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## LINCOLNSHIRE

# NATURALISTS' UNION.

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EDITED BY ARTHUR SMITH, F.L.S., F.E.S.,

and

R. W. GOULDING.





## LINCOLNSHIRE NATURALISTS' UNION.

# A CHECK-LIST

OF

# Lincolnshire Plants

BY THE

## REV. E. ADRIAN WOODRUFFE-PEACOCK,

F.L.S., F.G.S.,

BOTANICAL SECRETARY OF THE LINCOLNSHIRE

NATURALISTS' UNION.

#### LOUTH:

J. W. GOULDING AND SON, PRINTERS, 20, MERCER-ROW, 1909. DEDICATE THESE PAGES

TO

THE MOST CONSISTENT OF LINCOLNSHIRE BOTANISTS:

THE

REV. W. W. MASON, B.A.,
VICAR OF BOOTLE, LANCASHIRE.



## FOREWORD.

HIS pamphlet claims no merit, except that it is a practical study—a sign-post on the way to a flora. It shows topographically what information has been collected, up to date, by the Lincolnshire Naturalists'

Union in working out the distribution of our plants. It is an analysis, as near as I can approximate, of some 500,000 observations. The species in every case are followed by the numbers of the artificial divisions of the county accepted by the Union in 1895. As the Watsonian vice-counties were preserved intact in further sub-dividing the county, a glance at the figures shows whether a plant is recorded for either or both vice-counties. When this pamphlet is used with the map and parish list with division numbers, issued by the Union in 1895, no difficulty should be found in allocating records to their right divisions. The map with the list is still on sale, and can be obtained from Mr. A. Smith, F.L.s., the County Museum, Lincoln.

If plant ecology may be defined as the study of the balance of nature, or the reciprocal relation of plants to their environment, the vast mass of rock-soil and other notes, collected by many workers and by the Union since 1893, finds no place here. It is impossible to show, even in the barest outline, my own special work. All such material must wait till the last 18 soils, out of the 50 found on the drift maps of this county—and this number does not include combinations—have been worked out on the same full lines as those that have been already dealt with.

I have honestly endeavoured to give each lover of our plants credit for the work he or she has done in making first

records. Strict justice in this department is no small difficulty. Workers have had such different critical trainings, and so many have been doing much useful recording in their own districts, ranging over a period of more than a hundred years, while so few have left permanent printed memorials. For any given year I place all records in order of merit as follows:—The first position is given to localised specimens; secondly, printed notices; thirdly, manuscript records, if made before 1893. For the year 1856, for instance, the Bogg specimens, now in the county Herbarium, take a higher place than Thompson's Skirbeck Hundred List, which is not supported by specimens. This printed list, however, stands before Canon W. Fowler's manuscript notes, which I possess, except where such jottings are fortified by the original specimens.

In the case of the Rev. R. E. G. Cole, who gave his 600 specimens to the county Herbarium, and in that of a few other workers, my own register is not sufficiently full as yet, and for the present it is quite impossible for me to go through the Herbarium at Lincoln. Full justice, however, shall be done to every one in the flora, when I have obtained exact details of all the specimens there and elsewhere.

I have added to this alphabetical list, the most frequently misunderstood synonomy from my register. The commonest bother of the working botanist's life is the innumerable postcards he has to write about nomenclature difficulties, after he has returned a list of the plants sent in to be named. It is a matter which has absolutely nothing to do with his speciality. It can hardly be classed as botany at all. It stands on a par with terminology. If nearly one-fourth of this pamphlet is devoted to solving nomenclature difficulties, it is to be hoped that it will enable all our workers, using the flora they happen to possess, to read and understand this analysis by means of the names they personally use. I myself am now too old to learn new names, which may be changed any day, for plants I have known all my life. So I collect synonmy, and here use the 10th edition of The London Catalogue, as the latest authority I know of.

Many plants, rather difficult to distinguish by untrained

botanists, have been recorded for a large number of divisions, as for example *Trifolium filiforme*, L. In all such cases, and I must be allowed to be the judge of them, I record the species only on unquestionable authority, or for those divisions I have obtained them from—and have proof specimens in the county Herbarium.

It is greatly to be hoped that all the botanical members of the Union will help forward the future work by sending to the Secretary proof specimens for the plants not yet recorded for their own divisions. Any one possessing or knowing of an old Herbarium, if the specimens are localised, who would lend it or obtain it for the use of the Botanical Secretary, would also forward the work. Old floras, if they contain the notes of past workers, are invaluable too.

I can give but one illustration of this. Thompson, in his 1820 and 1856 editions of the Shirbeck Hundred, recorded Avena pratensis, L., for the Boston division. Dr. Lees in 1891, in his Botany of Lincolnshire in the 1892-3 edition of White's Gazetteer, commenting on these records, said "Misnomer," and excluded the species from his county list, for no botanist then at work had met with it. With the evidence available he was quite right. I met with the same species marked in an old flora in 1835. Luckily, the recorder-Miss E. J. Nicholson-was then alive, and I applied to her for an explanation, expecting to find the species was A. fatua, L. I was mistaken, and was soon put on the right track. By consulting the following pages it will be seen that Avena pratensis is now known to be locally distributed-more widely diffused according to our present information than A. fatua. From the soil point of view their chances are about equal at Boston, but the advantage at present lies slightly with A. pratensis. It is indigenous to the soils of Lincolnshire, while A. fatua is a follower of agriculture only. Therefore, in all probability, the Thompsonian recorders were correct in their identification. The special work on these species led to another discovery, namely, that a hybrid between A. pratensis, L., and A. pubescens, Huds., was by no means uncommon where these two species are found growing side by side. Such cases are the romances of a local flora.

I have to thank the Rev. W. W. Mason and Miss S. C. Stow for much topographical help, and for reading the proofs of this pamphlet for the press, and for correcting it by means of their specimens and notes. The same pleasing duty of paying a debt I owe to Messrs. A. Bennett, J. Britten, W. H. Beeby, F. A. Lees, as well as Canon W. Fowler, for endless critical and practical help of all kinds.

In analysing a mass of manuscript such as I possess on the flora of Lincolnshire, I cannot expect that some mistakes have not been made. Each note is on a single sheet of paper, and for some species I have hundreds of such jottings, while the whole garnering has been scattered irregularly over a period of 35 years. I myself, too, am only a humble recorder of trifling every-day facts such as seem to escape the observation of other men. I regret I am only a specialist in environment, and not in any of the fluid genera. In the brambles, roses, and willows, an authority is badly wanted in Lincolnshire. I have, however, tried my best to give a clear summary of such specimens, printed matter, or notes, as others have left behind them or communicated to me. I can only ask to be excused where deficiencies are found, and plead that I have ever striven after accuracy. The occupations of an active and busy life make my work broken and irregular at best, though it is a labour of love.

E. ADRIAN WOODRUFFE-PEACOCK.

Cadney, Brigg, Lincs., October, 1909.

## A CHECK-LIST

OF

## LINCOLNSHIRE PLANTS.

REVD. E. ADRIAN WOODRUFFE-PEACOCK, F.L.S., F.G.S.

#### EXPLANATION OF SIGNS.

Natural history divisions 1 to 12 are in 54 N. Lincs., divisions 13 to 18 in 53 S. Lincs. The plus (+) sign before division numbers signifies that the species has been recorded for all those divisions. The other form (+all) that the plant has been found in every division of the county. The minus (-) sign before division numbers implies that the species has been recorded for all the divisions except those indicated. sign of multiplication (x) shows a hybrid. The equal (=) sign implies that the plant's record of frequency will be found under its second name in this list. A division number in parenthesis (12) implies that I have every reason to believe the plant is now extinct in its recorded locality for this division, but there is no doubt it was once there—(see Equisetum hyemale, L.). An asterisk \* after division number or numbers means I have seen no Lincolnshire specimens, and do not know of one; where there is no doubt about the authority for such records I say so. The information in this list is up to the date of Foreword.

## THE FLORAL LIST.

ACER CAMPESTRE, L. 1851, Watson. -17.

ACER PSEUDO-PLATANUS, L. 1820, Thompson. +all.

[ACERAS ANTHROPOPHORA, Br. 1843. Mistake.]

ACHILLEA MILLEFOLIUM, L. 1820, Thompson. +all.

ACHILLEA PTARMICA, L. 1820, Ward. -4, 18.

[ACHILLEA TOMENTOSA, L. 1856, Thompson. +12. Doubtful.]

ACINOS VULGARIS, Pers. = CALAMINTHA ACINOS, Clairv.

ACONITUM NAPELLUS, L. 1890, Davy. +1, 3, 8, 10.

ACORUS CALAMUS, L. 1840, Dodsworth. +11, 12, (16).

ADONIS ANNUA, L. 1874, W.-P. +2, 3, 12, 13.

ADONIS AUTUMNALIS, L. = A. ANNUA, L.

ADOXA MOSCHATELLINA, L. 1834, Bailey. -1, 9, 12, 16, 17, 18.

ÆGOPODIUM PODAGRARIA, L. 1836, Dodsworth. +all.

ÆTHUSA CYNAPIUM, L. 1836, Dodsworth. +all,

AGRIMONIA EUPATORIA, L. 1820, Ward. -9.

AGRIMONIA ODORATA, Mill. 1900, Stow. +10.

AGROPYRON ACUTUM, Auct. Ang. = A. JUNCEUM × REPENS.

AGROPYRON CANINUM, Beauv. 1820, Thompson. +2, 7, 10, 12, 14, 16.

AGROPYRON HACKELII, Druce. = A. JUNCEUM × REPENS.

AGROPYRON JUNCEUM, Beauv. 1840, Grantham. +4, 9, 11.

AGROPYRON JUNCEUM × REPENS. 1856, Bogg. +9, 11, 17.

AGROPYRON PROSTRATUM, Beauv. 1901, Smith. +4.

AGROPYRON PUNGENS, Roem. & Schultz. 1836, Dodsworth. +4, 9, 11, 12, 17, 18. v. LITTORALE, Reicht. 1851, Watson. +3, 4, 9, 12.

AGROPYRON REPENS, Beauv. 1820, Thompson. +all. v. BARBATUM, Duv.-Jouv. 1851, Watson. +all.

AGROPYRON SOUARROSUM, Link. 1902, Smith. +4.

AGROSTEMMA GITHAGO, L. = LYCHNIS GITHAGO, Scop.

AGROSTIS ALBA, L. 1815, Peck. +all. v. STOLONIFERA, L. 1851, Watson. +all. v. MARITIMA, Meyer, 1903, L.N.U. +4, 9, 11.

AGROSTIS CANINA, L. 1815, Peck. +1, 3, 5, 7, 10, 11, 12, 13.

AGROSTIS NIGRA, With. N. & S. Lincs. Not distinguished generally. .

AGROSTIS PALUSTRIS, Huds. = A. ALBA, L.

AGROSTIS SPICA-VENTI, L. = APERA SPICA-VENTI, Beauv.

AGROSTIS TENUIS, Sibth. 1815, Peck. +all.

AGROSTIS VULGARIS, With. = A. TENUIS, Sibth.

AIRA CARYOPHYLLEA, L. 1851, Watson. +1, 2, 7, 10, 13, 15.

AIRA CÆSPITOSA, L. = DESCHAMPSIA CÆSPITOSA, Beauv.

AIRA FLEXUOSA L. = DESCHAMPSIA FLEXUOSA, Trin.

AIRA PRÆCOX, L. 1851, Watson. +1, 2, 5, 6, 7, 8, 10, 13.

AIRA ULIGINOSA, Weihe. = DESCHAMPSIA SETACEA, Reichter.

AJUGA REPTANS, L. 1836, Dodsworth. -9, 17, 18.

ALCHEMILLA ARVENSIS, Scop. 1836, Dodsworth. -17, 18.

ALCHEMILLA VULGARIS, L. 1666, Merrett. -5, 6, 9, 10, 12, 14, 17, 18.

ALISMA PLANTAGO-AQUATICA, L. 1799, Young. +all.

ALISMA LANCEOLATUM, With. 1856, Bogg. +2, 4, 13, 15, 16, 17, 18.

ALISMA RANUNCULOIDES, L. 1799, Young. -4, 6, 12, 15, 17, 18.

ALLIARIA OFFICINALIS, Andrzj. = SISYMBRIUM ALLIARIA, Scop.

ALLIUM ARENARIUM, L. = A. SCORODOPRASUM, L.

ALLIUM CARINATUM, L. 1883, Hampton. +5, 15.

ALLIUM OLERACEUM, L. 1840, Miller. +2, 5, 6, 7, 9, 15.

ALLIUM SCHENOPRASUM, L. 1856, Thompson. +12, 13.

ALLIUM SCORODOPRASUM, L. 1840, Miller. +1, 5.

[ALLIUM SIBIRICUM, L. 1872, Mistake.]

ALLIUM URSINUM, L. 1820, Ward. -4, 5, 6, 9, 12, 14, 17, 18.

ALLIUM VINEALE, L. 1836, Dodsworth. +4, 5, 7, 9, 11, 12, 13, 15, 16.
v. BULBIFERUM, Syme, 1903, W.-P. +4. v. COMPACTUM, Thuill, 1893, Lees. +9, 12, 13, 15.

ALNUS GLUTINOSA, Gaertn. = A. ROTUNDIFOLIA, Mill.

ALNUS ROTUNDIFOLIA, Mill. 1638, Mercator. -5, 6, 18.

ALOPECURUS ÆQUALIS, Sobol. 1898, L.N.U. +1, 15.

ALOPECURUS AGRESTIS, L. = A. MYOSUROIDES, Huds.

ALOPECURUS BULBOSUS, Gouan. 1893, Firbank. +3.

ALOPECURUS FULVUS, Sm. = A. ÆQUALIS, Sobol.

ALOPECURUS GENICULATUS, L. 1851, Watson. -2, 8, 12, 16.

ALOPECURUS MYOSUROIDES, Huds. 1820, Thompson. -5, 6, 17.

ALOPECURUS PRATENSIS, L. 1820, Thompson. +all.

ALSINE, L. = SPERGULARIA, Presl.

ALSINE PALLIDA, Dum. = STELLARIA APETALA, Ucria.

ALTHÆA HIRSUTA, L. 1905, Alston. +10.

ALTHÆA OFFICINALIS, L. 1723, Blair. +7, 10, 11, 12, 17, 18.

ALYSSUM ALYSSOIDES, L. 1855, Lowe. -1, 5, 6, 12, 16, 17, 18.

ALYSSUM CALYCINUM, L. = A. ALYSSOIDES, L.

ALYSSUM INCANUM, L. 1894, Larder. +6, 7, 8, 14.

AMBROSIA ARTEMISIÆFOLIA, L. 1878, Lees. +7.

AMMOPHILA ARENARIA, Link. 1824, Sinclair. +4, 9, 11, 12.

AMMOPHILA ARUNDINACEA, Host. = A. ARENARIA, Link.

AMSINCKIA LYCOPSIOIDES, Lehm. 1895, Venables. +4, 8, 13.

ANACHARIS ALSINASTRUM, Bab. = ELODEA CANADENSIS, Mich.

ANAGALLIS ARVENSIS, L. 1836, Dodsworth. + all. v. CARNEA, Schrank, 1898, W.-P. +3. v. PALLIDA, Hook. f. 1879, Fowler. +2, 3, 10, 16.

ANAGALLIS CÆRULEA, Schreb. = A. FŒMINA, Mill.

ANAGALLIS FŒMINA, Mill. 1831, Drury. - 1, 6, 12, 17, 18.

ANAGALLIS TENELLA, Murr. 1815, Feck. -3, 8, 11, 12, 14, 17, 18.

ANAPHALIS MARGARITACEA, Benth. & Hook. f. 1835, E. J. Nicholson. +(1), (3).

ANCHUSA ARVENSIS, Bieb. = LYCOPSIS ARVENSIS, L.

ANCHUSA HYBRIDA, Tem. 1902, Smith. +4.

ANCHUSA ITALICA, Retz. 1896, Sneath. +13.

ANCHUSA OFFICINALIS, L. 1900, Kiddall. +8.

ANCHUSA SEMPERVIRENS, L. 1896, Hawley (Lady). +10, 11.

ANDROMEDA POLIFOLIA, L. 1840, Owston (Revd. T.). +1.

ANEMONE APENNINA, L. 1853, Rake. +3, 13.

ANEMONE NEMOROSA, L. 1820, Ward. -4, 6, 9, 12, 17, 18. v. RUBRA, Pritzel, 1875, W.-P. +2, 7, 8, 15.

ANEMONE PULSATILLA, L. 1746, Blackstone. +1, 2, 13, 14, 15.

ANEMONE RANUNCULOIDES, L. 1840, Stovin (Miss). +13.

ANGELICA SYLVESTRIS, L. 1799, Young. -17.

ANTENNARIA DIOICA, Gaertn. 1805, Turner. +(2), (15).

ANTENNARIA MARGARITACEA, R. Br. = ANAPHALIS MARGARITACEA,
Benth. and Hook. f.

ANTHEMIS ARVENSIS, L. 1855, Bogg. +2, 3, 7, 8, 10, 13, 14, 15.

ANTHEMIS COTULA, L. 1851, Watson. -1, 6, 9, 17.

ANTHEMIS NOBILIS, L. 1893, Firbank. +2, 3, 7, 8, 11, 13, 14.

ANTHEMIS TINCTORIA, L. 1892, Fowler (Miss). +2, 8, 13.

ANTHOXANTHUM ARISTATUM, Boiss. 1896, W.-P. +3; 4.

ANTHOXANTHUM ODORATUM, L. 1820, Thompson. +all.

ANTHOXANTHUM PUELII, Lecoq. = A. ARISTATUM, Boiss.

ANTHRISCUS CEREFOLIUM, Hoffm. 1893, Alston. +3, 7.

ANTHRISCUS SYLVESTRIS, Hoffm. 1836, Dodsworth. +all.

ANTHRISCUS VULGARIS, Bernh. 1865, Britten. - 1, 7, 8, 14, 17, 18.

ANTHYLLIS VULNERARIA, L. 1726, Bacon. -1, 9, 17, 18.

ANTIRRHINUM LINARIA, L. = LINARIA VULGARIS, Mill.

ANTIRRHINUM MAJUS, L. 1805, Stovin (Mrs). +2, 6, 8, 11, 13.

ANTIRRHINUM ORONTIUM, L. 1855, Lowe. +12, 13, 14, 15.

APARGIA HISPIDA, Willd. = LEONTODON HISPIDUM, L.

APERA INTERRUPTA, Beauv. 1908, Burchnall. +(18).

APERA SPICA-VENTI, Beauv. 1898, Fowler. +1, 4.

APIUM GRAVEOLENS, L. 1725, Blair. +1, 2, 3, 4, 5, 9, 11, 12, 17, 18.

APIUM INUNDATUM, Reichb. f. 1840, Miller. +1, 2, 5, 6, 7, 9, 13, 14, 16. v. MOOREI, Syme. 1893, Lees. +5, 6.

APIUM NODIFLORUM, Reichb. f. 1836, Dodsworth. +all. v. OCHREATUM, DC. 1891, Fisher: +1, 5. v. REPENS, Koch. 1895, Fowler, +1.

AOUILEGIA VULGARIS, L. 1836, Dodsworth. -1, 6, 12, 17, 18.

ARABIS ALBIDA, Stev., 1884, Gibbs. +12.

ARABIS HIRSUTA, Scop., 1831, Drury. -1, 4, 7, 9, 10, 12, 16, 17, 18.

ARABIS GLABRA, Bernh., 1897, Howard. +10.\*

ARABIS PERFOLIATA, Lam. = A. GLABRA, Bernh.

ARABIS SAGITTATA, DC. = A. HIRSUTA, Scop.

ARABIS THALIANA, L. = SISYMBRIUM THALIANUM, J. Gay.

ARABIS TURRITA, L. 1896, Sneath. +13.

ARCHANGELICA OFFICINALIS, Hoffm. 1909, Reynolds. +11.

ARCTIUM INTERMEDIUM, Lange. = A. NEMOROSUM, Lej.

ARCTIUM MAJUS, Bernh. 1877, Fowler. +1, 2, 3, 5, 6, 13, 15, 16.

ARCTIUM NEMOROSUM, Lej. 1882, Fowler. +2, 3, 11, 14, 16.

ARCTIUM MINUS, Bernh. 1836, Dodsworth. +all.

ARENARIA LEPTOCLADOS, Guss. 1876, Fowler. +2,3,5,7,12,13,14,15,16,18.

ARENARIA PEPLOIDES, L. 1826, Howitt. +4, 5, 9, 11, 12, 17.

ARENARIA SERPYLLIFOLIA, L. 1836, Dodsworth. +all. v. HIBALD-STOWENSIS, W.-P. 1892, W.-P. +2, 5, 7.

ARENARIA TENUIFOLIA, L. 1855, Bloxam. +3, 13, 14, 15, 16.

ARENARIA TRINERVIA, L. 1836, Dodsworth. -12, 17, 18.

ARENARIA VERNA, L. 1892, Firbank. (Water carried!) +(3).

ARISTOLOCHIA CLEMATITIS, L. 1850, Ffytche. +2, 10, 15.

ARMERIA MARITIMA, Willd. = STATICE MARITIMA, Mill.

ARMORACIA AMPHIBIA, Koch. = RADICULA AMPHIBIA, Druce.

ARMORACIA RUSTICANA, Rupp. = COCHLEARIA ARMORACIA, L.

ARNOSERIS MINIMA, Schw & Koerte. 1865, Britten. +3, 4, 5, 6.

ARRHENATHERUM AVENACEUM, Beauv. = A. ELATIUS, Mert. & Koch.

ARRHENATHERUM ELATIUS, Mert. & Koch. 1820, Thompson. +all. v. BULBOSUM, Presl. 1893, W.-P. +3, 13, 15.

ARTEMISIA ABSINTHIUM, L. 1820, Ward. +7, 9, 10, 12, 16.

[ARTEMISIA CÆRULESCENS, L. 1762, Mistake.]

ARTEMISIA MARITIMA, L. 1723, Blair. +3, 4, 9, 11, 12, 17, 18. v. GALLICA, Willd. 1723, Blair. +4, 12, 17.

**ARTEMISIA VULGARIS,** L. 1820, Ward. -4, 8, 14, 16, 17, 18.

ARUM MACULATUM, L. 1820, Ward. -4, 17, 18.

ARUNDO CALAMAGROSTIS, L. = C. CANESCENS, Druce.

ARUNDO PHRAGMITES, L. = P. COMMUNIS, Trin.

ASARUM EUROPÆUM, L. 1884, Woolward. +(2).

ASPARAGUS ALTILIS, L. 1597, Gerarde. +3, 5, 9, 11, 12, 18.

[ASPARAGUS MARITIMUS, L. 1866-72, Mistake.]

ASPERUGO PROCUMBENS, L. 1875, W.-P. +2, 4, 6, 12, 13.

ASPERULA ARVENSIS, L. 1896, Lees. +4, 12, 13.

ASPERULA CYNANCHICA, L. 1850, Ffytche. +2, 6, 13, 14, 15, 16.

ASPERULA ODORATA, L. 1820, Ward. -4, 6, 9, 12, 14, 17, 18.

ASPIDIUM, Sw. = LASTREA, Presl.

ASPIDIUM, Sw. = POLYSTICHUM, Roth.

ASPLENIUM L. = ATHYRIUM, Roth.

ASPLENIUM ADIANTUM-NIGRUM, L. 1820, Ward. +9, 10, 11, 12, 18.

ASPLENIUM RUTA-MURARIA, L. 1830, Allen. - 5, 8, 17, 18.

ASPLENIUM TRICHOMANES, L. 1851, Watson. +1, 9, 11, 14, 15.

ASPLENIUM VIRIDE, Huds. 1860, Dodsworth. +11.\* (Wind sown?)

ASTER TRIPOLIUM, L. 1725, Blair. +1, 2, 3, 4, 5, 9, 11, 12, 17, 18. v. DISCOIDEUS, Reichb. 1890, Davy. +4, 11, 12, 17, 18.

ASTRAGALUS DANICUS, Retz. 1805, Stovin (Mrs.). +2, 5, 6, 13, 14, 15.

ASTRAGALUS GLYCYPHYLLOS, L. 1805, Crabbe. +1, 2, 5, 6, 15, 16.

ASTRAGALUS HYPOGLOTTIS, L. = A. DANICUS, Retz.

ASTRANTIA MAJOR, L. 1893, Firbank. +3. (Planted!)

ATHYRIUM FILIX-FŒMINA, Roth. 1855, Cole. +1, 2, 3, 6, 7, 8, 10, 11, 13, 15. v. ERECTUM, Syme. 1896, Goulding. +7.

ATRIPLEX BABINGTONII, Woods. 1851, Watson. +4, 6, 9, 11, 12.

ANTRIPLEX DELTOIDEA, Bab. 1885, Gibbs. +1, 3, 4, 6, 9, 11, 12, 16, 17. v. SALINA, Bab. 1905, W.-P. +9.

**ATRIPLEX HASTATA,** L. 1851, Watson. +1, 4, 7, 10,.11, 12, 14, 16.

ATRIPLEX LACINIATA, L. 1826, Howitt. +9, 11, 12.

ATRIPLEX LITTORALIS, L. 1728, Stukeley. +3, 4, 9, 11, 12, 17, 18. v. MARINA, L. 1728, Stukeley. +3, 4, 9, 12, 18.

ATRIPLEX PATULA, L. 1836, Dodsworth. +all. v. ANGUSTIFOLIA, Sm. 1851, Watson. +3, 4, 6, 7, 8, 10, 11, 12, 17. v. ERECTA, Huds. 1851, Watson. +3, 5, 7, 9, 12, 14.

ATRIPLEX PEDUNCULATA, L. 1695, Plukenet. +11, 12, 17.

ATRIPLEX PORTULACOIDES, L. 1826, Howitt. +4, 9, 11, 12, 17, 18.

ATRIPLEX SMITHII, Syme. = A. HASTATA, L.

ATROPA BELLADONNA, L. 1597, Gerarde. +6, 10, 12, 15, 16, 18.

AVENA ELATIOR, L. = ARRHENATHERUM ELATIUS, Mert. & Koch.

AVENA FATUA, L. 1851; Watson. +2, 3, 4, 7, 8, 12, 13, 16.

AVENA FLAVESCENS, L. = TRISETUM FLAVESCENS, Beauv.

AVENA PRATENSIS, L. 1820, Thompson. +2, 3, 5, 10, 12, 13, 14, 15, 16.

AVENA PRATENSIS × PUBESCENS. 1907, W.-P. +2, 3.

AVENA PUBESCENS, Huds. 1851, Watson. +2, 3, 4, 5, 6, 7, 13, 14, 15, 16

AVENA STRIGOSA, Schreb. 1856, Thompson. +12.

BALLOTA NIGRA, L. 1836, Dodsworth. +all.

BARBAREA INTERMEDIA, Bor. 1896, Lees. +3, 7, 8.

BARBAREA PRÆCOX, Br. = B. VERNA, Aschers.

BARBAREA STRICTA, Andrz. 1878, Fowler. +1, 3, 5, 6, 7, 13, 15, 16.

BARBAREA VERNA, Aschers. 1893, W.-P. +5, 7, 14.

BARBAREA VULGARIS, Ait. 1820, Thompson. -4, 17, 18.

BARTSIA ODONTITES, Huds. 1636, Johnson. -9, 17.

BELLIS PERENNIS, L. 1820, Thompson. +all.

BERBERIS AQUIFOLIUM, Pursh. 1874, W.-P. +2, 3, 5, 7.

BERBERIS VULGARIS, L. 1820, Ward. -4, 9, 12, 16, 17, 18.

BETA MARITIMA, L. 1666, Merrett. +3, 18.

BETA VULGARIS, L. Escape N. & S. Lincs.

BETULA ALBA, L. 1797, De Serra. -17, 18.

BETULA GLUTINOSA, Fries. = B. TOMENTOSA, Reith. & Abel.

[BETULA NANA, L. Early Post-Glacial.\*]

BETULA PUBESCENS, Ehrh. = B. TOMENTOSA, Reith. & Abel.

BETULA TOMENTOSA, Reith. & Abel. 1829, Oldfield. +5, 7, 11, 12.

BETULA VERRUCOSA, Ehrh. = B. ALBA, L.

BIDENS CERNUA, L. 1799, Young. -1, 4, 7, 8, 16, 17, 18.

BIDENS TRIPARTITA, L. 1837, Dodsworth. +1, 6, 7, 10, 12, 13, 14, 16.

BLACKSTONIA PERFOLIATA, Huds. 1726, Bacon. -17, 18.

BLECHNUM BOREALE, Sw. = B. SPICANT, With.

BLECHNUM SPICANT, With. 1851, Watson. +1, 2, 3, 5, 7, 8, 10, 11, 13, BLYSMUS, Panz. = SCIRPUS, Pers.

BORAGO OFFICINALIS, L. 1850, Ffytche. -1, 3, 4, 5, 7, 14, 16, 17.

BOTRYCHIUM LUNARIA, Sw. 1763, Martyn. +1, 2, 3, 4, 7, 8, 10, 13.

BRACHYPODIUM GRACILE, Beauv. = B. SYLVATICUM, Roem. & Schultz.

BRACHYPODIUM PINNATUM, Beauv. 1851, Watson. -9, 10, 12, 17, 18.

BRACHYPODIUM SYLVATICUM, Roem. & Schultz. 1851, Watson. -9, 17, 18.

BRASSICA ALBA, Boiss. 1856, Thompson. +2, 3, 4, 11, 12, 15, 16.

BRASSICA ARVENSIS, O. Kuntze. 1836, Dodsworth. +all.

BRASSICA CHEIRANTHUS, Vill. 1894, Fowler. +3, 6, 12.

BRASSICA ERUCASTRUM, Vill. 1898, Sneath. +13.

BRASSICA MURALIS, Bois. = DIPLOTAXIS MURALIS, DC.

BRASSICA NAPUS, L. 1876, W.-P. +1, 2, 3, 4, 12, 13, 16.

BRASSICA NIGRA, Koch. 1851, Watson. -1, 6, 7, 8, 10, 13.

BRASSICA OLERACEA, L. 1874, W.-P. +2, 3, 6, 13.

BRASSICA RAPA, L. 1856, Bogg. -4, 6, 9, 12, 14, 15, 16, 17.

BRASSICA RUTABAGA, DC. 1876, W.-P. +2, 3, 7, 13, 15.

BRASSICA SINAPIOIDES, Roth. = B. NIGRA, Koch.

BRASSICA SINAPIS, Visiani. = B. ARVENSIS, O. Kuntze.

BRASSICA SINAPISTRUM, Boiss. = B. ARVENSIS, O. Kuntze.

BRIZA MAXIMA, L. 1894, Smith. +4.

BRIZA MEDIA, L. 1836, Dodsworth. +all.

BROMUS ARVENSIS, L. 1856, Thompson. +3, 7, 8, 12, 13.

BROMUS ASPER, Murr. = B. RAMOSUS, Huds.

BROMUS COMMUTATUS, Schrad. 1851, Watson. +3, 4, 6, 7, 8, 13, 14, 16, 17.

BROMUS ERECTUS, Huds. 1851, Watson. -1, 7, 9, 12, 17, 18. v. VILLOSUS, Bab. 1904, W.-P. +5.

BROMUS GIGANTEUS, L. 1851, Watson. +1, 3, 7, 8, 10, 11, 13, 14, 15, 16.

BROMUS HORDEACEUS, L. 1851, Watson. +all. v. GLABRATUS, Doell. 1896, Lees. +3, 4, 7, 9. v. OVALIS, Parnell. 1904, W.-P. +7.

BROMUS JAPONICUS, Thunb. 1908, W.-P. +3.

BROMUS MADRITENSIS, L. 1890, Smith. +4.

BROMUS MAXIMUS, Desf. 1897, Smith. +4.

BROMUS MOLLIS, L. =B. HORDEACEUS, L.

BROMUS PATULUS, M. & K. = B. JAPONICUS, Thunb.

BROMUS RACEMOSUS, L. 1877, Lees. +3, 7, 8, 13.

BROMUS RAMOSUS, Huds. 1851, Watson. -5, 9, 17.

BROMUS RIGIDUS, Roth. = B. MAXIMUS, Desf.

BROMUS SCOPARIUS, L. 1900, Smith. +4.

BROMUS SECALINUS, L. 1851, Watson. +3, 11, 17.

BROMUS SQUARROSUS, L. 1897, Smith. +4.

BROMUS STERILIS, L. 1836, Dodsworth. +all.

BROMUS TECTORUM, L. 1897, Smith. +4.

BRYONIA DIOICA, Jacq. 1836, Dodsworth. +all.

BUDA, Dum. = SPERGULARIA, Presl.

[BUFFONIA TENUIFOLIA, Sm. 1691, Plukenet. A mistake in allocation, I think, though the specimen is right.]

BUNIAS ORIENTALIS, L. 1895, W.-P. +5.

BUNIUM FLEXUOSUM, With. = CONOPODIUM MAJUS, Loret.

BUPLEURUM ROTUNDIFOLIUM, L. 1796, Woodward. +3, 4, 6, 12, 13, 14, 16.

BUPLEURUM TENUISSIMUM, L. 1688, Plukenet. +4, 9, 11, 12, 17.

BUTOMUS UMBELLATUS, L. 1830, Allen. -8, 15.

BUXUS SEMPERVIRENS, L. 1874, W.-P. +2, 3, 11. Ripe seed in 1893!

CAKILE MARITIMA, Scop. 1834, Bailey. +4, 9, 11.

CALAMAGROSTIS CANESCENS. Druce. 1636, Johnson. +2, 10, 13, 15.

CALAMAGROSTIS EPIGEIOS, Roth. 1597, Gerarde. +2, 6, 7, 8, 11, 12, 13, 14, 15, 16.

CALAMAGROSTIS LANCEOLATA, Roth. = C. CANESCENS, Druce.

CALAMINTHA ACINOS, Clairv. 1726, Bacon. +1, 2, 6, 7, 8, 10, 13, 14, 15.

CALAMINTHA ARVENSIS, Lam. = C. ACINOS, Clairv.

CALAMINTHA ASCENDENS, Jord. = C. MONTANA, Lam.

CALAMINTHA CLINOPODIUM, Sperm. = CLINOPODIUM VULGARE, L.

CALAMINTHA GRAVEOLENS, Benth. 1902, Smith. +4.

CALAMINTHA MENTHÆFOLIA, Host. = C. MONTANA, Lam.

CALAMINTHA MONTANA, Lam. 1837, Dodsworth. +3, 6, 8, 10, 11, 14.

[CALAMINTHA NEPETA, Savi. 1855, Lowe. +14, 15.\* Doubtful.]

CALAMINTHA OFFICINALIS, Moench. = C. MONTANA, Lam.

CALAMINTHA PARVIFLORA, Lam. = C. NEPETA, Savi.

CALENDULA OFFICINALIS, L. 1893, Fowler. +2, 3, 4, 11, 13.

CALLITRICHE AQUATICA, Sm. = C. PALUSTRIS, L.

CALLITRICHE AUTUMNALIS, Hooker. f. = C. INTERMEDIA, Hoffm.

CALLITRICHE EU-VERNA, Syme. = C. PALUSTRIS, L.

CALLITRICHE HAMULATA, Kuetz. = C. INTERMEDIA, Hoffm.

CALLITRICHE INTERMEDIA, Hoffm. 1878, Lees. +5, 11, 16.

CALLITRICHE OBTUSANGULA, Le Gall. 1877, Lees. +2, 5, 11, 16.

CALLITRICHE PALLENS, Goldb. = C. PALUSTRIS, L.

CALLITRICHE PALUSTRIS, L. 1856, Thompson. +3, 9, 10, 11, 12, 13, 14, 15, 18.

CALLITRICHE PEDUNCULATA, DC. = C. INTERMEDIA, Hoffm.

CALLITRICHE PLATYCARPA, Kuetz. = C. STAGNALIS, Scop.

CALLITRICHE SESSILIS, Bab. = C. INTERMEDIA, Hoffm.

CALLITRICHE STAGNALIS, Scop. 1851, Watson. +all.

CALLITRICHE TRUNCATA, Guss. = C. INTERMEDIA, Hoffm.

CALLUNA ERICA, DC. = C. VULGARIS, Hull.

CALLUNA VULGARIS, Hull. 1799, Young. -4, 8, 9, 11, 12, 15, 17, 18.

CALTHA PALUSTRIS, L. 1799, Young. +all.

CALYSTEGIA SEPIUM, Br. 1799, Young. +all.

CALYSTEGIA SOLDANELLA, Br. 1834, Bailey. +4, 9, 11.

CAMELINA SATIVA, Crantz. 1785, Banks. +2, 4, 5, 7, 9, 13, 16, 18.

CAMPANULA GLOMERATA, L. 1726, Bacon. -3, 4, 9, 12, 17, 18.

CAMPANULA LATIFOLIA, L. 1820, Ward. +1, 2, 7, 8, 10, 11, 13, 15.

CAMPANULA LATIFOLIA × TRACHELIUM. 1893, W.-P. +2.

CAMPANULA PATULA, L. 1893, Burgess. +11.

CAMPANULA RAPUNCULOIDES, L. 1855, Lowe. +3, 6, 7, 10, 11, 14.

CAMPANULA RAPUNCULUS, L. 1893, Burgess. +11.

CAMPANULA ROTUNDIFOLIA, L. 1836, Dodsworth. -9, 17, 18.

CAMPANULA TRACHELIUM, L. 1820, Ward. +2, 10, 11, 13, 14, 15, 16,

CANNABIS SATIVA, L. 1799, Young. +1, 3, 5, 7, 13.

CAPNOIDES, Adans. = CORYDALIS, Vent.

CAPSELLA BURSA-PASTORIS, Medic. 1835, E. J. Nicholson. +all.

CARDAMINE AMARA, L, 1838, Browning. +16.

CARDAMINE FLEXUOSA, With. 1879, Browne. +2, 3, 4, 5, 7, 9, 13, 15.

CARDAMINE HIRSUTA, L. 1820, Ward. -1, 5, 6, 14, 18.

[CARDAMINE IMPATIENS, L. 1885. Mistake.]

CARDAMINE PRATENSIS, L. 1820, Thompson. +all.

CARDUUS CRISPUS, L. 1851, Watson. -4, 9, 12, 17. v. ACANTHOIDES, L. 1892, Davy. +3, 6, 7. v. POLYANTHEMOS, Koch. 1892, Davy. +3.

CARDUUS CRISPUS × NUTANS. 1895, Lees. +2, 3, 6, 7, 10, 13.

CARDUUS MARIANUS, Lin. = SILYBUM MARIANUM, Gaertn.

CARDUUS NUTANS, L. 1851, Watson. -18.

CARDUUS NUTANS × CNICUS LANCEOLATUS. 1890, Jarvis. +7.\* Not doubtful.

CARDUUS PYCNOCEPHALUS, L. v. TENUIFOLIUS, Curt. 1892, Lees. +4, 13.

CAREX ACUTA, Auct. = C. GRACILIS, Curt.

CAREX ACUTIFORMIS, Ehrh. 1838, Dodsworth. -2, 3, 4, 5, 10, 17, 18.

CAREX AMPULLACEA, Good. = C. INFLATA, Huds.

CAREX ARENARIA, L. 1856, Thompson. -3, 8, 10, 12, 13, 14, 15, 17, 18.

CAREX BINERVIS, Sm. 1851, Watson. +1, 2, 5, 7, 10, 13.

CAREX CÆSPITOSA, Gay. = C. ELATA, All.

CAREX CANESCENS, Auct. = C. CURTA, Good.

CAREX CARYOPHYLLEA, Latourr. 1851, Watson. +3,5,7,8,13,14,15,16.

CAREX CONTIGUA, Hoppe. 1836, Dodsworth. -1, 2, 5, 12, 18.

CAREX CURTA, Good. 1868, Charters. +5.

CAREX DIANDRA, Schrank. 1878, Fowler. +5.

CAREX DISTANS, L. 1876, Fowler. +4, 5, 8, 9, 11, 12, 14, 15.

CAREX DISTICHA, Huds. 1836, Dodsworth. -1, 5, 6, 10, 14, 17, 18.

CAREX DIVISA, Huds. 1851, Watson. +3, 4, 12.

CAREX DIVULSA, Stokes. 1878, Fowler. +2, 3, 11, 15, 16.

CAREX ECHINATA, Murr. 1851, Watson. +2, 5, 7, 15.

CAREX ELATA, All. 1868, Charters. +3, 4, 5, 7.

CAREX ELATIOR, And. = C. ŒDERI, Retz. v. ELATIOR, And.

CAREX ELONGATA, L. 1881, Fowler. +5.

CAREX EXTENSA, Good. 1876, Fowler. +4, 9, 11. v. PUMILA, And. 1892, Lees. +4.

CAREX FILIFORMIS, "L." = C. LASIOCARPA, Ehrh.

CAREX FLACCA, Schreb. 1836, Dodsworth. -4, 18.

