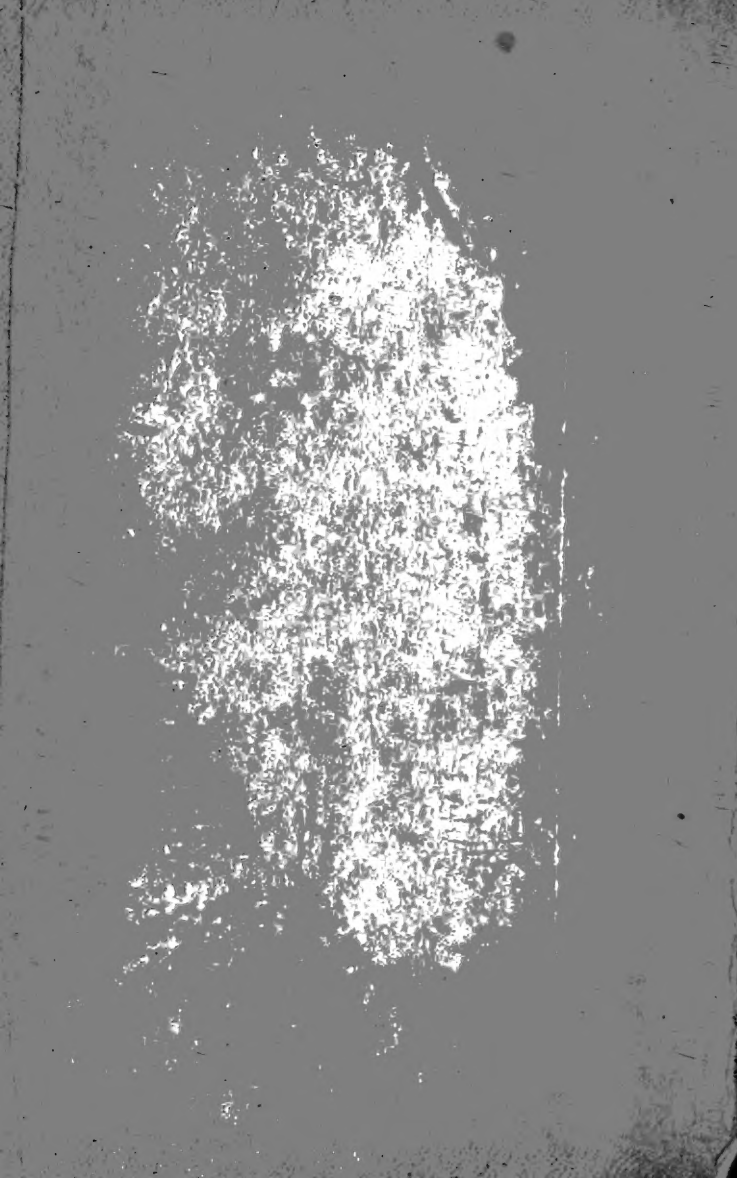
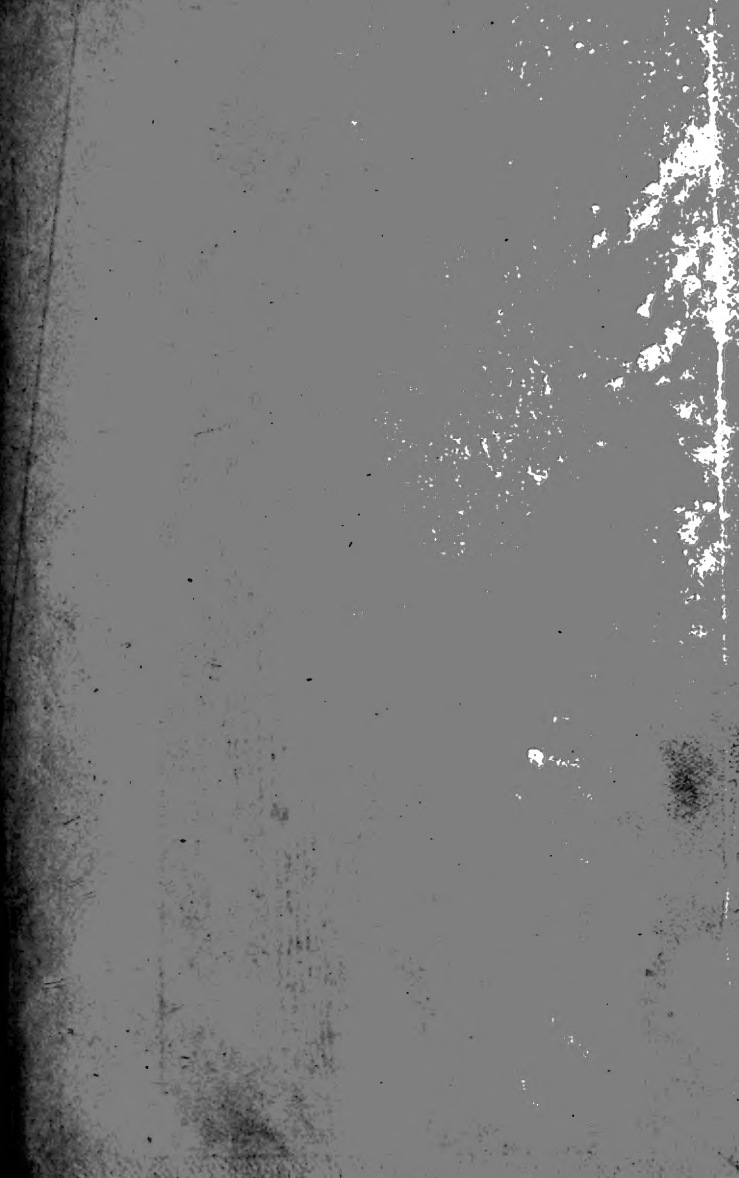


HAILEYBURY
NATURAL SCIENCE
SOCIETY.



B. M.
N. H.





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HAILEYBURY

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Natural Science Society

FIRST ANNUAL REPORT,

1873.

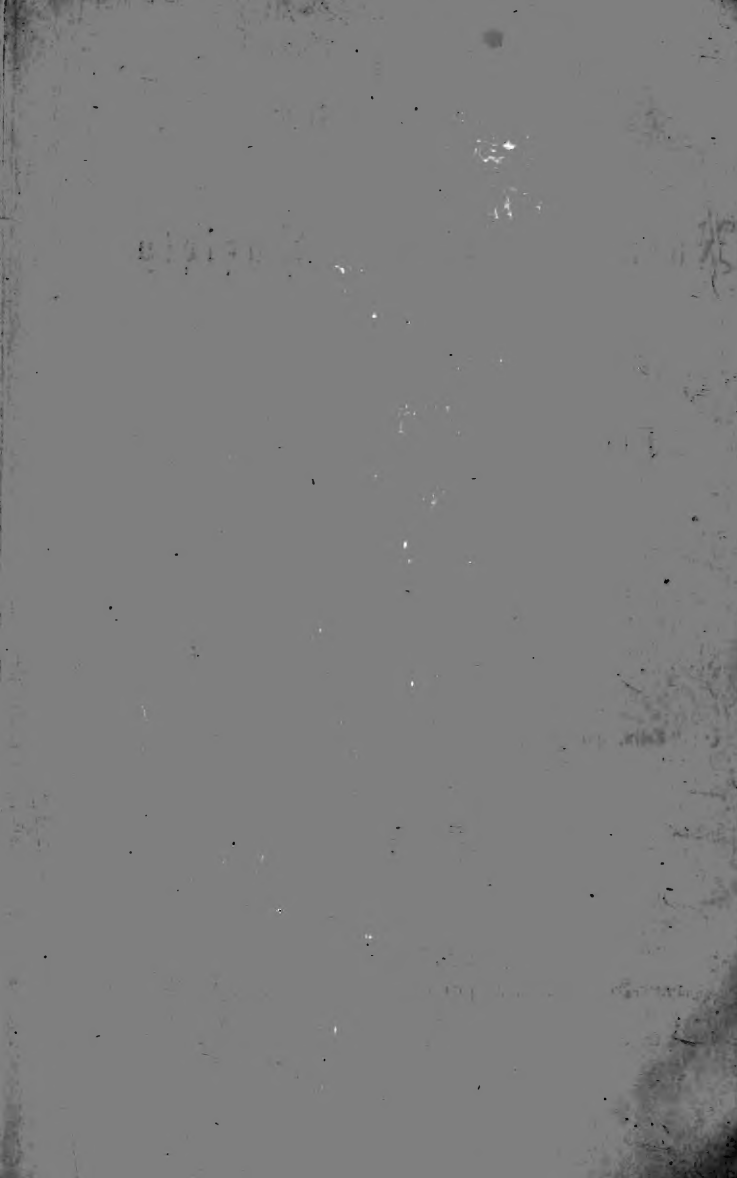


"Felix, qui rerum potuit cognoscere causas."—VIRGIL.

HERTFORD:

PRINTED BY SIMSON AND GROOMBRIDGE, MARKET PLACE.

1873.



INTRODUCTION.

DURING the past three or four years suggestions had often been made that a Natural Science Society should be formed at Haileybury ; it was not, however, till the end of 1872 that these suggestions led to any practical result. In the *Haileyburian* of October 22nd, 1872, appeared an anonymous letter strongly urging that such a Society should be established, and to the writer of that letter the thanks of all are due. Shortly after, a preliminary meeting was held, and a Haileybury Natural Science Society was formed, which has since held regular meetings.

A study of the minutes of the Society will show that papers on various subjects have been read, and that various objects have been exhibited. It may be well here to impress upon members of the Society the advantage of short papers upon simple subjects : perhaps there has been a tendency to try to cover too much ground in a paper, thus rendering it difficult for anyone to carry away much of what he has heard.

The arrangements just made for holding extra meetings for the exhibition of specimens will, it is hoped, be successful. Members cannot be too strongly urged to exhibit even the simplest specimens : more may often be learnt by seeing a thing for two or three minutes than by reading about it for an hour.

The different lists published will give some slight idea of what may be found in our neighbourhood. None of them can, of course, be expected to be perfect ; but we may hope, in the course of a few years, to make them nearly so. With a view of securing greater organization, it will be proposed, next term, to form sections of the Society for different branches of Natural History : Entomological and Botanical sections, with an experienced member at the head of each, would soon prove valuable.

The Council have liberally granted money for the erection of fresh cases in the Museum : part of these will be given to our Society, so that we may soon hope to arrange what has been already collected for the local Museum. F. PODMORE has presented to the Society a collection of Flowers, and S. O. RIDLEY one of Coleoptera : both these collections have won the Cornthwaite Prize. And here we may gratefully record our sense of the encouragement given to the pursuit of Natural History by this prize, and also by that given by the Master for collections made during the summer holidays.

LIST OF MEMBERS.

President.

R. W. BOWYER, Esq.

Committee.

F. PODMORE, *Sec.*
S. R. JAMES.

B. K. BOURDILLON.
W. E. SMITH.

Honorary Members.

REV. E. H. BRADBY.
REV. T. CORNTHWAITE.
REV. A. DE MORGAN HENSLEY.
REV. H. WALFORD.
REV. H. COUCHMAN.
CORMELL PRICE, Esq.
H. G. HART, Esq.
JAMES RHOADES, Esq.
E. P. ASH, Esq.
REV. T. PITTS.
REV. F. B. BUTLER.
REV. F. J. HALL.
R. W. BOWYER, Esq.
A. MESSERVY, Esq.
C. D. ARGLES, Esq.
G. H. POPE, Esq.
A. V. JONES, Esq.
A. D. CARLISLE, Esq.

H. B. COTTERILL, Esq.
J. G. FAWCUS, Esq.
A. J. C. DOWDING, Esq.
W. H. POOLE.
S. O. RIDLEY.
H. A. LUCAS.
C. E. BAKER.
A. D. O. WEDDERBURN.
G. M. MERIVALE.
G. H. BLUNT.
G. J. HOWSON.
A. W. HUTTON.
C. H. WINGFIELD.
H. N. RIDLEY.
H. W. PEARSE.
F. J. BANISTER.
A. H. LEWIN.
J. A. H. POLLOCK.

Members.

L. S. MILFORD.
F. H. COLSON.
R. T. BLOMFIELD.
J. R. TWISDEN.
C. W. RIDLEY.
J. CHARRINGTON.
A. ANSON.
J. R. RODD.
G. C. P. WILLIAMS-FREEMAN.
R. T. ALLEN.
M. RICHARDSON.
C. E. POLLOCK.
F. W. CHAMPNEYS.
C. C. ATKINSON.
H. M. STEPHENS.
T. S. LEA.

A. K. HOETS.
W. DE G. REEVES.
H. TYRER.
J. E. INNES.
E. A. ARMSTRONG.
A. C. BATTEN.
J. F. HOWSON.
R. BLUNT.
H. C. RANDOLPH.
C. P. R. BUTLER.
C. BAILEY.
C. S. B. RIDDELL.
A. W. PAYNE-GALLWEY.
H. A. MACPHERSON.
L. BARLOW.

R U L E S.

I.—That the Society be entitled “The Natural Science Society.”

II.—That the maximum number of Members be thirty-five.

III.—That a Committee be appointed, to consist of five Members, of whom one shall be the President, and another the Secretary : that the President be elected annually ; the rest of the Committee terminally.

IV.—That the names of Candidates for admission into the Society be inserted in a note, to be sent round to all the Members seven days previously, and at the next succeeding Meeting be voted for by ballot.

V.—That Meetings be held fortnightly.

VI.—(1). That there be held terminally two Meetings at least in addition to the fortnightly Meetings. (2). That it be in the hands of the Committee to settle the dates of the Meetings, and in their power to hold more, when necessary. (3). That these Meetings be given up entirely to the exhibition of specimens, and the discussion thereon. (4). That no specimens be exhibited except at these Meetings. (5). That these Meetings, to distinguish them from the regular Meetings, be termed “Specimen Meetings.”

VII.—That every Member be required to attend at least four Meetings a term.

VIII.—That Members should apply to the President, or Secretary, before reading a paper or exhibiting specimens.

IX.—That every Member be required, on receiving notice from the Secretary, to read a paper at the next Meeting but one.

X.—That after reading a paper, Members be required to leave it in the room, for inspection, till the next Meeting ; and at the next Meeting be prepared to answer, to the best of their ability, any questions that may be put to them on the subject.

XI.—That it be an object of the Society to make a perfect collection, to illustrate the Natural History of the district.

XII.—That there be a terminal subscription of two shillings from all Members of the Society.

XIII.—That every Member may admit one visitor to any Meeting. To prevent crowding, the sanction of the Secretary must be obtained beforehand.

XIV.—That Masters and Members who have left the School be Honorary Members.

XV.—That at each Meeting the minutes of the preceding Meeting be read by the Secretary.

November, 1873.

MINUTES.

The First Meeting of the Society was held on Wednesday, November 6th, when the number of those who attended was fourteen. A Committee was appointed to draw up rules, consisting of R. W. BOWYER, Esq., Rev. A. HENSLEY, F. PODMORE, G. J. HOWSON, and W. E. SMITH.

The Society held its Second Meeting on November 20th, Mr. BRADBY in the chair. The proceedings were opened by the proposed rules of the Society being read. These, after a few trifling alterations, were accepted.

R. W. BOWYER, Esq., was then elected President, and F. PODMORE, Secretary; the Committee was filled up by the election of W. E. SMITH, G. J. HOWSON, and C. H. WINGFIELD.

Mr. BRADBY announced that the President, who was unavoidably absent, would deliver his inaugural address at the next meeting, on Monday, December the 16th.

The attendance at this meeting was far greater than had at all been expected.

The Third Meeting was held on the evening of Monday, December 16th. The PRESIDENT in the chair. Proceedings were opened by certain additions being made to the rules.

The PRESIDENT gave a short, but interesting sketch of the various branches of Science likely to be pursued by the Society.

Mr. BRADBY then rose to propose a vote of thanks to the President for his address; at the same time, giving a brief description of the prospects and aims of the Society. The vote of thanks was carried by acclamation.

The PRESIDENT exhibited a case of *Lepidoptera*, caught during the preceding term.

There were four honorary members present at this meeting.

The Fourth Meeting was held on Wednesday, February 5th. The PRESIDENT in the chair.

G. H. Blunt, C. C. Atkinson, A. C. Batten, M. Richardson, A. K. Hoets, and J. A. H. Pollock were elected members; and W. H. Poole, S. O. Ridley, H. A. Lucas, honorary members.

J. R. TWISDEN, who was to have read a paper at this meeting, was unfortunately prevented by illness.

The PRESIDENT made a few remarks on the method of comparing the brightness of different lights, and exhibited a few shells and butterflies.

There were nineteen members and one visitor present at this meeting.

The Fifth Meeting was held on February 17th.

S. R. James was elected a member.

J. R. TWISDEN read a paper on the Structure and Classification of Phœnogamous Plants.

After the reading of the paper, there was a short discussion on the subject. Some specimens of the butterfly "Apollo" (*Parnassius Apollo*) were exhibited by the PRESIDENT; and a *Helix Pomatia*, by F. PODMORE.

There were seven honorary members, twenty members, and four visitors, present at this meeting.

The Sixth Meeting was held on Monday, March 3rd.

F. W. Champneys, R. Blunt, and J. F. Howson were elected members ; and C. E. Baker an honorary member.

A paper was read by F. PODMORE on "The Geology of the District," illustrated by a collection of local fossils.

A specimen of the sponge "Venus' Flowerbasket" (*Euplectella speciosa*) was exhibited by Mr. BRADBY, and some Lepidoptera by the PRESIDENT.

The present was announced of a collection of Ferns, by C. E. BAKER.

There were eight honorary members, thirty members, and three visitors, present at this meeting.

The Seventh Meeting was held on Monday, March 17th.

L. S. Milford, E. W. Howson, G. M. Merivale, and E. M. Hill were elected members.

A paper was read by C. H. WINGFIELD on "Electricity," illustrated by numerous experiments. Some sparks were administered by means of the Leyden jar, in which the majority of the Society joined.

Some elm flowers were exhibited by the PRESIDENT, and a few local fossils by F. PODMORE.

There were ten honorary members, twenty-nine members, and six visitors present at this meeting.

The Eighth Meeting was held on Monday, March 31st.

The Rev. T. Cornthwaite was elected an honorary member.

The PRESIDENT exhibited the flower of the common Alder, and a woodlouse which was caught during the progress of the meeting.

A tooth of the Mammoth (*Elephas primigenius*) was exhibited by G. J. HOWSON.

The Rev. T. PITTS gave a lecture on Oxygen, illustrated by numerous pleasant experiments, and some exceedingly unpleasant smells.

At the conclusion of the meeting, a vote of thanks was unanimously passed to the lecturer.

There were nine honorary members, thirty members, and seven visitors present at this meeting.

The Ninth Meeting was held on Monday, May 19th.

F. PODMORE was re-elected Secretary, and S. R. JAMES, W. E. SMITH and G. J. HOWSON were elected to form the Committee. J. R. Rodd and C. Bailey were elected members.

The PRESIDENT exhibited specimens of *Orchis mascula* and *morio*, with other flowers, and the larva and imago of *Dytiscus marginalis*. Mr. POPE exhibited a collection of birds' eggs, and L. S. MILFORD some minerals, and a piece of Australian gum.

F. PODMORE read part of a paper on Mollusca, but was unable to finish on account of the time.

Mr. BRADBY exhibited and explained the principle of a rain gauge, and wet and dry bulb, maximum, and minimum thermometers, which he and Mr. HENSLEY intended to present to the Society.

There were nineteen members, six honorary members, and four visitors present at this meeting.

The Tenth Meeting was held on Saturday, June 7th.

J. E. INNES and A. W. PAYNE-GALLWEY were elected members.

F. PODMORE finished his paper on Mollusca.

The PRESIDENT gave a lecture on the various kinds of Buttercups to be found in the neighbourhood, illustrated by numerous specimens of the commoner species.

There were six honorary members, and eleven members present at this meeting.

The Eleventh Meeting was held on Saturday, June 21st, at 3.45 p.m., in Epping Forest, whither two honorary members, thirty-two members, and four visitors, were conveyed in a couple of omnibuses.

