Mosses : *Miss A. Wyndham.*

Symbiosis in Plant Life, as illustrated in the Lichens : *Dr. G. Forden.*

In consequence of the railway strike Messrs. R. and J. Beck were prevented from exhibiting some interesting apparatus which was to have been shown by Mr. R. Beck of Clevedon. On the occasion of our annual meeting in December we were very glad to welcome several members of the Botanical Section.

The Section was formed with the object of enabling microscopists to become acquainted with each other to give or obtain assistance. There is no specified natural history subject to occupy the attention of members ; and any suggestions regarding microscopical assistance to the other Sections would greatly help the Microscopical Section.

C. R. KILLICK.