CAREX FLAVA, L. 1838, Dodsworth. -7, 8, 9, 11, 12, 15, 17, 18.
v. LEPIDOCARPA (Tausch.) 1895, Fowler. +2.

CAREX FLAVA × FULVA. 1895, Mason. +14.

CAREX FULVA, Host. 1836, Dodsworth. +2, 5, 7, 14, 16.

CAREX GLAUCA, Scop. = C. FLACCA, Schreb.

CAREX GOODENOWII, Gay. 1799, Young. -3, 4, 9, 10, 11, 14, 15, 17, 18.
v. JUNCELLA (Fr.) 1882, Searle. +4.

CAREX GRACILIS, Curt. 1836, Dodsworth. -4, 9, 11, 12, 14, 17, 18.

CAREX HELODES, Link. 1904, Carter. +8.

CAREX HIRTA, L. 1836, Dodsworth. -10, 12, 17, 18.

CAREX HUDSONII, Ar. Ben. = C. ELATA, All.

CAREX HORNSCHUCHIANA, Hoppe. = C. FULVA, Host.

CAREX INFLATA, Huds. 1815, Peck. +1, 2, 3, 4, 5, 6, 7, 13.

CAREX INTERMEDIA, Good. = C. DISTICHA, Huds.

CAREX LÆVIGATA, Sm. = C. HELODES, Link.

CAREX LEPIDOCARPA (Tausch.) = C. FLAVA, L. v. LEPIDOCARPA (Tausch.)

CAREX LEPORINA, L. 1857, Fowler. +2, 3, 6, 7, 10, 11, 13, 15.

CAREX LASIOCARPA, Ehrh. 1880, Fowler. +5.

CAREX MURICATA, Auct. = C. CONTIGUA, Hoppe.

CAREX ŒDERI, Retz. 1855, Lowe. +2, 3, 13. v. ELATIOR, And. 1857, Fowler. +2, 5, 13.

CAREX OVALIS, Good. = C. LEPORINA, L.

CAREX PALLESCENS, L. 1857, Fowler. +2, 6, 7, 8, 15, 16.

CAREX PALUDOSA, Good. = C. ACUTIFORMIS, Ehrh.

CAREX PANICEA, L. 1851, Watson. -9. 10, 11, 12, 13, 15, 17, 18.

CAREX PANICULATA, L. 1838, Dodsworth. +1, 2, 3, 4, 7, 8, 13, 16.

CAREX PILULIFERA, L. 1851, Watson. +1, 2, 5, 7, 10, 13.

CAREX PRÆCOX, (Jacq.) = C. CARYOPHYLLEA, Latourr.

CAREX PSEUDO-CYPERUS, L. 1838. Dodsworth. +1, 10, 13, 16, 18.

CAREX PULICARIS, L. 1856, Thompson. +2, 4, 5, 7, 8, 12, 15.

CAREX REMOTA, L. 1857, Fowler. +1, 2, 6, 8, 10, 11, 12, 13, 15, 16.

CAREX RIPARIA, Curt. 1838, Dodsworth. -6, 7, 17, 18.

CAREX ROSTRATA, Stokes. = C. INFLATA, Huds.

CAREX STELLULATA, Good. = C. ECHINATA, Murr.

CAREX STRICTA, Good. = C. ELATA, All.

CAREX SYLVATICA, Huds. 1851, Watson. -1, 5, 9, 14, 17, 18.

CAREX TERETIUSCULA, Good. = C. DIANDRA, Schrank.

CAREX VERNA, Chaix. = C. CARYOPHYLLEA, Latourr.

CAREX VESICARIA, L. 1815, Peck. -5, 8, 12, 14, 15, 16, 17, 18.

CAREX VULGARIS, Fr. = C. GOODENOWII, Gay.

CAREX VULPINA, L. 1838, Dodsworth. +all.

CARLINA VULGARIS, L. 1851, Watson. -1, 7, 11, 17, 18.

CARRICHTERA ANNUA, L. 1902, Smith. +4.

CARPINUS BETULUS, L. 1877, Lees. +2, 7, 10, 11, 13, 15.

CARUM CARUI, L. 1661, Ray. +2, 3, 5, 10, 12, 13, 15, 17, 18.

CARUM FLEXUOSUM, Fr. = CONOPODIUM MAJUS, Loret.

CARUM MAJUS, Rendl. & Brit. = CONOPODIUM MAJUS, Loret.

CARUM PETROSELINUM, Benth. & Hook. f. 1856, Bogg. +1, 2, 3, 7, 8, 9, 11, 12, 14, 18.

CARUM SEGETUM, Benth. & Hook. f. 1840, Grantham. -1, 2, 4, 15, 18.

CASTALIA ALBA, Wood. 1830, Allen. -1, 3, 4, 6, 8, 9, 10, 12, 17.

CASTALIA SPECIOSA, Salisb. = C. ALBA, Wood,

CASTANEA SATIVA, Mill. 1820, Thompson. +2, 5, 7, 10, 11, 12, 13, 15.

CATABROSA AQUATICA, Beauv. 1851, Watson. +2, 3, 7, 11, 12, 13, 15.

CAUCALIS ANTHRISCUS, Huds. 1836, Dodsworth. +all.

CAUCALIS ARVENSIS, Huds. 1851, Watson. -1. 4, 6, 8, 9, 11, 17.

CAUCALIS DAUCOIDES, L. 1789, Gough. +3, 4, 6, 12, 13, 14.

CAUCALIS INFESTA, Curtis. = C. ARVENSIS, Huds.

CAUCALIS LATIFOLIA, L. 1640, Parkinson. +4, 6, 12, 13, 14, 15, 16.

CAUCALIS NODOSA, Scop. 1851, Watson. -1.

[CENTAUREA AUREA, Ait. 1900. Mistake,]

CENTAUREA AXILLARIS, Willd. 1896, Lees. +13.

CENTAUREA CALCITRAPA, L. 1890, Burgess. +4, 6, 10, 13.

CENTAUREA CYANUS, L. 1835, E. J. Nicholson. -4, 6, 9.

CENTAUREA IBERICA, Trev. 1900, Smith. +4.

CENTAUREA INTYBACA, Lam. 1899, Hinchliff. +6.
CENTAUREA MELITENSIS. L. 1902, Smith. +4.

CENTAUREA NIGRA, L. 1823, Sinclair. +all. v. DECIPIENS, (Thuill.) 1890, Jarvis. +7, 10, 12.

CENTAUREA PALLESCENS, Delile. 1900, Smith. +4.

CENTAUREA SALMANTICA, L. 1900, Sneath. +13.

CENTAUREA SCABIOSA, L. 1820, Ward. -9, 17, 18.

CENTAUREA SOLSTITIALIS, L. 1892, Goodall. +4, 5, 6, 12, 13, 15.

CENTAUREA SPINOSA, L. 1885, Druce. +4.

CENTAURIUM PULCHELLUM, Druce. 1820, Ward. +4, 9, 10, 11.

CENTAURIUM UMBELLATUM, Gilib. 1835, E. J. Nicholson. -12, 17, 18.

CENTRANTHUS, DC. = KENTRANTHUS, Neck.

CENTUNCULUS MINIMUS, L. 1877, Lees. +7.

CEPHALARIA SYRIACA, Schrad. 1900, Smith. +4.

[CERASTIUM ALPINUM, L. 1763. Mistake.]

CERASTIUM AQUATICUM, L. = STELLARIA AQUATICA, Scop.

CERASTIUM ARVENSE, L. 1723, Bacon. +all.

CERASTIUM GLOMERATUM, Thuill. = C. VISCOSUM, L.

CERASTIUM SEMIDECANDRUM, L. 1851, Watson. -1, 6, 12, 15, 17, 18.

CERASTIUM TETRANDRUM, Curt. 1865, Britten. +4, 9, 10, 11, 12.

CERASTIUM TRIVIALE, Link. = C. VULGATUM, L.

CERASTIUM VISCOSUM, L. 1837, Dodsworth. - 1, 9.

CERASTIUM VULGATUM, L. 1836, Dodsworth. +all.

CERASTIUM VULGATUM, × VISCOSUM. 1909, W.-P. +3.

CERATOPHYLLUM DEMERSUM, L. 1851, Watson. -1, 4, 5, 8, 10, 14.

[CERATOPHYLLUM SUBMERSUM, L. 1892, W.-P. +2, 7, 9, 11. Never taken in fruit, so it is uncertain.]

CETERACH OFFICINARUM, Willd. 1889, Wilkinson. +14.

CHÆROPHYLLUM ANTHRISCUS, Lam. = ANTHRISCUS VULGARIS, Bernh.

CHÆROPHYLLUM SATIVUM, Lam. = ANTHRISCUS CEREFOLIUM, Hoffm.

CHÆROPHYLLUM TEMULUM, L. 1836, Dodsworth. +all.

CHARA ASPERA, Willd. 1883, Beeby. +1, 16.

CHARA CONTRARIA, Kuetz. 1896, Lees. +9.

CHARA FŒTIDA, Braun. = C. VULGARIS, L.

CHARA FRAGILIS, Desv. 1862, Carrington. +3, 7, 9, 12, 13, 16. v. BARBATA, Gant. 1895, Mason. +16. v. HEDWEGII, Kuetz. 1883, Beeby. +16. v. VERRUCOSA (Itzigs.) 1896, Mason. +3.

CHARA HISPIDA, L. 1838, Dodsworth. +1, 3, 4, 7, 10, 15, 16.

CHARA POLYACANTHA, Braun. 1894, Mason. +3.

CHARA VULGARIS, L. 1838, Dodsworth. -5, 8, 10, 17, 18.
v. LONGIBRACTEATA, Kuetz. 1883, Beeby. +4, 6, 9, 11, 12, 13, 14, 16.
v. PAPILLATA, Wallr. 1883, Beeby. +14, 16.

CHEIRANTHUS CHEIRI, L. 1835, E. J. Nicholson. -1, 4, 9, 13, 14, 15, 16, 17,

CHELIDONIUM MAJUS, L. 1834, Bailey. +all.

CHENOPODIUM ACUTIFOLIUM, Sm. = C. POLYSPERMUM, typica, L.

CHENOPODIUM ALBUM, L. 1836, Dodsworth. +all. v. PAGANUM Reichb.) 1893, W.-P. +2, 3, 4, 11, 12, 13. v. VIRIDE, L. 1893, W.-P. +1, 3, 4, 12, 13.

CHENOPODIUM BONUS-HENRICUS, L. 1836, Dodsworth. -1, 4, 6, 7, 14.

CHENOPODIUM BOTRYOIDES, Sm. 1836, Dodsworth. +11.\*

CHENOPODIUM CANDICANS, Lam. = C. ALBUM, typica, L.

CHENOPODIUM HYBRIDUM, L. 1890, Jarvis. +7, 15.

CHENOPODIUM INCANUM, Moq. = C. ALBUM, typica, L.

CHENOPODIUM MARITIMUM, L. = SUÆDA MARITIMA, Dum.

CHENOPODIUM MURALE, L. 1885, Gibbs. +12.

CHENOPODIUM OLIDUM, Curt. = C. VULVARIA, L.

CHENOPODIUM PAGANUM, Reichb. = C. ALBUM, v. PAGANUM, Reichb.

CHENOPODIUM POLYSPERMUM, L. 1829, E. J. Nicholson. +3,7,10,11, 12, 13, 14, 16. v. CYMOSUM, Moq. 1892, Alston. +7, 14.

CHENOPODIUM RUBRUM, L. 1836, Dodsworth. -6, 7, 14, 17, 18.
v. PSEUDO-BOTRYOIDES, Wats. 1900, Smith. +4.

CHENOPODIUM SPICATUM, Moq. = C. POLYSPERMUM, typica, L.

CHENOPODIUM URBICUM, L. 1839, Dodsworth. +3, 11, 12, 16.

CHENOPODIUM VIRIDESCENS, Moq. = C. ALBUM, v. PAGANUM, Reichb.

CHENOPODIUM VULVARIA, L. 1872, Bogg. +4, 13.

CHLORA PERFOLIATA, L. = BLACKSTONIA PERFÒLIATA, Huds.

CHRYSANTHEMUM CORONARIUM, L. 1900, Grierson. +13.

CHRYSANTHEMUM LEUCANTHEMUM, L. 1835, E. J. Nicholson. +all.

CHRYSANTHEMUM PARTHENIUM, Bernh. 1820, Ward. -1, 4, 6, 17, 18.

CHRYSANTHEMUM SEGETUM, L. 1835, E. J. Nicholson. -9, 17, 18.

CHRYSOSPLENIUM ALTERNIFOLIUM, L. 1867, Brewster. +7, 10, 15.

CHRYSOSPLENIUM OPPOSITIFOLIUM, L. 1597, Gerarde. +3, 7, 9, 10, 12, 14, 15.

CICHORIUM INTYBUS, L. 1820, Ward. -2, 9, 18.

CICUTA VIROSA, L. 1789, Gough. +(11), (12), (13), (16).\* (Not doubtful).

CINERARIA CAMPESTRIS, Retz. = SENECIO INTEGRIFOLIA, Clairy.

CINERARIA PALUSTRIS, L. = SENECIO PALUSTRIS, Hook

CIRCÆA LUTETIANA, L. 1834, Bailey. -1, 9, 17, 18.

CIRSIUM, Hill. = CNICUS, Benth. & Hook.

CIRSIUM BRITANNICUM, Scop. = CNICUS PRATENSIS, Willd.

CLADIUM GERMANICUM, Schrad. = C. MARISCUS, Br.

CLADIUM JAMAICENSE, Crantz. = C. MARISCUS, Br.

CLADIUM MARISCUS, Br. 1650, How. +1, 2, 5, 12.

CLAYTONIA PERFOLIATA, Donn. 1886, Newman. +3, 6, 7, 10, 11, 13.

CLEMATIS VITALBA, L. 1836, J. Nicholson. -1, 4, 5, 9, 10, 13, 14, 17, 18.

CLINOPODIUM VULGARE, L. 1836, Dodsworth. -3, 4, 9, 12, 17, 18.

CNICUS ACAULIS, Willd. 1800, Dalton. -2, 18. v. CAULESCENS, Pers. 1856, Fowler. +5, 9, 10, 11, 15.

CNICUS ACAULIS × ARVENSIS, 1895, Mason. +10, 13, 14, 15, 16.

CNICUS ARVENSIS, Hoffm. 1799, Young. +all. v. SETOSUS, Bess. 1893, Mackinder. +3, 7, 10, 12, 13.

CNICUS CLARKEI, Wats. = C. ACAULIS × ARVENSIS.

CNICUS DUBIUS, Willd. = C. ACAULIS × ARVENSIS.

CNICUS ERIOPHORUS, Roth. 1805, Turner. +1, 11, 12, 13, 14, 15, 16.

CNICUS FOSTERI, Sm. = C. PALUSTRIS × PRATENSIS.

[CNICUS HETEROPHYLLUS, Willd. 1892. Mistake.]

CNICUS LANCEOLATUS, Willd. 1836, Dodsworth. +all.

CNICUS LANCEOLATUS × PRATENSIS, 1890, Jarvis. +7, 11.

CNICUS OLERACEUS, Willd. 1815, Oldham. +16.\* (Not doubtful.)

CNICUS PALUSTRIS, Willd. 1836, Dodsworth. +all.

CNICUS PALUSTRIS × PRATENSIS, 1877, Lees. +7.

CNICUS PRATENSIS, Willd. 1840, Miller. +1, 2, 3, 5, 7, 10, 12, 13, 14.

COCHLEARIA ANGLICA, L. 1805, Salt. +12, 17, 18.

COCHLEARIA DANICA, L. 1908, Reynolds. +11.

COCHLEARIA OFFICINALIS, L. 1597, Gerarde. +4, 9, 11, 12, 17, 18.

COLCHICUM AUTUMNALE, L. 1836, Dodsworth. +1, 2, 3, 5, 6, 15.

COLLOMIA LINEARIS, Nutt. 1893, Alston. +1, 10, 11.

COMARUM PALUSTRE, L. = POTENTILLA PALUSTRIS, Scop.

CONIUM MACULATUM, L. 1820, Thompson. +all.

CONOPODIUM DENUDATUM, Koch. = C. MAJUS, Loret.

CONOPODIUM MAJUS, Loret. 1836, Dodsworth. -9, 12, 17, 18.

CONRINGIA ORIENTALIS, Dum. = ERYSIMUM PERFOLIATUM, Crantz.

CONVALLARIA MAJALIS, L. 1820, Ward. +2, 3, 6, 7, 8, 10, 13, 16.

CONVOLVULUS, L. = CALYSTEGIA, Br.

CONVOLVULUS ARVENSIS, L. 1836, Dodsworth. +all.

CORIANDRUM SATIVUM, L. 1805, Turner. +8, 14. 16.

CORION, N. E. Br. = SPERGULARIA, Presl.

CORNUS SANGUINEA, L. 1820, Ward. -4, 12, 17, 18.

CORONILLA SCORPIOIDES, Koch. 1901, Smith. +4.

CORONOPUS DIDYMUS, Sm. 1866, Daubney. +3, 4, 12, 13.

CORONOPUS PROCUMBENS, Gilib, 1836, Dodsworth. +all.

CORONOPUS RUELLII, All. = C. PROCUMBENS, Gilib.

CORONOPUS VERRUCARIUS, Gars. = C. PROCUMBENS, Gilib.

CORYDALIS BULBOSA, DC. = C. SOLIDA, Hook.

CORYDALIS CLAVICULATA, DC. 1876, Fowler. +7, 10, 12, 13, 14, 15, 17.

CORYDALIS LUTEA, DC. 1862, Britten. +2, 3, 7, 8, 10, 14.

CORYDALIS SOLIDA, Hook. 1862, Britten. +3, 5, 7, 11, 14.

CORYLUS AVELLANA, L. 1836, Dodsworth. -6, 8, 9, 17.

CORYNEPHORUS CANESCENS, Beauv. 1878, Lees. +11.

COTYLEDON UMBILICUS-VENERIS, L. 1727, Blair. +7, 10.

CRAMBE MARITIMA, L. 1805, Banks. +11.\* (Extinct.)

CRATÆGUS MONOGYNA, Jacq. 1820, Thompson. +all. v. KYRTOSTYLA, Fingerh. 1877, Lees. +7. v. LACINATA, Wallr. 1877, Lees. +7. 13.

CRATÆGUS OXYACANTHA, L. 1855, Bogg. +3, 6, 7, 8, 10, 13, 14, 15, 18.

CRATÆGUS OXYACANTHOIDES, Thuill. = C. OXYACANTHA, L.

CREPIS BIENNIS, L. 1820, Ward. +1, 3, 8, 10, 15, 16.

CREPIS CAPILLARIS, Wallr. 1836, Dodsworth. +all.

CREPIS PALUDOSA, Moench. 1890, Jarvis. +7.\* (Doubtful.)

CREPIS SETOSA, Hall. f. 1905, Smith. +4.

CREPIS TARAXACIFOLIA, Thuill. 1890, Jarvis. +2, 4, 7, 9, 13, 15.

CREPIS VIRENS, L. = C. CAPILLARIS, Wallr.

[CRITHMUM MARITIMUM, L. 1724. Mistake.]

CROCUS AUREUS, Sibth. = C. OFFICINALIS, Huds.

CROCUS NUDIFLORUS, Sm. 1885, Cochin. +6.\* (Not doubtful.)

· CROCUS OFFICINALIS, Huds. 1872, W.-P. +2, 3, 13, 16.

CROCUS SATIVUS, L. 1838, Dodsworth. +15.\* (Was it C. SATIVUS, or C. OFFICINALIS?)

CROCUS VERNUS, Mill. = C. OFFICINALIS, Huds.

CUSCUTA EPILINUM, Murr. 1878, Lees. +7, 14.

[CUSCUTA EUROPÆA, L. S. Lincs. Very doubtful.]

CUSCUTA TRIFOLII, Bab. 1856, Bogg. +1, 2, 7, 8, 12, 13, 14, 15.

CYCLAMEN HEDERÆFOLIUM, Ait. 1597, Gerarde. +3.

CYNODON DACTYLON, Pers. 1836, Dodsworth. +(12.)

CYNOGLOSSUM OFFICINALE, L. 1820, Ward. -4, 5, 8, 12, 17, 18.

CYNOSURUS CRISTATUS, L. 1820, Thompson. +all.

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CYNOSURUS ECHINATUS, L. 1856, Thompson. +(12.)
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CYPERUS LONGUS, L. 1839, Dodsworth. +(16.)\*

CYTISUS LABURNUM, L. 1904, W.-P. +2, 3, 7.

CYTISUS SCOPARIUS, Link. 1820, Ward. -4, 8, 9, 12, 16, 17, 18.

DACTYLIS GLOMERATA, L. 1820, Thompson. +all.

DAMASONIUM ALISMA, Mill. 1836, Dodsworth. +(16.)\*

DAMASONIUM STELLATUM, Pers. = D. ALISMA, Mill.

DAPHNE LAUREOLA, L. 1829, Oldfield. +2, 3, 4, 6, 7, 8, 11, 12, 14, 15, 16.

DAPHNE MEZEREUM, L. 1857, Browne. +10, 15. (Bird sown like the above, neither are areal.)

DATURA STRAMONIUM, L. 1805, Salt. -1, 9, 10, 15, 16, 17.

+all. DAUCUS CAROTA, L. 1847, Anderson.

DAUCUS GUMMIFER, All. 1903, Burton. +(11.)

DELPHINIUM AJACIS, L. 1862, Cole. +(3), (7), (10), (13.)

[DELPHINIUM CONSOLIDA, L. 1872. Mistake.]

DESCHAMPSIA CÆSPITOSA, Beauv. 1836, Dodsworth +all.

DESCHAMPSIA DISCOLOR, Roem. & Schultz. = D. SETACEA, Rechter.

DESCHAMPSIA FLEXUOSA, Trin. 1815, Peck. +1, 2, 5, 7, 8, 10, 13, 16.

DESCHAMPSIA SETACEA, Richter. 1878, Lees. +7.

DIANTHUS BARBATUS, L. 1874, W.-P. +2, II, 13.

[DIANTHUS CÆSIUS, Sm. 1805. Mistake.]

DIANTHUS GLAUCUS, L. 1763, Martyn. +(7), (13.)

DIANTHUS PLUMARIUS, L. 1903, W.-P. +10.

DIGITALIS PURPUREA, L. 1820, Ward. -1, 4, 8, 9, 12, 14, 16, 17.

**DIPLOTAXIS MURALIS, DC.** 1835, E. J. Nicholson. +2, 3, 4, 5, 7, 11, 13, 15.

**DIPLOTAXIS TENUIFOLIA,** DC. 1893, Walker. +3, 4, 5, 13, 14, 15.

DIPSACUS PILOSUS, L. 1829, Oldfield. +7, 11, 12, 15, 16.

DIPSACUS SYLVESTRIS, Huds. 1820, Ward. -18.

DIPSACUS FULLONUM, Auct. Ang. 1877, Fowler. +3, 10, 15.

DORONICUM PARDALIANCHES, L. 1878, Lees. +7, 11.

DORONICUM PLANTAGINEUM, L. 1898' Woolward. +15.

[DRABA MURALIS, L. 1856. Mistake.]

DROSERA ANGLICA, Huds. 1820, Ward. +1, 2, 5, 7, 10, 12. (Extinct?)

DROSERA INTERMEDIA, Drev. & Hayne. = D. LONGIFOLIA, L.

DROSERA LONGIFOLIA, L. 1803, Salt. +1, 2, 5, 7, 10.

DROSERA ROTUNDIFOLIA, L. 1724, Stukeley. +1, 2, 3, 5, 7, 10, 12, 13, 15,

DRYOPTERIS, Adans. = LASTRÆA, Presl.

ECHINOSPERMUM LAPPULA, Lehn. = L. ECHINATA, Gilib.

ECHIUM ITALICUM, L. 1899, Hinchliff. +6.

ECHIUM PLANTAGINEUM, L. 1897, Wood. +4, 6, 13.

ECHIUM VULGARE, L. 1820, Ward. -8, 17, 18.

ELEOCHARIS ACICULARIS, Roem. & Schultz. 1838, Dodsworth. +6, 16.

ELEOCHARIS CÆSPITOSA, Link. = SCIRPUS CÆSPITOSUS, L.

ELEOCHARIS MULTICAULIS, Sm. 1876, Fowler. +1, 2, 5, 7, 12.

ELEOCHARIS PALUSTRIS, Roem. & Schultz. 1815, Peck. -14.

ELEOCHARIS PAUCIFLORUS, Link. = SCIRPUS PAUCIFLORUS, Light.

ELISMA NATANS, Buch. 1883, Burton. +(5.)

ELODEA CANADENSIS, Mich. 1849, Carrington. +all.

ELYMUS ARENARIUS, L. 1805, Turner. +4, 9, 11, 12.

ELYMUS CAPUT-MEDUSÆ. L. 1902, Smith. +4.

EMPETRUM NIGRUM, L. 1799, Young. +1, 2, 12. (Extinct?)

EPILOBIUM ADNATUM, Griesb. = E, TETRAGONUM, Curt.

EPILOBIUM ANGUSTIFOLIUM, L. 1686, Ray. -9, 17, 18. v. BRACHY-CARPUM, Leighton. 1893, W.-P. +3, 7.

EPILOBIUM HIRSUTUM, L. 1799, Young. +all. v. INCANUM, Mihi. 1903, Stow. +15.

EPILOBIUM HIRSUTUM × PARVIFLORUM, 1907, Mason. +8, 14.

EPILOBIUM MONTANUM, L. 1835, E. J. Nicholson, +all.

EPILOBIUM MONTANUM × PARVIFLORUM, 1908, Mason. +3, 8.

EPILOBIUM OBSCURUM, Schreb. 1837, Deakin. +2, 7, 8, 16.

**EPILOBIUM PALUSTRE, L.** 1836, Dodsworth. -4, 6, 8, 9, 17, 18.

EPILOBIUM PARVIFLORUM, Schreb. 1836, Dodsworth. -9.

EPILOBIUM ROSEUM, Schreb. 1896, L.N.U. +16.

EPILOBIUM TETRAGONUM, Curt. 1851, Watson. -1, 4, 5, 9, 11, 12, 17, 18.

EPIPACTIS, Adans. = HELLEBORINE, Hill.

EPIPACTIS PALUSTRIS, Crantz. = HELLEBORINE LONGIFOLIA, Rendle & Britt.

EQUISETUM ARVENSE, L. 1836, Dodsworth. +all.

EQUISETUM ARVENSE × LIMOSUM. 1904, W.-P. +3, 12.

EQUISETUM EBURNEUM, Fr. = E. MAXIMUM, Lam.

EQUISETUM HYEMALE, L. 1829, Oldfield. +7, (12.)

EQUISETUM LIMOSUM, L. 1836, Dodsworth. +all. v. FLUVIATILE, L. 1836, Dodsworth. +all.

EOUISETUM LITORALE, Kuehl. = E. ARVENSE × LIMOSUM.

• EQUISETUM MAXIMUM, Lam. 1850, Ffytche. +3, 7, 8, 10, 11, 15.

EQUISETUM PALUSTRE, L. 1840, Dodsworth. -10, 12, 18. v. NUDUM, Newm. 1870, Fowler. +2, 5, 13. v. POLYSTACHYUM, Weigel. 1855, Lowe. +2, 3, 5, 14.

EQUISETUM SYLVATICUM, L. 1829, Oldfield. +2, 3, 6, 7, 12, 13.

EQUISETUM TELMETEIA, Ehrh. = E. MAXIMUM, Lam.

**ERANTHIS HYEMALIS,** Salisb. 1873, Max Peacock. +2, 3, 10, 13, 14, 15.

ERICA CINEREA, L. 1840, Miller. +1, 2, 3, 5, 7, 10, 13.

ERICA TETRALIX, L. 1840, Miller. + 1, 2, 3, 5, 7, 10, 13, 16.

ERIGERON ACRE, L. 1838, Dodsworth. -1, 4, 6.

ERIGERON CANADENSE, L. 1909, Reynolds. +11.

[ERIOCAULON SEPTANGULARE, With. 1856. Mistake.]

ERIOPHORUM ANGUSTIFOLIUM, Roth. 1799, Young. -3, 11, 14, 17, 18.

ERIOPHORUM LATIFOLIUM, Hoppe. 1840, Miller. +1, 16.\* (Doubtful in both cases as to whether in Lincs. or in Yorks. and Northam., but likely enough from soil requirements.)

ERIOPHORUM POLYSTACHION, L. = E. ANGUSTIFOLIUM, Roth.

ERIOPHORUM VAGINATUM, L. 1815, Peck. +1, 4, 5, 7.

ERODIUM CICUTARIUM, L'Herit. 1834, Bayley. - 18.

ERODIUM MOSCHATUM, L'Herit. 1900, Hudson. +(1.) (In seeds.)

EROPHILA PRÆCOX, DC. 1877, Lees. +2, 7, 15.

EROPHILA VERNA, E. Mayer. 1836, Dodsworth. -1.

EROPHILA VULGARIS, DC. = E. VERNA, E. Mayer.

ERUCA SATIVA, Mill. 1896, Larder. +8.

ERYNGIUM CAMPESTRE, L. 1838, Dodsworth. +12.\* (Ballast?)

ERYNGIUM MARITIMUM, L. 1834, Bayley. +4, 9, 11, 12.

ERYSIMUM CHEIRANTHOIDES, L. 1849, Carrington. -4, 8, 18.

ERYSIMUM HIERACIFOLIUM, L. 1894, Mason. +12, 17.

ERYSIMUM ORIENTALE, Mill. 1896, Sneath. +3, 7, 12, 13, 15.

ERYTHRÆA, Borck. = CENTAURIUM, Hill.

ERYTHRÆA CENTAURIUM, Pers. = C. UMBELLATUM, Gilib.

ERYTHRÆA LITTORALIS, Fr. = CENTAURIUM VULGARE, Rafn.

ESCHSCHOLZIA CALIFORNICA, Cham. 1895, W.-P. +5, 11.

EUONYMUS EUROPÆUS, L. 1834, Bayley. -4, 5, 9, 12, 14, 17, 18.

EUPATORIUM CANNABINUM, L. 1799, Young. -17, 18.

EUPHORBIA AMYGDALOIDES, L. 1838, Dodsworth. +16.

[EUPHORBIA ESULA, L. 1884. Mistake.]

EUPHORBIA EXIGUA, L. 1838, Dodsworth. -4, 6, 9, 17, 18.

EUPHORBIA HELIOSCOPIA, L. 1838, Dodsworth. -4, 6.

EUPHORBIA LATHYRIS, L. 1878, Fowler. +2, 7, 8, 12, 14, 15, 18.

EUPHORBIA PEPLUS, L. 1836, Dodsworth. -1.

EUPHORBIA PLATYPHYLLOS, L. 1877, Lees. +7.

EUPHORBIA PORTLANDICA, L. 1897, Lees. +11.

EUPHRASIA ODONTITES, L. = BARTSIA ODONTITES, Huds.

EUPHRASIA OFFICINALIS, L. 1820, Thompson. - 17, 18.

EUPHRASIA ROSTKOVIANA, Hayne. 1856, Cole. +7, 13.

FABA VULGARIS, Moench. = VICIA FABA, L.

FAGOPYRUM ESCULENTUM, Moench. = F. SAGITTATUM, Gilib.

FAGOPYRUM SAGITTATUM, Gilib. 1868, Charters. +2, 3, 5, 6, 7, 12, 13.

FAGUS SYLVATICA, L. 1799, Young. -6, 9, 16, 18.

FALCARIA RIVINI, Host. = F. VULGARIS, Bernh.

FALCARIA VULGARIS, Bernh. 1895, Higginbottom. +6.

FALCATULA, Bab. = TRIGONELLA, DC.

FARSETIA INCANA, R. Br. = ALYSSUM INCANUM, L.

FESTUCA ARUNDINACEA, Schreb. 1856, Thompson. +1, 3, 4, 11, 12, 16, 17.

FESTUCA BROMOIDES, L. 1851, Watson. +3, 5, 7, 9, 13, 15, 16, 18.

FESTUCA DUMETORUM, L. 1825, Sinclair. +3, 4, 9, 11. (Has been recorded hitherto as F. RUBRA, ARENARIA, Osb.) (I still think rightly, but give way to Prof. Hackel and Mr. G. C. Druce.)

FESTUCA ELATIOR, L. 1872, Britten. +1, 2, 3, 5, 6, 7, 10, 11, 13, 14, 15, 16.

FESTUCA GIGANTEA, Vill. = BROMUS GIGANTEUS, L.

FESTUCA LOLIACEA, Curt. = F. PRATENSIS v. PSEUDO-LOLIACEA,
Hackel. It may also imply the hybrid F. PRATENSIS × LOLIUM
PERENNE, which is with us too; but I know no means of distinguishing
them except by the infertility of the hybrid.

FESTUCA MARITIMA, L. 1904, L.N.U. +16.

FESTUCA MYUROS, L. 1879, Fowler. +2, 5.

FESTUCA ORARIA, Dum. = F. RUBRA v. ARENARIA, Fr.

FESTUCA OVINA, L. 1851, Watson. -9, 12, 16, 17. v. CAPILLATA, Hackel. 1891, W.-P. +3, 4, 5, 7.

FESTUCA PRATENSIS, Huds. 1820, Thompson. +2, 3, 4, 5, 6, 7, 9, 11, 12, 13 f. PSEUDO-LOLIACEA, Hackel. 1865, Britten. +3, 6, 13. FESTUCA PRATENSIS × LOLIUM PERENNE. 1896, W.-P. +3, 5, 6, 16.

FESTUCA PSEUDO-MYUROS, Soyce-White. = F. MYUROS, L.

FESTUCA RIGIDA, Kunth. 1836, Dodsworth. -1, 3, 4, 7, 9, 11, 12, 17, 18.

FESTUCA ROTTBŒLLIOIDES, Kunth. 1872, Whitehead. +4, 11.

FESTUCA RUBRA, L. 1825, Sinclair. -12, 13, 14, 17. v. ARENARIA, Osb. Recorded for N. Lincs. Will be found under F. DUMETORUM, L. v. FALLAX, Hackel. 1872, Britten. +7.

FESTUCA SCIUROIDES, Roth. = F. BROMOIDES, L.

FESTUCA TENUIFOLIA, Sibth. = F. OVINA. v. CAPILLATA, Hackel.

FICUS CARICA, L. 1901, Allett. +9.

FILAGO GERMANICA, L. 1836, Dodsworth. -18.

FILAGO MINIMA, Fr. 1851, Watson. +1, 2, 5, 7, 8, 10, 13.

FILAGO SPATHULATA, Presl. 1878, Fowler. +2, 3, 15.

FŒNICULUM VULGARE, Mill. 1856, Bogg. +4, 10, 11, 12, 13.

FRAGARIA ELATIOR, Ehrh. = F. MOSCHATA, Duchesne.

FRAGARIA MOSCHATA, Duchesne. 1893, W.-P. +1, 2, 3, 7.

FRAGARIA STERILIS, L. = POTENTILLA STERILIS, Garcke.

FRAGARIA VESCA, L. 1836, Dodsworth. -1, 9, 12, 17, 18.

FRANKENIA LÆVIS, L. 1763, Martyn. +18. (If in Lincs., as is probable, and not Cambs.?)

FRAXINUS EXCELSIOR, L. 1764, De la Pryme. +all.

FRITILLARIA MELEAGRIS, L. 1837, M. Nicholson. +2, 5, 6, 7, 15.

FUMARIA BASTARDI, Bor. 1890, Mason. +10.

[FUMARIA BORAÆI, Jord., 1879. Mistake.]

FUMARIA CAPREOLATA, L. 1834, Bailey. +8, 12.\* (Doubtful.)

FUMARIA CONFUSA, Jord. = F. BASTARDI, Bor.

FUMARIA MURALIS, Sonder. 1896, Fowler. +10, 18.

FUMARIA OFFICINALIS, L. 1836. Dodsworth. -9. 18.

FUMARIA PALLIDIFLORA, Jord. = F. CAPREOLATA, L.

FUMARIA VAILLANTII, Lois. 1883, Streatfeild. +15.

GALANTHUS NIVALIS, L. 1863, W.-P. +2, 3, 7, 8, 10, 13.

GALEOBDOLON LUTEUM, Hudson. = LAMIUM GALEOBDOLON, Crantz.

GALEOPSIS ANGUSTIFOLIA, Ehrh. 1837, Dodsworth. -1, 8, 9, 12, 17, 18.

GALEOPSIS DUBIA, Leers. 1838, Dodsworth. +1, 2, 16.

GALEOPSIS LADANUM, L. = G. ANGUSTIFOLIA, Ehrh.

GALEOPSIS OCHROLEUCA, Lam. = G. DUBIA, Leers.

GALEOPSIS SPECIOSA, Mill. 1695. Ray. -4, 8, 9, 11, 17.

GALEOPSIS TETRAHIT, L. 1763, Martyn. -9, 17. v. BIFIDA, Boenn. 1891, W.-P. +2, 3, 5, 7, 10, 12, 13, 14, 15. v. BREWSTERII, Mihi, 1892, W.-P. +3.

GALEOPSIS VERSICOLOR, Curt. = G. SPECIOSA, Mill.

GALIUM ANGLICUM, Huds. 1836, Dodsworth. +12.\* (Doubtful.)

GALIUM APARINE, L. 1836, Dodsworth. +all.

GALIUM CRUCIATA, Scop. 1836, Dodsworth. -9, 18.

GALIUM ERECTUM, Huds. 1856, Thompson. +2, 5, 15.

GALIUM MOLLUGO, L. 1836, Dodsworth. +2, 4, 5, 8, 10, 12, 13, 15, 16.

GALIUM PALUSTRE, L. 1820, Thompson. +all. v. ELONGATUM, Presl. 1899, W.-P. +9, 11, 14. v. WITHERINGII, Sm. 1892, Lees. -1, 4, 10, 15, 17, 18.

GALIUM SAXATILE, L. 1820, Ward. -4, 9, 11, 12, 14, 16, 17, 18.

GALIUM SPURIUM, L. 1896, Lees. +13.

GALIUM TRICORNE, Stokes. 1778, Hudson. +2, 5, 6, 7, 12, 13, 15, 16.

GALIUM ULIGINOSUM, L. 1836, Dodsworth. - 1, 7, 17, 18.

GALIUM VERUM, L. 1835, E. J. Nicholson. -1.

GENISTA ANGLICA, L. 1820, Ward. +2, 3, 5, 6, 7, 10, 13.

GENISTA OVATA, Willd. 1896, Mason. +13.

GENISTA TINCTORIA, L. 1834, Bayley. -1, 6, 10, 12, 17, 18. v. HUMI-FUSA, Syme. 1908, Mason. +2.

GENTIANA AMARELLA, L. 1820, Ward. +2, 3, 5, 6, 8, 10, 11, 13, 14, 15.

[GENTIANA LINGULATA, C. A. Agardh.] v. PRÆCOX, Towns. 1805, Cullam. +3, 15.

GENTIANA CAMPESTRIS, L. 1831, Drury. +2, 3, 5, 13, 15.

GENTIANA PNEUMONANTHE, L. 1633, Johnson. +2, 3, 5, 7, 10, 12, 13.

GERANIUM COLUMBINUM, L. 1806, Hailston. -4, 6, 9, 17, 18.

GERANIUM DISSECTUM, L. 1836, J. Nicholson. -9.

GERANIUM LUCIDUM, L. 1836, J. Nicholson. +3, 4, 5, 6, 7, 8, 10, 11, 15.

GERANIUM MOLLE, L, 1836, Dodsworth. +all.

GERANIUM PHÆUM, L. 1888, Newman. +3, 11, 13.

GERANIUM PRATENSE, L. 1836, J. Nicholson. -10, 17, 18.

GERANIUM PUSILLUM, L. 1851, Watson. -4, 17.

GERANIUM PYRENAICUM, Burm. f. 1855, Lowe. +1, 2, 3, 7, 12, 13, 14, 15.

GERANIUM ROBERTIANUM, L. 1836, Dodsworth. +all.

GERANIUM SANGUINEUM, L. 1746, Blackstone. +2, 3, 10, 11, 13, 15,

GERANIUM STRIATUM, L. = G. VERSICOLOR, L.

GERANIUM VERSICOLOR, L. 1875, W.-P. +2, 3, 11, 12.

GEUM RIVALE, L. 1670, Ray. -1, 4, 9, 12, 16, 17, 18.

GEUM RIVALE × URBANUM, 1686, Lister. +2, 3, 7, 8, 10, 11, 13, 14, 15.

GEUM URBANUM, L. 1686, Lister. +all.

GILIA CAPITATA, Sims. 1895, Mason. +13.

GITHAGO SEGETUM, Desf. = LYCHNIS GITHAGO, Scop.

GLAUCIUM CORNICULATUM, Curt. 1897, Sneath. +4, 5, 6, 13.

GLAUCIUM FLAVUM, Crantz. 1877, Lees. +4, 9, 11.