After some necessary refreshment, the Society dispersed in various directions into the Forest in search of specimens. Three adders, a wood argus (*Lasiommata Egeria*), a glow worm, the butterfly-orchis (*Habenaria bifolia*), yellow pimpernel, speedwell (*Veronica scutellata*), and other flowers, were obtained by various members.

The Society started from the Forest at 6.30, and reached the College, *via* Roydon, shortly before nine.

The Twelfth Meeting was held on Saturday, July 5th.

B. K. BOURDILLON was elected a member.

G. J. HOWSON read a paper on Boulders.

The PRESIDENT exhibited some moths which had been caught in the neighbourhood in the course of the term, and a stag beetle.

Mr. BRADBY presented to the Society two volumes of the "*Student and Science Gossip*" for 1871 and 1872.

There were five honorary members, seventeen members, and one visitor present at this meeting.

The Thirteenth Meeting was held on Saturday, July 19th.

Mr. POPE exhibited a fine series of the death's head moth (*Acherontia Atropos*); ANSON, the larva of the puss and eyed hawk moths (*D. Vinula* and *S. ocellatus*), and the Deptford pink (*Dianthus armeria*). The PRESIDENT exhibited an elephant hawk-moth (*C. Elpenor*), and W. E. SMITH some specimens of the adder's tongue fern (*Ophioglossum vulgatum*), and a rosegall.

Some statistics of the rainfall, heat, and cold during the seven weeks in which observations had been taken, were read to the Society by W. E. SMITH.

Mr. CARLISLE gave a lecture on the Common Bracken (*Pteris aquilina*), and exhibited some ferns from the Himalayas and elsewhere.

S. R. JAMES read a paper on the Mason Wasp.

At the conclusion of the meeting a vote of thanks was unanimously passed to Mr. CARLISLE for his interesting lecture.

There were seven honorary members, twenty-three members, and six visitors present at this meeting.

The Fourteenth Meeting was held on Saturday, September 27th.

F. PODMORE was re-elected Secretary. S. R. JAMES, B. K. BOURDILLON, and W. E. SMITH were elected to form the Committee. R. T. Blomfield, J. Charrington, E. A. Armstrong, C. S. B. Riddell, and H. A. Macpherson were elected members.

There were twenty-one members, and one visitor present at this meeting.

The Fifteenth Meeting was held on MONDAY, October 13th.

The PRESIDENT exhibited some hawk-moths. H. A. MACPHERSON some green lizards from Fontainebleau ; F. PODMORE a fungus, and the tail of a skate, and some pipe-fish (*Syngnathus*), which had been presented to the Museum by G. C. P. Williams-Freeman.

The PRESIDENT then gave a lecture on the principles and practice of the Common Pump, illustrated by diagrams, a model, and coloured water.

W. E. SMITH read to the Society the result of the meteorological observations taken during the summer holidays and the first week of the term.

This was the first meeting at which the Society was honoured by the presence of lady visitors.

There were three visitors, eight honorary members, and twenty-seven members present at this meeting.

The Sixteenth Meeting was held on Monday, October 27th. The PRESIDENT exhibited a male and female of the Japanese silk-worm moth (*Bombyx Pernyi*).

C. C. ATKINSON read a paper on Photography, illustrating it as far as the nature of the light would allow.

There were eight visitors, nine honorary members, and sixteen members present at this meeting.

The Seventeenth Meeting was held on November 10th.

The PRESIDENT exhibited a dormouse. C. C. ATKINSON rose to propose that meetings of the Society be held weekly, and that other Science besides Natural Science come in the province of the Society. The motion was seconded by B. K. BOURDILLON ; the consideration of these questions was deferred till the next meeting.

W. E. SMITH delivered a lecture on Combustion, illustrated by experiments shewing the burning of different substances in Oxygen.

There were five honorary members, twenty-nine members, and six visitors present at this meeting.

The Eighteenth Meeting was held on Monday, November 24th. C. C. ATKINSON proposed, and B. K. BOURDILLON seconded the following motions, which were carried by the Society :—

1. That there be held terminally two meetings at least in addition to the fortnightly meetings.
2. That it be in the power of the Committee to settle the date of these meetings, and to hold more when necessary.
3. That these meetings be given up entirely to the exhibition of specimens, and the discussion thereon.
4. That no specimens be exhibited except at these meetings.
5. That these meetings, to distinguish them from the regular meetings, be termed "Specimen Meetings."

The following motions also were proposed by the Committee, and carried by the Society :—

1. That for the present wording of Rule IX. be substituted, "That there be a terminal subscription of two shillings from all members of the Society."
2. That in Rule XI. the words "i.e. : be not subject to Rules VI. and VII.," be omitted.

3. That in Rule VII. the words "exhibit specimens or otherwise suggest matter for discussion," be omitted.
4. That after reading a paper, members be required to leave it in the room for inspection until the next meeting, and be prepared at the next meeting to answer, to the best of their ability, any questions that may be put to them on the subject.
5. That members apply to the President or Secretary before reading a paper, or exhibiting specimens.

It was also proposed and carried, that "*Nature*" be taken in next year (1874), and that the "*Entomologist*" and "*Zoologist*" be discontinued.

W. E. SMITH then concluded his paper on Combustion, illustrating the subject, as before, with numerous experiments.

There were five honorary members, twenty-three members, and two visitors present at this meeting.

The Nineteenth Meeting was held on Monday, December 8th.

Mr. HENSLEY gave a lecture on Quartz-pebbles, which he illustrated by specimens of many of the innumerable forms of silica, which were handed round for inspection. After a vote of thanks had been unanimously accorded the lecturer, numerous questions were asked, and the specimens on the table were examined more closely.

Owing to the approaching examination, the attendance at this meeting was unusually small, and far less than the interesting nature of the subject deserved.

There were seven honorary members, ten members, and three visitors present.

Meeting Extraordinary.

On the evening of Saturday, March 1st, some adventurous and self-sacrificing members of the Society met together for the purpose of discussing the slaughtered bodies of divers esculent snails, prepared according to a recipe given in No. 13, page 190, of *The Haileyburian*.

On entering the apartment appointed for the sacrifice, a perceptible shudder ran through the devoted band; but this was doubtless owing to the chill night air streaming in through the open casement. In the absence of the President—for reasons we guess, but dare not name—all the members took chairs. The collation was then served up, and the unanimous verdict was that it savoured of a variety of condiments, but did not savour of snails. So enthralled was one of the members by the delicious flavour of these seductive molluscs, that he earnestly entreated some more specimens might be procured him, for private consumption. Suffice it to say, that all were amply rewarded for their generous devotion to the cause of science.

It is worthy of remark, that several of the company present on this ever memorable occasion owned to having passed an unquiet night, which they all agreed in attributing to the over-strong tea they imbibed. For the benefit of the curious in such matters, it has been computed that each member had a teaspoonful and a half of the Helicine concoction.

There were four honorary members, nine members, and two visitors present at this meeting.

LOCAL FAUNA.

MAMMALIA.

CARNIVORA.

- Mustela vulgaris.
 " putorius.
 " erminea.
 Meles taxus.*
 Vulpes vulgaris.

INSECTIVORA.

- Talpa Europaea.
 Sorex araneus.
 Erinaceus Europaeus.

RAPACES.

- Falco tinnunculus.†
 " palumbarius.†
 " Nisus.
 " milvus.‡
 Strix flammea.

OMNIVORES.

- Corvus frugilegus.
 " monedula,
 " corone.
 Pica caudata.
 Garrulus glandarius.
 Sturnus vulgaris.

INSECTIVORÆ.

- Lanius meridionalis.
 " rufus.
 " collurio.
 Muscicapa grisola.
 Turdus viscivorus.
 " pilaris.
 " musicus.
 " iliacus.
 " merula.
 Sylvia phaenicurus.
 " luscinia.
 " rubecula.
 " hortensis.
 " cinerea.
 " curruca.
 " atricapilla.
 " trochilus.

RODENTIA.

- Lepus timidus.
 " cuniculus.
 Myoxus avillanarias.
 Mus musculus.
 " decumanus.
 " silvaticus.
 Arvicola amphibia.
 Sciurus vulgaris.

AVES.

- Silvia rufa.
 " modularis.
 " arundinacea.
 " sibilatrix.
 " phragmitis.
 Regulus cristatus.
 Troglodytes Europæus.
 Saxicola ananthe.
 " rubetra.
 " rubicola.
 Motacilla Yarellii.
 " boarula.
 " Rayi.
 Anthus pratensis.
 " arboreus.

GRANIVORÆ.

- Alauda arvensis.
 " arborea.
 Parus major.
 " coeruleus.
 " ater.
 " palustris.
 " caudatus.
 Emberiza melanocephala.
 " miliaria.
 " cirrus.
 " citrinella.
 Pyrrhula vulgaris.
 Fringilla coccothraustes.
 " spinus.
 " carduelis.
 " chloris.

* One specimen taken alive at Amwell, in 1868.

† Once seen, in Hatfield Park.

‡ Seen over Gallows Hill, in 1872. (C.B.)

AVES—Continued.

Fringilla coelebs.
 " montifringilla.*
 " cannabina.
 " linaria.
 " canescens.
 Passer domesticus.
 " montanus.

ZYGODACTYLI.

Cuculus canorus.
 Picus viridis.
 " minor.
 Yunx torquilla.

ANISODACTYLI.

Sitta Europaea.
 Certhia familiaris.

ALCYONES.

Alcedo ispida.

CHELIDONES.

Hirundo rustica.
 " urbica.
 " riparia.
 Cypselus apus.
 Caprimulgus Europæus.

COLUMBÆ.

Columba palumbus.
 " œnas.
 " turtur.

GALLINÆ.

Phasianus Colchicus.
 Perdix rubra.
 " cinerea.

GRALLATORES.

Charadrius pluvialis.
 Vanellus cristatus.
 Ardea cinerea.
 Botaurus stellaris.†
 Numenius arcuata.
 Scolopax gallinago.‡
 " rusticola.

Rallus crex.
 Gallinula chloropus.

PINNATIPEDES.

Podiceps minor.

PALMIPEDES.

Stena hirundo.
 Larus canus.

REPTILIA.

Zootoca vivipara.
 Anguis fragilis.

Coluber natrix.
 Pelias berus.

BATRACHIA.

Rana temporaria.
 Bufo vulgaris.

Triton palustris.
 " aquaticus.

COLEOPTERA.

PENTAMERA.
 Demetrias atricapillus.
 Dromius quadrimaculatus.
 " quadrinotatus.
 Brachinus crepitans. Nr. Hod-
 Clivina fossor. [desdon.
 " collaris.
 Notiophilus biguttatus.
 Leistus spinibarbis.
 " fulvibarbis.
 " ferrugineus.

Leistus rufescens.
 Nebria brevicollis.
 Carabus monilis.
 " violaceus.
 " nemoralis.§
 Loricera pilicornis.
 Badister bipustulatus.
 Chlaenius vestitus. Bank of
 Calathus cisteloides. [water jump
 " melanocephalus.
 Anchomenus pallipes.

* Never known to lay.
 † Once seen, in Hatfield Park.

‡ Seen over Gallow's Hill, in 1872.
 § One specimen only.

COLEOPTERA—*Continued.*

- Agonum marginatum.*
 " *sexpunctatum.*
Poecilus cupreus.
Abax striola.
Platysoma oblongopunctatus.
Adeloxia picimanus. Hoddesdon
Steropus madidus. [Fields.
Omaseus melanarius.
Amara communis.
Harpalus ruficornis. [Fields
Peryphus littoralis. Hoddesdon
Dytiscus marginalis. Ponds on Hert-
 ford Heath, and Bath
Acilius sulcatus. "
Agabus chalconotus. "
Gyrinus natator. Passim.
Myrmedonia canaliculata.
Homalota currax.
Tachyporus chrysomelinus.
 " *hymnorum.*
 " *brunneus.*
Bolitobius atricapillus.
Quedius tristis.
*Staphylinus erythropterus.** Avenue
Ocypus olens.
Philonthus splendens.
Xantholinus fulgidus.
Stenus Juno.
 " *bupthalmus.*
Necrophorus vestigator.. Dead rats,
 Hertford Heath.
 " *vespillo.* Dead rabbits,
 Hertford Heath.
Silpha thoracica.† Hertford Heath.
 " *obscura.*
Hister cadaverinus.
Dermestes murinus.
Byrrhus pilula.
Sphaeridium scarabaeoides.
Cetonia aurata. Hoddesdon.
Melolontha vulgaris. Passim.
Rhizotrogus solstitialis.
Geotrupes stercorarius.
Onthophagus nuchicornis.
Aphodius subterraneus.
 " *fossor.*
 " *fimetarius.*
 " *prodromus.*
- Athous haemorrhoidalis.*
Elater sanguineus.
Agriotes lineatus.
 " *sputator.*
Lampyris noctiluca. Hertford Heath
Telephorus lividus.
 " *fuscus.*
Malachius bipustulatus.
Byturus tomentosus.
Niptus hololeucus. Jam pots in cup-
Cis boleti. [boards.
- HETEROMERA.
- Blaps mucronata.* College.
Tenebrio molitor. Bread.
Lagria hirta.
Pyrochroa coccinea.
Rhipiphorus paradoxus.
Meloe violaceus.
- TETRAMERA.
- Bruchus pisi.*
Sitones lineatus. Passim.
Alophus trigultatus.
*Hylobius abietis.**
Phyllobius uniformis. Passim.
Otiorhynchus tenebricosus.
Balaninus nucum.
Scolytus destructor.
*Prionus coriarius.** Green Lane.
Callidium violaceum. Master's Gar-
Clytus arietis. [den.
Saperda populnea. Hertford Hth.
Toxotus meridionalis.
*Strangalia armata.**
Leptura livida.
Cryptocephalus sericeus. WoodField
Timarcha tenebricosa.
Chrysomela polygona.
 " *polita.*
Phyllotreta nemorum.
Cassida viridis. Hoddesdon Flds.
 " *vibex.*
- TRIMERA.
- Coccinella bipunctata.*
 " *septempunctata.*
 " *variabilis.*
 " *22 punctata.*
 " *dispar.*

* One specimen only.

† Two specimens only.

THE MACRO-LEPIDOPTERA OF HAILEYBURY.

THIS list is the result of four seasons collecting on the part of the compiler, assisted by past and present Entomologists of Haileybury. It cannot of course be considered nearly perfect; notably in the genera *Sesia* and *Eupithecia*; still the capture of many not common insects is here recorded, some of which are perhaps not generally known to occur in Hertfordshire. The opportunities for sugaring are not great, and it is certain that many fresh species of Noctuæ will from time to time be obtained here. The localities which have been thoroughly searched are limited in extent and are confined to those which are within an hour's walk from Haileybury; the familiar Hertford Heath and the Roman Road have been the chief hunting grounds. The greatest rarity taken during the present season is *S. Fagi*, a fine specimen, which was found on the trunk of a tree by Mr. A. C. Clark's son. In most cases where a species is not generally distributed here, a note is added as to frequency and locality.

DIURNI.

L. Sinapis.	One on Hertford Heath
P. Brassicæ.	[in 1871.
„ Rapæ.	
„ Napi.	
A. Cardamines.	
G. Rhamni.	
A. Euphrosyne.	Roman Road and
V. Urticæ.	[Green Lane.
„ Polychloros.	
„ Io.	
„ Atalanta.	
„ Cardui.	Occasionally.
S. Megæra.	
„ Janirus.	
„ Tithonus.	
„ Hyperanthus.	
C. Pamphilus.	
T. Quercus.	Roman Road.
P. Phlæas.	
L. Alexis.	
„ Agestis.	
„ Argiolus.	[Orchis Fld.
S. Alveclus.	Hertford Heath and
T. Tages.	Orchis Field.
H. Sylvanus.	„
„ Linea.	„

NOCTURNI.

S. Ocellatus.	Not common.
„ Populi.	„
„ Tilisæ.	Common.
A. Atropos.	One at light.
S. Ligustri.	
C. Elpenor.	[Heath in 1873
„ Porcellus.	One on Hertford

M. Stellatarum.	
„ Fuciformis.	
S. Cynipiformis.	
Z. Æsculi.	
C. Ligniperda.	
H. Hectus.	Abundant; Hert-
„ Lupulinus.	[ford Heath.
„ Sylvinus.	
„ Humuli.	Not common.
Z. Loniceræ.	Orchis Field.
„ Filipendulæ.	
N. Senex.	One in 1873.
C. Miniata.	
L. Mesomella.	
„ Complana.	
E. Jacobææ.	One in 1873 ;
C. Caja.	[Roman Road.
„ Villica.	
A. Fuliginosa.	One in 1869.
„ Mendica.	Not uncommon
„ Lubricipeda.	
„ Menthastri.	[1872.
„ Urticæ.	One at light in
L. Chryssorhæa.	Not common.
„ Auriflua.	[1873.
„ Monacha.	One at light in
O. Pudibunda.	Common.
„ Gonostigma.	occasionally ;
„ Antiqua.	[Hertford Hth.
P. Populi.	not uncommon
	at light.
E. Lanestris.	Larva very com-
B. Neustria.	[mon.
„ Quercus.	
O. Potatoria.	

LEPIDOPTERA—*Continued.*

L. Quercifolia.	Not uncommon	S. Clathrata.	
S. Carpini.	Rare.	P. Petraria.	Hertford Hth.
GEOMETRÆ.			
U. Sambucata.		F. Atomaria.	
R. Cratægata.		A. Strigillaria.	
V. Maculata.	[ford Heath.	A. Grossulariata.	
A. Prunaria.	Common on Hert-	L. Adustata.	Not common.
M. Margaritata.		L. Marginata.	
E. Dolabraria.	Not uncommon at	H. Rupicapraria.	
P. Syringaria.	[light.	" Leucophaæria.	
S. Illunaria.		" Aurantiaria.	At light: not ur
" Lunaria.	At light; not com-	" Defoliaria.	[common.
" Illunaria.	[mon.	A. Æscularia.	
O. Bidentata.		C. Brumata.	
C. Elinguaria.		O. Dilutata.	
E. Erosaria.	Not common.	L. Didymata.	Hertford Heath
H. Pennaria.		" Pectinataria.	Hertford Heath
P. Pilosaria.	[common.	E. Affinitata.	[and Roman Rd.
A. Prodromaria.	At light; not	" Alchemillata.	At light: not
" Betularia.		" Decolorata.	[common.
H. Abruptaria.		" Vulgata.	
C. Lichenaria.	Not common.	" Centaureata.	
B. Repandata.		" Subfulvata.	
" Rhomboidaria.	[Roman Road	" Rectangulata.	
T. Extersaria.	Not common; [L. Hexapterata.	Roman Road.
P. Cytisaria.	Common on Hert-	" Viretata.	On palings: not
	ford Heath.	T. Simulata.	[common.
		Y. Ruberata.	One in 1872.
G. Papilionaria.	Not common; at	Elutata.	
I. Vernaria.	Roman Rd. [light	M. Ocellata.	
" Lactearia.		" Procellata.	One at light in
P. Bajularia.	Hertford Hth ;	" Rivata.	[1871.
H. Thymiaria.	[not common.	" Subtristata.	
E. Porata.		" Montanata.	
" Punctaria.	Not common.	" Fluctuata.	[mon.
" Omicronaria.	"	A. Rubidata.	Roman Rd. :com-
A. Luteata.	"	" Badiata.	[common.
" Candidata.	"	" Derivata.	On pallings: not
A. Bisetata.	Hertford Hth.	C. Propugnata.	Not common.
" Trigeminata.	"	" Ferrugata.	
" Osseata.	Not common.	" Unidentata.	
" Straminata.	"	" Bilineata.	
" Remutata.	"	P. Tersata.	Roman Road.
" Imitaria.	Common at light	" Lignata.	Not common.
" Aversata.	[common.	" Vitalbata.	
" Emarginata.	Roman Rd. ; not	S. Dubitata.	Occasionally :
T. Amataria.	Roman Rd. and at	C. Miata.	[at light.
C. Pusaria.	[light ; common	" Picata.	Hertford Hth.
" Exanthemaria.		" Corylata.	[and Green
C. Temerata.	Roman Rd. : not	" Russata.	[Lane.
H. Wavaria.	[common.	" Testata.	Not common.

LEPIDOPTERA—Continued.