GLAUCIUM LUTEUM, Scop. = G. FLAVUM, Crantz.

GLAUCIUM PHŒNICEUM, Crantz. = G. CORNICULATUM, Curt.

GLAUX MARITIMA, L. 1834, Bayley. +1, 2, 3, 4, 9, 10, 11, 12, 17, 18.

GLECHOMA HEDERACEA, L. = NEPETA GLECHOMA, L.

GLYCERIA AQUATICA, Wahlb. 1597, Gerarde. +all.

GLYCERIA DISTANS, Wahlb. 1851, Watson. +1, 2, 3, 4, 9, 11, 12, 17, 18.

GLYCERIA FLUITANS, Br. 1851, Watson. -9.

GLYCERIA LOLIACEA, Wats. = FESTUCA ROTTBŒLLIOIDES, Kunth.

GLYCERIA MARITIMA, Mert. & Koch. 1823, Sinclair. +2, 3, 4, 5, 9, 11, 12, 17, 18.

GLYCERIA PLICATA, Fr. 1851, Watson. -2, 9, 10, 12, 15, 17, 18.

GLYCERIA RIGIDA, Sm. = FESTUCA RIGIDA, Kunth.

GNAPHALIUM DIOICUM, L. = ANTENNARIA DIOICA, Gaertn.

GNAPHALIUM RECTUM, Sm. = G. SYLVATICUM, L.

GNAPHALIUM SYLVATICUM, 1805, Crabbe. +1, 2, 5, 7, 10, 13, 15.

GNAPHALIUM ULIGINOSUM, L. 1836, J. Nicholson. -4, 5, 6, 12, 17, 18.

GYMNADENIA CONOPSEA, Br. = HABENARIA CONOPSEA, Benth.

GYPSOPHILA MURALIS, L. 1907, Burchnall. +12.

GYPSOPHILA PANICULATA, L. 1901. +4.

GYPSOPHILA PORRIGENS, Boiss. 1899, Smith. +4, 6.

HABENARIA BIFOLIA, Br. 1877, Fowler, +1, 4, 7.

HABENARIA CHLORANTHA, Bab. = H. VIRESCENS, Druce.

HABENARIA CHLOROLEUCA, Ridley. = H. VIRESCENS, Druce.

HABENARIA CONOPSEA, Benth. 1831, Drury. -1, 5, 6, 9, 12, 13, 17, 18.

HABENARIA VIRESCENS, Druce. 1831, Drury. -1, 3, 4, 9, 12, 14, 17, 18.

HABENARIA VIRIDIS, Br. 1831, Drury. +3, 7, 8, 10, 11, 12, 13, 14, 15.

HEDERA HELIX, L. 1810, Stark. +all.

HELEOCHARIS, Lestib. = ELEOCHARIS, Br.

HELIANTHEMUM CHAMÆCISTUS, Mill. 1726, Bacon. - 1, 7, 9, 10, 12, 17, 18.

HELIANTHEMUM VULGARE, Gaertn. = H. CHAMÆCISTUS, Mill.

HELIOTROPUM PERUVIANUM, L. 1895, Hudson. +1.

HELLEBORINE LATIFOLIA, Druce. 1834. Bailey. +8, 11, 15, 16.
v. MEDIA, E. S. Marshall. 1890, Chandler. +7, 11, 16.

HELLEBORINE LONGIFOLIA, Rendle & Brit. 1882, Fowler. +2, 4, 5.

[HELLEBORINE VIOLACEA, Druce. 1895. Mistake.]

HELLEBORUS FŒTIDUS, L. 1840, Grantham. +3, 8, 11, 13, 15.

[HELLEBORUS VIRIDIS, L.] v. OCCIDENTALIS, Reuter. 1836, Dodsworth. +1, 5, 8, 10, 11, 13, 15, 16.

HELOSCIADIUM Koch. = APIUM, L.

HERACLEUM SPHONDYLIUM, L. 1823, Sinclair. +all. v. ANGUSTI-FOLIUM, Sm. 1896, Mason. +11, 12, 15, 18.

HERNIARIA GLABRA, L. 1805, Crabbe. +14, 15.

HERNIARIA HIRSUTA, L. 1893, Mackinder. +4, 9.

HESPERIS MATRONALIS, L. 1837, Browning. +1, 3, 16.

HIERACIUM AURANTIACUM, L. 1893. Crow. +4, 8, 13.

HIERACIUM AURICULA, L. 1835, E. J. Nicholson. +(3).\*

HIERACIUM BOREALE, Fr. 1835, Dodsworth. -3, 4, 9, 12, 15, 17, 18.

HIERACIUM PILOSELLA, L. 1836, Dodsworth. -18.

HIERACIUM TRIDENTATUM, Fr. 1896, Lees. +2, 7.

HIERACIUM UMBELLATUM, L. 1718, Lister. -1, 4, 9, 12, 16, 18.

HIERACIUM VULGATUM, Fr. 1857, Bogg. +2, 7, 8, 10, 13, 15.

HIPPOCREPIS COMOSA, L. 1726, Bacon. +2, 5, 13, 14, 15.

HIPPOPHAE RHAMNOIDES, L. 1669, Mapletoft. +(3), (5), 9, 11.

HIPPURIS VULGARIS, L. 1837, Dodsworth. -2, 7, 10.

HOLCUS LANATUS, L. 1815, Peck. +all.

HOLCUS MOLLIS, L. 1815, Peck. -9, 11, 14, 15, 17, 18.

HORDEUM EUROPÆUM, All. 1862, Cole. +13, 16.

HORDEUM MARINUM, Huds. 1826, Howitt. +3, 4, 9, 11, 12, 17

HORDEUM MARITIMUM, With. = H. MARINUM, Huds.

HORDEUM MURINUM, L. 1836, Dodsworth. +all.

HORDEUM NODOSUM, L. 1836, Dodsworth. -9.

HORDEUM PRATENSE, Huds. = H. NODOSUM, L.

HORDEUM SECALINUM, Schreb. = H. NODOSUM, L.

HORDEUM SYLVATICUM, Huds. = H. EUROPÆUM, All.

HOTTONIA PALUSTRIS, L. 1820, Ward. -8.

HUMULUS LUPULUS, L. 1836, Dodsworth. -4, 9, 18.

HYACINTHUS, L. = SCILLA, L.

HYDROCHARIS MORSUS-RANÆ, L. 1837, Dodsworth. -2, 7, 8.

HYDROCOTYLE VULGARIS, L. 1746, Blackstone. -9.

HYOSCYAMUS NIGER, L. 1820, Ward. -18.

HYPECOUM PENDULUM, L. 1892, Smith. +4.

[HYPERICUM ANDROSÆMUM, L. 1820. Mistake.]

HYPERICUM CALYCINUM, L. 1865, Burtt. +3, 13.

HYPERICUM DUBIUM, Leers. = H. MACULATUM, Crantz.

HYPERICUM ELATUM, Ait. 1886, Mackinder. +10.

HYPERICUM ELODES, L. 1820, Ward. +2, 5, 7, 10.

[HYPERICUM HIRCINUM, L. 1893. Mistake.]

HYPERICUM HIRSUTUM, L. 1836, Dodsworth. -3, 5, 9, 12, 17, 18.

HYPERICUM HUMIFUSUM, L. 1840, Miller. -4, 9, 12, 14, 17, 18.

HYPERICUM MACULATUM, Crantz. 1878, Lees. +2, 3, 6, 7, 11, 13, 15, 16.

HYPERICUM MONTANUM, L. 1878, Fowler. +2.

HYPERICUM PERFORATUM, L. 1820, Ward. -3, 6, 9, 18. v. ANGUSTI-FOLIUM, DC. 1877, Lees. +2, 5, 7, 8, 10, 13, 14, 15, 16.

HYPERICUM PULCHRUM, L. 1820, Ward. -1, 9, 17, 18.

HYPERICUM QUADRANGULUM; L. 1799. -18.

HYPERICUM QUADRATUM, St. = H. QUADRANGULUM, L.

HYPERICUM TETRAPTERUM, Fr. = H. QUADRANGULUM, L.

HYPOCHÆRIS GLABRA, L. 1882, Melville. +10.

HYPOCHÆRIS MACULATA, L. 1896, W.-P. +13.

HYPOCHÆRIS RADICATA, L. 1836, Dodsworth. +all.

HYPOPITYS, Hill. = MONOTROPA, L.

IBERIS AMARA, L. 1908, Hurst. +12.

IBERIS UMBELLATA, L. 1874, W.-P. +2, 3, 4, 11.

ILEX AQUIFOLIUM, L. 1796, Bank. +2, 3, 6, 8, 10, 11, 13, 15.

[ILLECEBRUM VERTICILLATUM, L. 1847. Mistake.]

IMPATIENS NOLI-TANGERE, L. 1884, Browne. +7, 13, 15, 17.

IMPATIENS PARVIFLORA, L. 1889, Burgess. +10, 15.

INULA CONYZA, DC. = I. SQUARROSA, Bernh.

[INULA CRITHMOIDES, L. 1856. Mistake.]

INULA DYSENTERICA, L. = PULICARIA DYSENTERICA, Gaertn.

INULA HELENIUM, L. 1685, Plukenet. +5, 6, 7, 8, 15, 18.

INULA SQUARROSA, Bernh. 1838, Dodsworth. +2, 4, 7, 9, 10, 15, 16.

IRIS FŒTIDISSIMA, L. 1884, Fowler. +(3,) 14, (16.)

IRIS GERMANICA, L. 1892, W. Fowler. +2, 10.

IRIS PSEUDACORUS, L. 1799, Young. +all.

IRIS SPURIA, L. 1894, Burton. +11, (12?), (16?).

ISATIS TINCTORIA, L. 1897, Cordeaux. +4, 12, 14, 17.

JASIONE MONTANA, L. 1820, Ward. +2, 6, 7, 10, 13, 15.

JUNCUS ACUTIFLORUS, Ehrh. = J. SYLVATICUS, Reichb.

[JUNCUS ACUTUS, L. 1856. Mistake.]

JUNCUS ARTICULATUS, L. 1851, Watson. -2.

JUNCUS BUFONIUS, L. 1836, Dodsworth. +all.

JUNCUS BULBOSUS, L. 1851. Watson. -4, 6, 12, 15, 16, 17, 18.

JUNCUS COMMUNIS, Meyer. = J. EFFUSUS, L.

JUNCUS COMPRESSUS, Jacq. 1868, Charters. +3, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18.

JUNCUS CONGLOMERATUS, L. 1815, Peck. -17, 18.

JUNCUS DIFFUSUS, Hoppe. = J. EFFUSUS × GLAUCUS.

JUNCUS EFFUSUS, L. 1799, Young. +all.

JUNCUS EFFUSUS × INFLEXUS. 1868, Charters. +5.

JUNCUS GERARDI, Lois. 1836, Dodsworth. +1, 2, 4, 9, 11, 12, 17, 18.

JUNCUS GLAUCUS, Ehrh. = J. INFLEXUS. L.

JUNCUS INFLEXUS, L. 1836, Dodsworth. +all.

JUNCUS LAMPOCARPUS, Ehrh. = J. ARTICULATUS, L.

JUNCUS MARITIMUS, Lam. 1856, Fowler. +4, 9, 11.

JUNCUS OBTUSIFOLIUS, Ehrh. = J. SUBNODULOSUS, Schrank.

JUNCUS SUBNODULOSUS, Schrank. 1851, Watson. -5, 6, 7, 8, 10, 12, 17

JUNCUS SQUARROSUS, L. 1856, Fowler. +1, 2, 5, 7, 10, 13.

JUNCUS SUPINUS, Moench. = J. BULBOSUS, L.

JUNCUS SYLVATICUS, Reichb. 1851, Watson. -12, 15, 18.

KENTRANTHUS RUBER, DC. 1835, E. J. Nicholson. +2, 3, 5, 8, 15, 16.

KOELERIA CRISTATA, Auct. Ang. = K. GRACILIS, Pers.

KOELERIA GRACILIS, Pers. 1856, Bogg. +2, 4, 5, 7, 8, 13, 14, 15, 16.

LACTUCA MURALIS, Gaertn. 1858, Fowler. +2, 3, 17.

LACTUCA VIROSA, L. 1840, Miller. -2, 8, 12, 16, 17, 18.

LAGURUS OVATUS, L. 1870, Mason. +4, 11.

LALLEMANTIA IBERICA, Fisch. & Mey. 1890, Smith. +4.

LAMIUM ALBUM, L. 1836, Dodsworth. +all.

LAMIUM AMPLEXICAULE, L. 1840, Miller. -1, 4, 6, 12, 18.

LAMIUM CONFERTUM, Fr. = L. HYBRIDUM, Vill.

LAMIUM GALEOBDOLON, Crantz. 1820, Ward. -4, 9, 12, 17, 18.

LAMIUM HYBRIDUM, Vill. 1836, J. Nicholson. +2, 3, 5, 6, 7, 11, 13, 15, 17.

LAMIUM INCISUM, Willd. = L. HYBRIDUM, Vill.

LAMIUM MACULATUM, L. 1877, Allen. +2, 4, 10, 11, 15.

LAMIUM PURPUREUM, L. 1835, E. J. Nicholson. +all. v. DECIPIENS, Sonder. 1891, Firbank. +2, 3, 5, 7, 12, 15, 16.

LAPPULA ECHINATA, Gilib. 1895, Pears. +13.

LAPSANA COMMUNIS, L. 1835, E. J. Nicholson. +all.

LASTRÆA ARISTATA, Rendle & Brit. 1851, Watson. -9, 14, 16, 17, 18.

LASTRÆA DILITATA, Presl. = L. ARISTATA, Rendle & Brit.

LASTRÆA FILIX-MAS, Presl. 1851, Watson. -9, 17, 18. v. AFFINIS, Bab. 1856, Bogg. +8. v. PALEACEA, T. Moore. 1877, Lees. +1, 7, 10.

LASTRÆA MONTANA, T. Moore. 1840, Grantham. +1, 3, 5, 7, 8, 13.

LASTRÆA OREOPTERIS, Presl. = L. MONTANA, T. Moore.

LASTRÆA SPINULOSA, Presl. 1858, Fowler. -4, 6, 9, 12, 14, 16, 17, 18.

LASTRÆA SPINULOSA × ARISTATA. 1856, Bogg. +8.

LASTRÆA THELYPTERIS, Bory. 1797, Young. +2, 3, 5, 7, 10, 12.

LATHRÆA SQUAMARIA, L. 1840, Dodsworth. +2, 7, 8, 11, 15, 16.

LATHYRUS ANGULATUS, L. 1898, Sneath. +4, 13.

LATHYRUS ANNUUS, L. 1896, Lees. +13.

LATHYRUS APHACA, L. 1849, Carrington. +4. 5, 15.

LATHYRUS CICERA, L. 1898, Sneath. +6, 13.

LATHYRUS INCONSPICUUS, L. 1896, Lees. +13.

LATHYRUS LATIFOLIUS, L. 1903, W.-P. +3, 10, 11.

LATHYRUS MARITIMUS, Big. 1640, Parkinson. +(11.)

LATHYRUS MACRORRHIZUS, Wimmer. = L. MONTANUS, Bernh.

LATHYRUS MONTANUS, Bernh. 1820, Ward. +1, 2, 3, 5, 6, 7, 8, 10, 13.

LATHYRUS NISSOLIA, L. 1831, Drury. +13, 18.

LATHYRUS ODORATUS, L. 1909, W.-P. +3.

LATHYRUS PALUSTRIS, L. 1789, Gough. +6, (9.) (12.)

LATHYRUS PRATENSIS, L. 1836, J. Nicholson. +all.

LATHYRUS SYLVESTRIS, L. 1861, Walcott. +(5,) (11,) 13, 15.

LATHYRUS TUBEROSUS, L. 1708, Buddle. +(13.)

LAVATERA ARBOREA, L. 1890, Browne. + 11.

LEGOUSIA HYBRIDA, Delarbre. 1836, Dodsworth. -4, 5, 9, 12, 17, 18.

LEGOUSIA SPECULUM-VENERIS, Fisch. 1862, Cole. +4, 13.

LEMNA GIBBA, L. 1836, Dodsworth. -1, 2, 5, 8, 10, 15, 17, 18.

LEMNA MINOR, L. 1836, Dodsworth. -8.

LEMNA POLYRRHIZA, L. 1836, Dodsworth. +6, 7.9, 11, 12, 16.

LEMNA TRISULCA, L. 1836, Dodsworth. +all.

LEONTODON AUTUMNALE, L. 1856, Thompson. +all.

LEONTODON HIRTUM, L. = L. NUDICAULE, Banks & Soland.

LEONTODON HISPIDUM, L. 1835, E. J. Nicholson. -1.

LEONTODON NUDICAULE, Banks & Soland. 1851, Watson. -4, 6, 17.

LEONURUS CARDIACA, L. 1856, Thompson. +4, 7, 9, 11, 12.

LEPIDIUM CAMPESTRE, Br. 1836, Dodsworth. -4, 5, 8, 11.

**LEPIDIUM CANESCENS,** Gren. & Godr. 1840, Dodsworth. +2, 7, 10, 12, 13, 15, 16.

LEPIDIUM DRABA, L. 1893, Fowler. -6, 7, 9, 14, 15, 17, 18.

LEPIDIUM HIRTUM, F. J. H. = L. CANESCENS, Gren. & Godr.

LEPIDIUM RUDERALE, L. 1895, W.-P. +4, 5, 12.

LEPIDIUM SATIVUM, L. 1895, Sneath. +3, 4, 12, 13, 14.

LEPIDIUM SMITHII, Hook. = L. CANESCENS, Gren. & Godr.

LEPIGONUM, Wahl. = SPERGULARIA, Presl.

LEPTURUS FILIFORMIS, Trin. 1837, Howitt. +2, 4, 9, 11, 12, 17, 18.

LEUCOJUM ÆSTIVUM, L. 1897, Lewin. +8.

LIGUSTRUM VULGARE, L. 1820, Ward. -9.

LIMNANTHEMUM PELTATUM, Gmel. = NYMPHOIDES PELTATUM, Rendle. and Brit.

LIMNANTHES DOUGLASII, Br. 1866, W.-P. +2, 9, 15.

LIMONIUM BELLIDIFOLIUM, Dum. 1789, Gough. +(12), (17.)

LIMONIUM BINERVOSUM, C. E. Salm. 1852, Ffytche. +4, 9. v. INTER-MEDIUM, Syme. 1852, Ffytche. +4. LIMONIUM VULGARE, Mill. 1727, Blair. +3, 4, 9, 11, 12, 17, 18.

LIMOSELLA AQUATICA, L. 1838, Dodsworth. +(12), (16.)\* (Very possible.)

LINARIA CHALEPENSIS, Mill. 1902, Smith. +4.

LINARIA CYMBALARIA, Mill. 1836, Dodsworth. -1, 4, 13, 17.

LINARIA ELATINE, Mill. 1837. Dodsworth. -1, 2, 5, 9, 12, 17, 18.

LINARIA MINOR, Desf. 1805, Crabbe. -1, 6, 17, 18.

LINARIA REPENS. Mill. 1835, E. J. Nicholson. +3.\*

LINARIA SPURIA, Mill. 1831, Drury. +4, 5, 6, 7, 8, 13, 14, 15, 16.

LINARIA VISCIDA, Moench. = L. MINOR, Desf.

LINARIA VULGARIS, Mill. 1820, Ward. -17, 18. f. PELORIA (five spurs.) 1840, Miller. +2, 5, 6, 15.

LINUM CATHARTICUM, L. 1836, Dodsworth. +all.

LINUM PERENNE, L. 1666, Merrett. +2, (10), 15, 16.

LINUM USITATISSIMUM, L. 1661, Childret. +1, 3, 5, 11, 13, 15.

LIPARIS LOESELII, Rich. 1884, Burbridge. + (6 or 13)\*

LISTERA OVATA, Br. 1836, Dodsworth. +all.

LITHOSPERMUM APULUM, L. 1908, Hurst. +12.

LITHOSPERMUM ARVENSE, L. 1757, Pulteney. -1, 4, 9, 17, 18.

LITHOSPERMUM MARITIMUM, Lehm. = MERTENSIA MARITIMA, Gray.

LITHOSPERMUM OFFICINALE, L. 1856, Thompson. -1, 5, 9, 10, 17, 18.

LITHOSPERMUM PURPUREO-CÆRULEUM, L. 1840, Miller. +5.\*

LITTORELLA LACUSTRIS, L, = L. UNIFLORA, Aschers.

LITTORELLA UNIFLORA, Aschers. 1841, Drury. +5, (12.)

LOLIUM ITALICUM, Braun. 1898, W.-P. +2, 4, 6, 8, 12, 13,

LOLIUM LINICOLA, Sonder. = L. REMOTUM, Schrank.

LOLIUM MULTIFLORUM, Lam. 1896, W.-P. +all.

LOLIUM PERENNE, L. 1824, Sinclair. +all. v. ARISTATUM, Schum. 1896, W.-P. +2, 3, 10. v. COMPOSITUM, Sinclair. 1824, Sinclair. -6, 8, 9. v. TENUE, Syme. 1896, W.-P. +all. v. WHITWORTHIENSE, Sinclair. 1824, Sinclair. +2, 3, 7.

LOLIUM REMOTUM, Schrank. 1901, Stow. +13.

LOLIUM TEMULENTUM, L. 1872, Watson. +5, 8. v. ARVENSE, With. 1868, Charters. +5.

LONICERA PERICLYMENUM, L. 1820, Ward. -9, 18.

LONICERA XYLOSTEUM, L. 1896, Woolward. +5.

LOTUS CORNICULATUS, L. 1799, Young. +all. v. VILLOSUS, Ser. 1896, Stow. +16.

LOTUS MAJOR, Sm. = L. ULIGINOSUS, Schkuhr.

LOTUS PILOSUS, Beeke. =L. ULIGINOSUS, Schkuhr.

LOTUS SILIQUOSUS, L. = TETRAGONOLOBUS SILIQUOSUS, Roth.

LOTUS TENUIS, Waldst. & Kit. 1863, Cole. +3, 4, 6, 8, 9, 13, 14.

LOTUS ULIGINOSUS, Schkuhr. 1836, Dodsworth. -1, 9, 12, 17.

LUNARIA ANNUA, L. 1868, W.-P. +2, 3, 6, 9.

LUZULA CAMPESTRIS, DC. 1815, Peck. -6, 17, 18.

LUZULA ERECTA, Desv. = L. MULTIFLORA, DC.

LUZULA MAXIMA, DC. = L. SYLVATICA, Gaud.

LUZULA MULTIFLORA, DC. 1851, Watson. +1, 2, 3, 5, 7, 10, 11, 13, 15.

LUZULA PILOSA, Willd. 1836, Dodsworth. -1, 3, 5, 9, 12, 15, 17, 18.

LUZULA SYLVATICA, Gaud. 1857, Bogg. +2, 7, 8, 10, 11, 13, 15, 16.

LUZULA VERNALIS, DC. = L. PILOSA, Willd.

LYCHNIS ALBA, Mill. 1836, Dodsworth. +all.

LYCHNIS DIOICA, L. 1836, Dodsworth. -17.

LYCHNIS DIURNA, Sibth. = L. DIOICA, L.

LYCHNIS FLOS-CUCULI, L. 1799, Young. +all.

LYCHNIS GITHAGO, Scop. 1817, Dodsworth. -17, 18.

-LYCHNIS VESPERTINA, Sibth. = L. ALBA, Mill.

LYCIUM BARBARUM, Auct. Ang. = L. CHINENSE, Mill.

LYCIUM CHINENSE, Mill. 1886, Kew. -4, 6, 10.

LYCOPODIUM ALPINUM, L. 1875, Fowler. +(2.) (Extinct?)

LYCOPODIUM CLAVATUM, L. 1718, Ray. +2, 5, 7.

LYCOPODIUM INUNDATUM, L. 1868, Fowler. +2, 5, 7.

LYCOPODIUM SELAGO, L. 1815, Peck. +(1.)\* (Doubtful.)

LYCOPSIS ARVENSIS, L. 1836, J. Nicholson. -4, 16, 17, 18.

LYCOPSIS ORIENTALIS, L. 1896, Sneath. +4, 13.

LYCOPUS EUROPÆUS, L. 1820, Ward. -4, 6. 18.

LYSIMACHIA CILIATA, L. 1849, Carrington. +3.

LYSIMACHIA NEMORUM, L. 1820, Ward. -3, 4, 5, 9, 14, 15, 17, 18.

LYSIMACHIA NUMMULARIA, L. 1834, Bayley. +all.

LYSIMACHIA PUNCTATA, L. 1892, Larder. +8.

LYSIMACHIA THYRSIFLORA, L. 1840, Miller. +1, 12.

LYSIMACHIA VULGARIS, L. 1799, Young. -8, 15.

LYTHRUM SALICARIA, L. 1799, Young. -8.

MAIANTHEMUM BIFOLIUM, Schmidst. 1895, Rawnsley. +10.

MALACHIUM AQUATICUM, Fr. = STELLARIA AQUATICA, Scop.

MALAXIS PALUDOSA, Sw. 1820, Ward. + 10.\* (Not doubtful.)

MALCOMIA Br. = WILCKIA, Scop.

MALVA ÆGYPTIA, L. 1902, Smith. +4.

MALVA MOSCHATA, L. 1831, Drury. -9, 17, 18.

MALVA NICÆENSIS, All. 1896, Lees. +13.

MALVA PARVIFLORA, L. 1908, 'Claye. +3.

MALVA ROTUNDIFOLIA, L. 1836, Dodsworth. -4, 8.

MALVA SYLVESTRIS, L. 1835, E. J. Nicholson. -1.

MARIANA LACTEA, Hill. = SILYBRUM MARIANA, Gaertn.

MARISCUS, Br: = CLADIUM, Pat.

MARRUBIUM ALYSSON, L. 1900, Smith. +4.

MARRUBIUM VULGARE, L. 1763, Martyn. - 3. 4, 7, 8.

MATRICARIA CHAMOMILLA, L. 1836, J. Nicholson. -3, 8, 10, 13, 15.

MATRICARIA DISCOIDEA, DC. = M. SUAVEOLENS, Buchenau.

MATRICARIA INODORA, L. 1836, Dodsworth. +all.

MATRICARIA SUAVEOLENS, Buchenau. 1895, W.-P. +2, 5, 12, 13.

MATTHIOLA BICORNIS, Sibth. 1900, Smith. +4.

MECANOPSIS CAMBRICA, Vig. 1866, W.-P. +2, 5.

MEDICAGO ARABICA, Huds. 1855, Lowe. +2, 5, 6, 8, 12, 17.

MEDICAGO DENTICULATA, Willd. 1879, Allen. +3, 4, 7.

MEDICAGO FALCATA, L. 1897, Woods. +4, 13.

MEDICAGO LUPULINA, L. 1836, Dodsworth. +all.

MEDICAGO MACULATA, Sibth. = M. ARABICA, Huds.

[MEDICAGO MINIMA, Desr. 1893. Mistake.]

MEDICAGO ORBICULARIS, All. 1896, Lees. +13.

MEDICAGO SATIVA, L. 1858, Cole. -5, 8, 12, 18.

MEDICAGO SATIVA × FALCATA. 1895, Sneath. +3, 4, 13.

MEDICAGO SYLVESTRIS, Fr. = M. SATIVA × FALCATA.

MELAMPYRUM ARVENSE, L. 1868, Daubney. +4, 7.

MELAMPYRUM CRISTATUM, L. 1837, Dodsworth. +15, 16.

MELAMPYRUM PRATENSE, L. 1820, Ward. -3, 4, 6, 9, 12, 13, 14, 17, 18.

MELICA MONTANA, Huds. 1856, Fowler. +2.

MELICA NUTANS, Auct. Ang. = M. MONTANA, Huds.

MELICA NUTANS, L. 1836, Dodsworth. +2, 5, 7, 10, 11, 13, 15, 16.

MELICA UNIFLORA, Retz. = M. NUTANS, L.

MELILOTUS ALBA, Desr. 1836, Dodsworth. -1, 9, 17, 18.

MELILOTUS ALTISSIMA, Thuill. 1851, Watson. +all.

MELILOTUS ARVENSIS, Wallr. = M. OFFICINALIS, Lam.

MELILOTUS CÆRULEA, L. = TRIGONELLA CÆRULEA, Ser.

MELILOTUS INDICA, All. 1893, Mabel Peacock. +4, 5, 6, 8, 9, 12, 13, 16.

MELILOTUS LEUCANTHA, Koch. = M. ALBA, Desr.

MELILOTUS MACRORHIZA, Pers. = M. OFFICINALIS, Lam.

MELILOTUS OFFICINALIS, Lam. 1890, Jarvis. -1, 2, 4, 9, 12, 18.

MELILOTUS PARVIFLORA, Lam. = M. INDICA, All.

MELILOTUS VULGARIS, Wallr. = M. ALBA, Desr.

MELISSA ACINOS, Benth. = CALAMINTHA ARVENSIS, Lam.

MELISSA NEPETA, L. = CALAMINTHA PARVIFLORA, Lam.

MELISSA OFFICINALIS, L. 1893, Alston. +10.

MENTHA AQUATICA, L. 1797, Young. +all.

MENTHA AQUATICA × ARVENSIS. 1835, E. J. Nicholson. -4, 8, 9, 11, 14, 15, 17, 18. v. PALUDOSA, Sole. 1895, Mason. +10, 14.

MENTHA AQUATICA × SPICATA. 1877, Lees. +7. v. VULGARIS, Sole. 1862, Cole. +7, 13.

MENTHA ARVENSIS, L. 1851, Watson. -5, 6, 8, 9, 18. v. ALLIONII, Bor. 1892, Mason. +10. v. PRÆCOX, Sole. 1884, Mackinder. +10.

[MENTHA ARVENSIS × SPICATA. v. PRATENSIS, Sole. 1900, Walter. +10. (Uncertain.)]

MENTHA HIRSUTA, Huds, = M. AQUATICA, L.

MENTHA LONGIFOLIA, Huds. 1670, Ray. +1, 8, 10, 11, 12, 16.

MENTHA PIPERITA, L. = M. AQUATICA × SPICATA.

MENTHA PULEGIUM, L. 1856, Thompson. +10, 12.

MENTHA RUBRA, Sm. 1865, Cole. +2, 7, 13.

MENTHA SATIVA, L. = M. AQUATICA × ARVENSIS.

MENTHA SPICATA, L. 1877, Lees. +7, 11.

MENTHA SYLVESTRIS, L. = M. LONGIFOLIA, Huds.

MENTHA VERTICILLATA, Huds. = M. AQUATICA × ARVENSIS.

MENTHA VIRIDIS, L. = M. SPICATA, L.

MENYANTHES TRIFOLIATA, L. 1799, Young. -8, 16, 17, 18.

MERCURIALIS ANNUA, L. 1840, Grantham. +10, 11, 12,

MERCURIALIS PERENNIS, L. 1836, Dodsworth. -4, 9, 12, 17, 18.

[MERTENSIA MARITIMA, Gray. 1884. Mistake.]

MILIUM EFFUSUM, L. 1856, Bogg. +3, 7, 8, 10, 11, 13, 15, 16.

MIMULUS LANGSDORFFII, Donn. 1864, Charters. +2, 8, 15.

MIMULUS LUTEUS, Auct. Ang. = M. LANGSDORFFII, Donn.

MOLINIA CÆRULEA, Moench. 1815, Peck. +1, 2, 3, 5, 7, 10, 13. v. MAJOR, Roth. 1894, Lees. +2, 5.

MOLINIA DEPAUPERATA, Lindl. = M. CÆRULEA, v. MAJOR, Roth.

MOLINIA VARIA, Schrank. = M. CÆRULEA, Moench.

MONOTROPA HYPOPITYS, L. 1805, Dalton. +(6.) (Extinct?)

MONTIA FONTANA, L. 1831, Drury. +2, 3, 5, 7, 8, 10, 13, 15.

MUSCARI RACEMOSUM, Lam. & DC. 1879, Burgess. +6.

MYOSOTIS ARVENSIS, Hill. 1836, Dodsworth. +all.

MYOSOTIS CÆSPITOSA, Schultz. 1851, Watson. +1, 4, 5, 7, 9, 11, 13, 15.

MYOSOTIS COLLINA, Hoffm. 1851, Watson. -1, 16, 17.

MYOSOTIS PALUSTRIS, Hill. = M. SCORPIOIDES, L.

MYOSOTIS REPENS, G. & D. Donn. 1877, Lees. +6, 7, 9, 11, 13.

MYOSOTIS SCORPIOIDES, L. 1799, Young. +all. v. STRINGULOSA, Reichb. 1872, Fowler. +1, 2, 6, 7, 10.

MYOSOTIS SYLVATICA, Hoffm. 1856, Thompson. +7, 10, 12, 13, 15, 16.

MYOSOTIS VERSICOLOR, Sm. 1851, Watson. -1, 2, 6, 8, 17, 18.

MYOSURUS MINIMUS, L. 1856, Thompson. +1, 12, 15, 17.

MYRICA GALE, L. 1661, Childret. +1, 2, 5, 7, 10, 13, 14.

MYRIOPHYLLUM ALTERNIFLORUM, DC. 1851, Watson. +13, 16.

MYRIOPHYLLUM SPICATUM, L. 1670, Ray. -8.

MYRIOPHYLLUM VERTICILLATUM, L. 1799, Young. +1, 6, 9, 11, 12, 13, 14, 15, 16.

MYRRHIS ODORATA, Scop. 1856, Thompson. +2, 8, 12, 15.

NARCISSUS BIFLORUS, Curt. 1878, Cordeaux. +4.

NARCISSUS MAJOR, Curt. 1869, W.-P. +2, 3.

NARCISSUS POETICUS, L. 1879, Cordeaux. +4.

NARCISSUS PSEUDO-NARCISSUS, L. 1858, Fowler. +2, 3, 4, 6, 7, 8, 10, 13, 15. (If this species is not often recorded for N. MAJOR, Curt.)

NARDURUS UNILATERALIS, Boiss. = FESTUCA MARITIMA, L.

NARDUS STRICTA, L. 1815, Peck. +1, 2, 5, 7, 13, 15.

NARTHECIUM OSSIFRAGUM, Huds. 1724, Stukeley. +1, 2, 5, 6, 7, 10, 14.

NASTURTIUM, L. = RADICULA, Hill.

NECKERIA, Scop. = CORYDALIS, Vent.

NEOTTIA NIDUS-AVIS, Rich. 1834, Bayley. +2, 7, 8, 10, 11, 13, 15, 16.

NEPETA CATARIA, L. 1726, Bacon. -4, 7, 9, 11, 12, 14, 17; 18.

NEPETA GLECHOMA, Benth. = N. HEDERACEA, Trev.

NEPETA HEDERACEA, Trev. 1836, Dodsworth. +all.

NEPHRODIUM Rich. = LASTREA, Presl.

NESLIA PANICULATA, Desv. 1894, Higginbottom. +7.

NIGELLA DAMASCENA, L. 1894, Tryon. +7.

NITELLA OPACA, Agardh. 1877, Lees. +3, 4, 7.

NUPHAR, Sm. = NYMPHÆA, L.

NYMPHÆA ALBA, L. = CASTALIA ALBA, Wood.

NYMPHÆA LUTEA, Linn. 1830, Allen. -4, 8, 12, 15.

OBIONE, Gart. = ATRIPLEX, L.

ODONTITES RUBRA, Pers. = BARTSIA ODONTITES, Huds.

ODONTOSPERMUM AQUATICUM, Sch.-Bip. 1899, Hinchliff. +6.

**CENANTHE AQUATICA, Poir.** 1837, Howitt. -4, 6, 8, 15.

**CENANTHE CROCATA**, L. 1850, Carrington. +6, 7, 10, 15. (Extinct?)

CENANTHE FISTULOSA, L. 1803, Stovin. +all.

CENANTHE FLUVIATILIS, Colem. 1883, Beeby. +14, 16, 17.

**ENANTHE LACHENALII**, C. Gmel. 1681, Plukenet. -2, 3, 7, 10, 14, 16.

**CENANTHE PEUCEDANIFOLIA, Poll.** = CE. SILAIFOLIA, Bieb.

CENANTHE PHELLANDRIUM, Lam. = CE. AQUATICA, Poir.

[CENANTHE PIMPINELLOIDES, L. 1688. Mistake.]

[ŒNANTHE SILAIFOLIA, Bieb. 1838. Mistake.]

**ENOTHERA BIENNIS,** L. 1886, Burgess. +2, 3, 6, 11, 13.

**ENOTHERA BOTTAE**, Torr. & Gray. 1894, Fowler, +5. **ONOBRYCHIS SATIVA**, Lamk. = **0.** VICIÆFOLIA, Scop.

ONOBRYCHIS VICIÆFOLIA, Scop. 1726, Bacon. -4, 6, 7, 12, 13, 14, 16, 18.

ONONIS REPENS, L. 1820, Ward. -1, 5, 8, 10, 14, 17.

ONONIS SPINOSA, L. 1726, Bacon. -9, 17, 18.

ONOPORDUM ACANTHIUM, L. 1840, Miller. -4, 8, 9, 16, 17.

OPHIOGLOSSUM VULGATUM, L. 1799, Young. -16.

OPHRYS APIFERA, Huds. 1771, Langhorne. -1, 4, 13, 17, 18.

OPHRYS ARACHNITES, Lam. = 0. FUCIFLORA, Reichb.

OPHRYS ARANIFERA, Huds, = 0. SPHEGODES, Mill.

[OPHRYS FUCIFLORA, Reichb. No exact information.]

OPHRYS MUSCIFERA, Huds. 1840, Miller. +2, 8, 11.

[OPHRYS SPHEGODES, Mill. No exact information.]

ORCHIS FUSCA, Jacq. Lincs, specimens. = 0. PURPUREA, Huds.

[ORCHIS HIRCINA, Crantz. +3. I have the specimen. It must have been

[ORCHIS HIRCINA, Crantz. +3. I have the specimen. It must have been planted.]

ORCHIS INCARNATA, L. 1856, Bogg. +1, 2, 6, 8, 9, 10, 11, 14, 15.

ORCHIS LATIFOLIA, L. 1856, Fowler. -1, 6, 9, 10, 17, 18.

ORCHIS MACULATA, L.: 1820, Ward. - 18.

[ORCHIS MILITARIS, L. 1835. Mistake.]

ORCHIS MASCULA, L. 1820, Ward. -1, 9, 18.

**ORCHIS MORIO**, L. 1636, Dodsworth. -8, 18.

[ORCHIS PURPUREA, Huds. 1849. Mistake.]

ORCHIS PYRAMIDALIS, L. 1831, Drury. -1, 7, 18.

ORCHIS USTULATA, L. 1830, Allen. +2, 3, 5, 13, 15.

ORIGANUM VULGARE, L. 1819, Dodsworth. -4, 5, 6, 9, 17, 18.

ORNITHOGALUM NUTANS, L. 1892, Burgess. +10, 12.

ORNITHOGALUM UMBELLATUM, L. 1890, Fisher. +2, 3, 9, 13.

ORNITHOPUS EBRACTEATUS, Brot. = 0. PINNATUS, Druce.

ORNITHOPUS PERPUSILLUS, L. 1836, J. Nicholson. +2,4,5,6,7,8,10,11,13.

ORNITHOPUS PINNATUS, Druce. 1897, Woods. +4.

OROBANCHE ELATIOR, Sutton. 1805, Dalton. +5, 6, 13, 15, 16.

OROBANCHE MAJOR, L. 1837, Dodsworth. +5, 6, 16.

OROBANCHE MINOR, Sm. 1836, Dodsworth. +3, 13, 16.

OROBANCHE RUBRA, Sm. 1897, Lewin. +8.

OROBUS TUBEROSUS, L. = LATHYRUS MONTANUS, Bernh.

OSMUNDA REGALIS, L. 1836, J. Nicholson. +1, 2, 5, 10, 12, 13. (Extinct?)

OXALIS ACETOSELLA, L. 1820, Ward. -5, 9, 17, 18.

OXALIS CORNICULATUS, L. 1893, W.-P. +3, 5, 8, 16.

OXALIS STRICTA, L. 1836, Dodsworth. +3, 7, 13, 16.

OXALIS VIOLACEA, L. 1896, Rawnsley. +10.

OXYCOCCUS PALUSTRIS, Pers. = 0. QUADRIPETALA, Gilib.

OXYCOCCUS QUADRIPETALA, Gilib. 1796, Withering. +1, 2, 6, 7, 10, 12.

PAPAVER ARGEMONE, L. 1836, Dodsworth. -8, 17.

PAPAVER DUBIUM, L. 1836, Dodsworth. +all.

PAPAVER DUBIUM × LECOQII. 1883, Beeby. +3, 16.

PAPAVER HYBRIDUM, L. 1889, Fowler. +1, 2, 3, 4, 13.

PAPAVER LAMOTTEI, Bor. = P. DUBIUM, L.

PAPAVER LECOQII, Lamotte. 1877, Lees. +1, 3, 7, 11, 12.