C. Fulvata.	Hertford Hth. :	N. Saponariae.	Not uncommon.
„ Pyraliata.	[abundant.	H. Popularis.	
„ Dotata.	Not common.	C. Cytherea.	At light : not
E. Cervinaria.	At light : fre-	L. Testacea.	[common.
„ Mensuraria.	Orchis Field :	M. Anceps.	
„ Palumbaria.	[abundant.	„ Brassicæ.	Not common.
A. Plagiata.	On palings :	„ Persicariæ.	
	common.	A. Basilinea.	
C. Spartiata.	Hertford Hth. :	„ Oculea.	
	abundant.	M. Strigilis.	
		„ Fasciuncula.	
		„ Furuncula.	[1872.
		„ Arcuosa.	One at light :
		G. Trilinea.	At light : com-
		C. Morpheus.	[mon.
		„ Alsines.	
		R. Tenebrosa.	At light : com-
		A. Segetum.	[mon.
		„ Exclamationis.	
		„ Corticea.	Common.
		„ Porphyrea.	
		„ Ravida.	One in 1871.
		T. Ianthina.	
		„ Orbona.	
		„ Pronuba.	
		N. Augur.	
		„ Plecta.	
		„ C. Nigrum.	
		„ Triangulum.	Larva, common
			[in Hailey Ho.
			[Field.
			One in 1870.
		„ Rhomboidea.	
		„ Brunnea.	
		„ Festiva.	
		„ Xanthographa.	
		„ Baja.	One at light :
		T. Gothica.	
		„ Rubricosa.	At Sallows : not
		„ Instabilis.	[common.
		„ Stabilis.	
		„ Gracilis.	Not common.
		„ Munda.	
		„ Cruda.	„
		A. Pistacina.	
		„ Lunosa.	
		C. Vaccinii.	
		S. Satellitia.	
		X. Citrago.	Larva, common
		„ Cerago.	[on lime : Ter-
			[race Ground.
		„ Ferruginea.	

CUSPIDATES.

P. Falcula.	Not common.
„ Hamula.	„
C. Spinula.	Common.
D. Furcula.	
„ Vinula.	
P. Cassinea.	At light : fre-
„ Bucephala.	[quent.
„ Palpina.	At light : fre-
	[quent.
N. Camelina.	Common.
„ Ziczac.	Larva.
D. Cæruleocephala.	[1871.
N. Trepida.	One at light :
„ Dodonæa.	Occasionally.
S. Fagi.	One on Hert-
	ford Hth. : 1873

NOCTUÆ.

T. Derasa.	Green Lane and	„ Rhomboidea.	
„ Batis.	[Hertford Hth.	„ Brunnea.	
C. Diluta.		„ Festiva.	
„ Ridens.	One at light :	„ Xanthographa.	
B. Perlæ.	[1872.	„ Baja.	One at light :
A. Psi.		T. Gothica.	
„ Aceris.	Not common.	„ Rubricosa.	At Sallows : not
„ Megacephala.		„ Instabilis.	[common.
L. Conigera.		„ Stabilis.	
„ Lithargyria.		„ Gracilis.	Not common.
„ Comma.		„ Munda.	
„ Straminea.	One at light :	„ Cruda.	„
„ Impura.	[1872.	A. Pistacina.	
„ Pallens.		„ Lunosa.	
H. Nictitans.		C. Vaccinii.	
X. Rurea.	Occasionally.	S. Satellitia.	
„ Lithoxylea.		X. Citrago.	Larva, common
„ Polyodon.		„ Cerago.	[on lime : Ter-
„ Hepatica.	Not uncommon.		[race Ground.
D. Pinastri.	„	„ Ferruginea.	

LEPIDOPTERA—*Continued.*

C. Xerampelina.	One in 1868.	C. Verbasci.	Larva, common
C. Trapezina.	[common.	„ Umbratica.	Palings.
D. Capsincola.	At light: not	H. Arbuti.	Orchis Field:
H. Serena.	Palings: com-		common.
	[mon.	B. Parthenias.	Not common.
M. Oxyacanthæ.	Very common.	A. Urticæ.	At light: very
A. Aprilina.			common.
P. Meticulosa.	[palings.	„ Triplasia.	Occasionally.
A. Nebulosa.	Terrace Ground	P. Chrysitis.	
„ Advena.	One in 1873.	„ Iota.	
H. Protea.		„ Gamma.	
„ Dentina.		G. Libatrix.	
„ Chenopodii.		A. Pyramidea.	
„ Oleracea.		„ Tragopogonis.	
„ Pisi.		M. Typica.	Not common.
„ Thalassina.	[palings.	„ Maura.	
„ Genistæ.	Terrace Ground	C. Nupta.	[common.
X. Lithorhiza.	Common.	E. Mi.	Orchis Field:
C. Exoleta.		„ Glyphica.	„

MOLLUSCA.

(Named from *Jeffrey's British Conchology*).

CONCHIFERA.

Sphaerium corneum.	River Lea.
„ rivicola.	„
„ lacustre.	Amwell.
Pisidium amnicum.	„
„ nitidum.	„
Unio pictorum.	River Lea.
Anodonta cygnea.	„
„ anatina.	„

GASTEROPODA—PECTINIBRAN-
CHIATA.

Neritina fluviatilis.	Rye House.
Paludina vivipara.	River Lea.
Bythinia tentaculata.	„
„ Leachii.	Amwell.
Valvata piscinalis.	„
„ cristata.	St. Margarets

GASTEROPODA—PULMONOBRAN-
CHIATA.

Planorbis nautilus.	Near Hertford.
„ albus.	St. Margarets.
„ glaber.	„
„ spirorbis.	Amwell.
„ vortex.	„
„ carinatus.	„
„ complanatus.	„
„ corneus.	„

Planorbis contortus.	Amwell.
Physa hypnorum.*	St. Margarets.
„ fontinalis.	„
Limnaea peregra.	Passim.
„ auricularia.	Amwell.
„ stagnalis.	Passim.
„ palustris.	„
„ truncatula.	Pavilion Field.
Ancylus fluviatilis.	St. Margarets.
„ lacustris.	Hoddesdon
Arion ater.	Passim. [Flds.
„ hortensis.	„
Limax marginatus.	Gallows Hill.
„ flavus.	Passim.
„ agrestis.	„
„ maximus.	„
Succinea putris.	„
„ elegans.	St. Margarets.
Vitrina pellucida.	Gallows Hill.
Zonites cellarius.	Passim.
„ alliaris.	Gallows Hill.
„ nitidulus.	Passim.
„ crystallinus.	„
„ fulvus.	Hoddesdon
Helix aculeata.	„ [Flds.
„ pomatia.	Gallows Hill.
„ aspersa.	Passim.

* One specimen only, dead.

MOLLUSCA—Continued.

<i>Helix nemoralis.</i>	Passim.	<i>Helix rotundata.</i>	Passim.
" " var.		" <i>pygmaea.</i>	Hoddesdon
" " <i>hortensis.</i>	" "	" <i>pulchella.</i>	Passim. [Fls.]
" <i>arbustorum.</i>	St. Margarets.	" <i>lapicida.</i>	Gallows Hill.
" " var.		<i>Bulimus obscurus.</i>	Passim.
" <i>alpestris.</i>	Bks. of R. Lea.	<i>Pupa umbilicata.</i>	" "
" <i>Cantiana.</i>	Passim.	<i>Vertigo pygmaea.</i>	Rye House.
" <i>rufescens.</i>	" "	<i>Clausilia Rolphii.</i>	Gallows Hill.
" <i>concinna (?)</i>	Gallows Hill.	" <i>rugosa.</i>	Passim.
" <i>hispida.</i>	Passim.	<i>Cochlicopa lubrica.</i>	" "
" <i>fusca (?)</i>	Gallows Hill.	<i>Achatina acicula.</i>	St. Margarets.
" <i>caperata.</i>	Passim.	<i>Carychium minimum.</i>	Passim.
" <i>ericetorum.</i>	Gallows Hill.	<i>Cyclostoma elegans.</i>	Gallows Hill.

LOCAL FLORA.

FLOWERING PLANTS.

(Named from Sowerby and Johnson).

DICOTYLEDONS.		<i>Capsella bursa pastoris.</i>	Passim.
RANUNCULACEÆ.		<i>Cochlearia Armoracia.*</i>	Near Gallows
<i>Clematis Vitalba.</i>	Passim.	<i>Draba verna.</i>	[Hill.]
<i>Anemone nemorosa.</i>	" "	<i>Cardamine silvatica.</i>	Goldhinton
<i>Myosurus minimus.</i>	St. Margarets.	" <i>pratensis.</i>	Passim. [Wd.]
<i>Ranunculus aquatilis.</i>	Passim.	" <i>hirsuta.</i>	Roman Road.
" <i>fluitans.</i>	St. Margarets.	<i>Arabis hirsuta.</i>	Nr. Gallows Hill.
" " var.	Near Hertford.	<i>Turritis glabra.</i>	Gallows Hill.
" <i>hederaceus (?)</i>	Hertford Hth.	<i>Barbarea vulgaris.</i>	Passim.
" <i>lingua.</i>	" "	<i>Nasturtium officinale.</i>	" "
" <i>flammula.</i>	Passim.	<i>Sisymbrium officinale.</i>	Passim.
" <i>ficaria.</i>	" "	<i>Erysimum alliaria.</i>	" "
" <i>auricomus.</i>	The Avenue.	<i>Brassica napus.</i>	Amwell.
" <i>sceleratus.</i>	Near Gallows	" <i>oleracea.</i>	Gallows Hill.
" <i>acris.</i>	Passim. [Hill.]	<i>Sinapis arvensis.</i>	Passim.
" <i>repens.</i>	" "	RESEDACEÆ.	
" <i>bulbosus.</i>	" "	<i>Reseda luteola.</i>	Gallows Hill.
" <i>arvensis.</i>	" "	" <i>lutea.</i>	" "
<i>Caltha palustris.</i>	" "	CISTINEÆ.	
PAPAVERACEÆ.		<i>Helianthemum vulgare.</i>	Gallows Hill.
<i>Papaver Rhoas.</i>	Passim.	VIOLACEÆ.	
<i>Chelidonium majus.</i>	Gallows Hill.	<i>Viola hirta.</i>	Gallows Hill.
FUMARIACEÆ.		" <i>odorata.</i>	Hailey Lane.
<i>Fumaria officinalis.</i>	Amwell.	" <i>canina.</i>	Passim.
CRUCIFERÆ.		" <i>tricolor.</i>	" "
<i>Coronopus Ruelli.</i>	Nr. Gallows Hill.		

* One specimen in cultivated land.

FLOWERING PLANTS—Continued.

POLYGALACEÆ.		Geranium dissectum. Near Hertford.
Polygala vulgaris.	Passim.	Erodium cicutarium. Passim.
CARYOPHYLLEÆ.		OXALIDACEÆ.
Dianthus armeria.	Orchis Field.	Oxalis acetosella. Passim.
Silene inflata.	Passim.	CELASTRACEÆ.
Lychnis flos-cuculi.	"	Euonymus Europæus. Passim.
" diurna.	"	RHAMNACEÆ.
" vespertina.	"	Rhamnus frangula. Amwell.
Agrostemma githago.	Amwell.	" catharticus. Gallowes Hill.
Sagina procumbens.	Passim.	LEGUMINOSÆ.
" apetala.	"	Ulex Europæus. Passim.
Moenchia erecta.	Hertford Hth.	Genista tinctoria. "
Spergula arvensis.	Passim.	" Anglica. Hertford Hth.
Stellaria media.	"	Cytisus Scoparius. "
" holostea.	"	Ononis Spinosa. "
" graminea.	"	" procurrens. Passim.
" uliginosa.	Hertford Hth.	Anthyllus vulneraria. Gallowes Hill.
Arenaria verna.	Hoddesdon Rd.	Medicago lupulina. Passim.
" serpyllifolia.	Passim.	Melilotus officinalis. "
" rubra.	"	Trifolium repens. "
" trinervis.	"	" pratense. "
Cerastium vulgatum.	"	" arvense. Roman Road.
" viscosum.	Hailey Lane.	" medium. "
" semide-		" striatum. Near Hertford.
candrum.	Hertford.	" fragiferum. Hailey Lane.
LINEÆ.		" procumbens.
Linum catharticum.	Pavilion Field.	" minus. Roman Road.
MALVACEÆ.		Lotus corniculatus. Passim.
Malva sitvestris.	Passim.	" major. Hertford Hth.
" rotundifolia.	"	" tenuis.
" moschata.	Gallowes Hill.	Ornithopus perpusillus. "
TILIACEÆ.		Onobrychis sativa. Gallowes Hill.
Tilia Europæa.	Passim.	Vicia silvatica. Roman Road.
HYPERICINEÆ.		" cracca. Passim.
Hypericum perforatum.	Passim.	" lathyroides.
" humifusum.	Hertford Hth.	" sepium. Passim.
" montanum.	"	Ervum tetraspermum. "
ACERINÆ.		" hirsutum. "
Acer pseudo-platanus.	Passim.	Lathyrus pratensis. "
" campestris.	"	" nissolia. Wood Field.
GERANIACEÆ.		Orobus tuberosus.
Geranium Pyrenaicum.	Hertford.	ROSACEÆ.
" lucidum.	St. Margarets.	Prunus spinosa. Passim.
" Robertianum.	Passim.	" cerasus. Nr. Gallowes Hl.
" molle.	Gallowes Hill.	Spiræa ulmaria. Passim.
" columbinum.	Near Hertford.	Geum urbanum. "
" rotundifolium.	Gallowes Hill.	Rubus fruticosus. "

FLOWERING PLANTS—*Continued.*

<i>Fragaria vesca.</i>			<i>Daucus carota.</i>	
<i>Comarum palustre.</i>	Hoddesdon		<i>Scandix pecten-Ve-</i>	
<i>Potentilla anserina.</i>	Passim. [Flds.]		<i>neris.</i>	Nr. S. Margarets
" <i>argentea.</i>	"		<i>Anthriscus silvestris.</i>	Passim.
" <i>reptans.</i>	"		<i>Conium maculatum.</i>	Nr. Gallows HL
" <i>fragariastrum.</i>	"		ARALIACEÆ.	
<i>Tormentilla officinalis.</i>	"		<i>Hedera helix.</i>	Passim.
" <i>reptans.</i>	"		CORNACEÆ.	
<i>Agrimonia Eupatoria.</i>	"		<i>Cornus sanguinea.</i>	Passim.
<i>Alchemilla vulgaris.</i>	"		CAPRIFOLIACEÆ.	
" <i>arvensis.</i>	"		<i>Sambucus nigra.</i>	Passim.
<i>Poterium sanguisorba.</i>	Gallows Hill.		<i>Viburnum lantana.</i>	"
<i>Rosa spinosissima.</i>	Passim.		" <i>opulus.</i>	"
" <i>tomentosa.</i>			<i>Lonicera periclyme-</i>	
" <i>inodora.</i>	Passim.		<i>num.</i>	"
" <i>rubiginosa.</i>			RUBIACEÆ.	
" <i>canina.</i>	Passim.		<i>Galium verum.</i>	Passim.
" <i>arvensis.</i>			" <i>palustre.</i>	"
<i>Cratægus oxyacantha.</i>	Passim.		" <i>Witheringii.</i>	"
<i>Pyrus malus.</i>			" <i>saxatile.</i>	"
" <i>aucuparia.*</i>	Hertford Hth.		" <i>mollugo.</i>	"
ONAGRARIÆ.			" <i>aparine.</i>	"
<i>Epilobium hirsutum.</i>	Amwell.		<i>Sherardia arvensis</i>	
" <i>angustifolium.</i>			<i>Asperula odorata.</i>	
" <i>montanum.</i>	Passim.		VALERIANEÆ.	
<i>Circaea lutetiana.</i>	"		<i>Valeriana dioica.</i>	
HALORAGACEÆ.			<i>Fedia olitoria.</i>	Passim.
<i>Myriophyllum spica-</i>			" <i>dentata.</i>	Hailey Lane.
<i>tum.</i>	Passim.		DIPSACEÆ.	
CURCUBITACEÆ.			<i>Dipsacus silvestris.</i>	Passim.
<i>Bryonia dioica.</i>	Passim.		<i>Scabiosa succisa.</i>	Hertford Hth.
CRASSULACEÆ.			" <i>columbaria.</i>	Gallows Hill.
<i>Sédum Telephium.*</i>	Amwell.		" <i>arvensis.</i>	Passim.
" <i>acre.</i>			COMPOSITÆ.	
SAXIFRAGEÆ.			<i>Tragopogon pratensis.</i>	Hoddesdon
<i>Saxifraga granulata.</i>			<i>Helminthia echioides.</i>	Passim. [Flds.]
" <i>tridactylites.</i>			<i>Sonchus arvensis.</i>	"
UMBELLIFERÆ.			" <i>oleraceus.</i>	"
<i>Sanicula Europæa.</i>	Hertford Hth.		<i>Leontodon taraxacum.</i>	"
<i>Heliosciadium inun-</i>			<i>Hieracium pilosella.</i>	"
<i>datum.</i>	"		<i>Lapsana communis.</i>	"
<i>Bunium bulbocasta-</i>			<i>Cichorium Intybus.</i>	"
<i>num.</i>	"		<i>Arctium Lappa.</i>	"
<i>Silaus pratensis.</i>	"		<i>Carduus nutans.</i>	Gallows Hill.
<i>Heracleum Sphon-</i>			<i>Cnicus palustris.</i>	Passim.
<i>dylidium.</i>	Passim.		" <i>arvensis.</i>	"

* One specimen only.

FLOWERING PLANTS—Continued.

Bidens tripartita.	Hertford Hth.		
Artemisia vulgaris.	Passim.		
Gnaphalium mini- mum.	Hertford Hth.		
" Germanicum.	"		
Tussilago farfara.	Passim.		
Senecio vulgaris.	"		
" silvaticus.	"		
" Jacobæa.	"		
Pulicaria Dysenterica.	"		
Bellis perennis.	"		
Chrysanthemum leu- canthemum.	"		
Pyrethrum inodorum.	"		
Achillæa ptarmica.	Hertford Hth.		
" millefolium.	Passim.		
Centaurea nigra.	"		
" cyanus.	Gallows Hill.		
" scabiosa.	Passim.		
CAMPANULACEÆ.			
Campanula rotundi- folia.	Passim.		
ERICACEÆ.			
Erica tetralix.			
Calluna vulgaris.	Passim.		
AQUIFOLIACEÆ.			
Ilex aquifolium.	Passim.		
OLEACEÆ.			
Ligustrum vulgare.	Passim.		
APOCYNACEÆ.			
Vinca minor.			
GENTIANEÆ.			
Erythræa centaurium.			
CONVOLVULACEÆ.			
Convolvulus arvensis.	Passim.		
" sepium.	"		
BORAGINEÆ.			
Echium vulgare.	Gallows Hill.		
Lithospermum officinale.			
" arvense.			
Myosotis palustris.			
" cespitosa.			
" arvensis.	Passim.		
" collina.	"		
" versicolor.	"		
Lycopsis arvensis.	Gallows Hill.		
Symphytum officinale.	Amwell.		
SOLANEÆ.			
Hyoscyamus niger.	Amwell.		
Solanum dulcamara.	Passim.		
OROBANCHEÆ.			
Orobanche major.	Hertford Hth.		
SCROPHULARINEÆ.			
Veronica serpyllifolia.			
" scutellata.	"		
" anagallis.	"		
" beccabunga.	"		
" officinalis.	"		
" montana.	"		
" chamædrys.	Passim.		
" hederifolia.	"		
" Buxbaumii.	"		
" agrestis.	"		
Bartsia odontites.	"		
Euphrasia officinalis.	"		
Rhinanthus crista- galli.	"		
Melampyrum pra- tense.	"		
Pedicularis silvatica.	"		
Scrophularia nodosa.	"		
" aquatica.	"		
Digitalis purpurea.	"		
Antirrhinum oron- tium.	"		
Linaria cymbalaria.	Amwell.		
" spuria.	"		
" vulgaris.	Passim.		
" minor.	"		
Verbascum Thapsus.	Passim.		
" nigrum.	"		
LABIATÆ.			
Lycopus Europæus.	Passim.		
Mentha Hirsuta.	"		
Thymus serpyllum.	Hertford Hth.		
Teucrium Scorodonia.	Passim.		
Ajuga reptans.	"		
Ballota nigra.	"		
Galeopsis tetrahit.	"		
Galeobdolon luteum.	Passim.		
Lamium album.	"		
" purpureum.	"		
" amplexicaule.	"		
Betonica officinalis.	"		
Stachys silvatica.	Passim.		
Nepeta cataria.	"		

FLOWERING PLANTS—Continued.

Glechoma hederacea. Passim.	
Marrubium vulgare.	
Clinopodium vulgare. Passim.	
Prunella vulgaris. "	
Scutellaria galericulata. Bks. of R. Lea.	
VERBENACEÆ.	
Verbena officinalis.	
PRIMULACEÆ.	
Primula vulgaris. Passim.	
" veris. "	
Lysimachia vulgaris.	
" nemorum.	
" nummularia. Passim.	
Anagallis arvensis. "	
PLANTAGINEÆ.	
Plantago major. Passim.	
" media. Gallows Hill.	
" lanceolata. Passim.	
" coronopus. "	
POLYGONÆ.	
Polygonum aviculare.	
" convolvulus. Passim.	
" persicaria. "	
Rumex hydrolapathum. Bks. of R. Lea.	
" crispus.	
" acetosa. Passim.	
Rumex acetosella. "	
EUPHORBIACEÆ.	
Mercurialis perennis. Passim.	
Euphorbia peplus.	
" helioscopia.	
" exigua.	
" amygdaloides.	
URTICACEÆ.	
Urtica urens.	
" dioica. Passim.	
CANNABINEÆ.	
Humulus lupulus. Passim.	
ULMACEÆ.	
Ulmus campestris.	
BETULACEÆ.	
Betula alba.	
Alnus glutinosa.	
SALICACEÆ.	
Salix alba.	
" fusca.	
" caprea.	
Populus tremula. Hertford Hth.	
CUPULIFERÆ.	
Fagus silvatica. Passim.	
Quercus pedunculata. "	
Corylus avellana. "	
Carpinus betulus. "	
MONOCOTYLODONS.	
DIOSCOREACEÆ.	
Tamus communis. Passim.	
TRILLIACEÆ.	
Paris quadrifolia.	
HYDROCHARIDACEÆ.	
Anacharis alsinastrum.	
ORCHIDÆÆ.	
Orchis pyramidalis.	
" morio. Passim.	
" mascula. "	
" maculata. "	
Gymnadenia conopsea.	
Habenaria bifolia.	
" chlorantha.	
Listera ovata.	
IRIDEÆ.	
Iris pseud-acorus.	
LILIACEÆ.	
Hyacinthus non-scriptus. Passim.	
JUNCEACEÆ.	
Juncus conglomeratus. Passim.	
" effusus. "	
" bufonius. "	
" glaucus. Hailey Lane.	
Luzula pilosa.	
BUTOMACEÆ.	
Butomus umbellatus. Bks. of R. Lea.	
ALISMACEÆ.	
Alisma plantago. Passim.	
TYPHACEÆ.	
Sparganium ramosum.	

FLOWERING PLANTS—*Continued.*

ARACEÆ.	Lemna minor.	Passim.
Arum maculatum. Passim.		
LEMNACEÆ.	NAIADÆÆ.	
Lemna trisulca.	Potamogeton natans.	Passim.
	„ lucens.	River Lea.

FLOWERLESS PLANTS.

FILICES.	Pteris aquilina.	Passim.
Polypodium vulgare.	Ophioglossum vulgare.	
Lastrea Filix-mas. Passim.	OPHIOGLOSSACEÆ.	
	Equisetum arvense.	Passim.

METEOROLOGICAL OBSERVATIONS.

On May 19th, 1873, Mr. BRADBY and Mr. HENSLEY presented to the Society the following Meteorological Instruments, by Negretti and Zambra :—Glaisher's eight-inch rain-gauge, a maximum, a minimum, and a wet and dry bulb thermometer. W. E. SMITH was appointed to record observations with these instruments. This was first done with the rain-gauge on May 22nd, the maximum and minimum thermometers on June 18th. The direction of the wind at 9 a.m., on June 22nd. The temperature of the air at 9 a.m., on October the 7th. During the summer holidays a record was kept of the rain by the Master, and in his absence by the Porter ; but a few days at the beginning and end of that period are wanting.

Owing to the incompleteness of the statistics which have been collected this year, it has been thought unnecessary to publish them. It is to be hoped that they may be kept quite completely for next year. If this should be accomplished, they will have a scientific value, quite independently of their local interest. Professor MAXWELL tells us that "the most important step in the progress of every science is the measurement of quantities. Those, whose curiosity is satisfied with observing what happens, have occasionally done service by directing the attention of others to the phenomena they have seen ; but it is to those who endeavour to find out how much there is of anything, that we owe all the great advances in our knowledge." Thus the only way by which a satisfactory system of meteorology is likely to be constructed, is by the collection of a great number of accurate measurements ; and it is to this end that we shall be contributing our share.

Although complete statistics will not be given, it is thought that a few remarks on the nature of the instruments and on the weather may prove not uninteresting. In Negretti and Zambra's own words, "The gauge is eight inches diameter, and arranged for the reception of the water only which falls upon its receiving surface, and for the prevention of loss by evaporation. The rain is first collected in a funnel, the

receiving surface of which is accurately turned in a lathe, and terminated at its lower extremity by a bent tube of small aperture, in which the last few drops of rain remain." The funnel is fitted accurately on to the cylindrical receiving vessel, in such a manner that no water can escape by evaporation. The object of retaining the last few drops of rain in the tube of the funnel, is that they prevent any vapour from passing off from the water contained in the receiving vessel. The glass measure is graduated to hundredths of inches. As it is very much narrower than the receiving surface, half-an-inch of rain is represented by about seven inches in the measure. It has been calculated that one inch of rain falling in the quadrangle is equivalent to about 61780 gallons.

"The maximum thermometer consists of a bulb and tube of mercury fitted on a porcelain scale, with the divisions engraved on the glass tube. The thermometer tube above the mercury is entirely free from air; and in a bend above the bulb, is inserted and fixed with the blow-pipe, a small piece of solid glass, or enamel, which acts as a valve, allowing mercury to pass on one side of it when heat is applied; but not allowing it to return when the thermometer cools. When mercury has been once made to pass the valve, which nothing but heat can effect, and has risen in the tube, the upper end of the column registers the maximum temperature. To return the mercury to the bulb, we must apply a force equal to that which raised it in the tube; the force employed is gravity, and is applied by simply lowering the bulb end of the thermometer, when the gravity of the mercury in the tube will be sufficient to unite it with that in the bulb, and thus prepare the instrument for future observation."

"The minimum thermometer consists of a glass tube, the bulb and part of the bore of which is filled with pure alcohol, in which floats freely a black glass index. A slight elevation of the thermometer, bulb uppermost, will cause the glass index to flow to the surface of the liquid, where it will remain unless violently shaken. If the temperature falls, the alcohol contracts and takes the index with it; if the temperature rises, it leaves the index behind, which thus shows the lowest temperature at which the thermometer has been since it was last set." On December 3rd, this instrument was found broken; it is unknown how or by whom. A new thermometer has been procured at the expense of the Society.

The wet and dry bulb thermometer, which could not be put up before for want of a sheltered position, has just had a roof constructed for it. It consists of two thermometers, one of which is an ordinary thermometer, and the other has its bulb covered with muslin, which is kept wet by connection with a vessel of water. The object of this instrument is to show the amount of moisture contained in the air. The principle of its action is that the dryer the air is, the faster the water on the muslin evaporates, and in doing abstracts the more heat from the wet bulb. Thus the difference between the indications of the wet and the dry bulb thermometers (of course, the wet bulb is lowest) indicates the dryness of the air. If the air is saturated with moisture they coincide; in very dry climates there is sometimes as much as 30° Fahrenheit difference between them.

The largest falls of rain which have been measured here are 1.50 in. (August 24th), 1.39 in. (July 12th), 1.07 in. (September 30).

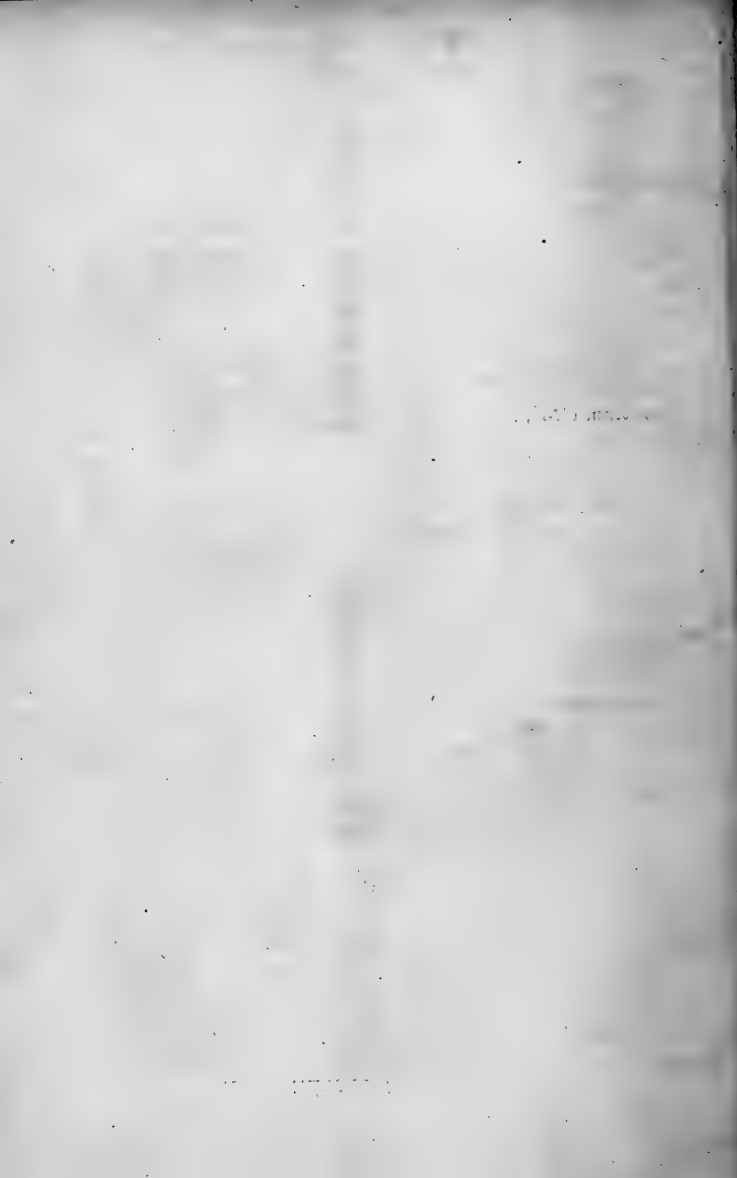
The highest and lowest temperatures have been respectively 83° Fahrenheit (July 21st and 23rd), and 26° (December 10th).

BALANCE SHEET.

RECEIVED.		PAID.	
	£ s. d.		£ s. d.
Subscriptions from 25 Members, Dec. 1872 ...	2 10 0	One year's payment for <i>Science Gossip</i> , Easter, 1873	0 4 6
Entrance Subscriptions from 19 Members, Easter and Summer terms, 1873	1 18 0	Ditto, <i>Zoologist</i>	0 12 0
Subscriptions from 34 Members, July, 1873 ...	3 8 0	Ditto, <i>Entomologist</i>	0 6 0
Entrance Subscriptions from 8 Members, Christmas term, 1873	0 16 0	Cover of <i>Science Gossip</i> ...	0 3 0
		To printing 100 copies of the Rules	0 8 0
Total	8 12 0	To expenses of the Field-meeting, Aug., 1873 ...	4 4 0
Paid	6 19 6	To replacing Minimum Thermometer, Dec. 5th	1 2 0
In hand December, 1873	£1 12 6	Total	6 19 6

Transferred
from Bot. Dept.





S. 113^a

HAILEYBURY

Natural Science Society. K



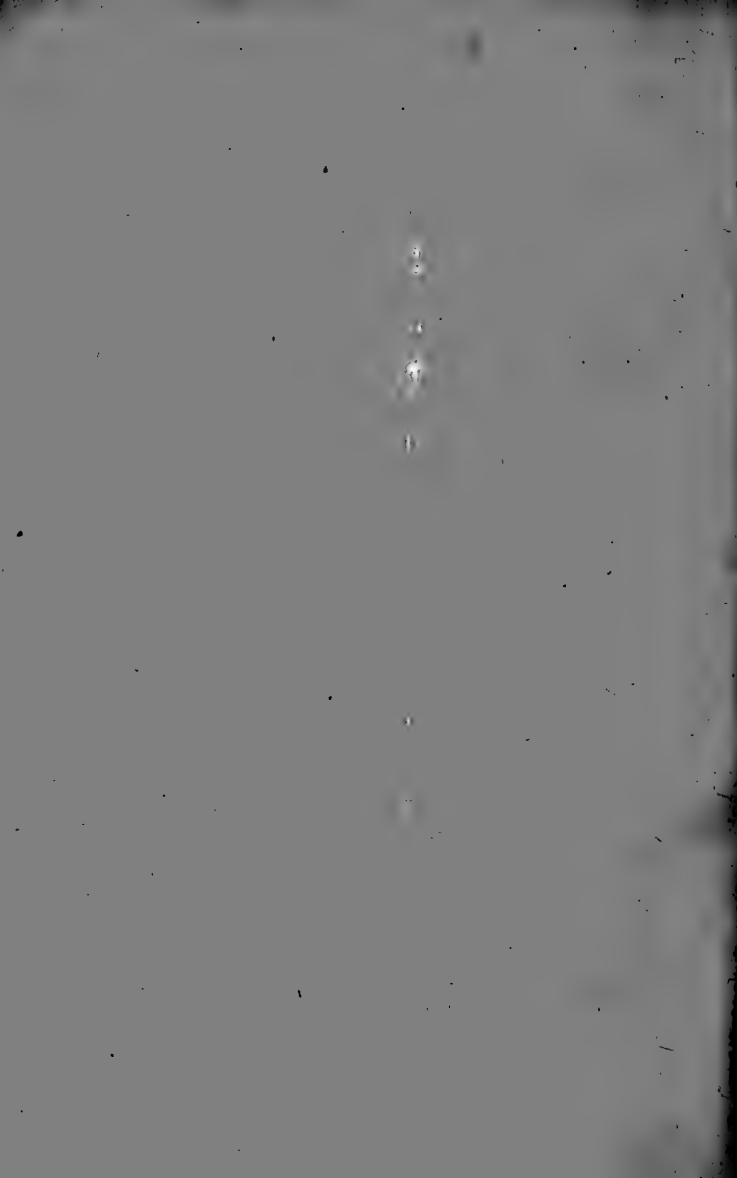
SECOND ANNUAL REPORT,
1875.

"Felix, qui potuit rerum cognoscere causas."—Virgil.

HERTFORD:

PRINTED BY STEPHEN AUSTIN AND SONS.

1875.



INTRODUCTION.

THE Natural Science Society has completed the second year of its existence, and it is now possible to form some opinion as to the degree in which it has fulfilled the hopes of its first promoters.

It was found in the course of the first year, that, while there was no falling off in the number of members, there was a lack of work. Members were content to listen: but, with some notable exceptions, they did not readily either make the effort to gain new experience for themselves, or to communicate to others the results of such as they already possessed. It was thought that a less formal style of meeting might tend to remedy this, and call out the energies of all who had the will to do real work. A plan was therefore adopted, similar in the main to that now in use at Marlborough, and this is now in working order. Those who desired it (up to a certain number) grouped themselves into separate sections, each with a special object in view. Certain rules for the organization of these were made, and the members pledged themselves to aid by their own personal observation and work the study of the Natural History of the neighbourhood. The unity of the Society was maintained by frequent general meetings. It is obvious that the working energy of these Sections must vary from time to time, but a certain amount of good cannot fail to result, if only the true spirit is maintained. To keep up the real working spirit is the fundamental difficulty of a Society like ours, and yet without it no permanent good can be done. While therefore heartily thanking those members by whose efforts the local collections have been arranged and increased, and who have done their best to interest the Society in their favourite pursuits, we cannot refrain from expressing our belief that the vitality of the Society can only be maintained at a high pitch by the exertions of each member to be both a learner and a teacher in some branch of Natural Science.

LIST OF MEMBERS.

President.—A. D. CARLISLE, Esq.

Vice-President.—REV. A. DE M. HENSLEY.

Committee.

C. W. RIDLEY, *Sec.*
F. H. COLSON.
J. R. TWISDEN.

T. S. LEA.
H. A. D. WATHEN.

Honorary Members.

REV. E. H. BRADBY.
REV. T. CORNTHWAITE.
REV. H. WALFORD.
REV. H. COUCHMAN.
H. G. HART, Esq.
E. P. ASH, Esq.
REV. T. PITTS.
REV. F. B. BUTLER.
REV. F. J. HALL.
R. W. BOWYER, Esq.
A. MESSERVY, Esq.
C. D. ARGLES, Esq.
G. H. POPE, Esq.
A. V. JONES, Esq.
H. B. COTTERILL, Esq.
A. J. C. DOWDING, Esq.
REV. G. E. JEANS.
REV. E. M. REYNOLDS.
A. A. BODKIN, Esq.
A. C. CLARK, Esq.
*W. H. POOLE.
†S. O. RIDLEY.
H. A. LUCAS.
C. E. BAKER.
A. D. O. WEDDERBURN.

G. M. MERIVALE.
G. H. BLUNT.
G. J. HOWSON.
A. W. HUTTON.
C. H. WINGFIELD.
H. N. RIDLEY.
H. W. PEARSE.
F. J. BANISTER.
A. H. LEWIN.
J. A. H. POLLOCK.
F. W. CHAMPNEYS.
H. TYRER.
A. C. BATTEN.
H. C. RANDOLPH.
F. PODMORE (*formerly Sec.*)
‡W. E. SMITH.
B. K. BOURDILLON.
L. S. MILFORD.
C. GURDON.
H. A. PHILLIPS.
W. DE G. REEVES.
C. P. R. BUTLER.
J. W. EWING.
G. C. P. WILLIAMS-FREEMAN.
C. M. SUMNER.

Members.

R. G. COPE.
F. S. WILDE.
A. ANSON.
C. C. ATKINSON.
J. E. INNES.
E. VON LENGERKE.
G. C. STAPYLTON.
W. C. WALKER.

L. BARLOW.
H. A. MACPHERSON.
C. BAILEY.
E. S. DASHWOOD.
C. S. B. RIDDELL.
G. H. VINCENT.
H. STEWARD.
A. W. PAYNE-GALLWEY.

* Natural Science Exhibitioner of Magdalen College, Oxford; and 1st Class in Natural Science.

† Natural Science Scholar of Exeter College, Oxford.

‡ Natural Science Exhibitioner of New College, Oxford.

R U L E S .

I.—That the Society be entitled “The Natural Science Society.”

II.—That the maximum number of Members be thirty.

III.—That a Committee be appointed, to consist of not more than 7, of whom one shall be the President, and another the Secretary; the Curators being Members *ex-officio*, and the rest elected by the Society, the President annually, and the others terminally.

IV.—That the names of candidates for admission into the Society be published in the notice of the Society seven days previously, and at the next meeting be voted for by ballot.

V.—That Meetings be held fortnightly.

VI.—That every Member be required to attend at least four Meetings a Term.

VII.—That Members should apply to the President or Secretary before reading a paper or exhibiting specimens.

VIII.—That every Member be required, on receiving notice from the Secretary, to read a paper at the next Meeting but one.

IX.—That after reading a paper, Members be required to leave it in the room for inspection, till the next Meeting, and at the next Meeting be prepared to answer, to the best of their ability, any question that may be put to them on the subject.

X.—That it be an object of the Society to make a perfect collection, to illustrate the Natural History of the district.

XI.—That there be a terminal subscription of two shillings from all Members of the Society; and that all subscriptions be paid in to the Secretary within the first fortnight of the term: the defaulter to pay a fine of 6*d.* for every additional week, and when his subscription is four weeks in arrear, to cease to be a Member of the Society.

XII.—That every Member may admit one visitor to any Meeting. To prevent crowding, the sanction of the Secretary must be obtained beforehand.