PAPAVER RHŒAS, L. 1836, Dodsworth. +all. v. PRYORII, Druce. 1893, W.-P. +2, 3, 4, 7, 9, 12, 13, 16. v. STRIGOSUM, Boem.

1893, W.-P. +2, 3, 5, 7, 13, 15, 18.

PAPAVER SOMNIFERUM, L. 1856, Thompson. +1, 3, 7, 9, 10, 11, 12, 15.

PARIETARIA DIFFUSA, M. & K. = P. RAMIFLORA, Moench.

PARIETARIA OFFICINALIS, Auct. Ang. = P. RAMIFOLIA, Moench.

PARIETARIA RAMIFOLIA, Moench. 1820, Ward. -17, 18.

PARIS QUADRIFOLIA, L. 1820, Ward. -1, 4, 9, 12, 14, 17, 18.

PARNASSIA PALUSTRIS, L. 1820, Ward. -3, 7, 9, 12, 14, 17, 18.

PARONYCHIA ARGENTATA, 1900, Smith. +4.

PEDICULARIS PALUSTRIS, L. 1799, Young. -3, 5, 15, 17, 18.

PEDICULARIS SYLVATICA, L. 1815, Peck. -2, 9, 12, 14, 15, 17, 18.

PEPLIS PORTULA, L. 1851, Watson. +2, 5, 7, 12, 13, 14.

PETASITES ALBUS, Gaertn. 1896, W.-P. +2.

PETASITES FRAGRANS, Presl. 1879, Burgess. +3, 7, 11.

PETASITES OFFICINALIS, Moench. = P. OVATUS, Hill.

PETASITES OVATUS, Hill. 1805, Relham. -6, 9, 13, 17, 18.

PETROSELINUM SATIVUM, Hoffm. = CARUM PETROSELINUM, Benth. & Hooker. f.

PETROSELINUM SEGETUM, Koch. = CARUM SEGETUM, Benth. & Hooker. f.

PEUCEDANUM PALUSTRE, Moench. 1789, Gough. +1, 5, 12.

PEUCEDANUM SATIVUM, Benth. & Hooker. f. 1805, Stovin. -4, 6, 7, 11.

PHACELIA CILIATA, Benth. 1901, Smith. +4.

PHALARIS ARUNDINACEA, L. 1836, Dodsworth. +all.

PHALARIS CANARIENSIS, L. 1872, Britten. +2, 3, 4, 5, 6, 11, 12, 13, 14, 16.

PHALARIS MINOR, Retz. 1905, Brown. +13.

PHALARIS PARADOXA, L. 1896, Sneath. +4, 13.

PHEGOPTERIS DRYOPTERIS, Fee. 1838, Irvine. +1.

PHEGOPTERIS ROBERTIANA, Braun. 1892, Firbank. +3.\*

PHLEUM ARENARIUM, L. 1851, Watson. +4, 9, 11, (13.)

PHLEUM PRATENSE, L. 1836, Dodsworth. +all. v. NODOSUM, Jord. 1894, W.-P. +3, 5, 13, 15.

PHRAGMITES COMMUNIS, Trin. 1636, Hexham. +all. v. REPENS, Mey. 1898, W.-P. +11.

PHYLLITIS SCOLOPENDRIUM, Newm. 1856, Bogg. -2, 4, 5, 6, 7, 9, 14, 16, 17, 18.

PICRIS ECHIOIDES, L. 1837, Dodsworth. -1, 5, 18.

PICRIS HIERACIOIDES, L. 1837, Dodsworth. -1, 2, 4, 5, 9, 12, 13, 17, 18.

PIMPINELLA CÆRULEA, L. 1900, Smith. +4.

PIMPINELLA MAJOR, Huds. 1851, Watson. -4, 9, 17, 18.

PIMPINELLA SAXIFRAGA, L. 1851, Watson. -4, 12, 17, 18. v. DISSECTA, With. -4, 12, 17, 18. (Much the commoner form N. & S.)

PINGUICULA VULGARIS, L. 1724, Stukeley. -4, 8, 9, 11, 12, 13, 14, 17, 18.

PINUS SYLVESTRIS, L. 1797, De Serra. - 15, 17, 18.

PLANTAGO ARENARIA, W. & K. 1897, Sneath. +6, 13.

PLANTAGO CORONOPUS, L. 1834, Bailey. -6, 7, 8, 14, 15, 16.

PLANTAGO LANCEOLATA, L. 1836, Dodsworth. +all. v. TIMBALI, Reich. f. 1896, Lees. +13.

PLANTAGO LANCEOLATA × MEDIA, 1908, L.N.U. +2.

PLANTAGO MAJOR, L. 1836, Dodsworth. +all.

PLANTAGO MARITIMA, L. 1834, Bayley. +2, 4, 9, 11, 12, 17, 18.

PLANTAGO MEDIA, L. 1836, Dodsworth. +all.

PLATANTHERA MONTANA, Reichb. = HABENARIA VIRESCENS, Druce.

PNEUMARIA MARITIMA, Hill. = MERTENSIA MARITIMA, Gray.

POA ANNUA, L. 1597. Gerarde. +all.

POA AQUATICA, L. = GLYCERIA AQUATICA, Sm.

POA COMPRESSA, L. 1851, Watson. -1, 3, 4, 6, 10, 12, 17, 18.

POA NEMORALIS, L. 1856, Bogg. +2, 5, 8, 13, 15.

POA PRATENSIS, L. 1597, Gerarde. +all. v. SUBCÆRULEA, Sm. 1896, L.N.U. +5.

POA TRIVIALIS, L. 1820, Thompson. +all.

POLEMONIUM CÆRULEUM, L. 1834, Bailey. +2, 8, 9, 11, 15.

POLYCARPON TETRAPHYLLUM, L. 1899, Parker. +4.

POLYGALA DEPRESSA, Ward. = P. SERPYLLACEA, Weihe.

POLYGALA SERPYLLACEA, Weihe. 1863, Cole. +2, 3, 7, 13.

POLYGALA VULGARIS, 1836, Dodsworth. +all.

POLYGONATUM MULTIFLORUM, All. 1856, Bogg. +7.

POLYGONUM AMPHIBIUM, L. 1799, Young. +all. v. TERRESTRE, Leers. 1895, Stow. -1, 2, 4, 5, 17.

POLYGONUM AVICULARE, L. 1836, Dodsworth. +all. v. ARENASTRUM, Bor. 1894, Lees. +3, 7, 9, 10, 12, 13. v. RURIVAGUM, Jord. 1895, Stow. +3, 10, 13, 14, 15.

POLYGONUM BISTORTA, L. 1820, Ward. -1, 4, 7, 9, 11, 17, 18.

POLYGONUM CONVOLVULUS, L. 1836, Dodsworth. +all.

POLYGONUM FAGOPYRUM, L. = FAGOPYRUM SAGITTATUM, Gilib.

POLYGONUM HYDROPIPER, L. 1851, Watson. -2, 4, 9, 12, 16, 17, 18.

POLYGONUM LAPATHIFOLIUM, L. 1851, Watson. -1, 4, 6, 8, 18.

POLYGONUM MACULATUM, Trim. & Dyer. 1868, Charters. +3.5, 11.

POLYGONUM PERSICARIA, L. 1836, Dodsworth. +all.

POLYGONUM RAII, Bab. 1872, Britten. + 11.

POLYGONUM ROBERTI, Loisel. = P. RAII, Bab.

[POLYGONUM VIVIPARUM, L. 1746. Mistake.]

POLYPODIUM VULGARE, L. 1789, Gen. Magaz. -4, 5, 9, 16, 17, 18.

POLYPOGON MONSPELIENSIS, Desf. 1898, Smith. +4.

POLYSTICHUM ANGULARE, Presl. 1876, Fowler. +5, 8, 11.

POLYSTICHUM LOBATUM, Presl. 1856, Bogg. +1, 4, 8, 11.

POPULUS ALBA, L. 1841, Stark. +2, 3, 5, 6, 7, 10, 11, 13, 15.

POPULUS ALBA × TREMULA. 1862, Cole. +3, 13.

POPULUS BALSAMIFERA, L. 1876, W.-P. +2.

POPULUS CANESCENS, Sm. = POPULUS ALBA × TREMULA.

POPULUS DELTOIDES, Marsh. 1799, Young. +17.

POPULUS FASTIGIATA, Ait. = P. ITALICA, Moench.

POPULUS ITALICA, Moench. 1841, Stark. +2, 3, 6, 15.

POPULUS MONILIFERA, Ait. = P. DELTOIDES, Marsh.

POPULUS NIGRA, L. 1841, Stark. +2, 3, 6, 7, 10, 11, 12, 13, 15, 18.

POPULUS PYRAMIDALIS, Roz. = P. ITALICA, Moench.

POPULUS TREMULA, L. 1851, Watson. -1, 4, 6, 9, 14, 15, 17, 18.

PORTULACA OLERACEA, L. 1897, Brewster. +7.

POTAMOGETON ACUTIFOLIUS, Link. 1795, Banks. +11 or 12.

POTAMOGETON ALPINUS, Balb. 1804, Brit. Mus. Herb. +4, 7, 9, 13, 14.

POTAMOGETON ANGUSTIFOLIUS, Bercht. & Presl. 1883, Beeby. +16.

POTAMOGETON COLORATUS, Hornem. 1818, Banks. +2, 3, 12.
POTAMOGETON CRISPUS, L. 1836, Dodsworth. -17, 18.

POTAMOGETON CUSPIDATUS, Sm. = P. ZOSTERIFOLIUS, Schum.

POTAMOGETON DECIPIENS, Nolte. 1883, Beeby. +16.

POTAMOGETON DENSUS, L. 1836, Dodsworth. -7, 10, 12, 18.

POTAMOGETON FLABELLATUS, Bab. = P. INTERRUPTUS, Kit.

POTAMOGETON FRIESII, Rupr. 1857, Bogg. +4, 8, 9, 12, 14, 18.

POTAMOGETON GRAMINEUS, Fr. = P. HETEROPHYLLUS, Schrad.

POTAMOGETON HETEROPHYLLUS, Schreb. 1877, Fowler. +1, 3, 12, 13, 14, 16.

POTAMOGETON INTERRUPTUS, Kit. 1876, Fowler. +4, 6, 8, 9, 12, 13. v. SCOPARIUS, Fryer. 1891, Fowler. +4, 9, 12.

POTAMOGETON LUCENS, L. 1836, Dodsworth. -4, 5, 7, 8, 15. v. ACUMINATUS, Fr. 1884, Beeby. +16.

POTAMOGETON MUCRONATUS, Schrad. = P. FRIESII, Rupr.

POTAMOGETON NATANS, L. 1815, Peck. -6, 10, 17.

POTAMOGETON OBTUSIFOLIUS, Mert. & Koch. 1849, Carrington. +4,5,13.

POTAMOGETON PECTINATUS, L. 1849, Carrington. -5, 10, 15, 16.

POTAMOGETON PERFOLIATUS, L. 1836, Dodsworth. -4, 5, 8, 15, 17, 18.

POTAMOGETON PLANTAGINEUS, Du Croy. = P. COLORATUS, Hornem.

POTAMOGETON POLYGONIFOLIUS, Pourr. 1876, Fowler. +1, 2, 3, 5, 7, 16.

POTAMOGETON PRÆLONGUS, Wulf. 1849, Carrington. +6, 13, 14.

POTAMOGETON PUSILLUS, L. 1856, Thompson. -2, 5, 6, 13, 17, 18.
v. TENUISSIMUS, Koch. 1883, Beeby. +7, 9, 14, 16.

POTAMOGETON RUFESCENS, Schrad. = P. ALPINUS, Balb.

POTAMOGETON ZIZII, Roch. = P. ANGUSTIFOLIUS, Presl.

POTAMOGETON ZOSTERIFOLIUS, Link. 1856, Fowler. +9.\*

POTENTILLA ANSERINA, L. 1799, Young. +all.

POTENTILLA ARGENTEA, L. 1872, Streatfeild. +10, 11.

POTENTILLA COMARUM, Nestl. = P. PALUSTRIS, Scop.

POTENTILLA ERECTA, Hampe. 1815, Peck. -18.

POTENTILLA FRAGARIASTRUM, Ehrh. = P. STERILIS, Garcke.

POTENTILLA FRUTICOSA, L. 1896, Mason. +13.

POTENTILLA ITALICA, Lehm. = P. REPTANS  $\times$  ERECTA.

POTENTILLA PALUSTRIS Scop. 1799, Young. -3, 4, 9, 14, 15, 16, 17, 18.

POTENTILLA PROCUMBENS, Sibth. 1866, Cole. +1, 3, 10, 13.

POTENTILLA REPTANS, L. 1820, Ward. +all.

POTENTILLA REPTANS × ERECTA. L. 1905, Larder. +1, 8.

POTENTILLA SILVESTRIS, Neck. = P. ERECTA, Hampe.

POTENTILLA STERILIS, Garcke. 1855, Bogg. -3, 6, 9, 12, 16, 17, 18.

POTERIUM MURICATUM, Spach. = P. POLYGAMUM, Waldst. & Kit.

POTERIUM OFFICINALE, A. Gray. 1726, Bacon. -10, 17, 18.

POTERIUM POLYGAMUM, Waldst. & Kit. 1896, Lees. +8.

POTERIUM SANGUISORBA, L. 1726, Bacon. -1, 12, 17, 18.

PRIMULA ELATIOR, Jacq. 1906, Hawkins. +15. (On Chalky Boulder Clay only.)

PRIMULA OFFICINALIS, Jacq. = P. VERIS, L.

PRIMULA VERIS, L. 1820, Thompson. +all.

PRIMULA VERIS × VULGARIS. 1836, Dodsworth. -3, 4, 6, 9, 12, 14, 17, 18.

PRIMULA VULGARIS, Huds. 1820, Ward. -4, 6, 9, 17, 18. v. CAULESCENS, Koch. 1876, W.-P. +2.

PRUNELLA VULGARIS, L. 1820, Thompson, +all.

PRUNUS AVIUM, L. 1836, J. Nicholson. -1, 9, 12, 14, 16, 18. v. HORTENSIS, W.-P. 1893, W.-P. +2, 3, 17. (Railways.)

PRUNUS DOMESTICA, L. 1866, W.-P. +2, 3, 5, 10, 17, 18.

PRUNUS INSITITIA, L. 1836, Dodsworth. - 1, 4, 8, 9, 10, 17, 18.

PRUNUS PADUS, L. 1877, Parsons. +2, 10, 11, 13. (Planted?)

PRUNUS SPINOSA, L. 1820, Thompson. -9, 18. v. MACROCARPA, Wallr. 1892, Fowler. +2.

PSAMMA ARENARIA, Rom. & Schultz. = AMMOPHILA ARENARIA, Link.

PTERIS AQUILINA, L. 1836, Dodsworth. -9, 14, 17, 18.

PULICARIA DYSENTERICA, Gray. 1836, Dodsworth. +all. v. GLABRA, Mihi. 1908, Mason. +14.

PYROLA MINOR, L. 1856, Thompson. +3, (5?), 7, 10, (12), 13.

[PYROLA ROTUNDIFOLIA, L. 1840, Miller. +(5).\* The last species, I believe. Extinct now.]

PYRUS ARIA, Ehrh. 1856, Bogg. 3, 8, 10, 15. (Bird sown from planted specimens?)

PYRUS AUCUPARIA, Ehrh. 1836, Dodsworth. -4, 8. 9, 13, 14, 17, 18. (Like the last generally.)

PYRUS COMMUNIS, L. 1878, Lees +7, 11. (Rat sown?)

PYRUS DOMESTICA, Mihi. 1893, W.-P. +2, 17. (Railways.)

PYRUS FENNICA, Bab. = P. PINNATIFIDA, Ehrh.

PYRUS MALUS, L. 1200, William of Malmesbury. -9, 18. (Water carried. Also perhaps rat sown?)

PYRUS MITIS, Wallr. = P. MALUS × DOMESTICA. 1857. Bogg. +3, 8, 15, 16. (Crossed by bees. Only found round villages in Lincs.)

PYRUS PINNATIFIDA, Ehrh. 1893, W.-P. +2. (Bird sown.)

PYRUS TORMINALIS, Ehrh. 1836. Dodsworth. +7, 15, 16. (Bird sown.)

OUERCUS PEDUNCULATA, Ehrh. 1638, De la Pryme. -18.

QUERQUS SESSILIFLORA, Salisb. 1877, Lees. +2, 3, 7. Planted only?

RADICULA AMPHIBIA, Druce. 1799, Young. -3, 4, 8, 10, 11, 14, 15, 17.

RADICULA NASTURTIUM-AQUATICUM, Rendle & Brit. 1836, Dodsworth. + all.

RADICULA PALUSTRIS, Moench. 1855, Lowe. -7, 8, 9, 11, 15, 16, 18.

RADICULA SYLVESTRIS, Druce. 1840, Miller. -3, 4, 8, 9, 11, 17.

**RADIOLA LINOIDES, Roth.** 1805, Salt. Herb. +1, 2, 5. 7, 10, 13.

RANUNCULUS ACRIS, L. 1820, Thompson. +all.

RANUNCULUS ARVENSIS, L. 1840, Grantham. -10.

RANUNCULUS AURICOMUS, L. 1836, Dodsworth. -4, 9, 12, 17, 18. (The typical plant is very rare; the apetalous or defective form almost universal.

RANUNCULUS BAUDOTII, Godr. 1840, Grantham. +4, 9, 11, 12, 17. v. CONFUSUS, Godr. 1877, Fowler. +4, 9, 11, 12, 17.

RANUNCULUS BULBOSUS, L. 1836, Dodsworth. +all.

RANUNCULUS CIRCINATUS, Sibth. 1851, Watson. -5, 7, 8, 12, 17, 18.

RANUNCULUS DROUETII, F. Schultz. 1840, Grantham. -2, 5, 8, 12, 15.

RANUNCULUS FALCATUS, L. 1902, Smith. +4.

RANUNCULUS FICARIA, L. 1835, E. J. Nicholson. +all.

RANUNCULUS FLAMMULA, L. 1815, Peck. -12, 17, 18.

RANUNCULUS FLUITANS, Lam. 1878, Fowler. +10, 12.

RANUNCULUS HEDERACEUS, L. 1851, Watson. +3, 6, 7, 8, 10, 11, 13, 15.

RANUNCULUS HETEROPHYLLUS, Weber. 1856, Bogg. +7, 8, 10, 11, 12, 13, 17.

RANUNCULUS HIRSUTUS, Curt. = R. SARDOUS, Crantz.

RANUNCULUS LINGUA, L. 1820, Ward. -3, 4, 5, 8, 12, 17, 18.

RANUNCULUS PARVIFLORUS, L. 1829, Oldfield. +1, 7, 8, 12, 14, 15, 16.

RANUNCULUS PELTATUS, Schrank. 1851, Watson. -9, 11, 16, 17, 18.
v. ELONGATUS, Hiern. 1864, Cole. +13. v. FLORIBUNDUS,
Bab. 1836, J. Nicholson. +3, 4, 5, 6, 7, 10, 13. v. PENICILLATUS,
Hiern. 1870, Lees. +3, 6, 8, 13. v. TRUNCATUS, Hiern. 1878,
Lees. +5, 7.

RANUNCULUS REPENS, L. 1836, Dodsworth. +all.

RANUNCULUS SARDOUS, Crantz. 1851, Watson. +3, 4, 6, 7, 8, 9, 11.

RANUNCULUS SCELERATUS, L. 1836, Dodsworth. +all.

RANUNCULUS TRICHOPHYLLUS, Chaix. 1877, Lees. -2. 5, 6, 8, 12, 13, 14, 18.

RAPHANUS RAPHANISTRUM, L. 1851, Watson. -6, 8, 16, 17, 18.

RESEDA LUTEA, L. 1726, Bacon. -1, 4, 9, 18.

RESEDA LUTEOLA, L. 1820, Ward. -17, 18.

RHAMNUS CATHARTICUS, L. 1805, Crabbe. -1, 4, 8, 9, 11, 16, 17, 18.

RHAMNUS FRANGULA, L. 1836, J. Nicholson. -1, 3, 8, 9, 11, 12, 15, 17, 18.

RHINANTHUS CRISTA-GALLI, L. 1820, Thompson. +all.

RHINANTHUS MAJOR, Ehrh. 1847, Anderson. -3, 4, 8, 13, 16; 18.

RHINANTHUS MINOR, Ehrh. = R. CRISTA-GALLI, L.

[RHODODENDRON PONTICUM, L. 1894, Lees. +2, 10.]

RHYNCHOSPORA, Willd. = RYNCHOSPORA, Vahl.

[RIBES ALPINUM, L. 1893, Uppleby. +3. Planted.]

RIBES GROSSULARIA, L. 1836, Dodsworth. -14, 15, 17, 18.

RIBES NIGRUM, L. 1878, Fowler. +2, 3, 10, 11.

RIBES RUBRUM, L. 1836, Dodsworth. -1, 5, 9, 12, 15, 17.

ROEMERIA HYBRIDA, DC. 1897, W.-P. +4.

ROSA AGRESTIS, Savi. 1851, Watson. +12, 13, 15.

ROSA ANDEGAVENSIS, Bast. 1891, Fisher. +13.

ROSA ARVATICA, Baker. = R. BLONDÆANA, Ripart.

ROSA ARVENSIS, Huds. 1836, Dodsworth. -1, 9, 12, 17.

ROSA BISERRATA, Merat. 1878, Lees. +7.

ROSA BLONDÆANA, Ripart. 1868, Cole. +7, 18.

ROSA BORRERI, Woods. 1890, Fisher. +8, 11, 12, 13.

ROSA CÆSIA, Sm. 1878, Lees. +7.

ROSA CANINA, L. 1836, Dodsworth. +all.

ROSA CORIIFOLIA, Fr. = R. CÆSIA, Sm.

ROSA DUMALIS, Bechst. = R. SARMENTACEA, Woods.

ROSA DUMETORUM, Thuil. = R. URBICA, Leman.

ROSA EGLANTERIA, Huds. 1837, Dodsworth. +1, 2, 3, 8, 9, 10, 15, 16.

ROSA GLANDULIFERA, Woods. = R. ANDEGAVENSIS, Bast.

ROSA GLAUCA, Vill. 1868, Cole. +7, 13, 15.

ROSA IMPLEXA, Gren. 1891, Fisher. +13.

ROSA LUTETIANA, Leman. 1877, Lees. +7, 15.

ROSA MICRANTHA, Sm. 1882; Melville. +10:

ROSA MOLLIS, Sm. = R. MOLLISSIMA, Willd.

ROSA MOLLISSIMA, Willd. 1851, Watson. +2, 6, 7, 9, 12, 13, 14, 16.

ROSA OBTUSIFOLIA, Desv. =R. BORRERI, Woods.

ROSA PULVERULENTA, Blox. = R. BLONDÆANA, Ripart.

ROSA REUTERI, Godet. = R. GLAUCA, Vill.

ROSA RUBIGINOSA, L. = R. EGLANTERIA, Huds.

ROSA SARMENTACEA, Woods. 1862, Cole. +8, 13, 15, 16.

ROSA SCABRATA, Crepin. = R. VINACEA, Baker.

ROSA SCABRIUSCULA, Winch. 1882, Webster. +14.

ROSA SEPIUM, Thuill. = R. AGRESTIS, Savi.

ROSA SPHŒRICA, Gren. 1893, Larder. +8.

ROSA SPINOSISSIMA, L. 1842, Hawkins. +6, 8.

ROSA SUBCRISTATA, Baker. 1891, Fisher. +13, 15.

ROSA SURCULOSA, Woods. 1893, Larder. +8.

ROSA TOMENTELLA, Leman. = R. BORRERI, Woods.

ROSA TOMENTOSA, Sm. = R. MOLLISSIMA, Willd.

ROSA URBICA, Leman. 1855, Bogg. +7, 8, 9, 13.

ROSA VERTICILLACANTHA, Merat. 1891, Fisher. +13.

ROSA VILLOSA, L. 1877, Lees. +2, 7, 8.

ROSA VINACEA, Baker. 1877, Lees. +7.

RUBUS AFFINIS, W. & N. 1877, Lees. +6, 7, 13.

RUBUS ARGENTATUS, W. & N. 1906, Ley. +13.

RUBUS BALFOURIANUS, Blox. 1879, Fowler. +3.7.

RUBUS BELLARDI, W. & H. 1904, Carter. +8.

RUBUS BRACTEATUS, Bag. 1904, Ley. +7, 13.

RUBUS CÆSIUS, L. 1836, J. Nicholson. +all.

RUBUS CALVATUS, Blox. 1877, Lees. +7.

RUBUS CARPINIFOLIUS, W. & N. 1877, Lees. +7, 13.

RUBUS CONJUNGENS, Bab. 1893. +8.

RUBUS CORDIFOLIUS, W. & N. 1877, Lees. +3, 7, 13.

RUBUS CORYLIFOLIUS, Sm. 1877, Lees. +3, 6, 7, 8, 13, 15.

RUBUS CYCLOPHYLLUS, Lindeb. 1904, Ley. +N. & S. Lincs.

RUBUS DASYPHYLLUS, Rog. 1877, Lees. +2, 3, 7, 13, 15.

RUBUS DIVERSIFOLIUS, Lindb. 1904, Ley. +7.

RUBUS DREJERI, Jensen. 1893, Fisher. +13.

RUBUS DUMETORUM, W. & H. 1904, Ley. N. & S. Lincs. as an aggregate.

RUBUS ECHINATOIDES, Rog. 1907, Ley. +2, 13.

RUBUS ECHINATUS, Lindl. 1904, Ley. +2, 7, 13, 15.

RUBUS FISSUS, Lindl. 1878, Lees. +2, 6, 7, 13.

RUBUS GLANDULOSUS, Bellardi. = R. BELLARDI, W. & H.

RUBUS GRATUS, Focke. 1891, Fisher. +7, 13.

RUBUS HEMISTEMON, P. J. Muell. 1908, Ley. +7, 13.

RUBUS HYSTRIX, W. & N. 1877, Lees. +6, 7, 13.

RUBUS IDÆUS, L. 1820, Ward. -6, 9, 14, 15, 16, 17, 18.

RUBUS INFECUNDUS, Rog. 1904, Ley. +7, 13.

RUBUS KOEHLERI, W. & N. = R. DASYPHYLLUS, Rog.

RUBUS LEUCOSTACHYS, Schleich. 1878, Fowler. +3, 6, 7, 8, 13.

RUBUS LINDEBERGII, P. J. Muell. 1904, Ley. +7, 13.

RUBUS LINDLEIANUS, Lees. 1878, Fowler. +2, 3, 7, 13.

RUBUS MACROPHYLLUS, W. & H. = R. SCHLECHTENDALII, W.

RUBUS MERCICUS, Bag. 1908, Ley. +7, 13.

RUBUS MUCRONATUS, Blox. 1877, Lees. +7, 13.

RUBUS NEMORALIS, P. J. Muell. 1893, Fisher. +13.

RUBUS OIGOCLADUS, Muell. & Lefv. 1893, Fisher. +13.

RUBUS PLICATUS, W. & N. 1847, Miller. +5, 13.

RUBUS PLICATUS × SELMERI, 1908, Ley. +7.

RUBUS PODOPHYLLUS, P. J. Muell. 1904, Ley. +3, 13.

RUBUS POLYANTHEMUS, Lindb. 1891, Fisher. +13.

RUBUS PULCHERRIMUS, Neum. 1878, Lees. +2, 3, 6, 7, 13.

RUBUS PYRAMIDALIS, Kalt. 1904, Ley. +7.

RUBUS RADULA, W. 1892, Lees. +6, 7, 13.

RUBUS RADULIFORMIS, Ley, 1904, Ley. +3, 6, 13.

RUBUS RHAMNIFOLIUS, W. & N. 1878, Lees. +3, 7.

RUBUS RHOMBIFOLIUS, Weihe. 1908, Ley. +7, 13.

RUBUS ROSACEUS, W. & N. 1904, Ley. +6, 7, 13.

RUBUS RUDIS, Weihe. 1906, Fisher. +15.

RUBUS RUSTICANUS, Merc. 1836, Dodsworth. -4, 9, 10, 11, 16, 17.

RUBUS RUSTICANUS × CORYLIFOLIUS, 1893, Fisher. +13.

RUBUS SALTERI, Bab. 1892, Fisher. +13.

RUBUS SAXATILIS, L. 1789, Gough. +2, 6, 9.

RUBUS SCHEUTZII, Lindeb. 1904, Ley. +13.

RUBUS SCHLECHTENDALII, W. 1904, Ley. +7, 13.

RUBUS SELMERI, Lindeb. 1908, Ley. +2, 3, 6, 7, 13.

RUBUS SILVATICUS, W. & H. 1904, Ley. +7, 13.

RUBUS SUBERECTUS, And. 1878, Fowler. +2, 6, 7, 10, 13.

RUBUS SUBLUSTRIS, Lees. 1904, Ley. +3, 6, 13.

RUBUS THYRSOIDEUS, Wimm. 1892, Fisher. +3, 13.

RUMEX ACETOSA, L. 1820, Thompson. +all.

RUMEX ACETOSELLA, L. 1836, Dodsworth. -4, 9, 17.

RUMEX ACUTUS, L. = R. CRISPUS × OBTUSIFOLIUS.

RUMEX CONGLOMERATUS, Murr. 1851, Watson. -6, 10, 15.

RUMEX CRISPUS, L. 1836, Dodsworth. +all.

RUMEX CRISPUS × OBTUSIFOLIUS. 1866, Cole. +3, 7, 13.

RUMEX HYDROLAPATHUM, Huds. 1799, Young. -2, 3, 7, 8, 15.

RUMEX LIMOSUS, Thuill. 1855, Lowe. +2, 3, 12, 13, 14, 16, 17, 18.

RUMEX MARITIMUS, L. 1670. Ray. -1, 2, 4, 8, 9, 15, 18.

RUMEX NEMOROSUS, Schrad. 1851, Watson. -5, 6, 9, 17.

RUMEX OBTUSIFOLIUS, L. 1836, Dodsworth. +all.

RUMEX PALUSTRIS. Sm. = R. LIMOSUS, Thuill.

RUMEX PRATENSIS, M. &. K. = R. CRISPUS × OBTUSIFOLIUS.

RUMEX PULCHER, L. 1836, Dodsworth. +3, 13, 17.

RUMEX SANGUINEUS, L. 1836, Dodsworth. -5, 6, 8, 11, 12, 13, 15, 17.

RUMEX VIRIDIS, Sibth. = R. NEMOROSUS, Schrad.

RUPPIA MARITIMA, L. 1795, Banks. +9, 11, 12.

RUPPIA SPIRALIS, Hartm. = R. MARITIMA, L.

[RUSCUS ACULEATUS, L. 1855, Bogg. +2, 3, 5, 8, 10, 11, 12. Always planted in our present climate.]

RYNCHOSPORA ALBA, Vahl. 1815, Peck. +1, 2, 5, 7, 10.

SAGINA APETALA, Ard. 1851, Watson. - 3, 4, 6, 9, 17, 18.

SAGINA CILIATA, L. 1877, Lees. +2, 3, 7, 8, 16.

SAGINA MARITIMA, Don. 1865, Britten. +3, 4, 9, 11, 12, 17.

SAGINA NODOSA, Fenzl. 1695, Ray. -6, 8, 18. v. MARITIMA, F. A. Lees. 1880, Carr. +4. Herb. Brit. Mus.

SAGINA PROCUMBENS, L. 1836, Dodsworth. -4, 17.

SAGITTARIA SAGITTIFOLIA, L. 1820, Ward. +all.

SALICORNIA ANNUA, Sm. 1909, Moss. +18.

SALICORNIA APPRESSA, Dum. 1880, Mackinder. +9.

SALICORNIA EUROPÆA, L. 1686, Ray. +4, 9, 11, 12, 17, 18.

SALICORNIA HERBACEA, L. = S. EUROPÆA, L.

SALICORNIA PROCUMBENS, Sm. 1840, Grantham. +11, 17, 18.

SALICORNIA RAMOSISSIMA, Woods. 1899, L.-C. +12, 18.

SALICORNIA STRICTA, Dum. = S. ANNUA, Sm.

SALIX ACUMINATA, Sm. 1877, Fowler. +3, 7, 8, 15.

SALIX ALBA, L. 1638, Mercator. -9.

SALIX ALBA  $\times$  FRAGILIS. 1893, L.N.U. +3, 9, 10.

SALIX ALBA × TRIANDRA. 1897. Cordeaux. +3, 4.

SALIX AMBIGUA, Ehrh. = S. AURITA × REPENS.

SALIX AURITA, L. 1851, Watson. +2, 3, 7, 8, 10, 11, 13.

SALIX AURITA × CINEREA, J. of B. 1906, p. 132.

SALIX AURITA × REPENS. 1878, Lees. +7.

SALIX CAPRÆA, L. 1636, Mercator. -1, 4, 6, 9.

SALIX CINEREA, L. 1851, Watson. -5, 10, 17, 18. f. AQUATICA, Sm. 1894, Walker. +14.

SALIX CINEREA × VIMINALIS. 1851, Watson. +1, 3, 12, 14, 15.

SALIX DECIPIENS, Sm. = S. TRIANDRA × FRAGILIS.

SALIX FRAGILIS, L. 1638, Mercator. -2, 4, 5, 8, 10, 16, 17.

SALIX LUTESCENS, A. Kern. = S. AURITA × CINEREA.

SALIX PENTANDRA, L. 1815, Peck. +1, 2, 3, 4, 8, 11.

SALIX PURPUREA, L. 1856, Bogg. +1, 4, 6, 8, 13, 14.

SALIX PURPUREA × VIMINALIS. 1856, Thompson. +2, 4, 12, 15, 17. f. FORBYANA, Sm. 1856, Thompson. +12.

SALIX REPENS, L. 1797, Young, +1, 2, 3, 5, 7, 10, 12, 13. f. ARGENTEA, Sm. 1876, Fowler. +2, 5, 7, 10, 13. f. ASCENDENS, Sm. 1876, Fowler. +5, 10, 13. f. INCUMBENS, Syme. 1896, L.N.U. +13. f. PROSTRATA, Sm. 1877, Lees. +7.

SALIX RUBRA, Huds. = S. PURPUREA × VIMINALIS.

SALIX RUSSELLIANA, Sm. = S. FRAGILIS, L.

SALIX SMITHIANA, Willd. = S. CINEREA × VIMINALIS.

SALIX TRIANDRA, L. 1856, Bogg. +4, 8, 11, 14, 15.

SALIX TRIANDRA × FRAGILIS. 1908, Mills. +6, 10, 12,

SALIX UNDULATA, Ehrh. = S. ALBA × TRIANDRA.

SALIX VIMINALIS, L. 1810, Stark. -6, 10, 13, 18.

SALIX VIRIDIS, Fr. = S. ALBA × FRAGILIS.

SALSOLA KALI, L. 1686, Ray. +4, 9, 11, 12. v. TRAGUS, Moq. 1901, Stow. +13.

SALVIA PRATENSIS, L. 1873, Woolward. +11, 15.

SALVIA OFFICINALIS, L. 1897, Smith. +4.

SALVIA VERBENACA, L. 1820, Ward. -1, 2, 4, 9, 17, 18.

SALVIA VERTICILLATA, L. 1895, Mason. +15.

SAMBUCUS EBULUS, L. 1688, Plukenet. +1, 7, 13, 15, 17.

SAMBUCUS NIGRA, L. 1728, Stukeley. +all.

SAMOLUS VALERANDI, L. 1836, Dodsworth. - 2.

SANGUISORBA OFFICINALIS, L. = POTERIUM OFFICINALIS, Hook. f.

SANICULA EUROPÆA, L. 1820, Ward. - 1, 3, 6, 9, 12, 14, 17, 18.

SAPONARIA OFFICINALIS, L. -5, 6, 13, 14, 15, 17, 18.

SAPONARIA VACCARIA, L. 1893, W.-P. +2, 4, 5, 6, 12, 13, 14, 15.

SAXIFRAGA GRANULATA, L. 1834, Bayley. -4, 9, 14, 16, 17, 18.

SAXIFRAGA TRIDACTYLITES, L. 1728, Stukeley. -2, 3, 4, 5, 7, 8, 17, 18.

SAXIFRAGA UMBROSA, L. v. PUNCTATA, Haw. 1884, Browne. +15.

SCABIOSA ARVENSIS, L. 1836, Dodsworth. -4.

SCABIOSA ATRO-PURPUREA, L. 1902, Lee. +11.

SCABIOSA COLUMBARIA, L. 1834, Bayley. - 1, 4, 7, 9, 17, 18.

SCABIOSA SUCCISA, L. 1836, Dodsworth. - 12, 17, 18.

SCANDIX ANTHRISCUS, L. = ANTHRISCUS VULGARIS, Bernh.

SCANDIX CEREFOLIUM, With. = ANTHRISCUS CEREFOLIUM, Hoffm.

SCANDIX PECTEN-VENERIS, L. 1820, Ward. +all. f. PASCUA, Mihi. 1898, W.-P. +3.

SCHENUS NIGRICANS. L. 1815, Peck. +1, 2, 3, 5, 16.

SCHOLLERA? = OXYCOCCUS, Hill.

SCILLA FESTINALIS, Sal. = S. NON-SCRIPTA, Hoffm. & Link.

SCILLA ITALICA, L. 1896, Mason. +7.

SCILLA NON-SCRIPTA, Hoffm. & Link. 1820, Ward. -3, 12, 17, 18.

SCILLA NUTANS, Sm. = S. NONSCRIPTA, Hoffm. & Link.

SCILLA VERNA, Huds. 1879, Burgess. +11.

SCIRPUS ACICULARIS, L. = ELEOCHARIS ACICULARIS, R. Br.

SCIRPUS CÆSPITOSUS, L. 1815, Peck. +1, 7.

SCIRPUS CARICIS, Retz. = S. COMPRESSUS, Pers.

SCIRPUS COMPRESSUS, Pers. 1851, Watson. +2, 9, 13, 15.

SCIRPUS FLUITANS, L. 1849, Carrington. +1, 5, 7, 9, 13.

SCIRPUS GLAUCUS, Sm. = S. TABERNÆMONTANI, Gmel.

SCIRPUS LACUSTRIS, L. 1815, Peck. -8, 10, 12, 17.

SCIRPUS MARITIMUS, L. 1836, Dodsworth. -7, 13, 14, 15, 16. v. CONGLOBATUS, Gray. 1890, Lee. +3, 4, 9, 11, 12, 18.

SCIRPUS MULTICAULIS, Sm. = ELEOCHARIS MULTICAULIS, Roem. & Schult.

SCIRPUS PALUSTRIS, L. = ELEOCHARIS PALUSTRIS, R. Br.

SCIRPUS RUFUS, Schrad. 1868, Charters. +5, 9, 11.

SCIRPUS SETACEUS, L. 1856, Thompson. +2, 3, 7, 8, 10, 13, 15.

[SCIRPUS SYLVATICUS, L. 1884. Mistake.]

SCIRPUS TABERNÆMONTANI, Gmel. 1851, Watson. +1, 4, 6, 12.

SCLERANTHUS ANNUUS, L. 1848, Forster. -4, 9, 12, 14, 15, 16, 17, 18.

SCLEROCHLOA DISTANS, Bab. = GLYCERIA DISTANS, Wahl.

SCLEROCHLOA LOLIACEA, Woods. = FESTUCA ROTTBŒLLIOIDES, Kunth.

SCLEROCHLOA MULTICULMIS, Syme. = GLYCERIA DISTANS, Wahl.

SCLEROCHLOA RIGIDA, Link. = FESTUCA RIGIDA, Kunth.

SCOLOPENDRIUM VULGARE, Symonds. = PHYLLITIS SCOLOPENDRIUM, Newm.

SCORPIURUS SUBVILLOSA, L. 1902, Smith. +4.

SCORPIURUS VERMICULATA, L. 1899, Hinchliff. +6.

SCROPHULARIA ALATA, Gilib. 1907, Mason. +13, 16.

SCROPHULARIA AQUATICA, L. 1820, Ward. +all.

SCROPHULARIA BALBISII, Hornem. = S. AQUATICA, L.

SCROPHULARIA NODOSA, L. 1840, Grantham. -9, 12, 17.

SCROPHULARIA UMBROSA, Dum. = S. ALATA, Gilib.

SCUTELLARIA GALERICULATA, L. 1834, Bayley. -17, 18.

SCUTELLARIA MINOR, Huds. 1836, Dodsworth. +2, 5, 7, 16.

SEDUM ACRE, L. 1834, Bayley. -1, 17, 18.

SEDUM ALBUM, L. 1865, Britten. +3, 15, 16.

SEDUM ANGLICUM, Huds. 1883, Mackinder. +9, 15, 16.

SEDUM REFLEXUM, L. 1838, Dodsworth. +2, 10, 11, 12, 15, 17.

[SEDUM RHODIOLA, DC. 1896. Mistake.]