XIII.—That Masters, and Members who have left the School, be Honorary Members.

XIV.—That at each Meeting the minutes of the preceding Meeting be read by the Secretary.

XV.—That Sections be formed in the Society.

XVI.—That each Section have a Curator, whose duty it shall be, to act as its Secretary, to have charge of the collection of the Society belonging to his own Section, and to examine and register all additions to that collection.

XVII.—That each Section appoint its own Curator, and arrange its own Meetings.

MINUTES.

The Twentieth Meeting of the Society was held on Monday, February 2nd, 1874.

The Rev. A. De M. Hensley was elected President for the year by acclamation.

A vote of thanks to Mr. Bowyer, the late President, was passed unanimously by the Society. F. Podmore was re-elected Secretary; and B. K. Bourdillon, L. S. Milford, and W. E. Smith on the Committee. E. R. Penrose, C. M. Sumner, and W. C. Walker were elected Members.

S. R. James's resignation, in consequence of stress of work, was announced to the Society.

The paper of the evening was then read, by C. C. ATKINSON, on Telegraphy. It would, perhaps, be not out of place to offer a few remarks on the substance of the paper. It commenced by giving a short sketch of the progress of science in general, and proceeded to trace the history of Telegraphy from Mr. Edgeworth's semaphore down to more modern and improved systems. The lecturer then, by means of a looking-glass, exhibited a telegraph of his own construction, with mercury commutator, similar to those used in India.

There were sixteen members, eight honorary members, and two visitors present at this meeting.

The Twenty-first Meeting was held on Monday, February 16th.

This meeting was devoted to the exhibition of specimens.

The PRESIDENT delivered a short inaugural address; at the commencement of which he humorously stated that he was about to open his presidency by saying something unpleasant, but, as he had a precedent for this in some remarks of the late President's, and as he had been assured by an officer of the Society that no one could give utterance to unpleasant truths with a better grace than himself, he felt encouraged to proceed. The Society had been fed upon pork, and had found it remarkably indigestible, instead of the succulent mental mincemeat which was fitted for infant digestions. The fault lay, it was true, in their own ignorance, and not in their teachers, but he thought that the readers of papers should not, in the plenitude of their superior knowledge, overlook the capacities and stomachs of their weaker brethren.

The speaker was vehemently applauded at the conclusion of his speech, and those present proceeded to examine the specimens laid for exhibition on the tables, including some fossils from the Museum, and some of A. Anson's, two live snowbuntings exhibited by H. A. Macpherson, and some coins kindly lent for the occasion by W. H. W. Searle.

The attendance at this meeting, the first of its kind, was fairly numerous.

The Twenty-second Meeting was held on Monday, February 23rd.

H. A. Phillips was elected a Member.

W. E. SMITH then read a paper on Air, in his usual lively and lucid style, illustrating it by experiments to show the elasticity and other properties of Gases.

In answer to some remarks in the course of the lecture about ventilation without draught, Mr. BRADBY explained the system of ventilation in use at the College, which is that invented by Mr. Watson.

The lecture, though short, had none of the faults complained of by the PRESIDENT at the preceding meeting, filling it with obscure allusions and technicalities, as few as possible of these latter being used.

There were three honorary members, twenty members, and eleven visitors present at this meeting.

The Twenty-third Meeting was held on Monday, March 9th.

C. Gurdon and R. G. Cope were elected Members of the Society.

A. ANSON read a paper on the Unicorn and Sea Serpent, in which he brought forward a large amount of evidence in support of the conclusion that there was some large animal still existing in the Northern Seas, probably a Saurian allied to the presumably extinct Plesiosaur. On the votes of the Society being taken, a large majority were found to be in favour of the existence of the Sea Serpent.

A. D. CARLISLE, Esq., then stated that he had seen a Sea Serpent in the Indian Ocean, some 400 miles from land; it was about eight feet long.

G. E. JEANS, Esq., saw nothing to prohibit the supposition that this latter was a conger-eel.

Rev. F. J. HALL had not actually seen a Sea Serpent, but he had seen in Skye, the preceding summer, a gentleman who had.

G. C. P. WILLIAMS-FREEMAN and A. C. BATTEN had seen mermaids preserved in glass bottles; and A. D. CARLISLE, Esq. said there was quite as much evidence for the existence of these animals as for that of the Sea Serpent.

There were eight honorary members, twenty-seven members, and ten visitors present at this meeting.

The Twenty-fourth Meeting was held on Monday, March 23rd, and was devoted to exhibition of specimens and experiments.

J. W. Ewing and J. H. C. Coode were elected Members of the Society. F. Podmore was re-elected Secretary; and B. K. Bourdillon, L. S. Milford, and W. E. Smith were re-elected on the Committee.

The PRESIDENT exhibited the processes for determining the specific gravity of a substance, whether in or out of water. R. W. Bowyer, Esq. exhibited under the microscope some slides presented to the Society by W. H. Poole. H. A. Phillips superintended the working of a still of his own construction, which extracted some spoonful of alcohol from a flask of port wine. W. E. Smith produced a musical flame from the burning of a jet of hydrogen in a long tube of glass, open at both ends. The President exhibited some shells from the coast of Wales. H. A. Macpherson a pair of horns of an antelope, and some other animal, name unknown. J. R. Twisden, *Anthophora acervorum*, and cells; and various other things were exhibited by other members.

The attendance at this meeting, both of visitors and members, was very good.

The Twenty-fifth Meeting was held on Monday, May 4th.

H. Steward was elected a Member.

J. R. TWISDEN read a paper on the Habits of Ants. After describing the

habits and instincts of our common English species, he proceeded to sketch the habits of the Brazilian Saüba Ant, and to narrate some startling anecdotes about this insect.

On the conclusion of the paper, a few questions were asked about the habits of the common garden ant by the President and others.

There were twenty-five members, eight visitors, and twelve honorary members present at this meeting.

The Twenty-sixth Meeting was held on Monday, May 18th.

The President proposed, on behalf of the Committee, the following rules, which were accepted by the Society:—

I.—That Sections be formed in the Society.

II.—That each Section have a Curator, whose duty it shall be, to act as its Secretary, to have charge of the collection of the Society belonging to his own Section, and to examine and register all additions to that collection.

III.—That each Section appoint its own Curator, and arrange its own meetings.

It was also proposed to substitute for the first half of Rule III. the following:—

That a Committee be appointed, to consist of not more than seven, of whom two shall be elected by the Society, the President, Secretary, and Curators being members *ex officio*.

The amendment was passed unanimously.

T. S. LEA then read a paper on "The Solar System," accompanied by diagrams and drawings, to illustrate the theory of eclipses, the relative distance of the planets, and other points.

There were seven honorary members, thirty-one members, and seven visitors present at this meeting.

The Twenty-seventh Meeting was held on Monday, June 1st.

F. PODMORE read a paper on the Darwinian Theory.

At the conclusion of the paper, in consequence of the lateness of the time, all discussion on its subject was postponed.

There were ten honorary members, twenty-six members, and fourteen visitors present at this meeting.

The Twenty-eighth Meeting was held on Monday, June 15th.

J. CHARRINGTON read a paper on Acoustics, with experiments illustrating the non-transmission of sound in a vacuum, and other phenomena.

There were ten honorary members, twenty-six members, and twelve visitors present at this meeting.

The Twenty-ninth Meeting was held on Monday, June 29th.

In the absence of the President, the SECRETARY took the chair.

R. T. ALLEN read a paper on the "Common Flea," in the course of which he gave some interesting details of the training and performances of those animals. In consequence, partly, of the concert rehearsal, which unfortunately was going on at the same time, the attendance at this meeting was unusually small.

There were thirteen members and four visitors present.

The Thirtieth Meeting was held on Monday, July 13th.

H. A. PHILLIPS read a paper on the Structure of the Human Eye. The lecturer, who was singularly clear in his explanation, gave a short account of the various coats, humours, and muscles of this organ, illustrating each point by large coloured diagrams.

At the conclusion of the paper, the PRESIDENT rose to propose a vote of thanks to the lecturer, who was to leave them next morning, as well for the interesting paper which they had just heard, as for his services rendered to the Society in assisting in the preparation of former lectures, and in other ways.

The motion was seconded by F. PODMORE, and accorded unanimously by the Society.

The lecturer then proceeded to dissect a bullock's eye, and succeeded in extricating the crystalline lens in a very glittering and perfect condition.

There were four honorary members, twenty-one members, and ten visitors at this meeting.

The Thirty-first Meeting was held on Monday, July 20th.

At this meeting the Sections exhibited the specimens collected during the term. The Botanical Section exhibited several plants not entered in the Society's lists. The Entomological Section a number of Lepidoptera, and a few Neuroptera and other insects, many of which were presented by R. W. Bowyer, Esq. The Geologists showed a few fossils, none of them of any very great rarity or beauty, except, perhaps, a piece of some quartzose rock found in chalk.

The meeting was well attended by members and visitors, although no honorary member was present.

The Thirty-second Meeting was held on Saturday, July 25.

This meeting was held for the purpose of electing officers for the ensuing term.

Mr. HENSLEY, in a short speech, touched upon the present flourishing state of the Society, which, in his opinion, was mainly owing to the fact that the boys knew more and took more interest in the institution than the masters (cries of "No, no!"). He concluded by proposing a vote of thanks to the Secretary and other officers of the Society, for their unremitting zeal and enthusiasm in its service.

The vote of thanks was seconded by J. R. TWISDEN, and carried unanimously.

C. W. Ridley was then elected Secretary, and F. H. Colson, J. R. Twisden, A. Anson, T. S. Lea, and C. M. Sumner on the Committee.

The Committee then brought forward the two following rules, which were passed by the Society:—

I.—That the number of Members be limited to 30.

II.—That all subscriptions be paid in to the Secretary within the first fortnight of the term; the defaulter to pay a fine of 6*d.* for every additional week; and when his subscription is four weeks in arrear, to cease to be a Member of the Society.

It was decided that a new Section should be formed after the holidays for the discussion of certain branches of Natural History which do not come under the province of the other Sections.

The Thirty-third Meeting was held on Monday, September 28th, for the election of Members.

S. C. SNOW, F. S. Wilde, and A. B. Oddie were elected Members. H. M. Stephens sent in his resignation.

There were fourteen members present at this meeting.

The Thirty-fourth Meeting was held on Monday, October 12th.

J. E. INNES read a paper on the Island of Eigg, accompanied by numerous specimens and illustrations.

R. W. BOWYER, Esq., gave a lecture on the Heart, explaining its structure and physiology. Afterwards the lecturer dissected a sheep's heart.

There were ten honorary members, seventeen members, and ten visitors present at this meeting.

The Thirty-fifth Meeting was held on October 26th.

E. S. DASHWOOD and G. H. VINCENT were elected Members.

R. G. COPE read a paper on the Nebular Theory of Laplace; and C. W. RIDLEY read one on the Direct Uses of Insects. At the conclusion of the papers, various questions were asked by the President and others.

There were seventeen members, five honorary members, and seven visitors present at this meeting.

The Thirty-sixth Meeting was held on Monday, November 9th.

T. S. LEA read a paper on "Comets." After a few questions had been asked on its subject, the Rev. A. HENSLEY read a paper on "Lime and Limestone," in which he gave a description of the properties and uses of its various forms. The audience then proceeded to examine some specimens which had been arranged for inspection.

There were thirteen members, four visitors, and five honorary members present at this meeting.

The Thirty-seventh Meeting was held on Monday, November 23rd.

H. A. D. WATHEN and G. C. STAPYLTON were elected Members of the Society.

The Rev. A. HENSLEY continued his paper on "Lime and Limestones," in which he explained the various forms of coral and marble, and compared the chalk now forming at the bottom of the sea with the old chalk formations. There were, as at the previous meeting, numerous specimens arranged for inspection.

There were seven honorary members, thirteen members, and five visitors present.

The Thirty-eighth Meeting was held on Monday, November 30th, for electing officers, etc.

R. G. COPE brought forward a motion that there should be a Convivium at the end of the term. After a somewhat hot discussion, it was put to the vote, and lost by a majority of 13 to 7.

A. D. CARLISLE, Esq., was elected President for the ensuing year, in place of Rev. A. Hensley, C. W. Ridley was elected Secretary, and F. H. Colson, J. R. Twisden, and T. S. Lea, on the Committee. A vote of thanks to the late President was then proposed, and carried unanimously.

There were twenty-one members present at this meeting.

LOCAL FAUNA.

Species printed in *Italics* are not in last year's lists.

M A M M A L I A.

CHEIROPTERA.

Vespertilio Pipistrellus
Plecotus Auritus
Noctulinia Altirolans

CARNIVORA.

Mustela Vulgaris
 „ Putorius
 „ Erminea
 Meles Taxus (one alive at Amwell, 1868)
 Vulpes Vulgaris

INSECTIVORA.

Talpa Europæa
 Sorex Araneus
 „ Fodiens
 Erinaceus Europæus

RODENTIA.

Lepus Timidus
 „ Cuniculus
 Myoxus Avellanarius
 Mus Musculus
 „ Decumanus
 „ Sylvaticus
Micromys Minutus
 Arvicola Amphibia
 Sciurus Vulgaris

AVES

RAPTORES.

Falco Tinnunculus
 „ Palumbarius
 „ Nisus
 „ Milvus (seen over Gallows Hill, 1872)
 Strix Flammea

INSESSORES.

Lanius Excubitor
 „ Collurio
 „ Rufus
 Muscipapa Grisola
 Turdus Viscivorus

Turdus Pilaris
 " Musicus
 " Iliacus
 " Merula
 Saxicola Oenanthe
 " Rubicola
 " Rubetra
 Sylvia Phœnicurus
 " Luscinia
 " Rubecula
 " Hortensis
 " Cinerea
 " Curruca
 " Aticapilla
 " Trochilus
 " Rufa
 " Arundinacea
 " Sibilatrix
 " Phragmitis
 " Locustella
 Regulus Cristatus
 Troglodytes Europæus
 Parus Major
 " Cœruleus
 " Ater
 " Palustris
 " Caudatus
 Motacilla Yarrellii
 " Boarula
 " Rayi
 Anthus Arboreus
 " Pratensis
 Alauda Arvensis
 " Arborea
 Emberiza Miliaria
 " Schœniclus
 " Citrinella
 " Cirrus
 Pyrrhula Vulgaris
 Fringilla Cœlebs
 " Montifringilla
 " Domestica
 " Montana
 " Carduelis
 " Spinus
 " Cannabina
 " Linaria
 " Canescens
 Coccothraustes Chlor
 " Vulgaris
 Sturnus Vulgaris
 Corvus Corone

Corvus Frugilegus
 „ Monedula
 Pica Caudata
 Garrulus Glandarius
 Alcedo Hispida
 Hirundo Rustica
 „ Urbica
 „ Riparia
 Cypselus Apus
 Caprimulgus Europæus

SCANSORES.

Picus Viridis
 „ Minor
 Yunx Torquilla
 Certhia Familiaris
 Sitta Europæa
 Cuculus Canorus

COLUMBINÆ.

Columba Palumbus
 „ Ænas
 „ Turtur

GALLINÆ.

Phasianus Colchicus
 Perdix Cinerea
 „ Rubra

GRALLÆ.

Charadrius Pluvialis
 Vanellus Cristatus
 Ardea Cinerea
 Botaurus Stellaris (one in Hatfield Park)
 Numenius Arcuata
 Scolopax Rusticola
 „ Gallinago (seen at Gallows Hill in 1872)
 Gallinula Crex
 „ Chloropus
 Anas Boschas
 Podiceps Minor
 Sterna Hirundo
 Larus Canus

REPTILIA.

Zootica Vivipara
 Anguis Fragilis
 Coluber Natrrix
 Pelias Berus

BATRACHIA.

Rana Temporaria
 „ Esculenta
 Bufo Vulgaris
 „ Calamita
 Triton Palustris
 „ Aquaticus

COLEOPTERA.

Species printed in *Italics* are not in last year's list.

This list of Coleoptera must be considered as very imperfect, owing to the great difficulty in identifying specimens, and the want of naturalists enterprising enough to collect these interesting insects. It will be seen that there is no mark put against those of which there are specimens in the collection. The reason of this is that there are not many in the collection, and of those that are in the collection several have not been properly identified. Those that are marked as not being in last year's list are not new species found since then, but some that were accidentally missed out in that list. A few also which were put down in last year's list have been left out in this one, as it was found that they had been wrongly identified, and had really never been found here.

PENTAMERA.

<i>Cicindela Campestris</i>	Passim
Demetrius Atricapillus	Under bark
Dromius Quadrinotatus	
" Quadrinotatus	"
Brachinus Crepitans	Near Hoddesdon
Clivina Fossor	Terrace-field
" Collaris	
Notiophilus <i>Aquaticus</i>	Pavilion field
" Biguttatus	Passim
Leistus Spinibarbis	Ploughed fields
" Fulvibarbis	Passim
" Ferrugineus	Near Amwell
" Rufescens	Passim
Nebria Brevicollis	Passim
Carabus Monilis	Two specimens, 1871
" Violaceus	Passim
" Nemoralis	One specimen, 1871
Lonicera Pilicornis	
Badister Bipustulatus	Two specimens, 1871
Chlceuius Vestitus	Bank of water-jump
<i>Patrobis Excavatus</i>	Passim
Calathus Cisteloides	
" Melanocephalus	
Anchomenus Pallipes	
" Dorsalis	
Agonum Marginatum	Hertford Heath
" Sex-punctatum	One specimen, 1871
Pœcilus Cupreus	Hertford Heath
Abax Striola	Passim
Platysoma Oblongo-punctatus	Passim
Adelocia Picimanus	Hoddesdon fields
Steropus Madidus	Passim
Omaseus Melanarius	Passim
<i>Bradytus Apricaria</i>	
Amara Communis	Passim
<i>Ophonus Punctatulus</i>	

Harpalus Ruficornis	Passim
„ <i>Aeneus</i>	
„ <i>Rubripes</i>	
Peryphus Littoralis	Hoddesdon fields
Dytiscus Marginalis	Ponds on Hertford Heath and Bath
„ <i>Dimidiatus</i>	
Acius Sulcatus	Ponds on Hertford Heath. Bath
Agabus Chalconotus	Ponds on Hertford Heath. Bath
„ <i>Bipunctatus</i>	Ponds on Hertford Heath
„ <i>Bipustulatus</i>	Pond on Hertford Heath
Gyrinus Natator	Passim
Myrmedonia Canaliculata	Passim
Homalota Currax	Mississippi field
„ <i>Vestita</i>	Mississippi field
„ <i>Carbonaria</i>	Mississippi field
Tachyporus Chrysomelinus	Passim
„ <i>Hypnorum</i>	Passim
„ <i>Brunneus</i>	Passim
Bolitobius Atricapillus	Fungi on Hertford Heath
Quedius Tristis	Passim
„ <i>Molochinus</i>	Hertford Heath
Staphylinus Erythropterus	Avenue
Ocypus Olens	Passim
„ <i>Ater</i>	Passim
„ <i>Compressus</i>	Hertford Heath
Philonthus Splendens	Passim
„ <i>Aeneus</i>	Passim
„ <i>Marginatus</i>	Passim
Xantholinus Fulgidus	Passim
„ <i>Linearis</i>	Mississippi field
Stenus Juno	Mississippi field
„ <i>Bupthalmus</i>	Mississippi field
Necrophorus Vestigator	Dead rats, Hertford Heath
„ <i>Humator</i>	
„ <i>Vespillo</i>	Dead rabbits, Hertford Heath
Silpha Thoracica	Hertford Heath
„ <i>Rugosa</i>	Hertford Heath
„ <i>Sinuata</i>	Passim
„ <i>Obscura</i>	Terrace field
Hister Cadaverinus	Passim
Dermestes Murinus	Cocoa-nut Matting
Byrrhus Pilula	Quadrangle and Terrace
<i>Dorcus Parallelopipedus</i>	
Sphæridium Scarabæoides	Passim
Cetonia Aurata	Hoddesdon
Melolontha Vulgaris	Passim
Rhizotrogus Solstitialis	Passim
Geotrupes Stercorarius	Passim
„ <i>Typhaeus</i>	Hertford Heath
„ <i>Sylvaticus</i>	Hertford Heath
Onthophagus Nuchicornis	Hertford Heath
Aphodius Subterraneus	Passim

Aphodius Fossor	Passim
" Fimetarius	Hertford Heath
" Prodromus	Passim
" <i>Erraticus</i>	Passim
" <i>Rufipes</i>	Passim
Athous Hæmorrhoidalis	Passim
Agriotes Lineatus	Hailey Lane
" Sputator	
<i>Corymbetes Holosericeus</i>	Hertford Heath
Lampyrus Noctiluca	Passim
Telephorus Lividus	Passim
" Fuscus	Woodfield
Malachus Bipustulatus	Passim
Byturus Tomentosus	Jampots in cupboards
Niptus Hololeucus	Hailey Lane
Cis Boleti	

HETEROMERA.