SEDUM RUPESTRE, L. 1891, Davy. +9.

SEDUM TELEPHIUM, L. 1838, Dodsworth, +2, 8, 16,

SEDUM TERETIFOLIUM, Haw. = S. ALBUM, L.

SELAGINELLA SELAGINOIDES, Gray. 1879, Fowler. +2, 5.

SELINUM CARVIFOLIUM, L. 1881, Fowler. +2.

SEMPERVIVUM TECTORUM, L. 1661, Ray. -1, 5, 6, 10, 13.

SENEBRIERA CORONOPUS, Poir. = CORONOPUS PROCUMBENS, Gilib.

SENEBRIERA DIDYMA, Pers. = CORONOPUS DIDYMUS, Sm.

SENEBRIERA PINNATIFIDA, DC. = CORONOPUS DIDYMUS, Sm.

SENECIO AQUATICUS, Hill. 1836, J. Nicholson. -14, 18.

SENECIO CAMPESTRIS, DC. =S. INTEGRIFOLIUS, Clairv.

SENECIO ERUCIFOLIUS, L. 1851, Watson. -5, 6, 9, 17.

SENECIO ERUCIFOLIUS × JACOBÆA. 1909, Hurst. +12.

SENECIO INTEGRIFOLIUS, Clairv. 1893, Streatfeild. +4, 14, 15.

SENECIO JACOBÆA, L. 1799, Young. +all. v. DISCOIDEUS, L. 1890, Davy. +9.

SENECIO PALUDOSUS, L. 1797, Wollaston. +6, 13. Extinct.

SENECIO PALUSTRIS, Hook. 1789, Gough. +7, 12. Extinct.

SENECIO SARRACENICUS, L. 1880, Browne. +15.

SENECIO SQUALIDUS, L. 1855, Lowe. +14.

SENECIO SYLVATICUS, L. 1840, Miller, -17, 18. v. AURICULATUS, Meyer. 1855, Cole. +3, 7, 12, 13, 15.

SENECIO TENUIFOLIUS, Jacq. = S. ERUCIFOLIUS, L.

SENECIO VISCOSUS, L. 1884, Browne. +9, 15.

SENECIO VULGARIS, L. 1836, Dodsworth. +all. v. RADIATUS, Koch. 1890, Davy. +3.

SERRATULA TINCTORIA, L. 1836, Dodsworth. -1, 3, 4, 12, 17, 18. v. MONTICOLA, Bor. 1855, Fowler. +6, 7, 9, 11, 13, 15.

SETARIA VERTICILLATA, Beauv. 1894, Hudson. +1, 10.

SETARIA VIRIDIS, Beauv. 1856, Thompson. +12, 13.

SHERARDIA ARVENSIS, L. 1836, Dodsworth. +all.

[SIBTHORPIA EUROPÆA, L. 1763. Mistake.]

SIDERITIS MONTANA, L. 1892, Larder. +8, 13.

SIDERITIS ROMANA, L. 1900, Alston. +10.

SIEGLINGIA DECUMBENS, Bernh. 1851, Watson. +1, 2, 3, 5, 7, 10, 13, 14, 15.

SILAUS FLAVESCENS, Bernh. 1851, Watson. -17, 18.

SILENE ANGLICA, L. 1785, Banks. +5, 10, 13, 14, 15. v. QUINQUE-VULNERA, L. 1842, Walter. +10.

SILENE CONICA, L. 1897, Grierson. +4, 13.

SILENE CUCUBALUS, Wibel. = S. LATIFOLIA, Rendle & Brit.

SILENE DICHOTOMA, Ehrh. 1853, Lowe. +1, 5, 8.

SILENE INFLATA, Sm. =S. LATIFOLIA, Rendle & Brit.

SILENE LATIFOLIA, Rendle. & Brit. 1836, Dodsworth. -17.

SILENE MARITIMA, With. 1836, J. Nicholson. +4, 11.

SILENE MUSCIPULA, L. 1902, Smith. +4.

SILENE NOCTIFLORA, L. 1836, Dodsworth. -9, 17.

SILENE NUTANS, L. 1891, Smith. +4.

SILENE PENDULA, L. 1893, Mackinder. +10.

SILENE VENOSA, Aschers. = S. LATIFOLIA, Rendle & Brit.

SILYBUM MARIANUM, Gaertn. 1820, Ward. +3, 6, 7, 10, 11, 12, 13.

SINAPIS ALBA, L. = BRASSICA ALBA, Boiss.

SINAPIS NIGRA, L. = BRASSICA NIGRA, Koch.

SISON AMOMUM, L. 1851, Watson. -2, 9, 12, 17, 18.

SISYMBRIUM ALLIARIA, Scop. 1820, Ward. -4, 9, 18.

SISYMBRIUM ALTISSIMUM, L. 1895, W.-P. +4, 5, 13.

SISYMBRIUM IRIO, L. 1908, Sneath. +6.

SISYMBRIUM OFFICINALE, Scop. 1836, Dodsworth. +all.

SISYMBRIUM PANNONICUM, Jacq. = S. ALTISSIMUM, L.

SISYMBRIUM POLYCERATUM, L. 1896, Grierson. +13.

SISYMBRIUM SOPHIA, L. 1851, Watson. -8, 11, 16, 17, 18.

SISYMBRIUM THALIANUM, J. Gay. 1820, Ward. +2, 5, 6, 7, 10, 13, 14, 15.

SIUM ANGUSTIFOLIUM, L. = S. ERECTUM, Huds.

SIUM ERECTUM, Huds. 1836, Dodsworth. -17.

SIUM LATIFOLIUM, L. 1836, Dodsworth. -2, 7, 15.

SOLANUM DULCAMARA, L. 1836, Dodsworth. +all.

**SOLANUM NIGRUM,** L. 1836, Dodsworth. -3, 4, 8, 9, 17.

SOLIDAGO VIRGAUREA, L. 1820, Ward. +2, 3, 4, 5, 7, 10, 13.

SONCHUS ARVENSIS, L. 1836, Dodsworth. +all.

SONCHUS ASPER, Hill. 1836, Dodsworth. +all.

SONCHUS OLERACEUS, L. 1851, Watson. +all.

SONCHUS OLERACEUS × ASPER, 1909, W.-P. +3.

SONCHUS PALUSTRIS, L. 1799, Young. +12 (Extinct.)

SPARGANIUM ERECTUM, L. 1836, Dodsworth. +all.

SPARGANIUM MINIMUM, Fr. 1826, Howitt. +1, 5, 7, 12, 13, 16.

SPARGANIUM NATANS, Sm. = S. MINIMUM, Fr.

SPARGANIUM RAMOSUM, Curt. = S. ERECTUM, L.

SPARGANIUM SIMPLEX, Huds. 1597, Gerarde. -2, 8, 15.

SPARTINA STRICTA, Roth. 1826, Howitt. +12.

SPECULARIA, Heist. = LEGOUSIA, Durande.

SPERGULA ARVENSIS, L. 1836, Dodsworth. -9, 17, 18. v. SATIVA, Boenn. 1858, Bogg. +2, 3, 6, 7, 8, 13. v. VULGARIS, Boenn. 1877, Lees. +1, 2, 3, 7, 10, 15, 16.

SPERGULARIA MARGINATA, Kittel. 1826, Howitt. +2, 3, 4, 9, 11, 12, 17, 18. v. GLANDULOSA, Druce. 1909, Hurst. +12.

SPERGULARIA RUBRA, Pers. 1836, Dodsworth. +1, 5, 7, 8, 10, 11, 13, 14, 15, 18.

SPERGULARIA SALINA, Presl. 1826, Howitt. +2, 3, 4, 9, 11, 12, 17, 18. v. MEDIA, Fr. 1877, Fowler. +2, 3, 9, 11, 12, 17, 18. v. NEGLECTA, Syme. 1879, Fowler. +2, 4, 9, 17, 18.

SPINACIA OLERACEA, L. 1909, Reynolds. +11.

SPIRÆA FILIPENDULA, L. 1726, Bacon. -1, 11, 12, 17, 18.

SPIRÆA SALICIFOLIA, L. 1865, Britten. +3, 5.

SPIRÆA TOMENTOSA, L. 1882, Fowler. +5.

SPIRÆA ULMARIA, L. 1820, Thompson. +all.

SPIRANTHES AUTUMNALIS, Rich. = S. SPIRALIS, Koch.

SPIRANTHES SPIRALIS, Koch. 1838, Latham. +12, 15, 16, 17.

STACHYS AMBIGUA, Sm. = S. PALUSTRIS × SYLVATICA.

STACHYS ARVENSIS, L. 1726, Bacon. +3, 7, 8, 10, 11, 13, 14, 15.

STACHYS BETONICA, Benth. = S. OFFICINALIS, Trev.

STACHYS GERMANICA, L. 1762, Hudson. +15, 16. (Extinct?)

STACHYS OFFICINALIS, Trev. 1820, Ward. - 12, 17, 18.

STACHYS PALUSTRIS L. 1825, Sinclair. - 10, 17.

STACHYS PALUSTRIS × SYLVATICA. 1864, Stanwell. +5, 16.

STACHYS SYLVATICA, L. 1836, Dodsworth. +all.

STATICE AURICULÆFOLIA, Vahl. = LIMONIUM BINERVOSUM, C. E. Salm.

STATICE BINERVOSUM, Sm. = LIMONIUM BINERVOSUM, Salm.

STATICE CASPIA, Willd. = LIMONIUM BELLIDIFOLIUM, Dum.

STATICE INTERMEDIUM, Syme. = LIMONIUM BINERVOSUM. v. INTER-MEDIUM, Druce.

STATICE LIMONIUM, L. = L. VULGARE, Mill.

STATICE MARITIMA, Mill. 1726, Bacon. +3, 4, 9, 11. 12, 14, 15, 17, 18, (Inland 14, 15.)

STATICE OCCIDENTALIS, Lloyd. = LIMONIUM BINERVOSUM, Salm.

STATICE RETICULATA, Bieb. = LIMONIUM BELLIDIFOLIUM, Dum.

STAPHYLEA PINNATA, L. 1633, Gerarde. +(16).

STELLARIA APETALA, Ucria. 1877, Fowler. -1, 6, 8, 10, 14, 16, 17.

STELLARIA AQUATICA, Scop. 1836, Dodsworth. -1, 2, 4, 5, 8, 9, 10, 18.

STELLARIA BORÆANA, Jord. = S. APETALA, Ucria.

STELLARIA ELIZABETHÆ, Schultz. = S. UMBROSA, Opiz.

STELLARIA GLAUCA, With. = S. PALUSTRIS, Retz.

STELLARIA GRAMINEA, L. 1836, Dodsworth. +all.

STELLARIA HOLOSTEA, L. 1836, Dodsworth. -4, 9, 12, 17, 18.

STELLARIA MAJOR, Koch. = S. NEGLECTA, Weihe.

STELLARIA MEDIA, Vill. 1836, Dodsworth. +all.

STELLARIA NEGLECTA, Weihe. 1785, Banks. +2, 3, 7, 8, 10.

STELLARIA NEMORUM, L. 1856, Fowler. +2, 7, 10, 13.

STELLARIA PALUSTRIS, L. 1840, Miller. -2, 4, 7, 8, 12, 15, 17.

STELLARIA ULIGINOSA, Murr. 1840, Miller. -1, 4, 9, 12, 14, 16, 17, 18.

STRATIOTES ALOIDES, L. 1633, Johnson. -1, 3, 4, 8, 13, 15, 18.

SUÆDA FRUTICOSA, Forsk. 1836, Dodsworth. +12 or 17.\* (Ballast?)

SUÆDA MARITIMA, Dum. 1836, Dodsworth. +3, 4, 9, 11, 12, 17, 18.

SYMPHORICARPUS RACEMOSUS, Mich. 1864, W.-P. +2, 3, 5, 7, 10, 11.

SYMPHYTUM OFFICINALE, L. 1796, Woodward. -1, 4, 6. v. PATENS, Sibth. 1894, Tindall. +2, 3, 10, 14, 18.

SYMPHYTUM TUBEROSUM, L. 1796, Woodward. +5, 12, 16.

TAMARIX GALLICA, L. 1899, Cordeaux. +9, 11.

TAMUS COMMUNIS, L. 1820, Ward. +all.

TANACETUM VULGARE, L. 1820, Ward. -4, 9, 16, 17, 18.

TARAXACUM ERYTHROSPERMUM, Andrz. 1876, W.-P. +2, 3, 5, 13.

TARAXACUM LÆVIGATUM, DC. 1883, Beeby. +3, 16.

TARAXACUM OFFICINALE, Wiber. 1820, Thompson. +all.

TARAXACUM PALUSTRE, DC. 1856, Thompson. +2, 3, 12.

TAXUS BACCATA, L. 1769, Edwards. +1, 2, 3, 7, 8, 11. (Ancient forests under peat.)

TEESDALIA NUDICAULIS, Br. 1876, Fowler. +1, 2, 5, 7, 10, 13.

TETRAGONOBALUS SILIQUOSUS, Roth. 1896, Lees. +13.

TEUCRIUM CHAMÆDRYS, L. 1858, Fowler. +2, 7.

TEUCRIUM SCORDIUM, L. 1636, Hexham. +12, 13.

TEUCRIUM SCORODONIA, L. 1820, Ward. +1, 2, 5, 7, 10, 13.

THALICTRUM AQUILEGIFOLIUM. L. 1895, Nelthorpe. +2, 3.

THALICTRUM CALCAREUM, Jord. 1891, Davy. +1, 8.

THALICTRUM DUNENSE, Dum. 1876, Fowler. +4, 9, 11.

THALICTRUM FLAVUM, L. 1836, Dodsworth. -15.

THESIUM HUMIFUSUM, DC. 1865, Burtt. +13, 15.

THESIUM LINOPHYLLUM, L. =T. HUMIFUSUM, DC.

THLASPI ARVENSE, L. 1856, Thompson. -4, 8, 14, 16, 17, 18.

[THLASPI PERFOLIATUM, L. 1856. Mistake]

THRINCIA HIRTA, Roth. = LEONTODON NUDICAULE, Banks & Soland.

THYMUS ACINOS, Sm. = CALAMINTHA ARVENIS, Lam.

THYMUS CALAMINTHA. Sm. = CALAMINTHA OFFICINALIS, Moench.

[THYMUS CHAMŒDRYS, Fr. 1893. Mistake.]

THYMUS NEPETA, Sm. = CALAMINTHA PARVIFLORA, Lam.

THYMUS SERPYLLUM, L. 1836, Dodsworth. -1, 3, 9, 12, 18.

TILIA CORDATA, Mill. 1670, Ray. +3, 6, 10, 11, 13.

TILIA EUROPÆA, L. = T. VULGARIS, Hayne.

TILIA GRANDIFOLIA, Ehrh. = T. PLATYPHYLLOS, Scop.

TILIA INTERMEDIA, DC. = T. VULGARIS, Hayne.

TILIA PARVIFLORA, Ehrh. =T. CORDATA, Mill.

TILIA PLATYPHYLLOS, Scop. 1865, Cole. +7, 13, 14.

TILIA ULMIFOLIA, Scop. = T. CORDATA, Mill.

TILIA VULGARIS, Hayne. 1799, Young. +2, 3, 5, 6, 7, 8, 10, 11, 15.

TOLPIS BARBATA, Gaertn. 1899, Hinchliff. +6.

TOLYPELLA GLOMERATA, Leonh. 1894, Mason. +12.

TOLYPELLA PROLIFERA, Loenh. 1883, Beeby. +16.

TORILIS ANTHRISCUS, Gmel. = CAUCALIS ANTHRISCUS, Huds.

TORILIS INFESTA, Spreng. = C. ARVENSIS, Huds.

TORILIS NODOSA, Gærtner. = C. NODOSA, Scop.

TORMENTILLA ERECTA, L. = POTENTILLA ERECTA, Hampe.

TORMENTILLA OFFICINALIS, Curtis. = P. ERECTA, Hampe.

TORMENTILLA REPTANS, L. = P. PROCUMBENS, Sibth.

TRAGOPOGON MINUS, Mill. 1840, Grantham. +all. v. SYMEI, Ar. Benn. 1857, Fowler. +2.\*

TRAGOPOGON PORRIFOLIUM, L. 1893, Firbank. +3, 10.

TRIFOLIUM AGRARIUM, L. 1877, Lees. +2, 7, 8, 10.

TRIFOLIUM ARVENSE, L. 1835, Dodsworth. -16, 17, 18.

TRIFOLIUM BADIUM, L. 1896, Lees. +13.

TRIFOLIUM DUBIUM, Sibth. 1836, Dodsworth. +all.

TRIFOLIUM ELEGANS, Savi. 1865, Britten. +all.

TRIFOLIUM FILIFORME, L. 1856, Thompson. +8, 12, 15, 16.

TRIFOLIUM FRAGIFERUM, L. 1763, Martyn. -5, 17.

TRIFOLIUM INCARNATUM, L. 1864, Burtt. +2, 3, 10, 13.

TRIFOLIUM MARITIMUM, Huds. = T. SQUAMOSUM. L.

TRIFOLIUM MEDIUM, L. 1823, Sinclair, -5, 16, 18.

TRIFOLIUM MINUS, Relham. = T. DUBIUM, Sibth.

TRIFOLIUM OCHROLEUCON, Huds. 1789, Gough. +4, 11, 12, 15, 16.

TRIFOLIUM PRATENSE, L. 1820, Thompson. +all. v. SATIVUM, Schreb. 1893, W.-P. +2, 3, 5, 11, 13.

TRIFOLIUM PROCUMBENS, L. 1820, Thompson. +all.

TRIFOLIUM REPENS, L. 1824, Sinclair. +all.

TRIFOLIUM RESUPINATUM, L. 1896, Sneath. +4, 13.

TRIFOLIUM SCABRUM, L. 1838, Latham. +4, 9, 11, 14, 16.

TRIFOLIUM SPUMOSUM, L. 1896, Lees. +13.

TRIFOLIUM SQUAMOSUM, L. 1881, Searle. +4, 11, 12.

TRIFOLIUM STRIATUM, L. 1868, Charters. +3, 4, 5, 6, 7, 9, 10, 12, 13, 15.

TRIFOLIUM SUBTERRANEUM, L. 1840, Miller. +6, (13.)

TRIGLOCHIN MARITIMUM, L. 1688, Plukenet. +2, 3, 4, 9, 11, 12, 17, 18.

TRIGLOCHIN PALUSTRE, L. 1815, Peck. -7, 13, 18.

TRIGONELLA ARABICA, Delile. 1902, Smith. +4.

TRIGONELLA CÆRULEA, Ser. 1896, Sneath. +4, 6, 12, 13.

TRIGONELLA FŒNUM-GRÆCUM, L. 1896, Lees. +4, 13.

TRIGONELLA ORNITHOPODIOIDES, DC. 1897, Goodall. +13.\*

TRIGONELLA PURPURASCENS, Lam. = T. ORNITHOPODIOIDES, DC.

TRIODIA DECUMBENS, Beauv. = SIEGLINGIA DECUMBENS, Bernh.

TRISETUM FLAVESCENS, Beauv. 1823, Sinclair. +all.

TRISETUM PRATENSE, Pers. = T. FLAVESCENS, Beauv.

TRITICUM, L. = AGROPYRON, Gaertn.

TRITICUM CANINUM, Huds. = AGROPYRON CANINUM, Beauv.

TRITICUM LOLIACEUM, Sm. - FESTUCA ROTTBŒLLIOIDES, Kunth.

TRITICUM MONOCOCCUM, L. 1633, Johnson. S. Lincs. 53.

TRITICUM REPENS, L. = AGROPYRON REPENS, Beauv.

TRITICUM TRIUNCIALIS, Rasp. 1899, Hinchliff. +6.

TROLLIUS EUROPÆUS, L. 1893, W.-P. +2. (Escape.)

TURRITIS GLABRA, L. = ARABIS GLABRA, Bernh.

TURRITIS HIRSUTA, L. = ARABIS HIRSUTA, Scop.

TUSSILAGO FARFARA, L. 1820, Ward. +all.

TYPHA ANGUSTIFOLIA, L. 1838, Dodsworth. -2, 3, 4, 5, 6, 17.

TYPHA LATIFOLIA, L. 1636, Johnson. +all. v. MEDIA, Syme. 1883, Beeby. +16.

ULEX EUROPÆUS, L. 1836, Dodsworth. -17, 18.

ULEX GALLII, Planch. 1892, Lees. +6, 7.

ULEX MINOR, Roth. 1855, Lowe. +6, 13.

ULEX NANUS, Forster. = U. MINOR, Roth.

ULMUS CAMPESTRIS, L. 1820, Thompson. -4, 9, 13, 14, 15, 16, 17, 18.

ULMUS GLABRA, Huds. 1799, Young. +all. v. MINOR, Mill, 1910, Ley. +13.

ULMUS MONTANA, Stokes. = U. GLABRA, Huds.

ULMUS SATIVA, Mill. = U. CAMPESTRIS, L.

ULMUS SURCULOSA, Stokes. = U. CAMPESTRIS, L.

URTICA DIOICA, L. 1836, Dodsworth. +all. v. ANGUSTIFOLIA, Wimm. & Grab. 1900, Mason. +5, 10. v. MICROPHYLLA, Hausm. 1894, W.-P. +3, 7.

URTICA PILULIFERA, L. 1640, Parkinson. +4, 7, 13.

URTICA URENS, L. 1836, Dodsworth. +all.

UTRICULARIA MINOR, L. 1838, Dodsworth. +5, 14, 16.

UTRICULARIA VULGARIS, L. 1831, Drury. -7, 8, 12, 15, 17, 18.

VALERIANA DIOICA, L. 1834, Bailey. -17, 18.

VALERIANA MIKANII, Syme. = V. OFFICINALIS, L.

VALERIANA OFFICINALIS, L. 1820, Ward. -9, 17, 18.

VALERIANA SAMBUCIFOLIA, Mikan. 1856, Bogg. +1, 2, 7, 8, 10, 13, 15, 16.

VALERIANELLA AURICULARIA, DC. = V. RIMOSA, Bast.

VALERIANELLA CARINATA, Lois. 1902, Smith. +4.

VALERIANELLA DENTATA, Poll. 1836, Dodsworth. -4, 9, 12, 17.

VALERIANELLA OLITORIA, Poll. 1856, Bogg. -1, 2, 4, 14, 15, 18.

VALERIANELLA RIMOSA, Bast. 1882, Melville. +10.\*

VERBASCUM BLATTARIA, L. 1879, Burgess. +3, 10, 13, 14.

VERBASCUM BLATTARIA × (BLATTARIA × NIGRUM). 1909, Reynolds. +11.

VERBASCUM LYCHNITIS, L. 1850, Lowe. +5, 13.

VERBASCUM LYCHNITIS × NIGRUM. 1908, Larder. +8.

VERBASCUM NIGRUM, L. 1835, J. Nicholson. +5, 12, 13, 15.

VERBASCUM THAPSUS, L. 1820, Ward. -4, 6, 8, 17. 18.

VERBASCUM THAPSUS  $\times$  (THAPSUS  $\times$  LYCHNITIS). 1909, T. W. W.-P. +3.

VERBASCUM VIRGATUM, Stokes. 1835, J. Nicholson. +6 or 13.

VERBENA OFFICINALIS, L. 1820, Ward. -1, 5, 7, 9, 15, 17, 18.

VERONICA AGRESTIS, L. 1836, Dodsworth. +all. v. BOTTES-FORDIENSIS, Mihi. 1874, W.-P. +2, 3, 5, 10, 15 (always on garden ground).

VERONICA ANAGALLIS-AQUATICA, L. 1836, Dodsworth. +all.

VERONICA ARVENSIS, L. 1836, Dodsworth. +ail.

VERONICA BECCABUNGA, L. 1836, Dodsworth. -17, 18. v. ARGILLACEA-SICCA, Mihi. 1897, W.-P. +7. Very luxuriant and fine in two parishes.

VERONICA BUXBAUMII, Ten. = V. TOURNEFORTII, Gmel.

VERONICA CHAMÆDRYS, L. 1836, Dodsworth. +all.

VERONICA DIDYMA, Ten. 1836, Dodsworth. -4, 5, 6, 14, 18.

VERONICA HEDERÆFOLIA, L. 1836, Dodsworth. +all.

VERONICA HEDERÆFOLIA × TOURNEFORTII. 1906, W.-P. +3. (Specimen lost.)

VERONICA HYBRIDA, L. 1895, Walker. +14.

VERONICA MONTANA, L. 1857, Fowler. +2, 7, 8, 11.

**VERONICA OFFICINALIS,** L. 1836, Dodsworth. -6, 9, 14, 17, 18.

VERONICA PERSICA, Poir. = V. TOURNEFORTII, Gmel.

VERONICA POLITA, Fr. = V. DIDYMA, Ten.

VERONICA SCUTELLATA, L. 1831, Drury -1, 3, 4, 8, 9, 12, 17, 18.
v. HIRSUTA, Weber. 1897, Lees. +7, 16.

VERONICA SERPYLLIFOLIA, L. 1836, Dodsworth. +all. v. TENELLA, All. 1898, W.-P. +8.

VERONICA SPICATA, L. 1838, Dodsworth. +16.

VERONICA TOURNEFORTH, Gmel. 1872, Streatfeild. +all.

VIBURNUM LANTANA, L. 1836, Dodsworth. +3, 5, 11, 13, 14, 15, 16.

VIBURNUM OPULUS, L. 1836, Dodsworth. -9, 12, 17, 18.

VICIA ANGUSTIFOLIA, L. 1840, Miller. -4, 6. 8, 14, 15, 16, 17, 18.

VICIA CALCARATA, Desf. = V. MONANTHA, Willd.

VICIA CRACCA, L. 1820, Thompson. +all. v. ARGENTEA, Coss. & Germ. 1903, L.N.U. +11.

VICIA FABA, L. 1874, W.-P. +all.

VICIA GEMELLA, Crantz. = V. TETRASPERMA, Moench.

VICIA HIRSUTA, Gray. 1856, Thompson. -4, 18.

VICIA HYBRIDA, L. 1835, J. Nicholson. +13.

VICIA LÆVIGATA, Sm. 1896, Lees. +13.

VICIA LATHYROIDES, L. 1872, Streatfeild. +11.

VICIA LUTEA, L. 1856, Thompson. +2, 4, 12, 13.

VICIA MONANTHA, Willd. 1896, Lees. +13.

VICIA NARBONENSIS, L. 1895, Waterfall. +2, 13. v. SERRATIFOLIA, Jack. 1895, Waterfall. +2.

VICIA PANNONICA, Crantz. v. STRIATA, Bieb. 1896, Lees. +13.

VICIA SATIVA, L. 1851, Watson. +all:

VICIA PSEUDO-CRACCA, Bert. 1896, Lees. +2, 4, 12, 13.

VICIA PURPURASCENS, DC. = V. PANNONICA, v. STRIATA, Bieb.

VICIA PYRENAICA, Pour. 1896, Lees. +13.

VICIA SEPIUM, L. 1836, Dodsworth. -4, 14, 17, 18.

VICIA SYLVATICA, L. 1834, Bailey. +5, 7, 8, 11, 15, 16.

VICIA TETRASPERMA, Moench. 1836, Dodsworth. -1, 2, 3, 4, 5, 6. (Most curious.)

VINCA MAJOR, L. 1805, Crabbe. +2, 3, 5, 8, 10, 11, 13.

VINCA MINOR, L. 1836, Dodsworth. +11, 12, 13, 15, 16.

VIOLA CANINA, L. 1836, Dodsworth. -3, 4, 6, 17, 18.

VIOLA CANINA × RIVINIANA. 1893, M. G. W. Peacock. +2, 3, 10.

VIOLA CANINA × STAGNINA. 1896, Owston. +6.

VIOLA CURTISII, Forster. 1892, M. Peacock. +2, 5, 7, 8.

VIOLA FLAVICORNIS, Sm. = V. CANINA, L.

VIOLA HIRTA, L. 1820, Ward. -1, 4, 9, 12, 17, 18.

[VIOLA LACTEA, Sm. 1839. Mistake.]

VIOLA LUTEA, Huds. 1909, Reynolds. +11.

VIOLA ODORATA, L. 1820, Ward. +all.

VIOLA ODORATA × RIVINIANA. 1895, W.-P. +3.

VIOLA PALUSTRIS, L. 1829, Oldfield. +1, 2, 5, 6, 7, 12, 13.

VIOLA PERSICÆFOLIA, Roth. = V. STAGNINA, Kit.

VIOLA REICHENBACHIANA, Boreau. = V. SYLVATICA, Kit.

VIOLA RIVINIANA, Reichb. 1836, Dodsworth. -9, 12, 18.

VIOLA STAGNINA, Kit. 1836, J. Nicholson. +2, 6, 13.

VIOLA SYLVESTRIS, Kit. 1877, Fowler. +2, 3, 4, 7, 11, 13, 15, 16.

VIOLA TRICOLOR, L. 1820, Ward. -4, 6, 9, 18.

VISCUM ALBUM, L. 1836, Dodsworth. +2, 3, 11, 15, 16. (Bird sown in S. Lincs. 53.)

WEIGAERTNERIA CANESCENS, Bernh. = CORYNEPHORUS CANESCENS, Beauv.

WIEDEMANNIA ERYTHROTRICHA, Benth. 1895, Lees. +5, 13.

WILCKIA AFRICANA, Muell. 1902, Smith. +4.

WILCKIA MARITIMA, Scop. 1868, W.-P. +2, 3, 11.

ZANNICHELLIA PALUSTRIS, L. 1851, Watson. +1, 3, 4, 7, 11, 13, 15, 16, 17.

ZANNICHELLIA PEDICILLATA, Fr. = Z. PEDUNCULATA, Reichb.

ZANNICHELLIA PEDUNCULATA, Reichb. 1883, Beeby. +9, 12, 15, 16, 18.

ZOSTERA MARINA, L. 1856, Thompson. +12, 17.

ZOSTERA NANA, Roth. 1884, Searle. +4, 9.

Topographical lists of this description are of necessity most unsatisfactory. The matter contained in them is never fully up to existing knowledge, and they are practically out of date before they come from the press. It is so with this list in many places. When half of it was in type an old collection of preserved plants with topographical notes, which has been called the "John Nicholson Herbarium," and the "Simpson Collection," came into the possession of Mr. Arthur Smith, F.L.s., Curator of the County Museum. It was sent on to me for study. It dates from 1836, so these specimens—see the "Foreword"—supply many first records, that should take the place of those of the Revd. J. Dodsworth's note book, and others of approximate dates.

This is not the only difficulty. Botanical knowledge is ever expanding, and ready to be applied to collected facts. Dr. E. C. Moss's paper on British Oaks in The Journal of Botany for this year, has thrown a flood of light on what was obscure specifically and also from the soil point of view. Both are specially interesting in such a flat county as this. After my record of the distribution of Quercus sessiliflora, Salisb., I added, "Planted only?" From the evidence I possessed then that seemed the only legitimate suggestion.

The oak of this county appears to be Q. pedunculata, Ehrh., as would seem likely to be the case from Dr. Moss's soil notes. This is the species, too, that I have identified in the ancient forests buried under the peat, alike on sands, gravels and clays. There can, however, be little doubt that Q. sessiliflora, Salish., is native too with us at least in Nat. Hist. Div. 7. My reason for saying this is not merely because my friend Mr. F. A. Lees believed this to be the case as far back as 1878, but because I find in Divs. 3 and 7 a form which is partially hairy on the lower veins of the leaves. It may be the hybrid Q. pedunculata × sessiliflora but, I should judge, is the cross hybrid Q. pedunculata × (pedunculata × sessiliflora). Such forms are common enough with species which produce hybrids fertile alike with both parents.

Again the form of *Veronica agrestis*, L., which for the sake of distinction I have recorded as "v. bottesfordiensis, Mihi.," and have known in garden soils since 1874, which the Revd. W. W. Mason, of Bootle, knows in this county almost as well as I do, seems to be nothing more than a state in the evolution of "the flore albo form" of the type, with what Mr. F. A. Lees rightly styles "a different facies." At least I have at last come across forms in tilth this season (1910), which show every fluctuation from the type to my characteristic variety on to the pure flora albo of both.

The birches require special study in this county as elsewhere. Betula alba, L. seems to be wholly a dry light soil species, and B. tomentosa, Reith. and Abel., equally a wet light soil species. Mr. Augustine Henry, F.L.S., tells me that this is their continental distribution. It is an interesting fact which does not seem to have been pointed out in any flora or work on British trees.

I have been very diffident about using the word "extinct," unless a locality is absolutely destroyed, as by drainage the East Fen was for Sonchus palustris, L., it is almost impossible to say when a species will not turn up. A garden here was destroyed in 1875, and joined to a grass paddock which had never been under the plough, and was soon equally rich feeding grass. In the winter of 1908-09, part of the old white thorn fence dividing them which still remained was cut down, and in the 1909 season a single Verbascum plant appeared by the roots of one of the old thorn trees. It was the first time in the eighteen years that I have made a special study of this old garden for rock-soil purposes that I had seen a plant of this species. When it flowered it proved to be V. Thapsus × (Thapsus × Lychnitis)—a not uncommon garden cross-hybrid. If the cutting down of the old garden fence had not given this cross-hybrid seed, the chance of light, air and moisture—of growing, how many years would it have remained dormant and fertile? Can any botanist reply?

I desire to thank Mr. Richard W. Goulding, Librarian to His Grace the Duke of Portland, for most kindly reading the proofs of this pamphlet for me. When I printed off the "Foreword" I did not know I should have his invaluable help.

BRITISH MUSEUM 5 DEC 21 NATURAL



GEORGE MAY LOWE, M.D., F.R.C.P.

Fifth President of the Lincolnshire Naturalists' Union.



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Founded June 12th, 1893.

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Any Corrections in the List will be gladly received by the Secretary.

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**∞∞** 

Members are reminded that Subscriptions for 1910 are now due, and should be paid to the Assistant Hon. Secretary, Mr. R. W. GOULDING, 20, Mercer Row, Louth, who will send receipts.

The minimum Subscription is 5/-, payable in advance. The payment of one sum of £5 constitutes a life member. Those subscribing 10/6 or more receive the "Naturalist" free, if they apply by letter to the Assistant Secretary.

### OBJECTS AND RULES.

The Lincolnshire Naturalists' Union was formed to promote the thorough investigation of the fauna, flora and physical features of the county, to bring together workers interested in the same pursuits, to increase the interest in, and study of, every branch of Natural History.

Field Meetings are held four or more times a year. There is also one annual general meeting, held at Lincoln, for the transaction of the business of the Society, and for the President's address.

Members will be entitled to free admission to all meetings and excursions, and to receive certificates, which will entitle the holder to special railway privileges for each excursion. Application should be made to the Hon. Secretary for the special forms issued before each meeting.

At ordinary Field Meetings, when the Union is not entertained, members may introduce two friends, not more, except by the President's consent.

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Correspondence with respect to Field or Sectional Meetings and organization generally should be addressed to Arthur Smith, Museum, Lincoln.

It is hoped that all Members will interest themselves in the work of the Union, especially by obtaining new members and communicating with the Sectional Officers respecting new records, etc.

NEW MEMBERS.—Members can greatly assist the Union by forwarding to the Secretary, the names of ladies and gentlemen whom they think at all likely to take an interest in the work of the Union.

Proposal Forms will be sent to any Member applying for them.

# LINCOLNSHIRE NATURALISTS' UNION.

# Statement of Accounts from 1st January to 31st December 1909.

e s. g.	3 15 0 2 8 6 16 13 0	3 11 7 1 2 3		36 15 8	58 17 1	£123 3 I
PAYMENTS.	To Subscriptions to the "Naturalist" ,, Printing and Stationery Printing Transactions for 1908	", Postage and Cheque Book Expenses of Meetings	", Life Members' Donations in Savings' Bank 35 18 2	0 17 6	" Balance in Bank and Secretary's hands 58 17 1	7
RECEIPTS.	kc., 31st nations	", Interest thereon o 17 6	" Members' Subscriptions including the "Naturalist" 25 19 0	pld		£123 3 1

24th January 1910.

Examined and found correct,

E. E. BROWN, Auditor.

# The Presidents of the Lincolnshire Laturalists' Union.

### GEORGE MAY LOWE, M.D., F.R.C.P.,

Member of the Röntgen Society, the Botanical Society, Edinburgh, the Royal Microscopical Society, the British Meteorl. & Balnl. Society, etc.

ARLY in life the subject of this short memoir was a pupil of the late Dr. John Lowe, of King's Lynn, and received from him a strict training in scientific methods of research, especially in Botany and Zoology. Dr. John Lowe, who was the author of "The Yew Trees of England and Ireland," and of several pamphlets on scientific subjects, was also Curator of the Lynn Museum, which contains an extensive collection of birds presented by the late Lord Derby, as well as a complete herbarium of Norfolk plants, and it became part of the duties of his pupil to arrange and catalogue the specimens. In 1862 he went to Edinburgh, and for some time resided with Professor J. H. Balfour, the late Regius Keeper of the Royal Botanical Gardens, and Dean of the Medical Faculty in the University. Here he was privileged to work in the Stove houses and made observations on the "elongation of pollen tubes in the stigma of Gloxinia," &c.; he became a Fellow of the Botanical Society and communicated several papers to the Transactions, especially on the "effects of forests on climate." Dr. Lowe graduated (with honours) in 1866, and was a medallist in Chemistry, Pathology and Diseases of Women. After acting as Resident Surgeon, and later as Resident Physician, in the Royal Infirmary of Edinburgh, Dr. Lowe joined the firm of Messrs. Harvey and Lowe, Surgeons, in Lincoln in 1866, and continued in active practice until 1903, when, in consequence of failing health, he removed to Ryde in the Isle of Wight, where,

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with the assistance of some influential medical friends, he has established a successful Medical Home overlooking Spithead, for the special treatment of Paralysis and nervous disorders.

In Lincoln, Dr. Lowe took a great interest in natural science, and did much in the way of lectures and classes to make the subjects popular; he was an early member of the Lincolnshire Naturalists' Union, and for several years acted as Curator of their Museum in Lincoln Castle. As President, he communicated a paper on "The Colours of Leaves and Flowers," the result of much labour and experiment in his own laboratory, and large glass houses on the Castle Hill. Dr. Lowe was also President of the Lincolnshire Science Society, and at a Conversazione in the Lincoln Assembly Rooms, to which members of both Societies were invited, he demonstrated the action of the Röntgen Rays, the Marconi Wireless Telegraphy, and Colour Photography, then novelties in the City. During the rejoicings in celebration of the recovery of the Prince of Wales (now King Edward VII.) from typhoid fever, Dr. Lowe gave the first display of electric light in Lincoln, in the form of a model Arc Lamp, actuated by forty large Daniel cells (Dynamos being unknown in those days) the beam of light extending from the roof of the Guildhall to St. Mark's. He also published papers on "The effect of damp houses on health," "The action of sun and air in the purification of surface waters," "The treatment of disease by modern electrical methods," and many other professional papers. Dr. Lowe was the first Hon. Sec. of the Lincoln Chrysanthemum Society, and with Mr. R. J. Ward, initiated the Lincolnshire Gardeners' Association which has now become such a useful institution. Dr. Lowe has always been a keen Volunteer, he holds the V.D. medal, and was, until November 1909, connected with the "Lincolns" as Surgeon Lieut.-Colonel.

# THE LEPIDOPTERA OF LINCOLNSHIRE.

### PART III.

By G. W. Mason,

Barton-on-Humber.

(Continued from Volume I., page 262).

This Part completes the List of what are generally called the Macro-Lepidoptera.

I am again indebted to Mr. G. T. Porritt and Mr. E. A. Atmore for their kind help in naming species of the Genus Eupithecia, commonly known as Pug Moths, a very difficult group.

The past few seasons have not been very favourable for Geometræ, and even common species have been more or less scarce. The season of 1909 opened very promisingly with a fine May, which only turned out to be the forerunner of a cold, inclement summer, and proved in the end to be a very disappointing season.

### EXPLANATION OF SIGNS

(repeated from pages 77 and 175 of Volume I.)

|| signifies Miller and Skertchly's "Fenland"—1878.

Nat. ,, The "Naturalist."

\* " The "Naturalists' World," May, 1885.

, C. G. Barrett's "Lepidoptera of the British Islands."

, Newman's "British Butterflies"—an old edition.

§ " The " Naturalists' World, 1886."

¶ " J. W. Tutt's "British Lepidoptera."

E.M.M.,, Entomologists' Monthly Magazine.

### Geometræ.

### UROPTERYX SAMBUCARIA, L.

Common.

- N. Gainsborough, F M B. Divs. 1, 3, 4, 5, 6, 7, 8, 10, 11.
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17, 18.

### EPIONE APICIARIA, Schiff.

As this species has the habit of flying late at night, it may be commoner than the records appear to show.

- N. Binbrook, one, 18-9-1908, S B S. Gainsborough, 1860, F M B. Hubbard's Valley, Louth, V. T. Crow. Lincoln, C P A. Linwood, one in 1908, S B S. Market Rasen, one or two most years, W L. West Ashby, 1908, F S A.
- S. Boultham, 10-7-1891, J F M. Wyberton, one at light 1894, J C L-C.

### RUMIA LUTEOLATA, L.

- Abundant. The Rev. A. Thornley records having seen a singular white variety in the possession of Mrs. Cross, which was taken in her garden at Appleby. Also, in the Entomologist 1888, p. 15, is a record from Grimsby with ground colour pure white.
- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12.
- S. Lincoln, C P A. Divs. 13, 14, 15, 18.

### VENILIA MACULARIA, L.

Only one record, and that a long time ago.

N. Woods near Gainsborough, F M B.

### ANGERONA PRUNARIA, L.

Very local.

- N. Market Rasen, W.L. Newball, common, J.F.M. Owersby, 1877-79, F.A.L. Stainfield, C.P.A. Tothill, fairly common 6-1880, C.D. Ash.
- S. ||Bourn Wood. Holbeach Dist., common, L M C. Hartsholme, C P A. Skellingthorpe, 6-6-1900, J F M; C P A.

### METROCAMPA MARGARITARIA, L.

Fairly common in most localities.

- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12.
- S. Hartsholme Woods, Nat. 1894, p. 254. Divs. 13, 14, 15,

### ELLOPIA PROSAPIARIA, L.

Not common, but generally to be found sparingly in Woods where there are plenty of Scotch fir trees.

N. Appleby (Big Wood), larvae 24·4·1882, Mrs. Cross. Ashby (Brigg) Dist., R T C.; one 25·7·1908, J P. Gainsborough, 1860, F M B. Limber, one 20-7·1907, G W M. Linwood, 1857, RPA. Market Rasen, two larvæ 13-5-1905, and subsequently bred, GWM.; a few each year, WL. Usselby, 1877-79, FAL.

S. Hartsholme, 19-6-1900, J F M.; C P A. Lincoln, 1848, F M B.

### EURYMEME DOLOBRARIA, L.

Frequent, but not common.

- N. Ashby (Brigg) District, R T C. Brocklesby District, one bred from larva on hawthorn, E A C. Gainsborough, since 1861, F M B. Legsby, one only, G H R.; one 30-5-1909, S B S. Lincoln District, 1881, Canon Fowler. Market Rasen, 1877-79, F A L.; rare, W L. Owston Ferry District, A R. Rigsby Wood, one 10-6-1889, E. W. Tothill, fairly common in 1880, C. D. Ash. West Rasen, 15-5-1856, W. W. Cooper. Wrawby Moor, one female 10-6-1909, and one male 18-6-1909, F P H B.
- S. Boultham, 25-6-1901, J F M. Haverholme Priory, not common, J D C. Lincoln, C P A. Wyberton, one at light, 1894, J C L-C.

### PERICALLIA SYRINGARIA, L.

Not common.

- N. Barton-on-Humber, one female taken by Mr. A. B. Hall. F P H B. Bradley Wood, one larva full fed 29-5-1909, W W. Brocklesby District, E A C. Goxhill, one at dusk, by woodside 17-7-1900, G W M. Great Carlton, C. D. Ash, Lincoln, 1840-50, F M B.; C P A. Market Rasen, one or two most years, W L. West Ashby, 1903, F S A.
- S. Allington, P. Wynne. ||Cowbit, Chas. M. Hufton. Hartsholme, 7-7-1889, J F M. Haverholme Priory, a few each year, J D C. Wyberton, J C L-C.

### SELENIA BILUNARIA, Esp.

Both Spring and Summer broods occur commonly. The Rev. G. H. Raynor records having bred both in 1892, and in 1896 third broods in large numbers. In 1892 they emerged between 22nd August and 29th October; and in 1896 between the 10th and 15th September. These were in each case reared from eggs of second brood obtained in July. I have records of both spring and summer broods occurring in Divs. 2, 3, 7, 8 and 10.

- N. Lincoln, 1848, F M B. Divs. 1, 2, 3, 5, 6, 7, 8, 10, 11.
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17, 18.

### SELENIA LUNARIA, Schiff.

Uncommon.

- N. Market Rasen District, W L (Nat. 1898, p. 50). Riseholme, C P A.
- S. Hartsholme and Skellingthorpe, C P A. Haverholme Priory, one in 1902, J D C. Holbeach District, common, L M C.
- var. delunaria, Hb.
  - S. Allington, one 23-7-1904 on wing at dusk, P. Wynne.

### SELENIA TETRALUNARIA, Hufn.

Only one record.

N. Gainsborough, caught 1860, F M B.

### ODONTOPERA BIDENTATA, Clerck.

Common.

- N. Lincoln, 1852, F M B. Divs. 2, 3, 5, 6, 7, 8, 10, 11,
- S. ||Bourn. Divs. 13, 14, 15, 16, 17,

### CROCALLIS ELINGUARIA, L.

Common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

### EUGONIA ALNIARIA, L.

Not common.

- N. Brocklesby District, E A C. Hameringham, common, H M B S. Lincoln, C P A. Louth, V. T. Crow. Market Rasen, 1877-79, F A L.; common, W L. Panton, one at light, G H R. Thoresthorpe, one 2-9-1890, E W.
- S. ||Cowbit, Chas. M. Hufton. Haverholme Priory, fairly common, J D C. Holbeach District, common, L M C. Lincoln, 31-8-1892, J F M. Wyberton, rare, J C L-C.

### EUGONIA FUSCANTARIA, Haw.

Scarce.

- N. Great Carlton, C. D. Ash. Market Rasen, two or three each year, W L. Panton, two at light, G H R. Worlaby (Brigg), one 25-9-1901, G W M.
- S. Haverholme Priory, not common, J D C. Holbeach District, common, L M C. Lincoln, 24-8-1902, J F M. Skellingthorpe, C P A.

### EUGONIA EROSARIA, Bork.

Very rare.

N. Gainsborough, since 1861, F.M.B. Lincoln District, 1881, Canon Fowler; at light, 1880-1882, W. Barber and E. Mead.

### EUGONIA QUERCINARIA, Hufn.

Uncommon.

- N. Brocklesby District, E A C. Great Carlton, C. D. Ash. Lincoln, 1840-50, F M B.; C P A. Market Rasen, one in 1895-97, W L. Pelham's Pillar Wood, two larvæ 7-7-1900 and subsequently bred, G W M. West Ashby, 1902, F S A
- S. Haverholme Priory, fairly common, J D C. Holbeach District, common, L M C. Wyberton, J C L-C.

### HIMERA PENNARIA, L.

The larvæ are generally common in favourable seasons in Woods.

- N. Appleby (Big Wood), larvæ 4-6-1881, Mrs. Cross. Barton-on-Humber, one at street lamp 31-10-1900, G W M. Binbrook, 1906 and 1909, S B S. Great Carlton, C. D. Ash. Legsby; Newball; Panton; G H R. Linwood, larvæ, G W M. Louth, V. T. Crow. Market Rasen, a few at light each year, W L. Pelham's Pillar Wood, larvæ generally common, G W M. West Ashby, 1901, F S A.
- S. Allington, one at indoor light 18-10-1908, P. Wynne. Haverholme Priory, very common, J D C. Lincoln, C P A. Skellingthorpe, J F M. Wyberton, J C L-C.

### PHIGALIA PEDARIA, Fb.

Common. Black varieties are recorded by Canon Fowler in the British Naturalist, 1891, p. 107, and by Mr. F. M. Burton.

- N. Gainsborough, 1861, F M B. Divs. 1, 2, 3, 5, 6, 7, 8,
- S. Wyberton, one bred 2-1896, J C L-C. Divs. 13, 14, 17.

### NYSSIA HISPIDARIA, Fb.

Scarce.

N. Ashby (Brigg) District, R T C. Gainsborough, 1861, F M B.

### BISTON HIRTARIA, Clerck.

Scarce.

- N. Gainsborough, 1861, F M B. Owston Ferry District, A R. West Ashby, 1909, F S A.
- S. Holbeach District, common, L M C.

### AMPHIDASYS STRATARIA, Hufn.

Scarce.

- N. Gainsborough, 1860; Lincoln, 1852, F M B. Laughton Wood, 10-4-1861, Thomas Fyles. Lincoln District, 1881, Canon Fowler. Lincolnshire, 1893, E. Porter. Market Rasen, March, 1894-97, W L. Newport (Lincoln) two larvæ, C P A. Panton, one at light, March, 1894, G H R. Tothill, C. D. Ash.
- S. Haverholme Priory, fairly common, J D C. Lincoln and Skellingthorpe, J F M. Boultham pupæ under oaks, 1883 and 1884, E. Mead; one pupa in 1885, J F M.

### AMPHIDASYS BETULARIA, L.

Common, but the type form appears to be rapidly decreasing in numbers, being superseded by the melanic variety doubledayaria, Mill.

- N. Lincoln, 1848, F M B. Divs. 1, 2, 3, 5, 6, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 17, 18.
- var. doubledayaria, Mill.
- N. Gainsborough, since 1861, F M B. Divs. 2, 3, 5, 7, 8, 10, 11.
- S. Wyberton, one 1896, J C L-C. Divs. 13, 14, 17, 18.

### HEMEROPHILA ABRUPTARIA. Thnb.

Fairly common.

- N. Lincoln, 1848, F M B. Divs. 1, 2, 3, 5, 6, 7, 8, 10, 11,
- S. ||Cowbit, Chas. M. Hufton. Divs. 13, 14, 15, 17, 18.

### CLEORA LICHENARIA, Hufn.

Scarce.

- N. Alford District, Mother Wood (Aby), one 4-7-1891, E W. Gainsborough and Lincoln, F M B. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81).
- S. || Cowbit, Chas, M. Hufton.

### BOARMIA REPANDATA, L.

Common in woods on tree trunks in the day-time.

- N. Lincoln, 1840-50, F M B, Divs. 2, 3, 4, 5, 6, 7, 8, 10, 11.
- S. Boultham, 9-7-1901, J F M. Divs. 13, 14, 15,

### BOARMIA GEMMARIA, Brahm.

Common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,
- var. perfumaria, Newm.
  - N. Ashby (Brigg) District, R T C.

### BOARMIA ABIETARIA, Hb.

Very rare.

N. Tealby, 1877-79, F A L.

### BOARMIA ROBORARIA, Schiff.

Local and scarce.

- N. Linwood, one female 6-1909, S B S. Market Rasen District, W L (Nat. 1898, p. 50). Tothill, not uncommon on oak trunks in 1880, C. D. Ash.
- S. Skellingthorpe, 9-7-1901, J F M; C P A.

### TEPHROSIA BISTORTATA, Goeze = BIUNDULARIA, Bork.

- There is so much difference of opinion as to whether this insect is the same species as crepuscularia, Hüb. = biundularia, Esper., or whether they are to be regarded as two distinct species, that I have treated all records as referring to one species bistortata, and I have accordingly set out in detail the dates of capture so far as possible.
- N. Ashby (Brigg) District, RTC. Binbrook, SBS. Bradley, June, EHF. Gainsborough, AT; 1860, FMB. Grimsby District, RC. Lincoln, CPA. Linwood, common, end of May 1909, SBS. and GWM. Market Rasen, common, WL. Coles Wood and Sweetingthorns, with var. delamerensis, April, RTC. Legsby, one 6-6-1893, one 10-6-1893, two 25-5-1894, four 9-5-1895, six (one very dark)

4-6-1895, four 22-5-1896, and two 27-5-1896; from the dark female taken on 4-6-1895 two dark specimens were reared 17-4-1896 and 20-4-1896; Newball, 31-5-1892; G H R. Barton-on-Humber, var. delamerensis bred from dug pupa 29-4-1900; Linwood, 27-5-1901, 23-5-1904, 12-6-1905, 8-6-1908; Morton Carr, two intermediate varieties 8-7-1909; Pelham's Pillar Woods, 22-5-1902 and 5-6-1909; Roxton Wood, two var. delamerensis 22-5-1909; Usselby, 13-5-1905; G W M. Owston Ferry District, A R. Pelham's Pillar Woods, 6-6-1902, J P. Wrawby Moor, one light and one dark 22-5-1909, F P H B.

S. Nocton, 10-6-1909; Skellingthorpe, including var. delamerensis 10-6-1909; G W M. Haverholme Priory, fairly common, J D C. Lincoln, C P A. Hartsholme, 23-4-1901, J F M.

### TEPHROSIA PUNCTULARIA, Hb.

Fairly common in May and June among birch trees in woods.

- N. Ashby (Brigg) Dist., R T C. Legsby and Newball, G H R. Linwood, S B S. Linwood and Market Rasen, G W M. Market Rasen, a few each year, W L. Stainfield (Wragby) C P A. Wrawby Moor, 14-6-1907 and 21-5-1909, F P H B; 9-5-1908, G W M.
- S. Hartsholme Woods, Nat. 1894 p. 254. Hartsholme, G H R. Nocton, 10-6-1909, G W M. Skellingthorpe, 5-6-1901, J F M.; C P A.; 10-6-1909, G W M.

### PSEUDOTERPNA PRUINATA, Hufn.

Not common; the larva feeds on furze.

- N. Ashby (Brigg) District, RTC. Binbrook, SBS. Gainsborough District, FMB. Lincoln, 1840-50, FMB. Linwood, 1857, RPA; one 5-8-1907, GWM; four larvæ beaten from furze, 29-5-1909, SBS and GWM. Market Rasen, one 31-7-1903 and two 3-8-1908, GWM. Roughton, 1903, FSA. Woodhall Spa, SBS; 1903, FSA.
- S. Hartsholme, 25-7-1886, J F M.

### GEOMETRA PAPILIONARIA, L.

Frequent and well distributed.

- N. Ashby (Brigg) District, R T C. Lincoln, 1840-50, F M B; C P A. Legsby, G H R. Linwood, 1857, R P A; one larva 6-1909, S B S. Market Rasen, a few each year, W L; one female 6-8-1900 and two larvæ 13-5-1905, G W M. Newball Wood, 1881, Canon Fowler. Owston Ferry District, A R. Pelham's Pillar Wood, two or three larvæ, J P. Scotton Common, 4-8-1860, F M B; bred three, H M B S. Twigmoor, larvæ, J P. Woodhall Spa and Tumby, L N U (Nat. 1899 p. 67).
- S. Allington, imago, P. Wynne. ||Bourn. Boultham, 25-6-1886; Hartsholme, 5-7-1896; J F M. Haverholme Priory, three in 1902, J D C. Skellingthorpe, bred, C P A. Wyberton, one at light 6-1892, J C L-C.

### PHORODESMA PUSTULATA, Hufn.

Rare.

- N. Ashby (Brigg) District, R T C. Horsington, one in 1890, J C L-C. Lincoln, bred, C P A. Linwood, 1857, R P A. Newball Wood, 1881, Canon Fowler; 25-6-1892, J F M.
- S. Skellingthorpe, a few in 1896, W L.

### IODIS LACTEARIA, L.

Locally common.

- N. Alford District, Greenfield Wood, 19-6-1890, 20-6-1891, and 15-6-1891, E.W. Ashby (Brigg) District, R.T.C. Croxby, one 18-7-1908, F.W.S. Gainsborough District, F.M.B. Lincoln, C.P.A. Linwood, common, G.W.M.; S.B.S. Newball, common, 11-6-1908, Rev. F. L. Blathwayt and J.D.C. Owston Ferry District, A.R.
- S. Haverholme Priory, fairly common, J D C. Lincoln, C P A.

### HEMITHEA STRIGATA, Mull.

Locally common.

- N. Alford, one 2-7-1890, E.W. Ashby (Brigg) District, R.T.C. Binbrook, 1906, S.B.S. Gainsborough District, F.M.B. Goxhill, common at dusk, 16 and 17-7-1900, but not seen since, G.W.M. Great Carlton, C.D. Ash. Irby, 13-7-1901, C. Nightingale and C.B. Parker. Market Rasen, one in 1893-1895, W.L. Newball, J.F.M. Panton, scarce, G.H.R. Skegness, 16-7-1879, G.T.P; 1902, F.S.A.
- S. Allington, P. Wynne. Hartsholme, 10-6-1886, J F M. Haverholme Priory, fairly common, J D C. Lincoln, F M B. Little Bytham, 17-7-1900, L N U. Wyberton, very common J C L-C.

### ZONOSOMA PUNCTARIA, L.

Local.

- N. Ashby, (Brigg) District, RTC. Gainsborough, FMB. Lincoln, FMB.; CPA. Linwood, one 12-6-1905, JP., 1907 and one 29.5-1909, SBS. Legsby, Newball, Panton, GHR. Maltby Wood, V.T. Crow. Market Rasen, a few most years, WL. Newhall, one in 1908, Rev. F. L. Blathwayt. Tothill, C. D. Ash. Wrawby Moor, one 22-5-1909, FPHB.
  - S. ||Cowbit, Chas. M. Hufton. Hartsholme, 25-5-1900, J F M. Lincoln, C.P.A.

### ZONOSOMA LINEARIA, Hb.

Very local, but common where it occurs.

N. Brocklesby District, E A C. Gainsborough, F M B. Limber, 1902, F S A. Pelham's Pillar Wood, common, J P. and G W M.

### ZONOSOMA ANNULATA, Schulz.

Rare.

- N. Gainsborough; Lincoln, 1840-50, FMB.
- S. Wyberton, rare, J C L C.

### ZONOSOMA PENDULARIA, Clerck.

Local.

- N. Holton-le-Moor, one 12-6-1908; Legsby, one 12-7-1900 and larva 6-8-1906; G W M. Linwood, 1909, S B S. Market Rasen, common, W L. Newhall, G H R.
- S. Hartsholme, C P A. Skellingthorpe, 17-5-1901, J F M.

### ASTHENA LUTEATA, Schiff.

Local.

N. Brocklesby District, E A C. Croxby, 2 and 19-7-1908, F W S. Legsby; Newhall; scarce, G H R. Lincoln, F M B.; C P A. Linwood, 1857, R P A.; common, S B S.; 21-6-1903 and 12-6-1905, G W M. Maltby Wood, V T. Crow. Market Rasen, a few each year, W L. Morton Carr, one 8-7-1909, G W M. Muckton, C. D. Ash. Pelham's Pillar Wood, a few each year, J P. and G W M. Roxton Wood, 19-6-1909, G W M.

### ASTHENA CANDIDATA, Schiff.

Locally common.

- N. Bradley; Croxby; fairly common 1908 and 1909, F W S. Legsby; Newball; G H R. Linwood, abundant, S B S. and G W M. Newball, very common 11.6-1908, Rev. F. L. Blathwayt and J D C. Pelham's Pillar Wood, not common, G W M.; 1909, F W S. Tothill, C. D. Ash.
- S. Hartsholme, C P A. Skellingthorpe, R T C.

### ASTHENA SYLVATA, Hb.

Rare.

N. Legsby, ten specimens in June, 1893, but absent in the three following years, G H R.; one 12-6-1905, J P.; one 8-6-1908, G W M.; five in 1909, S B S. Pelham's Pillar Wood, one 10-7-1909, G W M. Tothill, C. D. Ash.

### EUPISTERIA OBLITERATA, Hufn.

Rare.

- N. Linwood, two in 1907 and two in 1908, S B S. Panton, 21-6-1896, G H R.
- S. Haverholme Priory, very common, J D C.

### · ACIDALIA DIMIDIATA, Hufn.

Common.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. ||Cowbit, Chas. M. Hufton. Divs. 13, 14, 17, 18.

### ACIDALIA BISETATA, Hufn.

Common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 6, 7, 9, 11,
- S. Haverholme Priory, very common, J D C. Divs. 14,

### ACIDALIA DILUTARIA, Hb.

Scarce.

- N. Legsby, 1894; Mablethorpe, 1896; G H R. Mablethorpe, 24-7-1909, F. G. Whittle. Skegness, 16-7-1879, G T P. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81); one 26-6-1906, G W M.
- S. Little Bytham, 17-7-1900, A T and F M B.

### ACIDALIA VIRGULARIA, Hb.

Fairly common.

- N. Lincoln, 1852, F M B. Divs. 3, 4, 5, 6, 7, 8, 10,
- S. ||Cowbit, Chas. M. Hufton. Divs. 13, 14, 15, 17, 18.

### ACIDALIA MARGINEPUNCTATA, Goze.

Only one record.

N. Lincoln, 1840-50, F M B.

### ACIDALIA IMMUTATA, L.

Rare; probably often overlooked, as it is very similar to A. remutaria, Hb.

- N. Ashby (Brigg) District, R T C. Sutton-on-Sea, 25-7-1909, F. G. Whittle. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81).
- S. ||Cowbit, Chas. M. Hufton. Haverholme Priory, fairly common, J D C.

### ACIDALIA REMUTARIA, Hb.

Common in woods.

- N. Gainsborough, F M B. Divs. 2, 3, 5, 6, 7, 10, 11,
- S. || Cowbit, Chas. M. Hufton. Divs. 13, 17, 18.

### ACIDALIA IMITARIA, Hb.

Not uncommon in some districts.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, one 28-7-1904 and one 9-8-1907, G W M. Binbrook, not uncommon, S B S. About North Kelsey a specimen flew into a railway compartment to the light 5-9-1907, J P. and G W M. Skegness, 16-7-1879, G T P.; 1902, F S A. Sutton-on-Sea, 25-7-1909, F. G. Whittle. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81). West Ashby, 1902, F S A. Wickenby, 1896 and 1897, W L. Scrivelsby, 1909, F S A.
- S. ||Cowbit, Chas. M. Hufton. Hartsholme, C P A. Haverholme Priory, very common, J D C. Holbeach District, common, L M C.

### ACIDALIA EMUTARIA, Hb.

Very scarce

- N. Sutton-on-Sea, 25-7-1909, F. G. Whittle.
- S. ||Cowbit, Chas. M. Hufton.

### ACIDALIA AVERSATA, L.

Very common,

- N. Lincoln, 1848, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,
- var. spoliata, Stgr.
  - N. Ashby (Brigg) District, R T C. Barton-on-Humber, G W M. Binbrook, S B S. Grimsby District, F W S. Saxby (Barton), C. D. Ash.

### ACIDALIA INORNATA, Haw.

Rare.

N. Gainsborough; Lincoln, 1848; F M B.

### ACIDALIA EMARGINATA, L.

Scarce.

- N. Louth, V. T. Crow. Mablethorpe, 24-7-1909, F. G. Whittle. Skegness, 1902, F S A. Sutton-on-Sea, 1897, W L. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81).
- S. ||Cowbit, Chas. M. Hufton. Haverholme Priory, very common, J. D C. Wyberton, one at light 8-1896, J C L-C.

### TIMANDRA AMATARIA, L.

Fairly common in suitable localities.

- N. Barton-on-Humber, 29-7-1902, G W M. Binbrook, 1909, S B S. Goxhill, 9-7-1900 and several times since, also bred from larvæ found on dock, G W M. Great Carlton C. D. Ash. Grimsby, E H F. Gainsborough; Lincoln, 1852; F M B. Lincoln, C P A. Louth, V. T. Crow. Market Rasen and Wickenby, W L. New Holland, 1897, T. Sheppard. Owston Ferry District, A R. Panton, G H R. Skegness, 16-7-1879, G T P. Waltham, 7-7-1906, A B. West Ashby, 1902, F S A.
- S. Allington, P. Wynne. Hartsholme, 20-6-1892, J F M. Haverholme Priory, very common, J D C. Lincoln, C P A. Wyberton, J C L-C.

### CABERA PUSARIA, L.

Abundant

- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.
- S. Wyberton, J C L-C. Divs. 13, 14, 17.

### — ab. rotundaria, Haw.

N. Market Rasen, bred, G W M.

### CABERA EXANTHEMATA, Scop.

Very common.

- N. Lincoln, 1848, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 11.
- S. Skellingthorpe, 17-5-1901, J F M. Divs. 13, 14, 15.

### BAPTA TEMERATA, Hb.

Fairly common.

- N. Binbrook, S B S. Bradley, June, E H F. Brocklesby District, E A C. Broughton Woods, 1895, A. E. Hall. Burwell Wood, V.T. Crow. Gainsborough, F M B. Legsby; Newhall; not common, G H R. Lincoln, 1840-50, F M B. Limber, 11-5-1907, F P H B. Linwood, frequent, G W M.; S B S. Little Coates, R C. Market Rasen, one or two each year; Newball, one in 1896; W L. Muckton, C. D. Ash. Pelham's Pillar Wood, 11-6-1900, 7-7-1900 and 21-6-1902; Roxton Wood, 22-5-1909; G W M.
- S. Haverholme Priory, fairly common, J D C. Lincoln, C P A. Little Bytham, 9-6-1903, A T. Skellingthorpe, 17-5-1901, I F M.

### BAPTA BIMACULATA, Fb.

Rare and local.

N. Near Binbrook, taken at dusk, one 25-5-1906, one 28-5-1906, one 12-5-1907, one 27-5-1907, one 8-6-1907, three 9-6-1908, and two 11-6-1908, one specimen being taken five miles away from the locality where the others were taken, not seen in 1909, 'S B S.

### MACARIA ALTERNATA, Hb.

Rare.

N. Gainsborough; Lincoln; F M B.

### MACARIA LITURATA, Clerck.

Fairly frequent in fir woods.

- N. Ashby (Brigg) District, 25-7-1908, J P and G W M. Croxby, 19-7-1908, F W S. Legsby, G H R. Limber, one 20-7-1907; Linwood, frequent; Pelham's Pillar Wood, 7-7-1900 and 5-6-1909; G W M. Lincoln, 1840-50, F M B; C P A. Linwood, fairly common, S B S. Market Rasen, common, W L. Morton Carr, 8-7-1909; Roxton Wood, 19-6-1909; G W M. Roxton Wood, 31-5-1909, F W S. Willingham, 1877-79, F A L.
- S. Hartsholme, G H R; Nat. 1894, p. 254; J F M. Haverholme Priory, very common, J D C. Lincoln, 1848, F M B; C P A.

### HALIA VAUARIA, L.

Very common in fruit gardens.

- N. Gainsborough, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17, 18.

### STRENIA CLATHRATA, L.

Uncommon.

- N. East Ferry District, A R. Friesthorpe, 1857, R P A. Linwood and Market Rasen, 1877-79, F A L.
- S. Haverholme Priory, fairly common, J D C.

### PANAGRA PETRARIA, Hb.

Common among bracken.

- N. Lincoln, 1840-50, F M B. Divs. 1, 2, 3, 5, 6, 7, 8,
- S. Lincoln, C P A. Divs. 13, 14,

### NUMERIA PULVERARIA, L.

Not common.

- N. Linwood, not common, one 1-6-1903, G W M.; two 31-5-1909 and one or two on other days in 1909, S B S. Lincoln, C P A. Newball, not uncommon, G H R.
- S. Hartsholme, 14-5-1887, JFM. Lincoln, CPA. Skellingthorpe, RTC.

### EMATURGA ATOMARIA. L.

Common, often abundant, on heaths.

- N. Gainsborough, 1860, F M B. Divis. 1, 2, 5, 7, 10,
- S. Lincoln, 1840-50, F M B. Divs. 13,

### BUPALUS PINIARIA, L.

The males are common in fir woods, but the females are rarely seen.

- N. Ashby (Brigg) District, RTC. Appleby (Big wood), 10-6-1881, Mrs. Cross. Bradley, two males 27-6-1908, FWS. Div. 2, 1895, A. E Hall. Gainsborough, 1860, FMB. Holton-le-Moor, 12-6-1908, FPHB and GWM. Legsby, GHR, females 1-6-1903, 4-6-1900, GWM; SBS. Lincoln, FMB. Market Rasen, common, WL. Morton Carr, abundant, including two females 8-7-1909, FPHB. and GWM. Pelham's Pillar Wood, frequent, one female 21-6-1902; Sweetingthorns, abundant 14-7-1909; Twigmoor, abundant 25-6-1808; GWM. Scunthorpe, 11-7-1902, AT.
- S. Hartsholme Woods, males common, females rare, J F M. Haverholme Priory, very common, J D C. Lincoln, 1848, F M B.; C P.A.

### ASPILATES STRIGILLARIA, Hb.

Rare.

- N. Roughton, 1902, FSA.
- S. Hartsholme, 20-6-1892, J F M.

### ASPILATES OCHREARIA, Rossi.

Very rare.

- N. Saltfleetby, two examples about 1890, C P A.
- S. Wyberton, one only in 1890, J C L-C.

### ABRAXAS GROSSULARIATA, L.

Abundant.

- N. Bottesford, common 1868-97, M. and A. Peacock. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17, 18.

### ABRAXAS SYLVATA, Scop.

Common among elm.

- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10,
- S. Lincoln, 1848, F M B. Divs. 13, 14, 15, 18.

### LIGDIA ADUSTATA, Schiff.

Not common.

- N. Barton-on-Humber, one at light, G W M. Binbrook, one in 1906, S B S. Gainsborough District, F M B. Langworth, one 6-1897, W L. Lincoln, C P A. Panton, one at light, 27-8-1895, G H R.
- S. Hartsholme, 18-5-1903, J F M. Lincoln, C P A. Wyberton, one 8-1896, J C L-C.

### LOMASPILIS MARGINATA, L.

Common.

- N. Lincoln, 1840-50, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 17.

### HYBERNIA RUPICAPRARIA, Hb.

Abundant.

- N. Gainsborough, 1861, F M B. Divs. 1. 2, 3, 5, 6, 7, 8, 10,
- S. Wyberton, J C L-C. Divs, 13, 14, 15, 17, 18.

### HYBERNIA LEUCOPHÆARIA, Schiff.

Locally common.

- N. Appleby (Big) Wood, larvæ 9-6-1881, Mrs. Cross. Binbrook, one in 1907, S B S. Broughton, larvæ, C. D. Ash. Gainsborough, F M B. Hatton; Panton, not common; G H R. Linwood, S B S. Market Rasen, a few most years, W L.; 1-4-1907, G W M. Saxilby, C P A. Wrawby Moor, common, 5-3-1908, F P H B.; 23-3-1907, common 20-3-1909, G W M.
- S. ||Cowbit, Chas. M. Hufton. Hartsholme, W D C. and J F M. Haverholme Priory, very common, J D C.
- ---- var. marmorinaria, Esp.
  - N. Wrawby Moor, one 20-3-1909, G W M. Gainsborough, F M B.
  - S. Haverholme Priory, fairly common, J D C.

### HYBERNIA AURANTIARIA, Esp.

Larvæ locally abundant in June.

- N. Binbrook, S B S. Gainsborough, F M B, Lea, C P A. Lincoln, 1840-50, F M B. Linwood; Pelham's Pillar Wood; larvæ common, G W M. Louth, V. T. Crow. Market Rasen, one at light, 1895-96, W L.
- S. Hartsholme, 10-9-1900, J F M. Wyberton, J C L-C.

### HYBERNIA MARGINARIA, Bork.

Abundant.

- N. Gainsborough, 1852, F M B. Divs. 2, 3, 5, 6, 7, 8, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 17,

### var. fuscata.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, 24-3-1908, G W M. Binbrook, S B S. Panton, a few rather melanic, G H R. Saxby (Barton), C. D. Ash.
- S. Haverholme Priory, fairly common, J D C.

### HYBERNIA DEFOLIARIA, Clerck.

Abundant.

- N. Lincoln, 1848, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 11,
- S. Skellingthorpe, J F M. Divs. 13, 14,

### ANISOPTERYX ÆSCULARIA, Schiff.

Common.

- N. Lincoln, 1852, F M B. Divs. 2, 3, 5, 6, 7, 8, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

### CHEIMATOBIA BRUMATA, L.

Far too common; a very destructive insect in orchards.

- N. Lincoln, 1852, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

### CHEIMATOBIA BOREATA, Hb.

Common in the larval stage on birch in some localities in June.

- N. Broughton, larvæ 23-5-1908, G W M. Gainsborough and Lincoln, F M B. Linwood, larvæ in 1909, S B S. Market Rasen, W L. Pelham's Pillar Wood, larvæ common, J P. and G W M. Wrawby Moor, larvæ abundant 8-6-1909, G W M.
- S. Haverholme Priory, not common, J D C. Skellingthorpe, J F M.

### OPORABIA DILUTATA, Bork.

Common.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 7, 8, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 17,

### OPORABIA AUTUMNARIA, Gn.

Either scarce or confused with the former species, as I have only two records.

N. Ashby (Brigg) District, R T C. Louth, one 1888-93, G W M.

### LARENTIA DIDYMATA, L.

Abundant.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. Lincoln, C P A. Divs. 13, 14, 15;

### LARENTIA MULTISTRIGARIA, Haw.

Local and scarce.

N. Great Carlton, C. D. Ash. Linwood and Tealby, SBS. Market Rasen, three at sallow bloom after dark, 1-4-1907, FPHB. and GWM. Wrawby Moor, one at rest, 12-3-1908, GWM.

### LARENTIA SALICATA, Hb.

Rare.

N. Lincoln District, 1840-50, F M B.

### LARENTIA VIRIDARIA, Fb.

Common.

- N. Lincoln, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

### EMMELESIA AFFINITATA, St.

Rare.

N. Gainsborough, F M B. Maltby Wood, V. T. Crow.

### EMMELESIA ALCHEMILLATA, L.

Rare.

- N. Ashby (Brigg) District, R T C. Panton, larvæ on Hempnettle, G H R.
- S. ||Cowbit, Chas. M. Hufton.

### EMMELESIA ALBULATA, Schiff.

Fairly common.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, one in the garden 18-6-1900, G W M. Binbrook, 1908, S B S. Great Carlton, C. D. Ash. Gainsborough; Lincoln, 1852; F M B. Legsby, 1-6-1903, G W M. Linwood, 1908, S B S. Market Rasen, a few each year, W L. Newball, abundant; Panton, scarce, double brooded; G H R. Pelham's Pillar Wood, common; Roxton Wood, 19-6-1909; G W M. Saxby (Barton), common, C. D. Ash.
- S. ||Cowbit, Chas. M. Hufton. Nocton, 10-6-1909, G W M Wyberton, J C L.C.
- var. griseata, Stgr.
  - N. Ashby (Brigg) District, R T C.
- var, thules, Weir.
- N. Ashby (Brigg) District, R T C.
- var. hebuduim, Weir.
  - N. Ashby (Brigg) District, R T C.

### EMMELESIA DECOLORATA, Hb.

Fairly common.

- N. Ashby (Brigg) District, R T C. Near Binbrook, 1907 and 1908, S B S. Brocklesby District, E A C. Gainsborough District, F M B. Legsby, G H R. Lincoln, 1840-50, F M B. Market Rasen, one 6-8-1900, G W M. Pelham's Pillar Woods, larvæ 1907, J P. West Ashby, 1905, F S A.
- S. Hartsholme, C P A. Haverholme Priory, fairly common, J D C.

### EUPITHECIA VENOSATA. Fb.

Scarce.

- N. Gainsborough District, F M B. Skegness, 1904, F S A. Usselby, 1877-79, F A L.
- S. ||Cowbit, Chas. M. Hufton

### EUPITHECIA OBLONGATA, Thnb.

Fairly common.

- N. Barton-on-Humber, bred 1906 and one taken 4-8-1909; Belton-in-the-Isle, larvæ.28-8-1906; GWM. Binbrook, 1905, SBS. Lincoln, 1840-50, FMB. Panton, GHR. Skegness, 16-7-1879, GTP. Scrivelsby, 1909, FSA.
- S. Haverholme Priory, fairly common, J D C. Lincoln, off lamps, J F M. Wyberton, rare, J C L-C.

### EUPITHECIA SUCCENTURIATA, L.

Rare, only one record.

N. Lincoln, 1852, F M B.

### EUPITHECIA SUBFULVATA, Haw.

Scarce.

N. Binbrook, 12-8-1909 and 15-8-1909, S B S. Lincoln, 1840-50, F M B. Market Rasen, a few in 1895, W L. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81).

- var. cognata, St.

N. Lincoln, 1840-50, F M B.

### EUPITHECIA PLUMBEOLATA, Haw.

Only one record.

N. Legsby, 12-6-1896, G H R.

### EUPITHECIA ISOGRAMMARIA, H.-S.

Only one record.

N. Well, 18-7-1909, F. G. Whittle.

### EUPITHECIA PYGMÆATA, Hb.

Scarce.

N. Ashby (Brigg) District, R T C. Great Carlton, 1880, C. D. Ash. Legsby; Newball; Panton; scarce, G H R. Market Rasen, two in 1893, W L.

### EUPITHECIA SATYRATA, Hb.

Rare.

N. Linwood, one female 9-6-1908, which gave ova, and subsequently two more specimens were reared therefrom in 1909, S B S.

### EUPITHECIA CASTIGATA, Hb.

Fairly common.

- N. Barton-on-Humber, bred 17-6-1900, G W M. Cleethorpes, two 13-7-1908, F W S. Binbrook, 1906, fairly common; Linwood, 1907; S B S. Linwood, 30-5-1909, G W M. Legsby; Panton; G H R. Saxby (Barton), C. D. Ash. Wrawby Moor, 8-6-1909, G W M.
- S. Haverholme Priory, fairly common, J D C.

### EUPITHECIA FRAXINATA, Crewe.

Scarce.

N. Binbrook, 1907 and 1908, S B S. Panton, one at light about September, 1896, G H R.

### EUPITHECIA PIMPINELLATA, Hb.

Scarce.

N. Barton-on-Humber, larvæ common in a disused chalk-pit on Burnet Saxifrage 15-9-1897, G W M. (Identified by Mr. E. R. Bankes).

### EUPITHECIA INNOTATA, Hufn.

Rare.

N. Skegness, two examples 16-7-1879, G T P. † "In the year "1879 Mr. G. T. Porritt took upon the sandhills at Skegness, "Lincolnshire, two specimens, which on examination proved "to be genuine E. innotata."

### EUPITHECIA INDIGATA, Hb.

Scarce.

- N. Ashby (Brigg) District, R T C. Linwood, 6-1908, S B S.
- S. Skellingthorpe, J F M.

### EUPITHECIA CONSTRICTATA, Gn.

Only one record.

S. Haverholme Priory, one at dusk in garden, J D C.

### EUPITHECIA NANATA, Hb.

Occasional on heaths.

N. Linwood, 1877-79, F A L.; 1908, S B S.; 30-5-1909, G W M. Scotton Common, F M B. Wrawby Moor, a few 7-7-1906, G W M.

### EUPITHECIA SUBNOTATA, Hb.

Scarce.

- N. Ashby (Brigg) District, R T C. Binbrook, 28-7-1909, S B S. Cleethorpes, one 14-7-1905, F W S.
- S. ||Cowbit, Chas. M. Hufton. Haverholme Priory, not common, J D C.

### EUPITHECIA VULGATA, Haw.

Common.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 17,

### EUPITHECIA ALBIPUNCTATA, Haw.

Scarce.

N. Near Binbrook, 1907, SBS. Market Rasen, a few larvæ 1895, WL.

### EUPITHECIA EXPALLIDATA, Gn.

Only one record.

N. Binbrook, taken at privet blossom in my garden, 7-1905, SBS.

### EUPITHECIA ABSINTHIATA, Clerck.

Frequent.

- N. Barton-on-Humber, larvæ on ragwort 1905, bred July 1906; one female at sugared ragwort 30-7-1908, from which a large number of further specimens have been bred in 1909; Beltonin-the-Isle, larvæ on ragwort 28-8-1906, bred 1907; G W M. Near Binbrook, 1906 and 1907, S B S.
- S. Haverholme Priory, fairly common, J D C.

### EUPITHECIA MINUTATA, Gn.

On heaths.

N. Scotton, 1905, FSA. Sweetingthorns Wood, one 25-7-1908, GWM.

### EUPITHECIA ASSIMILATA, Gn.

Rare.

- N. Panton, one at light 23-8-1896, G H R.
- S. ||Cowbit, Chas. M. Hufton.

### EUPITHECIA TENUIATA, Hb.

Scarce, but it is a species which requires working for in the larval state.

N. Linwood, 1907 and 1908, bred from sallow catkins, S B S.

### EUPITHECIA SUBCILIATA, Gn.

Only one record.

N. Market Rasen, at heather bloom, J. A. Hardy (Nat. Chronicle, 1895, p. 112).

### EUPITHECIA LARICIATA, Frv.

Fairly common in fir woods.

- N. Ashby (Brigg) District, R T C. Elsham, 28-6-1904; Legsby, frequent; Pelham's Pillar Woods, frequent; Normanby (Scunthorpe), 4-6-1901; Welton (Lincoln), 20-5-1907; G W M. Holton-le-Moor, 12-6-1908, F B H B. and G W M. Limber, F P H B. Legsby, common; Panton, common; G H R. Roxton Wood, 5 and 6-1909, F W S. Wrawby Moor, 8-6-1909, G W M.
- S. Hartsholme Woods, Nat. 1894, p. 254.

### EUPITHECIA ABBREVIATA, St.

Scarce.