Blaps Mucronata	Quadrangle
Tenebrio Molitor	College Bread
Lagria Hirta	Nettles
Pyrochroa Coccinea	Passim
Rhipiphorus Paradoxus	Wasps' Nests
Meloë Violaceus	Passim

TETRAMERA.

<i>Bruchus Seminarius</i>	Passim
Sitones Lineatus	Passim
<i>Apion</i> (several species)	
Alophus Triguttatus	Passim
Hylobius Abietis	Amwell
Phyllobius Uniformis	Passim
Otiorhynchus Sulcatus	Passim
Balaninus Nucum	Hertford Heath (one specimen)
Scolytus Destructor	Masters' garden
Prionus Coriarius	Passim
Callidium Violaceum	Hertford Heath
Clytus Arietis	Hertford Heath & Hoddesdon fields
Saperda Populnea	Green Lane (one specimen)
Toxotus Meridianus	Amwell (one specimen)
<i>Rhagium Inquisitor</i>	Woodfield
Strangalia Armata	Woodfield
Leptura Livida	Woodfield
Cryptocephalus Sericeus	Passim
Timarcha Tenebricosa	Passim
Chrysomela Polygoni	Mississippi field
" Polita	Passim
Phyllotreta Nemorum	Hoddesdon fields (one specimen)
<i>Crepidodera Ferruginea</i>	Hoddesdon fields
Cassida Viridis	Ponds on Hertford Heath
" Vibex	One specimen
<i>Attelabus Coryli</i>	

TRIMERA.

<i>Coccinella Bipunctata</i>	Passim
„ <i>Septem-punctata</i>	Passim
„ <i>Variabilis</i>	Passim
„ <i>22-punctata</i>	Hoddesdon fields
„ <i>Dispar</i>	Passim
„ <i>Conglobata</i>	Passim

HYMENOPTERA, ACULEATA.

This list is not presented as containing the whole, or anything like the whole, of the Bees and Wasps of the neighbourhood. It is the result of only one season's collecting, and therefore its imperfections must be very numerous. But it has been determined to publish the list for several reasons. The Aculeate Hymenoptera seem most unjustly neglected by the members of our Society. While a fair list of the Coleoptera of the neighbourhood—a far more difficult subject—has been in our hands for some time; and a good list of our Lepidoptera is one of the most important parts of our report; this, I believe, is the first time that an attempt has been made to catalogue our Hymenopterous treasures. It is hoped that the publication of this list, incomplete as it is, will break the ice, and that we shall in a few years have as good a list of Hymenoptera as we already have of Lepidoptera.

As in the other lists, the species of which specimens are contained in the Society's collection are distinguished by an asterisk.

DIPLOPTERA.

* <i>Odynerus Spinipes</i>	End of Green Lane
„ <i>Quadratus</i>	End of Green Lane
<i>Vespa Crabro</i>	Passim
„ <i>vulgaris</i>	Passim

ANTHOPHILA.

* <i>Colletes</i> [?] <i>Succincta</i>	Hoddesdon-road
<i>Sphecodes Rufescens</i>	Hoddesdon-road
* „ <i>Ephippia</i>	Hoddesdon-road
* <i>Halictus rubicundus</i>	Hertford Heath
* „ <i>Quadrinotatus</i>	Hoddesdon-road
* „ <i>Cylindricus</i>	Hoddesdon-road
* „ <i>Flavipes</i>	Near Gallows hill
„ <i>Morio</i>	Hoddesdon-road
* „ <i>Minutus</i>	Hoddesdon-road
* „ <i>Nitidiusculus</i>	Hoddesdon-road
<i>Andrena Albicans</i>	Hoddesdon-road
„ <i>Gwynana</i>	Hoddesdon-road
* „ <i>Atriceps</i>	End of Green Lane
„ <i>Nigroænea</i>	Hoddesdon-road
* „ <i>Chrysoseles</i>	Hoddesdon-road

* <i>Andrena Xanthura</i>	End of Green Lane
<i>Nomada Fabriciana</i>	Hoddesdon-road
" <i>Solidaginis</i>	End of Green Lane
* " <i>Lineola</i>	Hoddesdon-road
" <i>Alternata</i>	Hoddesdon-road
* " <i>Sexfasciata</i> [?]	Hoddesdon-road
* " <i>Succincta</i>	Hoddesdon-road
<i>Coelioxys Simplex</i>	End of Green Lane
* <i>Melecta Armata</i>	Hoddesdon-road
* <i>Osmia Rufa</i>	The Avenue
* <i>Megachile Centuncularis</i>	Hoddesdon-road
<i>Anthidium Manicatum</i>	A study window
* <i>Anthophora Acervorum</i>	Passim
* <i>Bombus Muscorum</i>	Passim
* " <i>Senilis</i>	Passim
* " <i>Silvarum</i>	Passim
* " <i>Terrestris</i>	Passim
* " <i>Lapidarius</i>	Passim
" <i>Subterraneus</i>	End of Green Lane
* <i>Apis Mellifica</i>	Passim

LEPIDOPTERA.

The list of 1873 has not received as many additions as we should like to have seen. We hope this is not a sign of any falling off in the interest of collecting these insects. The only new species found since 1873 which can be called rare is *N. Dictæa*; but there are some other rarities missed out in the last list, namely *N. Chaonia* and *A. Leporina*, which are placed in this one. It has been impossible to mark in this list those of which specimens are in the local collection, because at present the collection cannot be arranged and identified for want of cabinets to put it in, for although we have got some cabinets, they are not yet ready for use. It is to be hoped that they will soon be ready for the reception of specimens: but, at the same time, there is no reason why members should not contribute more than at present they do; for the collection is very small when compared with the list, and even the very commonest moths and butterflies will be gladly received from those members who take an interest in this branch of Natural History.

MACRO-LEPIDOPTERA.

DIURNI.

<i>Gonepteryx Rhamni</i>	Passim
<i>Aporia Cratægi</i>	Hailey House Garden (one specimen)
<i>Pieris Brassicæ</i>	Passim
" <i>Rapæ</i>	Passim
" <i>Napi</i>	Passim
<i>Eucloe Cardamines</i>	Passim
<i>Leucophasia Sinapis</i>	Hertford Heath (one specimen)
<i>Lasiommata Megæra</i>	Passim
<i>Hipparchia Semele</i>	Hertford Heath

<i>Hipparchia Janira</i>	Passim
„ <i>Tithonus</i>	Passim
„ <i>Hyperanthus</i>	Passim
<i>Cœnonympha Pamphilus</i>	Passim
<i>Cynthia Cardui</i>	Occasionally
<i>Vanessa Atalanta</i>	Passim
„ <i>Io</i>	Passim
„ <i>Polychloros</i>	Passim
„ <i>Urticæ</i>	Passim
<i>Argynnis Euphrosyne</i>	Roman Road. Green Lane
<i>Thecla Quercus</i>	Roman Road. Hertford Heath
<i>Chrysophanus Phlœas</i>	Passim
<i>Polyommatus Argiolus</i>	Passim
„ <i>Alexis</i>	Passim
„ <i>Agestis</i>	Orchis field
<i>Pyrgus Alveolus</i>	Hertford Heath. Orchis field
<i>Nisionades Tages</i>	Orchis field
<i>Pamphila Linea</i>	Passim
„ <i>Sylvanus</i>	Orchis field

NOCTURNI.

<i>Smerinthus Ocellatus</i>	Not common
„ <i>Populi</i>	Not common
„ <i>Tiliæ</i>	Palings
<i>Acherontia Atropos</i>	One at light
<i>Sphinx Ligustri</i>	Passim
<i>Chœrocampa Porcellus</i>	One on Hertford Heath
<i>Macroglossa Stellatarum</i>	Passim
„ <i>Fuciformis</i>	One on Hertford Heath
<i>Sesia Cynipiformis</i>	One on Pavilion field
<i>Macrogaster Arundinis</i>	Moorhen Pond
<i>Zeuzera Æsculi</i>	Occasionally
<i>Cossus Ligniperda</i>	Hertford Heath
<i>Hepialus Hectus</i>	Passim
„ <i>Lupulinus</i>	Passim
„ <i>Sylvinus</i>	
„ <i>Humuli</i>	Occasionally
<i>Zygæna Lonicæræ</i>	Orchis field
„ <i>Filipendulæ</i>	Orchis field
<i>Nudaria Senex</i>	One specimen
<i>Calligenia Miniata</i>	Hertford Heath. Roman Road
<i>Lithosia Mesomella</i>	Hertford Heath
„ <i>Complanula</i>	Passim
<i>Euchelia Jacobææ</i>	Roman Road
<i>Chelonia Caja</i>	Passim
„ <i>Villica</i>	Passim
<i>Arctia Fuliginosa</i>	One specimen (bred)
„ <i>Mendica</i>	♀ common. ♂ one only
„ <i>Lubricipeda</i>	Passim
„ <i>Menthastri</i>	Passim

Arctia Urticæ	One at light
Liparis Chrysorrhæa	Occasionally
Auriflua	Passim
Monacha	One at light
Orgyia Pudibunda	Passim
Gonostigma	Hertford Heath
Antiqua	Passim
<i>Trichiura Cratægi</i>	One specimen (bred)
Poecilocampa Populi	Passim
Eriogaster Lanestris	Larva, common
Bombyx Neustria	Passim
Quercus	Passim
Odonestis Potatoria	Passim
Lasiocampa Quercifolia	Passim
Saturnia Carpini	A few specimens

GEOMETRÆ.

Uropteryx Sambucata	Passim
<i>Epione Apiciaria</i>	One at light
Rumia Cratægata	Passim
Venilia Maculata	Passim
Angerona Prunaria	Hertford Heath
Metrocampa Margaritata	Hertford Heath
Eurymene Dolobrararia	Occasionally at light
Pericallea Syringaria	Not unfrequent
Selenia Illunaria	
Lunaria	At light
Odontoptera Bidentata	Not common
Crocallis Elinguaria	Passim
<i>Ennomos Tiliaria</i>	At light. Palings
Erosaria	Not common
Himera Pennaria	Passim
Phigalia Philosaria	Passim
Amphydasis Prodrumaria	At light
Betularia	Occasionally
Hemerophila Abruptaria	Hertford Heath
Cleora Lichenaria	Not common
Boarmia Repandata	Passim
Rhomboidaria	Passim
Tephrosia Extersaria	Roman Road
Pseudoterpna Cytisaria	Hertford Heath
Geometra Papilionaria	At light, not common
Iodis Vernaria	Roman Road
Lactearia	Hertford Heath
Phorodesma Bajularia	Hertford Heath
Hemithea Thymiaria	Hertford Heath
Ephyra Porata	Hertford Heath
Punctaria	Not common
Omicronaria	Hertford Heath
Asthema Luteata	
Candidata	Passim

Acidalia Bisetata	Hertford Heath
„ Trigemmata	Hertford Heath
„ Osseata	Not common
„ Straminata	Not common
„ Remutata	Common
„ Imitaria	At light
„ Aversata	Passim
„ Emarginata	Roman Road
Timandra Amataria	Roman Road, at light
Cabera Pusaria	Passim
„ Exanthemaria	Passim
Corycia Temerata	Roman Road
Halia Wavaria	
Strenia Clathrata	Passim
Panagra Petraria	Hertford Heath
Fidonia Atomaria	Hertford Heath
Aspilates Strigillaria	
Abraxas Grossulariata	Passim
Ligdia Adustata	Not common
Lomaspilis Marginata	Passim
Hibernia Rupricapraria	Passim
„ Leucophearia	Hertford Heath
„ Aurantiaria	At light
„ Progenimaria	Hertford Heath
„ Defoliaria	Hertford Heath
Anisopteryx Æscularia	Passim
Chimatobia Brumata	Passim
Oporabia Dilutata	
Larentia Didymata	Hertford Heath
„ Pectinitaria	Hertford Heath. Roman Road
Emmelesia Affinitata	
„ Alchemillata	At light
„ Decolorata	
Eupithecia Vulgata	Palings
„ Centaureata	Palings
„ Subfulvata	Palings
„ Rectangulata	Palings
Lobophora Hexapterata	Roman Road
„ Viretata	Palings
Thera Simulata	
Ypsipetes Ruberata	One specimen
„ Elutata	
Melanthia Ocellata	
Melanippe Procellata	One at light
„ Rivata	
„ Subtristata	
„ Montanata	Fives' Courts
„ Fluctuata	Passim
Anticlea Rubidata	Roman Road
„ Badiata	Passim
„ Derivata	Palings
Coremia Propugnata	Not common

Coremia Ferrugata	
" Unidentata	
" Bilineata	Passim
Phibalapteryx Tersata	Roman Road
" Lignata	Not common
" Vitalbata	Hertford Heath
Scotosia Dubitata	At light
Cidaria Miata	At light
" Picata	Hertford Heath Green Lane
" Corylata	
" Russata	
" Testata	Occasionally
" Fulvata	Hertford Heath
" Pyraliata	
" Dotata	Occasionally
Eubolia Cervinaria	At light
" Mensuraria	Orchis field
" Palumbaria	Hertford Heath
" <i>Bipunctata</i>	Gallows' Hill
Anaitis Plagiata	Palings
Chesias Spartiata	Hertford Heath
<i>Tanagra Chærophyllata</i>	Hertford Heath

CUSPIDATES.

Platypteryx <i>Lacertula</i>	A few at light
" Hamula	Occasionally
" Falcula	Passim
" Spinula	Passim
Cilix Spinula	One on Hertford Heath
Dicranura Furcula	Passim
" Vinula	One on Hertford Heath
Stauropus Fagi	At light
Petasia Cassinea	Passim
Pygaera Bucephala	At light
Philodontis Palpina	Passim
Notodonta Camelinea	One at light
" <i>Dictæa</i>	Hertford Heath. Hailey Lane
" Ziczac	One at light
" Trepida	One on Hertford Heath
" <i>Chaonia</i>	Occasionally
" Dodonæa	Passim
Diloba Cæruleocephala	

NOCTUÆ.

Gonophera Derasa	At light, Hertford Heath
Thyatira Batis	At light
Cymatophora Diluta	
" Ridens	One at light
Bryophila Perla	Passim

<i>Acronycta Psi</i>	Passim
" <i>Leporina</i>	One near Hertford Heath
" <i>Aceris</i>	Not common
" <i>Megacephala</i>	Passim
<i>Leucania Conigera</i>	
" <i>Lithargyria</i>	At light
" <i>Comma</i>	One at light
" <i>Straminea</i>	Passim
" <i>Impura</i>	Passim
" <i>Pallens</i>	At light
<i>Gortyna Flavago</i>	
<i>Hydræcia Nictitans</i>	At light
<i>Axylia Putris</i>	Occasionally
<i>Xylophasia Rurea</i>	Passim
" <i>Lithoxylea</i>	Passim
" <i>Polyodon</i>	Not uncommon
" <i>Hepatica</i>	Hertford Heath. Palings
<i>Dipterygia Pinastri</i>	Not uncommon
<i>Neuria Saponariæ</i>	At light
<i>Heliophobus Popularis</i>	At light
<i>Cerigo Cytherea</i>	
<i>Luperina Testacea</i>	
<i>Mamestra Anceps</i>	
" <i>Brassicæ</i>	Passim
" <i>Persicariæ</i>	Not common
<i>Apamea Basilinea</i>	
" <i>Oculea</i>	Passim
<i>Miana Strigilis</i>	
" <i>Fasciuncula</i>	
" <i>Furuncula</i>	
" <i>Arcuosa</i>	One at light
<i>Caradrina Morpheus</i>	
" <i>Alsines</i>	
<i>Rusina Tenebrosa</i>	At light
<i>Agrotis Segetum</i>	Passim
" <i>Exclamationis</i>	Passim
" <i>Corticea</i>	Passim
" <i>Porphyrea</i>	
" <i>Ravida</i>	One specimen
<i>Tryphæna Janthina</i>	
" <i>Orbona</i>	Passim
" <i>Pronuba</i>	Passim
" <i>Augur</i>	Passim
<i>Noctua Plecta</i>	At light
" <i>C. Nigrum</i>	
" <i>Triangulum</i>	Larva in Hailey House Field
" <i>Rhomboidea</i>	One specimen
" <i>Brunnea</i>	
" <i>Festiva</i>	
" <i>Baja</i>	One at light
" <i>Xanthographa</i>	Passim
<i>Tæniocampa Gothica</i>	At Sallows

<i>Tæniocampa Rubricosa</i>	At Sallows, occasionally
„ <i>Instabilis</i>	At Sallows
„ <i>Stabilis</i>	At Sallows
„ <i>Gracilis</i>	At Sallows, occasionally
„ <i>Munda</i>	At Sallows, occasionally
„ <i>Cruda</i>	At Sallows
<i>Anthocelis Pistacina</i>	
„ <i>Lunosa</i>	At light
<i>Cerastis Vaccinii</i>	Passim
<i>Scophelosoma Satellitia</i>	Passim
<i>Xanthia Citrigo</i>	Larva on Lime Trees
„ <i>Cerago</i>	
„ <i>Ferruginea</i>	
<i>Cirrhiædia Xerampelina</i>	One specimen
<i>Cosmia Trapezina</i>	Passim
<i>Dianthæcia Capsincola</i>	Larva in Hailey Lane: at light
<i>Hecatera Serena</i>	On Palings
<i>Miselia Oxyacanthæ</i>	Passim
<i>Agriopsis Aprilina</i>	Hertford Heath
<i>Phlogophora Meticulosa</i>	
<i>Euplexia Lucipara</i>	A few specimens
<i>Aplecta Nebulosa</i>	Passim
„ <i>Advena</i>	One specimen
<i>Hadena Proteus</i>	Terrace Field
„ <i>Dentina</i>	Palings
„ <i>Chenopodii</i>	
„ <i>Suasa</i>	On Palings
„ <i>Oleracea</i>	At light
„ <i>Pisi</i>	Palings
„ <i>Thalassina</i>	Palings
„ <i>Genistæ</i>	Palings
<i>Xylocampa Lithorhiza</i>	Palings
<i>Xylina Rhizolitha</i>	One at light
<i>Calocampa Exoleta</i>	
<i>Cucullia Verbasci</i>	Larva, common
„ <i>Umbratica</i>	Palings
<i>Heliodes Arbuti</i>	Orchis field
<i>Brephos Parthenias</i>	Occasionally
<i>Abrostola Urticæ</i>	At light
„ <i>Triplasia</i>	Occasionally
<i>Plusia Chrysitis</i>	At light
„ <i>Iota</i>	At light
„ <i>Gamma</i>	Passim
<i>Gonoptera Libatrix</i>	Passim
<i>Amphipyra Pyramidea</i>	
„ <i>Tragopogonis</i>	Passim
<i>Nænia Typica</i>	Hertford Heath
<i>Mania Maura</i>	Hertford Heath
<i>Catocala Nupta</i>	Passim
<i>Euclidia Mi</i>	Orchis field. Roman Road
„ <i>Glyphica</i>	Orchis field. Roman Road

MOLLUSCA.

There are no new species in this year's list of Mollusca, but as this list is so very nearly perfect, we should hardly have expected any. But the specimens in the collection are not so numerous—in fact, there are only 15 sorts, though some are rare, and most of them hard to find, being very small. Our thanks for the specimens, as well as for the list itself, are due to F. Podmore: As in most of the other lists, those of which there are specimens are marked with an asterisk.

(Named from Jeffreys's *British Conchology*).

CONCHIFERA.

Sphærium Corneum	River Lea
" Rivicola	River Lea
" Lacustre	Amwell
Pisidium Amnicum	Amwell
" Nitidum	Amwell
Unio Pictorum	River Lea
Anodonta Cygnea	River Lea
" Anatina	River Lea

GASTEROPODA—PECTINIBRANCHIATA.

*Neritina Fluviatilis	Rye House
Paludina Vivipara	River Lea
Bythinia Tentaculata	River Lea
" Leachii	Amwell
Valvata Piscinalis	Amwell
" Cristata	St. Margaret's

GASTEROPODA—PULMONOBRANCHIATA.

*Planorbis Nautilus	Near Hertford
" Albus	St. Margarets
" Glaber	St. Margarets
• " Spirorbis	Amwell
" Vortex	Amwell
" Carinatus	Amwell
" Complanatus	Amwell
" Corneus	Amwell
" contortus	Amwell
*Physa Hypnorum †	St. Margarets
• " Fontinalis	St. Margarets

† One specimen dead.

Limnæa Peregra	Passim
„ Auricularia	Amwell
„ Stagnalis	Passim
„ Palustris	Passim
„ Truncatula	Pavilion Field
*Ancylus Fluviatilis	St. Margarets
* „ Lacustris	Hoddesdon Fields
Arion Ater	Passim
„ Hortensis	Passim
Limax Marginatus	Gallows Hill
„ Flavus	Passim
„ Agrestis	Passim
„ Maximus	Passim
Succinea Putris	Passim
„ Elegans	St. Margarets
Vitrina Pellucida	Gallows Hill
Zonites Cellarius	Passim
„ Alliaris	Gallows Hill
„ Nitidulus	Passim
* „ Crystallinus	Passim
* „ Fulvus	Hoddesdon Fields
*Helix Aculeata	Hoddesdon Fields
„ Pomatia	Gallows Hill
„ Aspersa	Passim
„ Nemoralis	Passim
„ „ var.	Passim
„ Hortensis	Passim
„ Arbustorum	St. Margarets
„ „ var. Alpestris	Banks of River Lea
„ Cantiana	Passim
„ Rufescens	Passim
„ Concinna (?)	Gallows Hill
„ Hispida	Passim
„ Fusca (?)	Gallows Hill
„ Caperata	Passim
„ Ericetorum	Gallows Hill
„ Rotundata	Passim
* „ Pygmæa	Hoddesdon Fields
„ Pulchella	Passim
„ Lapicida	Gallows Hill
Bulimus Obscurus	Passim
Pupa Umbilicata	Passim
*Vertigo Pygmæa	Rye House
Clausilia Rolphii	Gallows Hill
„ Rugosa	Passim
Cochlicopa Lubrica	Passim
*Achatina Acicula	St. Margarets
*Carychium Minimum	Passim
Cyclostoma Elegans	Gallows Hill

LOCAL FLORA.

The list of the Local Flora printed in the Society's report for 1873 having unfortunately been found by no means as accurate as could be wished, it has been determined to reprint the whole with the additions and corrections which have been found necessary. In a considerable number of instances the names of plants were found inserted in the former list without locality, and without any authority which has yet been discovered. In such cases the species has been struck off the list. It is to be hoped that the system of registration lately introduced into the Society may prevent such mistakes in future. Beside this, an examination of the collections of two members of the Society, from which the former list was almost entirely compiled, has proved that a few species were wrongly identified.

The species which are contained in the Society's collection are distinguished by an asterisk; and those which were not entered in the former list are printed in italics. The nomenclature is that adopted by Dr. Hooker in his *Student's Flora of the British Isles*. Synonyms used in last year's list are printed in brackets after the name of the species to which they belong.

The following species were wrongly identified:—

Ranunculus Lingua,	by mistake for a large form of <i>R. flammula</i> .
<i>Arabis hirsuta</i>	„ <i>Sisymbrium Thaliana</i> .
<i>Trifolium minus</i>	„ <i>T. filiforme</i> .
<i>Vicia lathyroides</i>	„ a starved specimen of <i>V. sativa</i> .
<i>Bidens tripartita</i>	„ <i>B. cernua</i> .
<i>Luzula pilosa</i>	„ <i>L. campestris</i> .

The occurrence of the following species in the district requires confirmation:—

Arenaria Verna
 „ *Trinervis*
Hypericum Montanum
Oxalis Acetosella
Vicia Silvatica
Rosa Tomentosa
Epilobium Angustifolium
Circæa Lutetiana
Fedia Dentata
Erica Tetralix
Lithospermum Officinale
Veronica Buxbaumii
Nepeta Cataria
Lysimachia Vulgaris
 „ *Nummularia*
Polypodium Vulgare

DICOTYLEDONS.

RANUNCULACEÆ.

Clematis Vitalba	Passim
*Anemone Nemorosa	Passim
*Myosurus Minimus	St. Margarets
*Ranunculus Aquatilis	Passim
* " Hederaceus	Hertford Heath
* " Flammula	Passim
* " Auricomus	The Avenue
* " Sceleratus	Near Gallows Hill
* " Acris	Passim
* " Repens	Passim
* " Bulbosus	Passim
* " Arvensis	Passim
* " Ficaria	Passim
*Caltha palustris	Passim

PAPAVERACEÆ.

*Papaver Rhceas	Passim
*Chelidonium majus	Gallows Hill

FUMARIACEÆ.

*Fumaria Officinalis	Amwell
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CRUCIFERÆ.

*Nasturtium Officinale	Passim
*Barbarea Vulgaris	Passim
*Arabis Perfoliata† [Turrilis glabra]	Gallows Hill
*Cardamine Hirsuta	Roman Road
* " subsp. Flexuosa [C. Silvatica]	Goldhinton Wood
* " Pratensis	Passim
*Sisymbrium Thaliana	Near Gallows Hill
* " Officinale	Passim
* " Alliaria [Erysimum Alliaria]	Passim
*Brassica Oleracea	Gallows Hill
* " Campestris, subsp. Napus	Amwell
* " Sinapistrum [Sinapis Arvensis]	Passim
*Erophila Verna [Draba]	Near Gallows Hill
*Cochlearia Armoracia ‡	Passim
*Capsella Bursa Pastoris	Passim
*Senebiera Coronopus [Coronopus Ruelli]	Passim
<i>Raphanus Raphanistrum</i>	Passim

RESEDACEÆ.

*Reseda Luteola	Gallows Hill
* " Lutea	Gallows Hill

† One specimen only, collected in 1872.

‡ A few scattered specimens only, all of which were found in the neighbourhood of heaps of garden refuse, etc.

CISTINEÆ.

- * *Helianthemum Vulgare* Gallows Hill

VIOLACEÆ.

- Viola Odorata* Hailey Lane
 " *Hirta* (?) Near Gallows Hill
 * " *Canina* Passim
 * " *Tricolor* Passim

POLYGALEÆ.

- * *Polygala Vulgaris* Passim

CARYOPHYLLEÆ.

- Dianthus Armeria* Orchis Field
 * *Silene Inflata* Passim
 * *Lychnis Flos-cuculi* Passim
 * " *Diurna* Passim
 * " *Vespertina* Passim
 * *Githago Segetum* [*Agrostemma Githago*] Passim
Cerastium Quaternellum [*Moenchia erecta*] Hertford Heath
 * " *Semidecandrum* Near Hertford
 * " *Glomeratum* [*C. Vulgatum*] Passim
 * " *Triviale* [*C. Viscosum*] Passim
 * *Stellaria Aquatica* St. Margarets
 * " *Media* Passim
 * " *Holostea* Passim
 * " *Uliginosa* Passim
 * " *Graminea* Passim
Arenaria Serpyllifolia Passim
 * *Sagina Apetala* Passim
 * " *Procumbens* Passim
 * *Spergula Arvensis* Passim
 * *Spergularia Rubra* Passim

PORTULACEÆ.

- * *Montia Fontana* Goose Green

HYPERICINEÆ.

- * *Hypericum Perforatum* Passim
 " *Quadrangulum* Hertford Heath
 * " *Humifusum* Hertford Heath
 * " *Hirsutum* Hailey Lane

MALVACEÆ.

- * *Malva Silvestris* Passim
 * " *Rotundifolia* Passim
 " *Moschata* Gallows Hill

TILLACEÆ.

- Tilia Intermedia* † Passim

† Apparently planted in all the localities in the neighbourhood in which it has yet been found.

LINEÆ.

- **Linum Catharticum* Passim
 * „ *Angustifolium* Hertford Road

GERANIACEÆ.

- **Geranium Pyrenaicum* Near Hertford
 * „ *Molle* Passim
 * „ *Rotundifolium* Gallows Hill
 * „ *Columbinum* Near Hertford
 * „ *Dissectum* Near Hertford
 * „ *Robertianum* Passim
 * „ *Lucidum* Near Amwell
 **Erodium Cicutarium* Passim

ILICINEÆ.

- **Ilex Aquifolium* Passim

CELASTRINEÆ.

- **Euonymus Europæus* Passim

RHAMNEÆ.

- **Rhamnus Catharticus* Gallows Hill
 * „ *Frangula* Amwell

ACERINEÆ.

- **Acer Campestre* Passim
 * „ *Pseudoplatanus* † Passim

LEGUMINOSÆ.

- Genista Tinctoria* Passim
 * „ *Anglica* Hertford Heath
 **Ulex Europæus* Passim
 **Cytisus Scoparius* Passim
Ononis Arvensis Passim
 „ *Spinosa* Hertford Heath
 **Medicago Lupulina* Passim
 **Melilotus Officinalis* Passim
 **Trifolium Arvense* Roman Road
 * „ *Pratense* Passim
 „ *Medium* Passim
 * „ *Striatum* Near Hertford
 * „ *Scabrum* Hoddesdon-road
 * „ *Repens* Passim
 „ *Fragiferum* Hailey Lane
 * „ *Procumbens* Passim
 „ *Filiforme* Roman Road
 **Anthyllis Vulneraria* Gallows Hill

† Apparently planted in all the places in the neighbourhood where it has yet been found.

	ONAGRARIÆ.	
<i>Epilobium Hirsutum</i>	Passim	
* " <i>Montanum</i>	Passim	
" <i>Tetragonum</i>	Near Ware	
	LYTHRACEÆ.	
<i>Lythrum Salicaria</i>	Near Amwell	
	CUCURBITACEÆ.	
* <i>Bryonia Dioica</i>	Passim	
	UMBELLIFERÆ.	
* <i>Hydrocotyle Vulgaris</i> *	Goose Green	
<i>Sanicula Europæa</i>	Hertford Heath	
<i>Conium Maculatum</i>	Near Gallows Hill	
* <i>Bupleurum Rotundifolium</i> †	St. Margarets	
<i>Apium Nodiflorum</i>	Lea and its Tributaries	
" <i>Inundatum</i> [<i>Heliosciadium</i>]	Hertford Heath	
<i>Carum Bulbocastanum</i> [<i>Bunium</i>]	Hertford Heath	
<i>Sison Anomum</i>	Passim	
<i>Pimpinella Saxifraga</i>	Hertford Heath	
" <i>magna</i>	Orchis field	
<i>Conopodium Denudatum</i>	Passim	
* <i>Scandix Pecten-Veneris</i>	Near Amwell	
<i>Chærophyllum Temulum</i>	Passim	
<i>Anthriscus Silvestris</i>	Passim	
<i>Ethusa Cynapium</i>	Passim	
<i>Silaus Pratensis</i>	Passim	
<i>Angelica Silvestris</i>	Roman Road	
<i>Peucedanum Sativum</i>	Gallows Hill	
<i>Heracleum Sphondylium</i>	Passim	
<i>Daucus Carota</i>	Passim	
* <i>Caucalis Anthriscus</i>	Hailey Lane	
" <i>Infesta</i>	Near St. Margarets	
	ARALIACEÆ.	
<i>Hedera Helix</i>	Passim	
	CORNACEÆ.	
* <i>Cornus Sanguinea</i>	Passim	
	CAPRIFOLIACEÆ.	
* <i>Viburnum Lantana</i>	Passim	
* " <i>Opulus</i>	Passim	
* <i>Sambucus Nigra</i>	Passim	
* <i>Lonicera Periclymenum</i>	Passim	
	RUBIACEÆ.	
<i>Galium Verum</i>	Passim	
* " <i>Palustre</i>	Passim	
* " " var. <i>Witheringii</i>	Passim	
* " <i>Saxatile</i>	Passim	
* " <i>Mollugo</i>	Passim	

† One specimen only.

*Galium Aparine	Passim
*Asperula Odorata	Hoddesdon Fields
*Sherardia Arvensis	Near Amwell
VALERIANEÆ.	
*Valeriana Dioica	St. Margarets
<i>Officinalis</i>	Near Amwell
*Valerianella Olitoria [Fedia]	Passim
DIPSACEÆ.	
Dipsacus Silvestris	Passim
*Scabiosa Succisa	Hertford Heath
* " Columbaria	Gallows Hill
* " Arvensis	Passim
COMPOSITÆ.	
Arctium Lappa	Passim
Centaurea Nigra	Passim
" Scabiosa	Passim
" Cyanus	Gallows Hill and Amwell
Carduus Nutans	Passim
" <i>Lanceolatus</i>	Passim
" <i>Acaulis</i>	Amwell
" Arvensis [Cnicus]	Passim
" Palustris [Cnicus]	Passim
<i>Eupatorium Cannabinum</i>	St. Margarets
Tussilago Farfara	Passim
Bellis Perennis	Passim
Inula Dysenterica [Pulicaria]	Passim
Bidens Cernua	Passim
<i>Anthemis Cotula</i>	Passim
Achillæa Ptarmica	Passim
" Millefolium	Passim
<i>Matricaria Parthenium</i> †	Little Amwell
*Chrysanthemum Segetum	Near Ware
" Leucanthemum	Passim
Artemisia Vulgaris	Passim
*Gnaphalium Uliginosum	Hertford
*Filago Germanica	Hertford
Senecio Vulgaris	Passim
" Silvaticus	Passim
" Jacobæa	Passim
Lapsana Communis	Passim
Cichorium Intybus	Passim
* <i>Hypochaeris Radicata</i>	Passim
Helminthia Echioides	Passim
Tragopogon Pratensis	Passim
* " <i>Porrifolia</i> ‡	Field behind Mrs. George's
<i>Picris Hieracioides</i>	St. Margaret's
*Leontodon Hirtus	Passim
* " <i>Hispidus</i>	Passim
*Lactuca Virosa‡	Near Gallows Hill

† An escape from cottage gardens, but apparently established now.

‡ One specimen only. ‡ One specimen only, apparently an escape.

Taraxacum Officinale [Leontodon Taraxacum]	Passim
* <i>Crepis Virens</i>	Passim
* " <i>Taraxacifolia</i>	Hoddesdon
Sonchus Arvensis	Passim
" Oleraceus	Passim
Hieracium Pilosella	Passim
" <i>Silvaticum</i>	Passim
CAMPANULACEÆ.	
Campanula Rotundifolia	Passim
* " <i>Glomerata</i>	Chadwell Springs
ERICACEÆ.	
Calluna Vulgaris	Passim
OLEINEÆ.	
Ligustrum Vulgare †	Passim
<i>Frazinus Excelsior</i>	Passim
APOCYNÆÆ.	
Vinca Minor ‡	Hailey Lane
GENTIANEÆ.	
* <i>Chlora Perfoliata</i>	Orchis field
<i>Erythraea Centaurium</i>	Passim
CONVOLVULACEÆ.	
* <i>Convolvulus Arvensis</i>	Passim
" <i>Sepium</i>	Passim
BORRAGINEÆ.	
* <i>Echium Vulgare</i>	Gallows Hill
* <i>Symphytum Officinale</i>	Banks of the Lea and its Tributaries
* <i>Anchusa Arvensis</i> [Lycopsis]	Gallows Hill
* <i>Lithospermum Arvense</i>	Gallows Hill
* <i>Myosotis Palustris</i>	Passim
* " <i>Lingulata</i> [M. Cœspitosa]	Passim
* " <i>Arvensis</i>	Passim
* " <i>Collina</i>	Passim
" <i>Versicolor</i>	Passim
SOLANEÆ.	
<i>Hyoscyamus Niger</i> §	Amwell
* <i>Solanum Dulcamara</i>	Passim
* " <i>Nigrum</i>	G.E.R. Station, Hertford
PLANTAGINEÆ.	
* <i>Plantago major</i>	Passim
* " <i>Media</i>	Passim
* " <i>Lanceolata</i>	Passim
* " <i>Coronopus</i>	Passim
SCROPHULARINEÆ.	
<i>Verbascum Thapsus</i>	Passim
* " <i>Nigrum</i>	Passim
<i>Linaria Cymbalaria</i>	Amwell

Only in hedgerows. † Apparently planted. ‡ One specimen only, collected in 1872.

Linaria Spuria	Near Wood field
" Vulgaris	Passim
* " Minor	Terrace field
Antirrhinum Orontium	Passim
*Scrophularia Nodosa	Passim
* " Aquatica	Passim
*Digitalis Purpurea	Passim
*Veronica Agrestis	Passim
* " Hederæfolia	Passim
* " Serpillifolia	Passim
* " Officinalis	Passim
* " Chamædrys	Passim
* " Montana	Hoddesdon fields
* " Scutellata	Passim
* " Beccabunga	Passim
* " Anagallis	Passim
Bartsia Odontites	Passim
*Euphrasia Officinalis	Passim
*Rhinanthus Crista-Galli	Passim
*Pedicularis Silvatica	Hertford Heath and Goose Green
*Melampyrum Pratense	Hertford Heath and Goose Green

OROBANCHEÆ.

*Orobanche Major	Hertford Heath and Goose Green
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LABIATÆ.

Mentha Aquatica	Hertford Heath and Goose Green
" Arvensis	Near Orchis field
Lycopus Europæus	Pond in Hoddesdon fields
<i>Origanum Vulgare</i>	Amwell
*Thymus Serpyllum	Hertford Heath
*Calamintha Clinopodium [Clinopodium Vulgare]	Passim
*Nepeta Glechoma [Glechoma Hederacea]	Passim
*Prunella Vulgaris	Passim
*Scutellaria Galericulata	Passim
*Marrubium Vulgare	Hoddesdon fields
*Stachys Silvatica	Passim
* " Palustris	Banks of the River Lea
* " Arvensis	Near the Orchis field
* " Betonica [Betonica Officinalis]	Passim
Galeopsis Tetrahit	Passim
*Lamium Purpureum	Passim
* " Amplexicaule	Passim
* " Album	Passim
* " " var.†	Near Gallows Hill
* " Galeobdolon [Galeobdolon Luteum]	Passim
*Ballota Nigra	Passim
*Teucrium Scorodonia	Passim
*Ajuga Reptans	Passim

VERBENACEÆ.

Verbena Officinalis	Amwell
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† With white blotches on the leaves. One specimen only, collected in 1871.

	PRIMULACEÆ.
*Primula Vulgaris	Passim
* " Veris	Passim
Lysimachia Nummularia	Passim
Anagallis Arvensis	Passim
	POLYGONÆ.
*Polygonum Amphibium	Lea near St. Margarets
* " Lapathifolium	Goose Green
* " Persicaria	Passim
* " Hydropiper	Goose Green
* " Aviculare	Passim
" Convolvulus	Passim
*Rumex Crispus	Passim
" Sanguineus	Passim
" Hydrolapathum	River Lea and its Tributaries
* " Acetosa	Passim
* " Acetosella	Passim
	CHENOPODIACEÆ.
*Chenopodium Album	Passim
* " Bonus-Henricus†	Hoddesdon
	EUPHORBIACEÆ.
*Euphorbia Helioscopia	Near Hertford
* " Amygdaloides	Hertford Heath
* " Peplus	Passim
* " Exigua	Passim
*Mercurialis Perennis	Passim
	URTICEÆ.
*Urtica Urens	Little Amwell
* " Dioica	Passim
	CANNABINEÆ.
Humulus Lupulus	Passim
	ULMACEÆ.
*Ulmus Campestris	Passim
	SALICINEÆ.
Populus Tremula	Hertford Heath
*Salix Alba	Hertford Heath
* " Caprea	Passim
* " Repens [S. Fusca]	Hertford Heath and Goose Green
	CUPULIFERÆ.
*Quercus Robur	Passim
Fagus Silvatica	Passim
Corylus Avellana	Passim
Carpinus Betulus	Passim
	BETULACEÆ.
*Betula Alba	Passim
Alnus Glutinosa	Passim

† One specimen only, in a hedgerow, collected in 1874.