- N. Lincoln, 1840-50, F M B. Legsby; Panton; G H R. Linwood, 1908 and 1909, S B S.
- S. Lincoln, off lamps, J F M.

### EUPITHECIA DODONEATA, Gn.

Only one record.

S. Ropsley, rare, W. A. Atmore.

### EUPITHECIA EXIGUATA, Hb.

Rather scarce.

- N. Ashby (Brigg) District, R T C. Binbrook, 31-5-1909, G W M; fairly common, S B S. Gainsborough District, F M B. Great Carlton, C. D. Ash. Panton, G H R.
- S. ||Cowbit, Chas. M. Hufton.

### EUPITHECIA SOBRINATA, Hb.

Rare.

- N. Market Rasen, rare, W L.
- S. Wyberton, rare, J C L-C.

### EUPITHECIA PUMILATA, Hb.

Only one record.

N. Lincoln, 1840-50, F M B.

### EUPITHECIA CORONATA, Hb.

Only recorded from one locality.

S. Haverholme Priory, a few taken each season at rest on a zinc fence painted green, overhung by whitethorn, J D C.

### EUPITHECIA RECTANGULATA, L.

Common in orchards.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 6, 7, 8, 9, 10, 11,
- S. Wyberton, J C L-C. Divs. 14, 17.

### EUPITHECIA DEBILIATA, Hb., var. nigropunctata, Chant.

Only one record.

N. Gainsborough, 1860, F M B.

### LOBOPHORA SEXALISATA, Hb.

Only one record.

S. Skellingthorpe, C P A.

### LOBOPHORA HALTERATA, Hufn.

Scarce.

- N. Grimsby District, two 24-5-1908, R.C. Linwood, taken and bred in 1908 and 1909, S.B.S.
- S. Ropsley, not uncommon, W. A. Atmore. Skellingthorpe, C P A.

### LOBOPHORA CARPINATA, Bork.

Local.

N. Linwood, common in 1907 and 1909, S B S. Market Rasen, one, 1-4-1907, F P H B.

### LOBOPHORA POLYCOMMATA, Hb.

Only one record.

N. Stainfield (Wragby), C P A.

### THERA SIMULATA, Hb.

Local and scarce.

- N. Gainsborough, 1860; Lincoln, 1840-50; FMB. Sweetingthorns Wood, RTC. West Ashby, 1901, FSA.
- S. Lincoln, 1848, F M B.

### THERA VARIATA, Schiff.

Common in fir woods.

- N. Ashby (Brigg) District, R T C. Div. 2, 1895, A. E. Hall. Gainsborough, 1860, F M B. Holton-le-Moor, common 12-6-1908, F P H B. and G W M. Legsby; Panton; G H R. Linwood, common, S B S. Market Rasen, a few most years, W L. Market Rasen; Morton Carr, 8-7-1909; Pelham's Pillar Wood, frequent; Raventhorpe, 14-7-1909; Twigmoor, 25-6-1898; Roxton Wood, 19-6-1909; G W M.
- S. Hartsholme, L N U. (Nat. 1899, p. 286); 11-6-1901, J F M.; C P A. Lincoln, 1840-50, F M B. Haverholme Priory, very common, J D C.
- var. obeliscata, Hb.
  - N. Ashby (Brigg) District, R T C.

### THERA FIRMATA, Hb.

Scarce.

- N. Ashby (Brigg) District, R T C. Linwood, 1907. S B S. Market Rasen, one bred 8-9-1904, G W M.
- S. Hartsholme, L N U. (verified by A T.). Haverholme Priory, fairly common, J D C.

### HYPSIPETES RUBERATA, Frr.

Very local.

- N. Althorpe, a few pupæ under willow bark 18-4-1908, J P. and G W M. Ashby (Brigg) District, R T C. Market Rasen, one or two most years, W L. Scotton Common, 6-6-1901, J F M.; pupæ common some years, J P. and G W M.
- S. Hartsholme, C P A. Haverholme Priory, plentiful in the willow beds, J D C.

### HYPSIPETES TRIFASCIATA, Bork.

Scarce.

- N. Gainsborough, 1860, F.M.B. Linwood, 1908, S.B.S. Market Rasen, one or two most years, W.L.
- S. Hartsholme; pupæ in quantity on alders in 1888-89, J F M. and E. Mead; 12-10-1892, J F M.; C P A. Haverholme Priory, very common, J D C.

### HYPSIPETES SORDIDATA, Fb.

Common.

- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. || Cowbit, Chas. M. Hufton. Divs. 13, 14, 17, 18.

### MELANTHIA BICOLORATA, Hufn.

Not common.

- N. Gainsborough; Lincoln, 1840-50; F M B. Louth, V. T. Crow. West Ashby, generally every year, F S A. Wrawby Moor, one 8-8-1908, G W M. Scrivelsby, 1909, F S A.
- S. ||Cowbit, Chas. M. Hufton. Haverholme Priory, fairly common, J D C. Wyberton, common, J C L-C.

### MELANTHIA OCELLATA, L.

Frequent.

- N. Ashby (Brigg) District, R T C. Near Binbrook, 1906, S B S. Great Carlton, C. D. Ash. Gainsborough; Lincoln; F M B. Lincoln, C P A. Legsby; Panton, scarce; G H R. Market Rasen, 1877-79, F A L.; a few each year, W L. Skegness, 16-7-1879, G T P. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81). Wrawby Moor, 14-6-1907, F P H B.; 28-8-1909, G W M. Scrivelsby, 1909; West Ashby, 1908; F S A.
- S. ||Cowbit, Chas. M. Hufton. Hartsholme and Doddington, common, 1880-83, W. Barber and E. Mead. Haverholme Priory, not common, J D C. Lincoln, C P A. Wyberton, common, J C L-C.

### MELANTHIA ALBICILLATA, L.

Locally common.

- N. Ashby (Brigg) District R T C. Binbrook, S B S. Brocklesby, 23-6-1908, G W M. Croxby, several 7-1908; Irby, several 6-1909; F W S. Gainsborough, 1860, F M B.; 1900, A T. Haugham Wood; Maltby Wood; V. T. Crow. Hundleby, 1908, F S A. Irby, 6-1907, E H F. Linwood, S B S.; G W M. Market Rasen, a few most years, W L. Newball, two in 1908, Rev. F. L. Blathwayt. Panton, very local, G H R. Pelham's Pillar Woods, a few each year; Roxton Wood, 3-7-1909; G W M. Scrivelsby, 1909, F S A. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81). Tothill, C. D. Ash.
- S. Hartsholme, 19-6-1903, J F M. Haverholme Priory, abundant, J D C. Lincoln, C P A. Little Bytham, 9-7-1903, A T. Skellingthorpe, 31-5-1901, J F M.

### MELANIPPE HASTATA, L.

Local.

- N. Langworth, 22-5-1893, J W C. Legsby; Newball; G H R. and C. D. Ash. Linwood, 1857, R P A.; S B S.; one 21-6-1903, G W M. Market Rasen, 1877-79, F A L.; a few most years, W L. Newball, C P A.; 11-6-1908, Rev. F. L. Blathwayt and J D C. Saxilby, 21-5-1893, J W C.
- S. Hartsholme, 10-6-1892, J F M. Skellingthorpe, R T C.;

### MELANIPPE TRISTATA, L.

Only one record.

N. Gainsborough, F. M B.

### MELANIPPE RIVATA, Hb.

Much confused with the next species.

N. Ashby (Brigg) District, R T C. Croxby, 1907, S B S.; 7-1908, F W S. Irby, 8-1908, F W S. Legsby, G H R. Tothill, C D Ash. West Ashby, 1903, F S A.

### MELANIPPE SOCIATA, Bork.

Very common.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 7, 8, 9, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17, 18.

### MELANIPPE MONTANATA, Bork.

Abundant.

- N. Lincoln, 1852, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

### MELANIPPE GALIATA, Hb.

Only one record.

N. Gainsborough, F M B.

### MELANIPPE FLUCTUATA, L.

Abundant.

- N. Lincoln, 1848, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12.
- S. Lincoln, C P A. Divs. 13, 14, 15, 17,

### ANTICLEA RUBIDATA, Fb.

Rare.

- N. Binbrook, 1906, S B S.
- S. Haverholme Priory, four or five examples, J D C.

### ANTICLEA BADIATA, Hb.

Common.

- N. Lincoln, 1848, F M B. Divs. 2, 3, 6, 7, 8, 10,
- S. Wyberton, J C L.C. Divs. 13, 14, 15, 17,

### ANTICLEA NIGROFASCIARIA, Goze.

Common.

- N. Lincoln, F M B. Divs. 1, 2, 3, 4, 6, 7, 8, 10,
- S. || Cowbit, Chas. M. Hufton. Divs. 13, 14, 15, 17, 18.

### ANTICLEA BERBERATA, Schiff.

Only one record.

N. East Ferry District, one, A R.

### COREMIA FERRUGATA, Clerck.

Very common.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 7, 8, 9, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 17,

### COREMIA UNIDENTARIA, Haw.

Not so common as the last species.

- N. Legsby, G H R. Divs. 2, 3, 7, 8, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 17,

### COREMIA QUADRIFASCIARIA, Clerck.

Apparently very local.

N. Croxby, 1907, S B S.; one E H F.; abundant by beating yews, 17-7-1908, F W S. Linwood, one 11-8-1909, S B S. Panton, one 21-6-1896, G H R. West Ashby, 1904, F S A.

### CAMPTOGRAMMA BILINEATA, L.

Abundant.

- N. Gainsborough, 1860, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
- S. Wyberton, J C L.C. Divs. 13, 14, 15, 17, 18.

#### CAMPTOGRAMMA FLUVIATA, Hb.

Only one record.

N. Skegness, A. H. Waters (Nat. Chron., 1895, p. 128).

#### PHIBALAPTERYX TERSATA, Hb.

Only one record.

N. Hameringham, scarce, H M B S.

#### PHIBALAPTERYX VITTATA, Bork.

Rare.

S. ||Cowbit, Chas. M. Hufton. Skellingthorpe, 9-6-1902, J F M. Wyberton, two at light 8-1895, J C L-C.

#### TRIPHOSA DUBITATA, L.

Frequent.

- N. Lincoln, 1840-50, F M B. Divs. 1, 2, 3, 5, 6, 7, 8, 10, 11,
- S. || Cowbit, Chas. M. Hufton. Divs. 13, 14, 15, 17, 18.

#### EUCOSMIA CERTATA, Hb.

- N. Gainsborough; Lincoln, 1840-50; F M B. Market Rasen, W L. (Nat., 1898, p. 50).
- S. Allington, P. Wynne. Hartsholme, 1-6-1900, J F M. Wyberton, rare, J C L-C.

# ÈUCOSMIA UNDULATA, L.

Rare.

- N. Burwell Wood, V. T. Crow. Linwood, 1857, R P A. Market Rasen, one or two most years, W L. Newball, 1881, Canon Fowler.
- S. Hartsholme, 6-6-1897, J F M.; C P A.; one about 1881, E. Mead.

# SCOTOSIA VETULATA, Schiff.

Very local.

N. Legsby, G H R. Pelham's Pillar Wood, common, but very local, J P. and G W M.

# SCOTOSIA RHAMNATA, Schiff.

Scarce.

- N. Panton, one at light, G H R. Skegness, A. H. Waters (Nat. Chron., 1895, p. 129).
- S. Allington, imago, P. Wynne. ||Cowbit, Chas. M. Hufton. Hartsholme, 30-8-1902, J F M. Haverholme Priory, not common, J D C.

# CIDARIA SIDERATA, Hufn.

Only one record.

N. Lincoln, 1840-50, F M B.

## CIDARIA MIATA, L.

Fairly common.

- N. Lincoln, 1848, F M B. Divs. 2, 3, 5, 6, 7, 8, 10,
- S. Lincoln, 8-10-1892, J F M. Divs. 13, 14, 15,

#### CIDARIA CORYLATA, Thnb.

Frequent.

- N. Brocklesby District, E A C. Div. 2, 1895, A. E. Hall. Gainsborough, F M B. Holton-le-Moor, 12-6-1908, F P H B. and G W M. Lincoln, 1852, F M B. Linwood, a few every year, S B S.; 8-6-1908, F P H B. and G W M. Louth, V. T. Crow. Legsby; Newball; Panton; G H R. Market Rasen, a few most years, W L. Morton Carr, 8-7-1909, G W M. Newball, C P A.; three 11-6-1908, Rev. F. L. Blathwayt and J D C. Pelham's Pillar Wood, frequent, J. P. and G W M. Twigmoor, 25-6-1898, G W M. Tothill, C. D. Ash. Wrawby Moor, 14-6-1909, G W M.
- S. Hartsholme, 19-6-1903, J F M. Skellingthorpe, C P A.; 10-6-1909, G W M.

#### CIDARIA SAGITTATA, Fb.

Rare and local.

S. Billinghay, E. R. Walker. Boultham Fen, two about 1880, E. Mead. Haverholme Priory, taken on the wing, also bred from wild larvæ; three dozen larvæ taken in 1906, J D C.

# CIDARIA TRUNCATA, Hufn.

Abundant.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,
- var. comma-notata, Haw.
  - N. Barton-on-Humber, occurs, G W M. Binbrook, not uncommon some years, S B S. Hameringham, common, H M B S. Linwood, 8-6-1908, F P H B. Panton, G H R.
  - S. Lincoln, C P A.
- var. perfuscata, Haw.
  - N. Hameringham, common, H M B S. Panton, G H R.

#### CIDARIA IMMANATA, Haw.

Common.

- N. Gainsborough District, F M B. Divs. 2, 3, 4, 5, 7, 8, 10, 11,
- S. Wyberton, not common, a melanic variety at rest on oak trunk 9-1897, J C L-C. Divs. 13, 14, 17,

#### CIDARIA SUFFUMATA, Hb.

Common in some localities.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, one 18-5-1908, G W M. Binbrook, abundant, S B S.; 5-1909, G W M. Gainsborough, F M B. Great Carlton, C. D. Ash. Irby, 14-5-1908, E H F. Limber, 8-6-1907, G W M. Market Rasen, W L. Owston Ferry District, A R. Panton, common, G H R. Saxby (Barton), C. D. Ash. West Ashby, 1905, F S A.
- S. Allington, P. Wynne. Haverholme Priory, fairly common, IDC.
- var. piceata, St.
  - S. Hartsholme, 1888, J F M.

# CIDARIA SILACEATA, Hb.

Fairly common amongst Epilobium angustifolium.

- N. Ashby (Brigg) District, R T C. Haltham, 1909, F S A. Hameringham, common, H M B S. Legsby; Panton, amongst E. angustifolium; G H R. Limber, 8-6-1907; Legsby; Pelham's Pillar Wood, frequent; Roxton Wood, 19-6-1909; G W M. Linwood; Pelham's Pillar Wood; Roxton Wood; common 5 and 6 1909, F W S. Linwood, S B S. Lincoln District, 1881, Canon Fowler. Stainfield (Wragby), C P A. Tothill, C. D. Ash.
- S. Boultham Fen; second brood, 1882, E. Mead; ditto, 1890, J F M. Haverholme Priory, not common, J D C.

# CIDARIA PRUNATA, L.

Scarce.

N. Gainsborough District, F M B. Market Rasen, W L. Owston Ferry District, A R. Haltham, 1909; Somersby, 1902; West Ashby; F S A.

# CIDARIA TESTATA, L.

Common.

- N. Lincoln, 1840-50, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

# CIDARIA POPULATA, L.

Scarce.

- N. Gainsborough; Lincoln, 1840-50; F M B.
- S. Allington, P. Wynne. Boultham, 4-6-1901, J F M.

### CIDARIA FULVATA, Forst.

Common.

- N. Cleethorpes, 1840-50, F M B. Divs. 1 2, 3, 4, 5, 6, 7, 8, 10,
- S. || Cowbit, Chas. M. Hufton. Divs. 14, 15, 17, 18.

## CIDARIA DOTATA, L.

Frequent.

- N. Binbrook, common, S B S. Brocklesby District, E A C. Claxby Wood, 31-7-1903; Goxhill, 17-7-1900 and 9-7-1906, G W M. Croxby; Little Coates; abundant, F W S. Grimsby District, E H F. Gainsborough; Lincoln; F M B. Louth, V. T. Crow. Market Rasen, W L. Panton, scarce, G H R. Saxby (Barton); Tothill; C. D. Ash. Well, 18-7-1909, F. G. Whittle. West Ashby, 1902, F S A.
- S. Haverholme Priory, not common, J D C. Wyberton, J C L-C.

#### CIDARIA ASSOCIATA, Bork.

Rather scarce.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, bred 6 and 7-1897, from ova laid by female taken in the garden the previous year, G W M. Binbrook, common, S B S. Cleethorpes, one 4-7-1908, F W S. Lincoln, 1840-50, F M B. West Ashby, 1902, F S A.
- S. Haverbolme Priory, fairly common, J D C. Lincoln, C P A. Little Bytham, 17-7-1900, L N U. Wyberton, common, J C L-C.

#### PELURGA COMITATA, L.

Common in some districts.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, larvæ in the garden on mercury 8-1896, G W M. Gainsborough; Lincoln, 1840-50; F M B. Market Rasen, a few each year W L. Skegness, 16-7-1879, G T P. Theddlethorpe, 1904, A. E. Gibbs (Ent., 1905, p. 81).
- S. Haverholme Priory, not common, J D C. Lincoln, C P A. Skellingthorpe, 15-7-1902, J F M. Wyberton, common, J C L-C.

#### EUBOLIA CERVINATA, Schiff.

Frequent among Mallows.

- N. Ashby (Brigg) District, R T C. Barton-on-Humber, F P H B. Binbrook, S B S. Brocklesby District, E A C. Cleethorpes, two 1908; Irby, larvæ 1909, F W S. Gainsborough District, F M B. Kirton-in-Lindsey, larvæ on mallows 1909, E A W P. Lincoln, C P A. Theddlethorpe, two bred in 1906; Thornton Abbey, one 16-9-1905; G W M. West Ashby, 1901, F S A.
- S. Haverholme Priory, very common, J D C. Lincoln (South Park), 28-9-1902, J F M.

#### EUBOLIA LIMITATA, Scop.

Abundant.

- N. Scotton Common, F M B. Divs. 2, 3, 4, 5, 7, 8, 10, 11,
- S. Wyberton, J C L-C. Divs. 13, 14, 15, 17,

#### EUBOLIA PLUMBARIA, Fb.

Local.

- N. Ashby (Brigg) District, one 14-7-1909, G W M. Bradley, 7-1906, A B. Gainsborough District, F M B. Linwood, 1908, S B S. Market Rasen, common, W L.
- S. Wyberton, one, some years ago, J C L-C. (Nat., 1897, p. 366).

#### MESOTYPE VIRGATA, Rott.

N. "A specimen taken by W. Lewington, of Market Rasen, on the "coast, I believe at Mablethorpe. He showed it to me," R. T. C.

#### CARSIA PALUDATA, Hb.

N. Lincoln, 1840-50, F M B. Recorded by Mr. Burton as Celsia imbutata. This is a very unusual record for Lincolnshire, but I give Mr. Burton's own words in his letter to me. "Difficult to speak positively. I once had a correspondent "from Manchester and may have got it then; but (so far as "I know) I always put down names of places, if from a "distance, and there are two moths from that quarter but "not this; a full series also speaks against an exchange."

#### ANAITIS PLAGIATA, L.

Not common.

- N. Broughton, 1895, A. E. Hall. Croxby, one 19-7-1908, F W S. Gainsborough District, F M B. Market Rasen, W L.
- S. Hartsholme, W D C.; 24-4-1900, J F M. Haverholme Priory, not common, J D C. Wyberton, two at light 1896, J C L-C.

#### CHESIAS SPARTIATA, Fues.

Rare.

- N. Gainsborough, 1861, F M B. Market Rasen, 1877-79, F A L. West Ashby, 1903, F S A.
- S. Hartsholme, about 1901, J F M. Near Hartsholme, C P A Haverholme Priory, not common, J D C.

# TANAGRA ATRATA, L.

Common, abundant in some localities.

- N. Lincoln, 5-7-1852, F M B. Divs. 2, 3, 4, 5, 6, 7, 8,
- S. Lincoln, C P A. Divs. 13, 14, 15, 18.

# ADDRESS TO THE LINCOLNSHIRE NATURALISTS' UNION.

LINCOLN, 1909.

# W. DENISON ROEBUCK, F.L.S.,

President, 1909-10.

My first duty is to thank you for the honour you have done me in asking me to occupy the Presidential chair of the L. N. U.—an honour which is all the greater and the more appreciated in that it is offered to one who is not either a native of, or a resident in, the county. Nevertheless, I have taken an interest in the natural history of Lincolnshire for a quarter of a century, and have paid almost annual visits to the county. There are not many districts in it that I have not visited on conchological expeditions.

Moreover, I had a small share in the foundation of our Union, of which I am an original member and have been a member throughout.

I remember well the circumstances which led to the formation of our L. N. U. About 1892 I was very closely associated with Mr. Walter F. Baker, of Gainsborough, then resident in Leeds, and my colleague in the secretaryship of the Yorkshire Naturalists' Union. In conversation one day, he was expressing a desire that Lincolnshire had some similar Society; whereupon I suggested that he should take steps to call a meeting of Lincolnshire Naturalists. This was done, and a small party of us met at Mablethorpe for a day's outing.

Another meeting at Mablethorpe was arranged for 12th June, 1893, and a circular issued by Messrs. Baker, Coe and Larder. I had the honour of contributing the conchological paragraph to this circular, although I was prevented from being

actually present at the meeting. The Lincolnshire Naturalists' Union was then definitely established, and has ever since continued to do good and useful work, and during Mr. Baker's term of office the first part of its Transactions was published.

This year I am pleased to say that we have had a series of good meetings at which some excellent work has been done, thanks to the care and attention which our accomplished Secretary, Mr. Smith, has paid to them.

The subject which I propose to take for my Presidential Address is the

# History and Present Condition of the Investigation of the Land and Fresh-Water Mollusca of Lincolnshire.

I am afraid that I shall find it difficult to make it as interesting as I could wish, or as those delivered by my predecessors on subjects of more general interest.

The beginning of the investigation of the Lincolnshire Mollusca dates back to the time of the great revival of human knowledge which followed the commotions of the Civil Wars; and the age when the Royal Society was founded, the age in which flourished our great Lincolnshire worthy, Sir Isaac Newton, was also the age when the foundation of the Natural Sciences on the scientific basis as we now know them, freed from the sophistries and the pedantries of the old schoolmen, and of the philosophers of the middle ages, was laid by three great Englishmen, the precursors of Linnæus, who flourished a century after them.

These men were Ray, Willughby, and Lister. John Ray was of Black Notley, in Essex; Francis Willughby, of Middleton, in Warwickshire, and of Wollaton, in our neighbouring county of Notts.; and Martin Lister, of Craven, in Yorkshire, and of Burwell, in Lincolnshire. These three great men, between them, covered practically the whole range of the Natural Sciences. Ray was the botanist, and Willughby devoted himself to the department of vertebrate zoology; while Dr. Martin Lister took up the investigation of various forms of invertebrate life, as well as interesting himself in fossils and in geology.

Of these three it is Lister who is associated with the Mollusca of Lincolnshire, of which he was the first investigator and describer. For the full account of his life and work we may refer to the excellent paper published by Mr. Richard W. Goulding in 1900, in the 25th volume of the Associated Architectural Societies' Reports. It must suffice us to state that he was born in 1638, that he lived to 1712, when he died at the age of 74, that he came of a Yorkshire family of the Craven district, that in 1641 when he was three years old the Burwell estate came into the possession of the Lister family, in which it remained for two centuries until 1883, and that Dr. Martin Lister settled in York about 1670 and removed to London in 1683, so that his direct connection with Burwell can only have been a few years in duration. A man of great ability and capacious intellect, his indefatigable energy led him to the investigation of various scientific topics. He was the author of 19 separately printed books and of about 72 papers in the Philosophical Transactions of the Royal Society. He early recognized the character of fossils and was disposed to believe that they were the petrified remains of former living objects. He was also the first to propose the construction of geological maps, in his "Ingenious Proposal for a new sort of Maps of Countrys, together with tables of Sands and Clays, such chiefly as are found in the north parts of England," so that, as he went on to say, "we shall be better able to judge of the make of the earth, and of many phænomena belonging thereto, when we have well and duly examined it, as far as human art can possibly reach, beginning from the outside downwards." His scientific papers included some on the circulation of saps, veins in plants, the nature and differences of the juices of plants, observations on the gossamer spiders observed by him on the towers of York Minster, on galls, which he called vegetable excrescences, and insects generated in them, viviparity in flies, the true way of making steel, the electrical power of stones, the cause of earthquakes and volcanoes, the cause of lightning and thunder, sea water made fresh, to mention but a few.

But it is as a conchologist, or more correctly speaking a malacologist, that Martin Lister was at his highest level. His

great work was the Methodical Synopsis of Shells, in folio, published 1685—1692, which may be regarded as the foundation of modern conchology. It was illustrated by fine copper-plates by his two daughters, giving figures drawn to the life of all shells then known, as well as figures of their anatomy.

Lister's first published work is the one which most directly concerns us to-day. This is in Latin and was published in 1678 by the Royal Society. The title in Latin is lengthy and the book is really composed of four distinct works. The first is of spiders, the second of land and freshwater shells, the third of marine shells, and the fourth of fossil shells, or, as more cautiously put, of stones fashioned in the image of shells.

It is the second of these treatises that is not only the first book upon British Land and Freshwater Mollusca, but also the first record of some of those found in our own county of Lincoln.

Three species are definitely localized for Lincolnshire and have been found on the same spots by our modern investigators, and a fourth is also definitely stated to occur in the county without mention of a particular locality.

Of Cyclostoma elegans, a fine and conspicuous operculated shell, Lister says, writing for once in English: "I have found them plentifully in a woody high cliff upon the river Wharf near Oglethorp[Yorkshire]; also at Burwell Woods in Lincolnshire."

In this Lincolnshire station, the species was re-discovered in 1886 by Mr. H. Wallis Kew, in the part of the wood known as Grisel Bottom. A year or two afterwards I myself had the pleasure of finding it in company with Mr. Kew, and I have also collected it in the Yorkshire station, on the very ground hallowed by the tread of the great Lister.

Another of Lister's shells is one we now identify as *Hyalinia* fulva, a small species which Lister speaks of as a somewhat rare little creature (admodum rara bestiola), found in Burwell Woods, where, in 1887, it also was re-discovered by Mr. Kew.

A third, now identified as *Pupa cylindracea*, also a very small species, was found by Lister abundantly in a place which he called "Estrope," a name not now to be found on our Lincolnshire maps. The place whose name seems most nearly to

correspond to this is Hasthorpe, near Willoughby, to which place, as in duty bound, Mr. Kew and I made a joint pilgrimage on the 10th of May, 1906, and were rewarded by finding the little creature; so that, if our version of the place-name be correct, another of the Listerian species was verified on the original ground.

The fourth species mentioned as found in many places in the county is *Helicigona lapicida*, the stone-cutter snail, a somewhat large shell shaped like a lens with sharp edge, which has of course been collected by us in various places.

In addition to these four definitely recorded and others mentioned definitely as only found in Yorkshire, Cambridgeshire, or Buckinghamshire, there are 16 of which Lister speaks in such manner as to imply without doubt that he saw them in our county as well as elsewhere, and which we can therefore regard as Lincolnshire shells of the first record. These are—Helix aspersa, H. nemoralis, Helicigona arbustorum, Zua lubrica, Clausilia bidentata, Helicella itala, Limax maximus, Agriolimax agrestis, Arion ater, Bythinia tentaculata, Limnæa stagnalis, Limnæa peregra v. ovata, Succinea putris, Physa fontinalis, Planorbis corneus, and Pl. umbilicatus, all of them well known to us as Lincolnshire shells or slugs at the present time.

We may therefore regard the molluscan fauna of Lincolnshire as amounting in 1678 to 20 species, all of them found in the district which has been perhaps the best-worked one in the county, the neighbourhood of Louth, and more especially the Burwell estate.

Another species which is an inhabitant of the County now but does not appear to have been found in it by Lister himself, whose localities are Cambridgeshire and Yorkshire ones, is Vivipara contecta, formerly known as Paludina listeri, one of the various species named in honour of Martin Lister.

The descriptions of these species, the accounts of their localities, habitats, mode of life, etc., are all set forth in strictly scientific fashion, just as would be done in modern works, and quite as free from fabulous or indefinite writing—and Lister, like Ray and Willughby, thus anticipated modern scientific

biological work by more than a century. But he, like they, was hampered by a cumbrous system of nomenclature. It was reserved for the next century, and for the great Swedish Naturalist, Linnæus, to devise the simple and effective system of binomial nomenclature, which rendered possible the work of modern systematic zoologists and botanists.

The common garden snail, which Linnæus and we know as Helix aspersa, had to be spoken of by Lister and his contemporaries in a long descriptive sentence like this—"Cochlea vulgaris major, pulla, maculata et fasciata, hortensis"—that is, translated, "the common larger dark grey spotted and banded garden snail," a most cumbrous method of expression. Yet, in spite of this great disadvantage, the work which was accomplished by Lister and his contemporaries was worthy to be compared with much of that of the naturalists of our own time, their philosophical insight was as keen, their mental vision as alert, their powers of observation, comparison and reasoning as manifest. Willughby died in 1672, John Ray in 1705 and Lister in 1712, and with him closed the first epoch in our history.

For the next century and a half we are unaware that any conchological investigations were made in Lincolnshire.

The history of our branch of research now becomes the record of work done by investigators who are living or of very recent memory, and it is a source of gratification to us that the first man who paid attention to our shells since Lister's time is still living in full bodily and mental vigour, although within a few weeks of attaining his 90th year [which he did on the 3rd of January, 1910].

Mr. John Hawkins, of Grantham, has been a naturalist keen and observant from his twelfth year, and as it has been remarked that times of conflict are conducive to the development of thought, and as the scientific activity of Lister and Ray were in some degree consequent upon the stirrings of thought following the Civil Wars, so it would seem that the struggles over the Reform Bill of 1832 were instrumental in quickening the mind of our friend Mr. Hawkins, and leading his bent of mind in the

direction of the study of nature. His first find was that of Neritina fluviatilis at the bend of the river near Newark, his native town, and he made observations upon various species of land shells. Removing to Grantham on attaining manhood, he diligently collected the land and freshwater shells of that neighbourhood and studied them with Captain Brown's Illustrations The freshwater shells of the of British Shells as a text-book. Canal then recently opened from Grantham to Nottingham, supplied him with many examples—and along the lanes and fields the Helices were not at all scarce. It was about 1854 that he collected Helix lapicida, the identical specimens being now in his collection—as also are those of Clausilia laminata, which he found in Ropsley Rise Wood. Numerous other species were found by him as early as this-and his interest in the mollusca has been more or less continuous ever since-and for the past decade he has been as active and keen an investigator as many a man half his age. The only regret we can have is that he has never published any account of the Grantham shells-and that there is therefore no record in print of the admirable work he accomplished during a long and well-spent life.

We have also amongst us another investigator who is only second to Mr. Hawkins in point of time. Our good friend and ex-President, Mr. F. M. Burton, of Gainsborough, though essentially a geologist, has also interested himself in our molluscan fauna, and his collection contains species which he gathered in his neighbourhood, as well as previously in Rutlandshire, many years ago.

The long interregnum in printed records since the Listerian epoch was broken in 1848, when Mr. E. S. Peacock, Jun., a near relative of our own active ex-President, published in the "Zoologist" a note on the Habits of the Pond Mussel as observed at Bottesford, where it abounded in a peat pond, and also in the Trent, which was salt-water at high tide.

We now come to the first list of shells for any part of Lincolnshire which has ever been printed.

Mr. Thomas Ball, of Brigg, who was born in Lincolnshire on the 5th March, 1833, and died at Auckland, New Zealand,

on the 30th January, 1906, was a keen naturalist, a man of artistic skill, deep religious feeling, and high character. He left Lincolnshire for New Zealand about 33 years ago, taking his collections with him to Auckland. Life is oft a record of missed opportunities, and I myself now regret that I missed the chance of seeing Mr. Ball during his lifetime; for I spent a fortnight in Auckland in February and March, 1905, only ten months before Mr. Ball's death, and I was a frequent visitor to the museum there and made the acquaintance of more than one conchologist, including Mr. Henry Suter.\*

It was in 1864 that Mr. Ball published what I have called the "Pioneer List of Lincolnshire Land and Freshwater Shells." It appeared in a magazine called "Young England" for May, 1864, and it enumerated without any remark or annotation the names of 68 species, all but five of which had been taken within a radius of a mile and a half round Brigg. The list is a sound and reliable one and has been verified since by the more recent researches of the Rev. E. A. Woodruffe-Peacock, who states that it is too accurate to admit of any doubt. The only other contribution made by Mr. Ball to our subject is a record in 1868 (in "Science Gossip") of a white variety of Planorbis nitidus at Brigg.

The next investigator in point of time is our friend Mr. H; Wallis Kew, F.z.s., formerly of Louth, whose collecting was done on the same ground as that of Martin Lister, most of whose records he has verified and confirmed. The results of his first researches were embodied in a note by Mr. T. D. A. Cockerell on Louth Shells, enumerating 24 species with localities, published in the Naturalists' World for December, 1885. That publication also contained numerous excellent articles on the Louth natural history from Mr. Kew's own pen. "The Naturalist" also, under my own editorship, and other magazines, contained various notes of his writing. In 1886 alone were published no

<sup>\*</sup> P.S.—June 1910. I am now in possession of all that is to be known about Mr. Ball, thanks to my friends Dr. and Mrs. Longstaff, who visited New Zealand during the past winter; they visited his widow and inspected his collection. Mrs. Ball was also good enough to send for my inspection Mr. Ball's own catalogue of his collection, which supplies the data wanting in his published list.—W. D. R.

less than seventeen notes and articles from Mr. Kew, dealing with the Lincolnshire mollusca in no dry-as-dust manner, but with the addition of details that betokened the alert mind as well as the observant eye.

It is of interest to recall that it was the accidental finding of a freshwater cockle attached to the leg of a water-beetle at West Barkwith in August 1888, that set Mr. Kew collecting particulars of cases of similar significance, which ultimately—in 1893—resulted in the publication of his excellent book on "The Dispersal of Shells."

The species which is most closely identified with Mr. Kew is the discovery of Clausilia rolphii in the postglacial ravines near Louth—a discovery which was made in 1887. The species was subsequently identified at Grantham by Messrs. Hawkins and Worsdale, and there is no doubt that Mr. Hawkins had taken it many years before without regarding it as more than a strongly-marked variety of one of the other species of the genus—but that he did discriminate it is not to be doubted. The species is one of what we may consider the disappearing ones, and the Lincolnshire localities are a great distance from the other known British stations, Northamptonshire being the nearest.

In 1886, the Rev. Canon W. W. Fowler, our entomological ex-President, announced the discovery and at the same time the extinction, by railway extension, of *Limnwa glabra* near Lincoln, a species which ought certainly—judging by its Yorkshire distribution—to be found in the north of our county.

I now come to my own connection with Lincolnshire Conchology. In 1883, I collected on the edge of the Isle of Axholme, and at the exact point of junction—on the Black Bank Drain—of the three counties of Lincoln, York and Nottingham, we (my friend Mr. W. Eagle Clarke, F.R.S.E., now head of the Natural History department of the Royal Scottish Museum in Edinburgh, and myself) took a single example floating of Vivipara contecta, which at that time seemed to be a new record for all three counties.

Two years later, I made the acquaintance of an excellent naturalist, the late Mr. James Eardley Mason, of Alford, and in

1886 I paid more than one visit to his hospitable home, very keenly investigated all the neighbouring country, and in the months of August and September, 1887, I published in "The Naturalist" a full and elaborate list under the title of "Materials towards a List of the Land and Freshwater Mollusca of Lincolnshire." This paper extends to 27 pages and includes full particulars as to the occurrence of 88 species and a number of named varieties, and in four pages of introduction I gave a brief history of the subject and a discussion of the contents of the list. At the conclusion I indicated a dozen species as almost certain to occur-and the work of Lincolnshire conchologists since that time has been successful in establishing the presence of all but one of them—and it is quite possible to expect that that one— Acicula lineata-may some day be found. The discovery of the interesting Clausilia rolphii is the most significant fact placed for the first time on record in this list of mine.

Various miscellaneous notes by other investigators followed during the next few years, the natural and inevitable result of the publication of a full list. Amongst others may be mentioned notes by Mr. J. Burtt Davy, now Government Agrostologist in the Transvaal Colony, and a record of Trent dredgings by Mr. George Roberts, of Lofthouse, Yorkshire.

The formation of our Lincolnshire Naturalists' Union in 1893 gave still further impetus and a more systematic direction to our study. Mr. F. W. Fierke, of Hull, was at this time secretary to our Conchological Section, and as such the author of the reports of work done at the meetings, and he was the finder of Zonitoides excavatus at the Woodhall Spa meeting.

In 1894, Mr. Wallis Kew announced the discovery of Amphipeplea glutinosa in the drains at Saltfleetby—a species remarkable for the sporadic nature of its occurrence in its localities, being in great abundance some years and entirely absent in others, from unaccountable causes.

In 1895, the Rev. E. A. Woodruffe-Peacock published in "The Naturalist" a map of the county showing its surface-soils and the divisions for natural history work, which has ever since been the base of all work dealing with the distribution of species.

In 1898, the long-wanted Cacilioides acicula was added to our list by Mr. J. H. Cooke. This is what is called the Needle Agate Shell, from its shape and colour, it is blind and lives in the earth, just beneath the surface-crust, especially in limestone and chalky areas.

The same year, Mr. F. M. Burton found at Gainsborough *Testacella haliotidea*, the shell-bearing carnivorous slug, which is also an underground creature, preying upon worms.

In 1900, Mr. Kew added Pisidium amnicum to our fauna.

In 1900, there appeared on the scene a new worker, Mr. C. S. Carter, of Louth, one of the most vigorous and indefatigable workers the county has ever had. His sound and competent knowledge of geology and the acumen he has displayed in his malacological investigations have contributed much to the advancement of our study. Vertigo angustior was added by him during his first year's collecting, Pisidium milium during the next year and various other species since. His minute and detailed investigations of the molluscan fauna of the Hubbard's Hills, near Louth, are of permanent value and a model of what detailed local work by a resident should be. His notes on the albinism of about ten species in that district are particularly interesting, and his lists of the holocene fossil shells found in the rainwash there, valuable.

In 1901, the Rev. E. A. Woodruffe-Peacock, who had previously confined his attention to the flora of the county, took up the active pursuit of the Lincolnshire molluscs with his characteristic vigour and energy, and with good results. He verified the species indicated in Mr. Ball's Brigg list, he paid special attention to the mollusca of the thrush-stones—and his special and technical knowledge of soils and soil-preferences make his papers of much value to us in our work. In 1901, he added the rare slug Limax cinereo-niger to our list.

In 1902, Mr. H. Wallis Kew published in "The Naturalist" a new list, arranged according to the most recent classification, and accompanied by a bibliography of the books and papers containing the successive additions to the Lincolnshire list. The total number of Lincolnshire species is here brought up to

110, including six species which during the same year had been added, viz., Hyalinia lucida and Paludestrina jenkinsi by Mr. Carter, Pupa secale and Pyramidula rupestris by Messrs. Worsdale and Preston, and Pisidium henslowanum in the Ancholme by Mr. Peacock.

In this year also, our energetic secretary, Mr. Arthur Smith, F.L.S., F.E.S., whose attention had been previously directed to the study of the marine mollusca of the coast, began to co-operate in our work and has continued it ever since with much success.

In 1903, the curiously irregularly appearing shell Amphipeplea glutinosa turned up again in the county, this time at Tetney.

In 1904, Azeca tridens was taken near Louth by Mr. Carter, it being one of the expected ones, and in the same year Mr. Thomas Stow, who, with his daughter Miss Catherine Stow, had taken up the study, found a colony in South Lincolnshire of the remarkable white variety of Helicigona lapicida.

In our Transactions for 1905, Mr. C. S. Carter published the third general list of Lincolnshire non-marine mollusca, giving numerous records with details for 110 species and a great number of varietal forms.

A year later, in the Transactions for 1906, Mr. Carter published a list of additions, chiefly locality-records, including many by Mr. John F. Musham.

In 1906, under the new arrangements for the management of the Lincoln Museum, our friend and secretary Mr. Arthur Smith, was appointed Curator, and to him the Museum owes much. It is gratifying here to note that it is being kept strictly devoted to local archæology and natural history, and it is to be hoped that now that we have a central museum under proper control and well-officered, our Lincolnshire men will look upon it as the place to which all local antiquities and natural history specimens should gravitate. Too many important objects and collections of peculiarly Lincolnshire interest have been lost for want of such an institution as this. One only this last year, although it is in good hands and only just over the border, ought to have been secured for our own Museum.

As far as our own particular line of research is concerned, a reference collection of the shells upon which my forthcoming list is to be founded, is being put together and later on a display collection of good examples of each species and well-marked variety will be formed.