MONOCOTYLEDONS.

HYDROCHARIDÆÆ.

Anacharis Alsinastrum Hertford Heath

ORCHIDÆÆ.

* *Orchis Masculata* Passim
 * " *Maculata* Passim
 * " *Morio* Passim
 * " *Pyramidalis* Chadwell Springs
 * *Gymnadenia Conopsea* Chadwell Springs
 * *Habenaria Bifolia* Roman Road
Ophrys Apifera Pavilion field
 * *Listera Ovata* Hertford Heath

ERIDÆÆ.

* *Iris Pseud-Acorus* River Lea

ALISMACEÆ.

* *Alisma Plantago* Passim
Butomus Umbellatus River Lea

NAIADÆÆ.

Potamogeton Natans Passim
 * " " *var. plantagineus* (?) River Lea
 * " *Lucens* River Lea
 * " *Prælongus* River Lea
 " *Densus* River Lea
 * " *Pectinatus* River Lea

LILIACEÆ.

* *Paris Quadrifolia* Goldhinton Wood
 * *Scilla Nutans* [*Hyacinthus Nonscriptus*] Passim
 * *Allium Vineale* Field behind Mrs. George's

JUNCÆÆ.

Juncus Communis [*J. Effusus* and *J. Conglomeratus*] Passim
 * " *Glaucus* Passim
 " *Articulatus* Hertford Heath
 * " *Bufo-nius* Passim
 * *Luzula Campestris* Passim

AROIQÆÆ.

* *Arum Maculatum* Passim

LEMNACEÆ.

Lemna Minor Passim
 " *Trisulca* Pond by Hertford Road

TYPHACEÆ.

* *Sparganium Ramosum* Near Amwell
 * *Typha Latifolia* Near Amwell

GRAMINEÆÆ.

* *Phleum Pratense* Passim
 * *Alopecurus Pratensis* Passim
 * *Phalaris Canariensis*† Terrace field
 * *Agrostis Canina* Passim

† On a rubbish heap.

<i>Hocus Lanatus</i>	Passim
* <i>Melica Uniflora</i>	Near Gallows Hill
* <i>Glyceria Rigida</i>	Chalk-pit at Gallows Hill
* <i>Briza Media</i>	Passim
* <i>Festuca Elatior</i>	Passim
* <i>Bromus Sterilis</i>	Passim
* " <i>Mollis</i>	Passim
* <i>Triticum Repens</i>	
* <i>Lolium Perenne</i>	Near Hertford
* <i>Hordeum Pratense</i>	St. Margarets
* " <i>Murinum</i>	Passim

ACOTYLEDONS.

FILICES.

<i>Pteris Aquilina</i>	Passim
<i>Asplenium Ruta-Muraria</i>	Terrace field
<i>Scolopendrium Vulgare</i>	Terrace field
<i>Nephrodium Filix-mas</i> [Lastrea]	Passim
<i>Ophioglossum Vulgatum</i>	Hailey House Cricket Ground

EQUISETACEÆ.

<i>Equisetum Arvense</i>	Passim
" <i>Silvaticum</i>	Hoddesdon-road
* " <i>Palustre</i>	Near Ware

METEOROLOGICAL OBSERVATIONS.

It may be remembered that in the report for last year the statistics of the weather were omitted on account of their incompleteness. It was then hoped that we should be able to publish a full and accurate set of tables for the year 1874, but this hope has unfortunately not been fulfilled. We have to lament the complete loss of the statistics for the latter half of December—the most interesting period of the year,—and the partial loss of those for April, August, and September. But, in spite of these unfortunate losses, it was thought that the part of the year during which the observations were complete was long enough to warrant their publication.

In the temperature of the air both higher and lower readings have been recorded in 1874 than in 1873. Those under 25° were: 20° on March 11th, 22° on January 6th and 11th, and 23° on December 3rd, while the temperature was down to 25° on January 7th and 12, and on December 4th. Those above 80° were: 81° on July 11th and 20th, 82° on July 14th, and 85° on Aug. 8th.

The recorded falls of rain for this year are, on the contrary, much smaller. In 1873 there were three falls of more than one inch, viz., 1·39 on July 12th, 1·50 on August 24th, and 1·07 on September 30th. In 1874 there have been no falls of more than one inch, and only the following of more than .70 in.: .78 on February 27th, .85 on July 11th (of this .75 fell in thirty minutes), 1·00 on September 4th, and .72 on November 29th. The total fall for the year was 19·63 in. (including that in December, for an account of which see the tables appended.) This gives a monthly average of 1·63—without December the total would be 17·79 and the average 1·61. The driest month was March, in which 0·58 in. of rain fell; next comes August, with 0·63 in. The wettest were October, with 3·08 in., and September with 2·36 in.

JANUARY.

Date	Rainfall.	THERMOMETERS.				Date	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	48	*	35	35	17	0.09	50		33	34
2	0.09					18	0.00	40		38	39
3	0.24					19	0.10	49		44	44
4	0.03					20	0.29	51		49	50
5	0.01					21	0.02	52		39	39
6	0.01	50				22	0.00	47		30	30
7	0.00	40		32	33	23	0.00	43		42	42
8	0.00	40		32	33	24	0.18				
9	0.09	45		43	43	25	0.20	49	29	30	31
10	0.08	48		41	42	26	0.00	40	32	38	38
11	0.03	50		31	32	27	0.00	47	38	42	43
12	0.00	42		41	42	28	0.00	49	39	45	45
13	0.00	48	*	32	34	29	0.00	48	41	41	42
14	0.00	46		44	44	30	0.00	44	40	38	41
15	0.00	50		45	45	31	0.00	45	34	37	37
16	0.00	52.		44	45						
TOTAL RAINFALL OF THE MONTH, 1.46.											

* The Thermometer readings were not satisfactorily preserved during the holidays.

FEBRUARY.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	47	36	42	43	17	0.05	47	40	42	42
2	0.00	47	40	39	40	18	0.04	45	31	34	34
3	0.00	44	32	40	40	19	0.01	42	31	33	33
4	0.01	43	34	34	35	20	0.00	43	30	froz.	31
5	0.10	43	29	froz.	29	21	0.02	41	30	34	34
6	0.00	43	22	„	23	22	0.02	45	30	41	42
7	0.00	31	25	„	28	23	0.05	45	41	41	41
8	0.00	43	28	39	40	24	0.10	45	40	40	41
9	0.02	42	29	froz.	29	25	0.01	45	31	35	35
10	0.00	35	27	„	29	26	0.03	44	30	42	42
11	0.00	34	22	„	25	27	0.78	48	40	42	43
12	0.00	32	25	„	29	28	0.00	50	34	38	38
13	0.00	44	37	44	45						
14	0.04	49	47	46	47						
15	0.04	50	45	46	47						
16	0.00	51	49	45	46						
TOTAL RAINFALL OF THE MONTH, 1.32.											

MARCH.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.02	48	38	45	46	17	0.00	54	45	48	49
2	0.00	52	41	42	42	18	0.09	55	42	49	49
3	0.01	49	38	39	39	19	0.00	56	37	44	45
4	0.00	48	30	33	33	20	0.03	51	38	40	43
5	0.00	43	34	39	40	21	0.00	51	38	43	45
6	0.00	48	39	39	41	22	0.00	62	43	50	51
7	0.00	49	32	34	34	23	0.00	55	46	52	53
8	0.00	47	29	33	33	24	0.00	61	44	46	46
9	0.00	47	33	41	41	25	0.00	57	38	41	41
10	0.11	43	25	28	*	26	0.00	*	*	*	*
11	0.08	37	20	27	*	27	0.00	52	33	38	39
12	0.02	34	24	31	*	28	0.01	59	41	44	47
13	0.00	40	31	35	35	29	0.03	56	41	51	54
14	0.10	44	34	41	43	30	0.00	57	43	45	49
15	0.02	49	41	47	48	31	0.06	55	48	52	53
16	0.00	52	42	47	49						
TOTAL RAINFALL OF THE MONTH, 0.58.											

* These entries are lost.

APRIL.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	59	38	44	45	16	0.01				
2	0.01	*				17	0.00				
3	0.27					18	0.15				
4	0.07					19	0.01				
5	0.31					20	0.00				
6	0.00					21	0.00				
7	0.00					22	0.00				
8	0.01					23	0.00				
9	0.53					24	0.00				
10	0.00					25	0.00	65	†	59	61
11	0.00					26	0.00	70	52	58	61
12	0.07					27	0.00	71	47	57	60
13	0.01					28	0.00	71	47	52	55
14	0.11					29	0.00	62	39	45	49
15	0.00					30	0.00	55	36	48	51
TOTAL RAINFALL OF THE MONTH, 1.56.											

* The readings taken during the holidays were so untrustworthy that it has been thought unnecessary to publish them.

† Untrustworthy.

MAY.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	62	36	44	46	17	0.00	56	36	45	48
2	0.00	59	35	42	45	18	0.00	59	35	45	47
3	0.00	54	36	42	45	19	0.00	59	40	48	50
4	0.15	58	35	40	43	20	0.00	57	42	49	51
5	0.02	59	35	42	45	21	0.00	59	39	52	54
6	0.00	56	40	46	49	22	0.00	52	48	56	58
7	0.01	52	39	45	48	23	0.11	67	51	52	52
8	0.00	57	39	43	43	24	0.06	62	51	59	61
9	0.00	55	35	43	45	25	0.00	67	52	60	62
10	0.06	55	35	45	47	26	0.39	68	50	58	60
11	0.00	57	37	45	48	27	0.00	73	48	59	61
12	0.00	58	35	44	47	28	0.00	73	54	61	63
13	0.00	59	35	48	49	29	0.00	76	55	60	62
14	0.00	59	35	47	48	30	0.00	70	53	59	62
15	0.13	56	47	48	48	31	0.00	71	52	61	63
16	0.00	59	35	43	48						

TOTAL RAINFALL OF THE MONTH, 0.93.

JUNE.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	70	54	63	67	16	0.03	62	48	51	52
2	0.00	73	54	65	68	17	0.43	60	49	50	50
3	0.15	72	56	61	63	18	0.03	63	50	53	55
4	0.00	77	50	61	65	19	0.00	60	48	48	51
5	0.00	70	52	61	66	20	0.01	*	42	*	*
6	0.00	73	59	65	67	21	0.00	62	*	50	56
7	0.55	74	55	*	57	22	0.00	63	44	55	60
8	0.00	66	49	55	61	23	0.00	70	50	58	63
9	0.00	70	57	67	67	24	0.66	70	53	55	57
10	0.00	77	56	60	65	25	0.11	65	50	55	59
11	0.00	70	48	55	61	26	0.00	70	53	55	58
12	0.00	73	46	47	57	27	0.03	62	54	55	55
13	0.00	60	40	45	50	28	0.00	70	51	56	60
14	0.00	59	42	48	53	29	0.10	65	54	57	62
15	0.00	60	45	50	54	30	0.03	70	55	58	63

TOTAL RAINFALL OF THE MONTH, 2.26.

* These entries are lost.

JULY.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.03	73	60	60	61	17	0.00	73	54	59	63
2	0.03	70	55	67	70	18	0.00	75	51	57	61
3	0.00	79	59	60	67	19	0.00	74	54	64	67
4	0.00	72	56	58	63	20	0.00	81	58	68	74
5	0.04	70	53	56	63	21	0.00	†	60	59	64
6	0.00	70	53	54	62	22	0.00	73	55	59	64
7	0.00	70	50	58	65	23	0.00	72	58	60	65
8	0.00	73	51	61	67	24	0.00	74	53	58	64
9	0.00	75	56	65	73	25	0.50	70	50	57	58
10	0.00	79	65	67	73	26	0.07	71	56	58	58
11	0.85*	81	64	66	70	27	0.01	70	57	58	62
12	0.21	75	60	61	64	28	0.11	70	55	58	59
13	0.00	74	60	65	68	29	0.11	71	52	60	64
14	0.00	82	59	65	70	30	0.08	70	52	57	62
15	0.00	78	61	63	70	31	0.00	71	‡	59	66
16	0.00	76	56	62	67						
TOTAL RAINFALL OF THE MONTH, 2.04.											

* Of this .75 fell in 30 minutes.

† The Max. Thermometer was found registering 111 this morning.

‡ Untrustworthy.

AUGUST.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.06	73	*	61	63	17	0.00	69		54	59
2	0.00	71		65	67	18	0.00	68		56	64
3	0.00	72		55	61	19	0.00	70		63	65
4	0.01	70		55	57	20	0.00	75		63	66
5	0.11	63		54	56	21	0.00	78		59	60
6	0.01	62		51	59	22	0.00	71		54	59
7	0.00	70		60	63	23	0.00	70		56	61
8	0.08	86		56	61	24	0.00	73		50	54
9	0.08	70		55	61	25	0.02	67		57	60
10	†					26	0.00	70		57	65
11						27	0.00	69		56	60
12						28	0.04	70		55	66
13						29	0.00	68		54	54
14						30	0.20	64		55	57
15						31	0.06	67		54	66
16	0.00	70		60	64						
TOTAL RAINFALL OF THE MONTH, 0.67.											

* The readings of the Minimum Thermometer taken during the holidays are untrustworthy.

† The readings from the 10th—15th were not taken.

SEPTEMBER.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.09	70	*	64	66	16	0.00	63		57	60
2	0.03	72		59	59	17	0.01	64		51	50
3	0.00	70		57	58	18	0.00	58		54	55
4	1.00	70		52	55	19	0.00	62	46	53	55
5	0.00	67		55	58	20	0.00	62	53	57	60
6	0.00	63		54	54	21	0.08	68	57	60	61
7	0.14	63		55	55	22	0.02	69	53	56	60
8	0.03	64		59	60	23	0.00	64	50	57	57
9	0.00	60		57	60	24	0.14	61	54	57	58
10	0.37	62		50	53	25	0.01	65	54	60	61
11	0.03	62		51	54	26	0.00	70	52	57	60
12	0.24	62		52	52	27	0.00	70	51	59	60
13	0.04	62		52	52	28	0.00	67	55	59	60
14	0.00	61		57	53	29	0.04	67	57	56	60
15	0.00	63		54	54	30	0.09	65	52	54	55
TOTAL RAINFALL OF THE MONTH, 2.36.											

* The readings of the Minimum Thermometer taken during the holidays are untrustworthy.

OCTOBER.

Date	Rainfall.	THERMOMETERS.				Date	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.65	62	54	55	57	17	0.02	59	48	50	51
2	0.38	64	48	52	52	18	0.04	58	50	52	53
3	0.16	58	43	45	48	19	0.01	60	49	52	53
4	0.01	56	46	49	50	20	0.00	57	41	44	45
5	0.04	54	41	45	48	21	0.00	59	44	51	53
6	0.00	54	38	45	47	22	0.02	56	41	42	44
7	0.41	55	45	54	54	23	0.00	51	37	39	41
8	0.37	58	41	44	45	24	0.00	48	39	43	44
9	0.01	53	41	51	52	25	0.00	54	44	53	53
10	0.06	58	44	50	50	26	0.04	57	52	54	54
11	0.01	59	49	54	54	27	0.06	59	52	54	55
12	0.03	61	51	53	54	28	0.01	61	54	55	55
13	0.00	61	51	55	56	29	0.00	61	51	51	52
14	0.00	62	51	52	52	30	0.24	58	49	50	50
15	0.21	60	54	57	57	31	0.10	53	49	49	50
16	0.20	63	53	55	55						
TOTAL RAINFALL OF THE MONTH, 3.08.											

NOVEMBER.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.00	53	46	46	47	16	0.04	47	41	42	44
2	0.00	51	46	47	47	17	0.19	53	43	44	46
3	0.01	53	43	44	45	18	0.13	50	42	49	50
4	0.01	52	39	43	44	19	0.07	53	46	46	47
5	0.01	54	43	48	48	20	0.06	50	40	39	40
6	0.00	54	48	53	53	21	0.00	46	33	33	33
7	0.00	57	44	44	45	22	0.01	39	27	froz.	28
8	0.00	53	34	38	39	23	0.01	37	26	,,	28
9	0.00	49	37	48	49	24	0.00	37	28	,,	29
10	0.01	55	47	50	51	25	0.03	37	29	37	37
11	0.00	52	31	31	33	26	0.13	38	31	froz.	31
12	0.02	40	29	froz.	32	27	0.00	34	28	,,	29
13	0.04	39	32	39	39	28	0.00	33	29	,,	33
14	0.01	43	33	35	36	29	0.72	49	33	46	46
15	0.08	43	36	43	43	30	0.25	47	38	41	41

TOTAL RAINFALL OF THE MONTH, 1.83.

DECEMBER.

Date.	Rainfall.	THERMOMETERS.				Date.	Rainfall.	THERMOMETERS.			
		Max.	Min.	Wet.	Dry.			Max.	Min.	Wet.	Dry.
1	0.40	43	37	37	37	9	0.63	50	36	39	39
2	0.00	41	27	26*	27	10	0.05	40	29	froz.	30
3	0.00	34	23	froz.	25	11	0.23	35	29	35	35
4	0.01	35	25	„	32	12	0.11	42	35	41	41
5	0.00	45	32	45	45	13	0.10	42	35	35	35
6	0.01	48	37	46	47	14	0.03	39	32	32	32
7	0.12	52	35	33	35	15	0.02	37	29	froz.	29
8	0.01	40	33	36	36	16	0.12	33	29	„	29
Total rainfall of the first sixteen days of the month 1.84.											

The record of the rain during the holidays has unfortunately been lost; and the readings of the thermometers preserved during that period seem so untrustworthy (in some cases they are glaringly impossible), that it has been thought best not to publish them. The loss of the registrations of the temperature is much to be regretted, seeing that the weather during this part of the year was perhaps more interesting than that of any other part. The loss of the rainfall is not so much to be regretted, since after the beginning of the snow (Dec. 14th) it is known that the fall was exceedingly small.

* Notwithstanding the lowness of the temperature, the water was not frozen.

SUMMARY.

	THERMOMETERS.						RAINFALL.				
	Max.		Min.		Max.	Min.	Mean.	Inches.	Days on which none fell.	Greatest fall in one day.	
	Deg.	Day.	Deg.	Day.	Mean. Deg.	Mean. Deg.				Inch.	Day.
Jan...	52	{ 16 21 }			46.6			1.46	17	.29	20
Feb..	51	16	22	{ 6 11 }	43.4	33.4	37.3	1.23	13	.78	27
Mar...	62	22	20	11	50.3	36.9	43.6	.58	19	.11	10
April.								1.26	18	.53	9
May...	76	29	35	*	64.1	44.0	53.8	.93	23	.39	26
June..	77	{ 4 10 }	40	13	67.4	50.5	58.9	2.13	18	.66	24
July...	82	14	50	{ 7 25 }	75.1	53.5	65.8	2.04	19	.85	11
Aug...	86	8†			70.2			.67	15	.20	30
Sept...	72	2			64.9			2.36	15	1.00	4
Oct...	64	2	37	23	57.7	46.8	52.2	3.08	9	.65	1
Nov...	57	7	26	23	46.6	36.7	41.8	1.83	11	.72	29
Dec...								1.84	3‡	.63	9
Total								19.41	180		

* This was the minimum on no less than ten days :- the 2nd, 4th, 5th, 9th, 10th, 12th, 13th, 14th, 16th, 18th.

† The records for six days are lost.

‡ The records for the latter half of the month are lost.

*Transferred from
Bot. Dept.*



BALANCE SHEET.

RECEIVED.

	£ s. d.
Surplus after Midsummer, 1874... ..	1 12 0
Subscriptions for Christmas Term, 1874 ..	2 4 6
Subscriptions for Easter Term, 1875 ..	1 18 0
Paid	5 14 6
Balance	0 14 4
Balance	£5 0 2

PAID.

	£ s. d.
Cash Box	0 4 6
Dorset, for Weather Report during the Holidays	0 5 0
Botanical Section	0 1 0
Drawing Pins	0 1 6
To Printing Proof Sheet of Society's Notices...	0 1 6
To "Science Gossip" (two numbers)	0 0 10
£0 14 4	£0 14 4