Not very much work was done in 1907 except that Mr. John F. Musham, F.E.s., who has now worked the county with great assiduity and vigour during the past year or two, printed for private circulation a list of his captures, giving localities for 89 species and numerous named varieties—and a year later he supplemented it by a list of additions, concerning 32 species.

In 1907, Mr. Vernon Howard found the reversed or dextrorse monstrosity of the common *Clausilia bidentata* in the Louth district, and in 1908 Mr. Beetlestone found the sinistrorse or reversed monstrosity of *Helix nemoralis* near Market Rasen.

In our Transactions for last year (1908), I published a Census of the distribution of our Land and Freshwater Mollusca, showing in tabular columns the districts for which each species has been recorded. Copies of this I shall be happy to give to anyone—conchologist or not—who will assist us in securing material to fill up the blanks in our knowledge.

There are various other people who have worked at our subject, and have not published. Mr. Henry Preston, of Grantham, our geological ex-president, has worked for some years along with Messrs. Hawkins, Stow and Worsdale, the Grantham Museum displaying some of the results of their labours; and Miss Florence H. Woolward, of Belton, has also worked with the Grantham group of investigators.

The Rev. W. W. Mason, in the course of his botanical perambulations, never forgets his conchological friends and their insatiable thirst for detailed information.

In the north of the county, Mr. John Beaulah, of Raventhorpe, near Brigg, is a collector of old standing, whose stores of knowledge we hope before long to avail ourselves of.

The recent lamented death of Mr. Alfred Reynolds, of Owston Ferry, has deprived us of a keen and active worker.

Of conchologists outside the county, many have collected in it at one time or another. Amongst others, Mr. Fred. Rhodes, the Curator of the Bradford Cartwright Museum natural history collections, has spent holidays in two successive years at Mablethorpe, and has given me notes of his captures.

So much for the history, with which I fear I shall have wearied you.

The present state of affairs is very simply stated. We wish to complete the investigation during the coming year—1910—if possible, with the view of publishing a complete, elaborate and exhaustive account of the Land and Freshwater Mollusca. What remains to be done is this. The county is divided into 34 districts which have been unevenly worked. For the Holbeach district we have not a single species, record or note of any kind, and for the Louth district there are 84 species on record,—the numbers recorded for the others varying from 7 to 79. Striking an average 18 districts are below and only 16 above it.\*

We cannot, of course, attain perfection, but we should like this year to devote special attention to the districts which have so far had the least attention paid to them—and such of our friends who are desirous to help and have choice of place would do well to direct their attention to some poorly-worked area lying conveniently for them.

There are now not many species one may confidently expect to meet with. Nevertheless, the existence of *Limnaa glabra*, now supposed to be extinct, ought to be confirmed by new discovery.

Mr. Peacock believes he has once seen *Limax tenellus* at Linwood Warren, and I think he was right in his surmise—but we require the actual confirmation that the sight of one example would give.

Zonitoides excavatus has been seen once, and ought to be found : again.†

<sup>\*</sup> P.S.—June, 1910. These statistics are as given in December, 1909. Research this year in the Holbeach, Long Sutton, Horncastle, Crowland, Axholme and Grimsby areas has considerably altered the state of things.

—W. D. R.

<sup>†</sup> P.S.—In May, 1910, Mr. Musham and I re-discovered it in Tumby Wood.

There are perhaps one or two species of the genus *Vertigo* to be found, but the shells are exceedingly minute and need special skilled knowledge for their successful search.

Succinea oblonga might possibly be found, as also might Acicula lineata, another very minute shell. Planorbis glaber is one which might possibly occur, and Pisidium cinereum will very likely occur some time.

There are other methods in which the new list may be helped. We require notes on environment, on food, on soil-preferences, on species-associations, in short, on anything which tends to give life to our dry bones.

For our introductory chapters we need notes on observers, on the work they have done, on their history and career. We should particularly like help from photographers—views of characteristic shell-localities, snapshots of the investigators, all which would help to find material for illustrations to accompany the work.

So may we hope to put together an account of our Lincolnshire snails that will be of some value and use to future investigators and be in some degree worthy of the county of Newton, of Banks, and of Lister.

# CHECK-LIST OF LINCOLNSHIRE PLANTS.

I much regret to say after this Check-List was published and issued to the Union, it was discovered that three species had been omitted through the sticking of the sheets of the original manuscript. Would members kindly add the following three records to their copies of the Check-List?

COCHLEARIA ARMORACIA, L. 1865, Britten. —1, 4, 5, 7, 8.

NYMPHOIDES PELTATUM, Rendle & Britten. 1895, Craster. +13, 15.

VIOLA ARVENSIS, Murr. 1851, Watson. +all.

Many new divisional specimens and records have already been received, and before the end of this season much further additional matter may be expected, but all this material must wait for the full "Flora of Lincolnshire."

# LINCOLNSHIRE COLEOPTERA.

#### BY THE

REV. A. THORNLEY, M.A., F.L.S., F.E.S., Nottingham, and

W. WALLACE, M.B., Ch.B., Grimsby.

# (Third Paper).

The following four species are additions to the already published sections:—

# PTEROSTICHUS MINOR, Gyll.

N. 11, Farlesthorpe, J E M. Identified by W W F. (Alford Nat. Soc. Records).

#### HYDROPORUS RUFIFRONS, Duft.

N. 11, Alford at Well, one specimen, 11-4-1887, J E M. Identified by W W F. (Alford Nat. Soc. Records).

# CYCLONOTUM ORBICULARE, F.

N. 3, Thornton Abbey, 18-7-09, in numbers in wet moss at side of pond, W W.

# CERCYON HÆMORRHOUS, Gyll.

N. 4, Grimsby district, one specimen, 1909, W W.

The family Staphylinida is one of the most difficult to work by reason of the great affinity that exists between its members, and on this account students are apt to neglect it. There is no doubt that our county list will be much increased when we have more collectors in the south V.C.—though none of the areas have been really well worked. We are much indebted to Dr. Joy for his help in clearing up many difficulties.

# Staphylinidæ.

### ALEOCHARA RUFICORNIS, Gr.

N. 4, Bradley Wood, one specimen of this fine species struggling in a rain-pool in one of the drives, 26-6-07, W W. 6, Langworth Wood (FOWLER, BRIT. COL.)

#### ALEOCHARA FUSCIPES, F.

A very common species.

- N. 3, Brigg, 6-95, A.T. Goxhill, in carcase of bird in numbers, 18-7-09, W.W. 4, Bradley, in dung, 29-8-06, W.W. 9, Donna Nook, in carcase of bird, 15-5-10, W.W.
- S. 13, Hartsholme, 24-5-94, L N U. (W F B.) Court Leys, 5-1900, S C S.

#### ALEOCHARA LANUGINOSA, Gr.

A very common species.

- N. 3, New Holland, 29-8-09, W W. Grimsby shore, 7-6-07, W W. Irby, 4-4-07, W W. 6, Marton, A T. 9, Humberstone, in dung, 10-5-08, W W.
- S. 13, Hartsholme, 24-5-94, L N U. (W F B.)

#### ALEOCHARA NITIDA, Gr.

- N. 3, New Holland, 29-8-09, W W. 4, Little Coates, under carcase of bird in sandpit, several, 5-8-09, W W. 9, Humberstone, 10-5-08, W W.
- S. 17, Wash, foreshore, 8-97, L N U. (A T.)
- --- var. bilineata, Gyll.
  - N. 4, Clee, a fine specimen, 23-9-09, W W.

#### ALEOCHARA MORION, Gr.

Our only record:-

N. 4, Irby, in dung, one specimen, 1-8-08, W W.

# ALEOCHARA GRISEA, Kr.

N. 4, Grimsby, shore near targets, under seaweed, 7-6-07, W W.

# ALEOCHARA OBSCURELLA, Er.

N. 4, Cleethorpes, under seaweed, 2-8-09, W W. 9, Mablethorpe (Fowler, Brit. Col.)

# MICROGLOSSA SUTURALIS, Sahl.

N. 4, Clee, in haystack refuse abundant, 18-3-09, W W.

# MICROGLOSSA NIDICOLA, Fair.

N. 4, Laceby, in sandpit near holes of sand-martin, 27-7-09, W W.
 7, Moortown, very common in sand-martins' nests, 18-8-07, W W.

# OXYPODA LIVIDIPENNIS, Man.

N. 4, Freshney, flood refuse, 8-7-08, WW.

#### OXYPODA ALTERNANS, Gr.

Frequent in the county, A T. I have only seen it once:-

N. 4, Beelsby, one specimen, 17-9-08, W W.

#### OXYPODA OPACA, Gr.

N. 4, Clee, in haystack refuse, 18-3-09, W W.

#### OXOPODA UMBRATA, Grav.

N. 3, Humber bank, at New Holland, 2-5-09, W W. 4, Bradley, 4-4-08, W W. Freshney Bog, 20-4-08, W W.

#### OXYPODA NIGRINA, Wat.

N. 4, Clee, one in stack refuse, 18-3-09, W W.

Lincoln (Fowler, Brit. Col.) "In my hot-bed in Lincoln." (See E M M., August 1881, p. 71, W W F.)

## OXYPODA HÆMORRHOA, Sahl.

N. 4, Little Cotes sandpit, 2-8-09, W W. 8, Grainsby, in stable refuse, 23-7-09, W W. 9, Humberstone, 20-3-09, W W.

#### ISCHNOGLOSSA PROLIXA, Gr.

N. 11, Alford, at Well Vale, 20-8-08, L N U., under bark of fallen trunks, in company with Habrocerus capillaricornis, W W.

#### PHLEOPORA REPTANS, Gr.

N. 4, Roxton Wood, one under bark, 31-5-09, W W. Ravendale, one, 6-6-09, W W.

## OCALEA CASTANEA, Er.

Our only record:-

N. 6, Langworth Wood (Fowler, Brit. Col.)

# ILYOBATES NIGRICOLLIS, Payk.

Our only record:-

Lincoln, (Fowler, Brit. Col.)

#### CHILOPORA LONGITARSIS, Er.

Not uncommon in spring months.

N. 3, Roxton Wood, several in marshy places, 31-5-09, WW. 4, Bradley, in the water net, 18-6-08, WW.

#### ATEMELES EMARGINATUS, Pk.

Lincoln, with formica fusca, (Fowler, Brit. Col.) "In a wood near Lincoln, on March 18th, 1882." (See E M M., May, 1882, p. 277, W W F.)

#### MYRMEDONIA CANALICULATA, F.

N. Bradley Wood, one by sweeping, 1906, WW. Beelsby, 3-4-08, one, WW.

#### CALLICERUS OBSCURUS, Grav.

N. 4, Freshney Bog, 29-6-08. by sweeping the tall grasses in the afternoon; I took five males in this way, but no females, W W.

#### HOMALOTA GREGARIA. Er.

A very common species.

N. 4, Cleethorpes, swarming under seaweed on wet sand, 2-8-09, W W. Irby, in leaves, 4-4-09, W W.

#### HOMALOTA HYGROTOPORA, Kr.

N. 3, Roxton Wood, one specimen, 1-8-07, W W. Freshney bog, one, 9-5-08, W W.

#### HOMALOTA ELONGATULA, Gr.

N. 4, Little Coates, 6-8-og, W W. Croxby, 9-8-og, W W.

#### HOMALOTA VESTITA, Gr.

Found frequently on the coast.

N. 3, New Holland shore, under seaweed, 29-8-99, W W. 4, Clee shore, 26-10-99, one specimen, W W. Cleethorpes, 4-10-08, one specimen, W W. 9, Saltfleetby, 8-6-1899, L N U., abundant.

#### HOMALOTA VICINA, Steph.

N. 4, Cleethorpes, under seaweed, 2-8-09, W W. Beelsby, 17-9-08, W W.

#### HOMALOTA PAGANA, Er.

N. 4, Beelsby, one specimen, 29-9-09, W W.

# HOMALOTA GRAMINICOLA, Gyll.

Not common.

N. 3. Humber bank, at New Holland, one specimen, 2-5-09. W W. 4, Bradley, 11-4-08, one, W W.

# HOMALOTA CIRCELLARIS, Grav.

A common species.

N. 4, Irby, in wet dead leaves in the woods and under bark, 2-4-09, W W. Freshney, flood refuse, 1-9-09, W W.

# HOMALOTA ÆQUATA, Er.

N. 4, Bradley Wood, 11-8-07, one specimen, W W. 3, Roxton Wood, 31-5-09, one specimen in leaves at bottom of tree trunk, W W. I have taken four specimens in the Grimsby district, all females, W W.

# HOMALOTA ANALIS, Gr.

An abundant species.

N. 3, Goxhill, abundant in flood refuse, 25-12-09, W W. 4, Irby, in dead wet leaves in the woods, 4-4-09, W W. Clee, in haystack refuse, 18-3-00, in large numbers, W W.

# HOMALOTA DEPRESSA, Gyll.

A fairly common species in woods.

- N. 3. Brocklesby, 14-6-00, A S. 4, Bradley Wood, by sweeping, 18-5-08, W W. Roxton Wood, in numbers by sweeping in the afternoon, the females being three times as common as males, 31-5-09, W W. 8, Ludborough, 28-5-01, A S.
  - "I have taken it by sweeping in a wood near Lincoln in May or June and in abundance on the rocky sides of a gravel pit close to the town far from any trees." (FOWLER, BRIT. COL.)

# HOMALOTA AQUATICA, Th.

Fairly common.

N. 3, Goxhill, a large series under carcase of a sea-gull lying in a marshy place, 2-5-10, females being ten times as many as males, W W. 4. Bradley, 8-5-08, one, W W. Beelsby, 17-9-08, one, W W.

# HOMALOTA XANTHOPTERA, Steph.

Frequent in the county, A T.

N. 4, Little Coates, a number in decaying fungus, 8-7-09, W W-Irby, 12-6-09, W W.

# HOMALOTA TRINOTATA, Kr.

Frequent in the county, A T.

N. 4, Clee, in haystack refuse, 24-2-09, W W. Little Coates, a number in fungi, 8-7-09, W W. Bradley, in leaves, 2-4-09, W W.

# HOMALOTA FUNGICOLA, Th.

Frequent in the county, A T.

N. 4, Roxton Wood, 8-10-08, W W. Little Coates, in decaying fungi, common, 8-7-09, W W. 8, North Thoresby, 11-6-09, W W.

# HOMALOTA XANTHOPUS, Th.

N. 4, Bradley, in fungus, one specimen, 4-9-08, W W.

# HOMALOTA TRIANGULUM, Kr.

N. 4, Bradley, in straw, 29-5-09, W W., again in fungi, 15-8-09, W W.

# HOMALOTA LITURATA, Steph.

N. 4, Little Coates, one specimen in fungus, 28-7-09, W W.

# HOMALOTA PALUSTRIS, Kies.

N. 4, Cleethorpes, under seaweed, one specimen, 2-8-09, W W.

# HOMALOTA SERICEA, Muls.

Frequent in the county, A T., but we have no specific records.

#### HOMALOTA NIGRA, Kt.

A very common species.

N. 4, Clee, in haystack refuse in abundance, 18-3-09, W W. Bradley, 19-5-09, W W.

#### HOMALOTA ATRAMENTARIA, Gyll.

A very common species.

N. 3, New Holland, 29-8-09, W W. 4, Waltham, in dung, 2-8-09, W W. Irby, in leaves, 4-4-09, W W. 9, Humberstone, in dung, 10-5-08; in seaweed, 20-3-09, W W.

### HOMALOTA LONGICORNIS, Grav.

Frequent in the county, A T.

N. 3, Goxhill, in carcase of a sea-gull, 2-5-10, W W. 4, Bradley, in leaves, 2-4-09, W W. Irby, in dung, 1-8-08, W W, Freshney, flood refuse, 8-7-08, W W.

#### HOMALOTA SORDIDA, Marsh.

Frequent in the county, A T.

N. 4, Little Coates, 22-3-07, WW. Freshney, flood refuse 12-9-08, WW.

# HOMALOTA MUSCORUM, Bris.

N. 3, Cadney, AT.

#### HOMALOTA LATICOLLIS, Steph.

Apparently uncommon.

N. 4, Bradley, in fungus, 4-9-08, two specimens, W W.

# HOMALOTA SUBSINUATA, Er.

N. 8, Grainsby, in dry stable sweepings, two specimens, 23-7-09, W W.

# HOMALOTA FUNGI, Gr.

A very abundant species.

N. 3, Cadney, 21-3-98, E A W-P. Goxhill, flood refuse, 25-12-09, W W. 4, Irby, in dead wet leaves, 4-4-09, W W. Clee, in haystack refuse, 24-2-09, W W. Freshney, flood refuse, 26-9-09, W W. 11, Sutton, 9-9-09, A B.

# - var. dubia, Shp.

N. 4, Bradley, in leaves, with type form, 2-4-09, W W.

# GNYPETA LABILIS, Er.

We have found it only on the shore!

N. 4, Cleethorpes, under seaweed on the wet sands, common in company with H. GREGARIA. 9, Humberstone shore, 10-5-08, W W.

#### TACHYUSA FLAVITARSIS, Sahl.

N. I, Haxey and Epworth, one specimen, 14-7-1898, AT. 9, Mablethorpe, 1882, H. Bedford Pim, (E M M., December, 1882, XIX. p. 161).

#### FALAGRIA SULCATA. Pk.

N. 4, Clee, in haystack refuse, one specimen, 28-2-09, W W. Bradley, in straw, two specimens, 15-8-09, W W. Freshney, river tidal rubbish, 24-9-09, W W.

#### FALAGRIA SULCATULA, Gr.

Evidently rare.

S. 13, Nocton, E A W. (see E M M., Jan. 1868, p. 186).

#### FALAGRIA OBSCURA, Gr.

N. 4, Tidal rubbish of river Freshney at Little Coates, 26-9-09, and under decaying plants, W W.

#### AUTALIA IMPRESSA, Ol.

N. 3, Cadney, 9-97 in fungi, A T. 4, Little Coates, a number in a fungus on dead ash tree, 8-7-09, W W.

#### AUTALIA RIVULARIS, Grav.

N. 4, Little Coates, one specimen, under cut herbage, 8-7-09, W W.

#### ENCEPHALUS COMPLICANS, West.

Evidently rare.

S. 13, Nocton, E A W. (See E M M., Jan., 1868, p. 186.)

#### GYROPHÆNA AFFINIS, Man.

- N. 4, Irby, one specimen, 12-6-09, W W. 7, Moortown, 3-7-10, W W. 9, North Somercotes, one specimen, 18-6-09, W W.
- S. 13, Nocton E A W. (See E M M., March, 1868, p. 231). Lincoln (Fowler, Brit. Col.)

# GYROPHÆNA GENTILIS, Er.

- N. 4, Little Coates, a very large colony in a decayed fungus on an old ash stump, 24-9-06, W W.
- S. 13, Nocton, E A W. (see E M M., March 1868, p. 231).

# GYROPHÆNA MINIMA, Er.

Lincoln (Fowler, Brit. Col.) is our only record.

# GYROPHÆNA LÆVIPENNIS, Kr.

- N. 4, Bradley, a number in a fungus on an old stump at roadside, 15-8-09, W W. Irby, 12-6-09, W W.
- S. 15, Sapperton, 10-00, S C S.

# GYROPHÆNA MANCA, Er.

The commonest species of the genus in our county.

- N. 4, Bradley, in fungi on stumps by the roadsides in large numbers, 9-8-99, and occurring there each year, W W. Little Coates, W W. 6, "In abundance in boleti growing on an old stump by the side of the road between Lincoln and Langworth." (Fowler, Brit. Col.) Newton Cliff, 18-6-01, abundant in fungus on an old ash stump, A T.
- S. 13, Nocton, E A W. (See E M M., March 1868, p. 231).

#### LEPTUSA FUMIDA, Ev.

N. 4, Roxton Wood, one specimen under bark, 31-5-09, WW.

#### SIPALIA RUFICOLLIS, Er.

Lincoln (Fowler, Brit. Col.)

S. 13, Nocton, E A W. (See E M M., Jan. 1868, p. 186).

#### BOLITOCHARA LUCIDA, Gr.

N. 6, Riseholme, near Lincoln (Fowler, Brit. Col.), our only record.

#### BOLITOCHARA BELLA, Mark.

N. 8, North Thoresby, two specimens, 17-6-09, WW.

#### BOLITOCHARA OBLIQUA, Ev.

N. 4, Irby, one specimen, 12-6-09, W W.

#### PHYTOSUS SPINIFER, Curt.

N. o. Mablethorpe (Fowler, Brit. Col.)

#### PHYTOSUS BALTICUS, Kr.

N. 9, Mablethorpe, in abundance under dry dung on the beach (Fowler, Brit. Col.)

#### PHYTOSUS NIGRIVENTRIS, Chev.

This insect was confounded with the preceding until 1899, when it was listed as a British species.

N. 9, Mablethorpe (see E M M., Sept. 1909).

#### DIGLOTTA MERSA, Hal.

There is no recent record.

N. 4, Cleethorpes, J. Kidson Taylor (see E M M., Jan. 1869, p. 200). Cleethorpes (Fowler, Brit. Col.)

#### HYGRONOMA DIMIDIATA, Gr.

N. 4, Freshney Bog, by sweeping, one specimen 9-5-08, W W. Croxby, at pond, one specimen by Mr. F. Sowerby, 12-5-10, W W.

## OLIGOTA INFLATA, Man.

Will, without doubt, be found all over the County.

N. 4, Freshney Bog; 2-7-08 by sweeping sallows, W W. and Mr. Donisthorpe. Clee, in abundance in haystack refuse, 28-2-09, W W.

# MYLLÆNA BREVICORNIS, Mat.

The only species of this genus which has been recorded in the County.

N. 6, Langworth Wood, (Fowler, Brit. Col.)

# DEINOPSIS EROSA, Steph.

Our only record :-

Lincoln, sparingly in flood refuse, (Fowler, Brit. Col.)

#### HYPOCYPTUS LONGICORNIS, Pk.

A very common species, but we have records for a small area only.

N. 4, Croxby, by sweeping, 8-8-06, W W. Bradley, in dead leaves, 2-4-09, W W. 9, Humberstone, 3-5-09, W W.

#### CONOSOMA LITTOREUM, L.

Our only record:-

Lincoln (FOWLER, BRIT. COL.)

# CONOSOMA PUBESCENS, Gr.

A common species.

N. 3, Goxhill, on fungus, 1908, W W. 4, Grimsby shore, on old logs, common, 20-10-06, W W. Clee, in haystack refuse, 24-2-08, W W. 7, Moortown, at stumps of trees, 3-7-10, W W.

#### CONOSOMA IMMACULATUM, Steph.

Our only record :-

N. 6, Langworth Wood (Fowler Brit. Col.)

# CONOSOMA LIVIDUM, Er.

A common species.

N. 4. Humber Bank, on logs, common, 9-06, W W. Bradley, in dead leaves, 2-4-09, W W. Flood refuse of River Freshney, in large numbers, 26-9-09, W W. 11, Chapel, 11-7-87, J E M.

# TACHYPORUS OBTUSUS, L.

Very common.

N. 2, Ashby, 1899, Dr. C. 3, Cadney A T. 4, Grimsby, A S. 8, Grainsby, 25-4-08, W W.

S. 17, Wash shore, A T.

# TACHYPORUS SOLUTUS, Er.

Rather common.

N. 4, Bradley, 4-6-07, W W. Grimsby shore, 20-10-06, W W. 7, Moortown, 3-7-10, W W. 9, Mablethorpe, 3-4-86, H W K. (NAT. WORLD, June, 1886).

# TACHYPORUS CHRYSOMELINUS, L.

Very common.

- N. 3, Cadney, A.T. 4, Brocklesby, 14-6-00, A.S. 7, Moortown, 3-7-10, W.W. 9, Humberstone, 21-6-00, A.S.
- S. 13, Court Leys, 6-00, S.C.S.

## TACHYPORUS HYPNORUM, F.

The commonest of all our beetles.

N. 3, Cadney, A T. 4, Clee, A S. 9, Humberstone sandhills and shore, 9-4-07, W W. 11, Ingoldmells, 21-9-99, E A W-P.

#### TACHYPORUS PUSILLUS, Grav.

Not uncommon.

N. 4, Bradley, 9-12-07, W.W. Clee, in haystack refuse, 3-09, W.W. 9, Humberstone, 20-3-09, W.W.

#### TACHYPORUS BRUNNEUS, F.

Not uncommon.

N. 3, Goxhill, in flood refuse, 25-12-09, W W. 4, Bradley, 26-6-07, W W. Laceby, sandpit, 27-7-09, W W.

#### CILEA SILPHOIDES, L.

Uncommon.

- N. 4, Freshney, river flood refuse, one specimen, 10-7-08, W W.
- S. 13, Court Leys, 7-7-01, S C S.

#### TACHINUS FLAVIPES, F.

Not uncommon in the Grimsby district.

N. 4, Beelsby, in a wood in decaying fungi several specimens, 5-9-09, W W. Little Coates, 6-09, W W. Roxton Wood, 31-5-09, W W.

#### TACHINUS HUMERALIS, Gr.

This species will no doubt be found to occur commonly throughout the County.

N. 4, Beelsby, in fungi, 9-07, WW. Roxton Wood, 8-10-08, in fungi, WW.

# TACHINUS RUFIPES, De. G.

A very common species.

N. 3 Goxhill, 25-12-09, WW. 4, Little Coates, in dung, 8-5-07, WW. Freshney, flood refuse of river, in great abundance, 8-7-08, WW. Bradley, in fungi, 15-9-08, WW. 7, Moortown, 18-8-07, WW.

# TACHINUS SUBTERRANEUS, L.

Uncommon.

N. 4. Grimsby, in a garden, one specimen, 19-12-07, W W. Clee, in haystack refuse, one specimen, 3-09, W W.

#### TACHINUS MARGINELLUS. F.

A very common species.

N. 4, Freshney, river flood refuse, abundant, 8-7-08, W W. Little Coates, in dung and fungi, common, 8-7-09, W W. 7, Moortown, 3-7-10, W. W. 9, Mablethorpe, A T.

#### TACHINUS LATICOLLIS, Gr.

Rare or overlooked.

N. 4. Beelsby, one specimen in decaying fungus, 5-9-99, W W.

#### TACHINUS COLLARIS, Gr.

Local.

Lincoln, common in flood refuse, (Fowler, Brit. Col.)

#### TACHINUS ELONGATUS, Gyll.

Lincoln, (Fowler, Brit. Col.), (also see E M M. Vol. xxiv., 1887-8, p, 46, "June 1887, running on a pavement in the City.")

#### MEGACRONUS CINGULATUS, Man.

N. 4, Irby, 11-5-10, one specimen taken by A B by sweeping, W W.

#### MEGACRONUS ANALIS, Pk.

N. 4, Grimsby, one specimen on street, 10-5-08, W.W. 7, Linwood one specimen, 8-09, W.W.

#### BOLITOBIUS LUNULATUS, L.

N. 4, Bradley Wood, in fungi, 18-10-06. Irby, in fungi, 24-5-06,
 W W. 6, Newton-on-Trent, 6-95, A T.

#### BOLITOBIUS TRINOTATUS, Er.

N. 2, Broughton Woods, in fungi, 8-9-08, W W. 4, Bradley Wood, in fungi, common, 18-10-06, W W. 7, Linwood, 5-8-09, W W.

#### BOLITOBIUS EXOLETUS, Er.

N. 4, Bradley Wood, in fungi, common, 18-10-06, W W. Irby, 24-5-08, in fungi, W W. Beelsby, 5-9-09, W W.

#### BOLITOBIUS PYGMÆUS, F.

N. 3, Cadney, in fungi, 9-97, A T. 4, Little Coates, in fungi, 8-7-09, W W. Bradley, in fungi, 18-8-09, W W.

# MYCETOPORUS LONGULUS, Man.

Not uncommon.

N. 4, Irby, by sweeping, 20-6-07, W W. Bradley, in dead leaves, 2-4-09, W W. Laceby, sandpit, 27-7-09, W W. 9, Mablethorpe, under seaweed and refuse on shore (Fowler, Brit. Col.) Humberstone, 'fitties,' 6-5-06, W W. Lincoln, on pavements (Fowler, Brit. Col.)

#### MYCETOPORUS SPLENDIDUS, Gr.

N. 4, Freshney bogs, one specimen, 9-5-08, W W.

#### HABROCERUS CAPILLARICORNIS, Gr.

N. 11, Alford, at Well Vale, 20-8-08, L N U., one specimen taken and several seen under bark of fallen tree, W W.

#### TRICHOPHYA PILICORNIS, Gyll.

Our only record :- Lincoln, (Fowler, Brit. Col.)

#### HETEROTHOPS NIGRA, Kr.

N. 4, Little Coates, 26-9-09, five specimens in a mole's nest in company with Q. vexaus, Epp. (see below), WW. 9, Humberstone, a specimen in a mole's nest in the sand, 15-10-09, WW.

#### HETEROTHOPS DISSIMILIS, Grav.

N. 4, Clee, in haystack refuse, common, 18-3-09, W W.

#### OUEDIUS LATERALIS, Gr.

N. 4, Roxton Wood, one specimen, 8-10-08, W W. The fact of our having only one record for so conspicuous a species indicates its rarity in this as in other counties.

#### OUEDIUS MESOMELINUS, Marsh.

Occasional, but widely distributed.

- N. 2, Ashby, 1899, Dr. C. 4, Clee, in haystack refuse, one specimen, 3-09, W W. Cleethorpes, 6-09, W W. 7, Linwood, 5-8-09, W W.
- S. 18, near Spalding, 6-04 (W. E. Sharp, F.E.S.)

#### QUEDIUS FULGIDUS, F.

N. 4, Grimsby shore, one specimen under a stone, 18-9-07, W W.

#### OUEDIUS PUNCTICOLLIS, Th.

N. 3, Cadney, 6-10-98, one specimen, A T.

## QUEDIUS CRUENTUS, Ol.

N. 4, Clee, in haystack refuse, one specimen, 23-3-10, W W.

S. 13, Court Leys, 5-01, S C S.

# QUEDIUS VEXANS, Epp.

A very interesting capture.

N. 4, Little Coates, 26-9-09, one specimen in a mole's nest in company with H. nigra, Kr. (see above).

This beautiful insect is evidently found only in moles' nests and from its curious habitat remained quite 'unknown in Britain until March, 1906, when it was discovered by Dr. N. H. Joy at Bradfield, near Reading, Berkshire, and since then has turned up widely in England (see E M M.)

# QUEDIUS CINCTUS, Payk.

A common species and no doubt widely distributed.

N. 3, Cadney 9-97 A T. 4, Bradley Wood under a dead hedge-hog in numbers, 29-8-07, W W. River Freshney flood refuse, 12-9-08 in large numbers, W W. Croxby, 11-9-08, W W. Cleethorpes, 16-5-08, W W.

#### **QUEDIUS FULIGINOSUS, Gr.**

A common species in the Grimsby district and no doubt throughout the County.

N. 3, Cadney, 21-3-98, E A W-P. 4, Great Coates, in moss, etc., 27-4-07, W W. Irby, 14-5-08, W W. Cleethorpes, 8-09, W W.

#### QUEDIUS TRISTIS, Gr.

Another common species, specially so on the coast.

N. 3, Cadney, 3-00, E A W-P. 4, Great Coates, L N U, 8-9-96, A T. Cleethorpes, 19-9-09, W W. 8, Donington-on-Bain, 9-08, sent by Rev. W. Wright Mason. 9, Tetney Haven, several under tidal rubbish, 13-8-08, W W.

#### QUEDIUS MOLOCHINUS, Gr.

As common and in such localities as the preceding.

N. 3, New Holland, under stones on the shore, 29-8-09, W W. 4, Grimsby, on Humber Bank, 9-9-07, W W. Laceby, under stones, 27-7-09, W W. 9, Tetney Haven, under tidal refuse, several, 13-8-08, W W.

#### QUEDIUS FUMATUS, Steph.

N. 4, Irby, 4-4-09, in wet dead leaves, one specimen, W W. Beelsby, 25-9-09, W W.

#### QUEDIUS MAURORUFUS, Gr.

Our only record:—near Boston, E. C. Rye, Apl. 1860 (see Ent. W. Intell., May 19, 1860, p. 52).

#### QUEDIUS UMBRINUS, Er.

N. 4, Irby, 20-6-07, one specimen, W W.

# QUEDIUS SUTURALIS, Kies.

N. 4, Bradley, from dry dead leaves in a wood, 2-4-09, W W. Clee, in haystack refuse, 18-3-09, W W.

# QUEDIUS ATTENUATUS, Gyll.

N. 4, Freshney River, flood refuse, in large numbers, 24-9-09, W W. Bradley, one specimen in a rain pool, 18-8-09, W W.

# QUEDIUS SEMIÆNEUS, Steph.

N. 4, Irby, 20-6-07, one specimen, I believe by sweeping and a subsequent specimen, 12-6-09, W W. Bradley, 1-9-09, W W. Clee, in haystack refuse, W W.

# QUEDIUS BOOPS, Gr.

Appears not to have occurred in the Grimsby district!

N. 3, Cadney, A T.

# CREOPHILUS MAXILLOSUS, L.

Generally common.

- N. 2, Ashby, Dr. C. 4, Roxton Wood, in a dead crow, 31-5-09, W W. Cleethorpes, 19-9-09, F. W. Sowerby. 8, near Louth, H W K. 9, Theddlethorpe, in dead dog, A T. Saltfleetby, 8-6-99, L N U.
- S. 13, Court Leys, -98, S C S.

#### LEISTOTROPHUS NEBULOSUS, F.

Frequent.

N. 4, Great Coates, L.N.U., 8-9-96, A.T. Bradley Wood in putrid fungi, 20-8-06, in numbers, W.W. Cleethorpes Sandhills, one specimen, 4-10-08, Mr. Donisthorpe. 10, Woodhall Spa, 7-8-93, L.N. U., (W.F.B).

#### LEISTOTROPHUS MURINUS, L.

- N. 4, Great Coates, L N U., 8-9-96, A T. (I have never taken it in the Grimsby district, W W.) 10, Woodhall Spa, 7-8-93, L N U., (W F B).
  - Court Leys, 5-00, S C S.

#### STAPHYLINUS STERCORARIUS, Ol.

Not recorded from Grimsby district.

- N. 8, Hubbard's Hill, Louth, R. W. Goulding. 11, Alford, Chas.
- S. 13, Hartsholme, one specimen, L N U., (NAT. 1899, p. 287), Hykeham and Lincoln, (Fowler, Brit. Col.)

#### STAPHYLINUS CÆSAREUS, Ceder.

Our only record.

N. 8, Hubbard's Valley, Louth, H W K. (NAT. WORLD, March 1886).

#### OCYPUS OLENS, Mull.

The familiar "devil's coach horse," a common species.

- N. 2, Manton, 1900, M P. 3, Cadney, A T. 4, Weelsby, 1898, A S. 5, Scotton, E A W-P. 8, Donington-on-Bain, H W K. 9, Humberstone, 21-6-00, A S.
- S. 13, Court Leys, 8-98, S C S.

# OCYPUS BRUNNIPES, F.

Evidently rare.

N. 7, Linwood, 1908, sent by Miss Cameron, A T.

#### OCYPUS FUSCATUS, Grav.

Our only record:—Lincoln (FOWLER, BRIT. COL.)

#### OCYPUS CUPREUS, Ross.

Not so common inland as on the coast.

N. 2, Manton district, 9-97, A T. 4, Great Coates, L N U., 8-9-96, A T. Cleethorpes, under rubbish on coast, 29-8-07, W W. 9, Tetney Haven, in numbers under tidal refuse, 13-8-08, W W.

#### OCYPUS ATER, Gr.

Confined to the coast, where it is common.

N. 3, New Holland, on the shore under stones, 29-8-09, W W. 4, Cleethorpes, 5-7-94, L N U. (W F B.) 9, Humberstone, 9-7-08, W W.

#### OCYPUS MORIO, Gr.

Common on the coast and inland.

- N. 3, Goxhill, 5-9-08, W W. 4, Irby, 24-5-08, W W. Ravendale, 12-9-08, W W. 9, Tetney fitties, under tidal refuse, 13-8-08, W W.
- S. 17, Surfleet, 30-8-01, A T.

#### OCYPUS COMPRESSUS, Marsh.

Evidently rare.

N. 4, near Peak's Farm, Grimsby, 1898, A S.

## PHILONTHUS SPLENDENS, F.

Common.

N. 3, Ulceby, in dung, 6-09, W W. 4, Peak's Fields, 1898, A S. 7, Linwood, sent by Miss Cameron, A T. 9, Theddlethorpe, A T.

#### PHILONTHUS INTERMEDIUS, Bois.

N. 4, near Peak's Farm, 1898, A S. I have taken several specimens in Grimsby district from dung, W W. 8, Tetney, 13-8-08, W W.

#### PHILONTHUS LAMINATUS, Creutz.

Fairly common.

N. 2, Manton Common, 1900, M P. 3, Cadney, 3-00, E A W-P.
 4, Grimsby, 30-3-01, A S. Clee, haystack refuse, 3-09, W W.
 8, Tetney, 16-4-08, W W. 9, Theddlethorpe, 1893, A T.

#### PHILONTHUS ÆNEUS, Ross.

Common.

- N. 2, Broughton, 3-6-95, L N U. (NAT. 1895, p. 236). 3, Goxhill, in carcase, 2-5-10, W W. 4, Grimsby, 11-8-07, W W. 8, near Louth, H W K. 10, Woodhall Spa, 7-8-1893, L N U. (W F B).
- S. 13, Hartsholme district, 24-5-94, L N U.

# PHILONTHUS PROXIMUS, Kr.

Is probably not uncommon in the County.

- N. 4, Croxby, 6-09, W W. Little Coates, 8-7-09, W W. Cleethorpes, 19-9-09, W W. 10, Woodall Spa, 7-8-93, L N U. (W F B.)
- S. 13, Court Leys, 6-00, S C S.

# PHILONTHUS ADDENDUS, Steph.

N. 4, Bradley, 29-8-07, W W.

# PHILONTHUS CARBONARIUS, Gyll.

N. 4, Bradley, several specimens in straw, 15-8-09, W W. Croxby, 6-09, W W.

## PHILONTHUS DECORUS, Gr.

A fairly common species.

N. 3, Cadney, 3-00, E A W-P. 4, Peak's farm, Grimsby, 1898, A S. Roxton Wood, 31-5-09, W W. Freshney river flood refuse, in abundance, 8-7-08, W W.

#### PHILONTHUS POLITUS F.

A very common species.

- N. 2, Manton Common, 1900, M P. 3, Cadney, 1898, M P. 4, Roxton Wood, 6-4-07, W W. 8, Donington-on-Bain, Sept., 1908, sent by Rev. W. Wright Mason, A T. 9, Mablethorpe, 30-8-00, L N U.
- S. 17, Wash foreshore, 26-8-97, L N U. (A T).

#### PHILONTHUS VARIUS. Gyll.

A very common species.

N. 2, Broughton, 8-9-08, L N U. (W W). 3, Cadney, A T. 4, near Peak's farm, 1898. Grimsby, in large numbers on the pavements all over the town, 17-9-08, W W. 9, Theddlethorpe, A T. 11, Chapel, 11-7-1887, J E M.

#### PHILONTHUS MARGINATUS, F.

Fairly common.

N. 4, Bradley Wood, by sweeping in the afternoon, 9-9-06, W W. 9, Theddlethorpe, A T. Humberstone, in dung, common, 10-5-08, W W.

#### PHILONTHUS ALBIPES, Gr.

Occasional in Grimsby District.

N. 4, Irby, one specimen, 4-4-07, W W. Freshney river flood refuse, one specimen, 12-9-08, W W. Little Coates, 8-7-09, W W., one specimen.

#### PHILONTHUS CEPHALOTES, Grav.

N. 4, Cleethorpes, 1909, W W. Freshney flood refuse, several in, 12-9-08, W W.

#### PHILONTHUS FIMETARIUS, Gr.

A very common species.

- N. 3, Goxhill, in carcase, 2-5-10, W W. 4, Irby, in dung, 4-4-07, W W. Freshney river flood refuse, in abundance, 12-9-08, W W.
- 13, Court Leys, 24-7-01, S C S. Hartsholme, L N U. (Nat. 1899, p. 286).

#### PHILONTHUS SORDIDUS, Grav.

A common species.

N. 3, Barton-on-Humber, 20-4-07, T. Stainforth. 4, Freshney river flood refuse, abundant, 12-9-08, W.W. Clee, in haystack refuse, 18-3-09, W.W. 9, Humberstone, 24-3-07, W.W.

### PHILONTHUS DEBILIS, Gr.

Occasional in Grimsby district.

N. 4. Croxby, at side of the pond, one specimen, 8-8-09, W W. Cleethorpes, one specimen, 19-9-09. 8, Grainsby, one, 7-09, W W.

### PHILONTHUS SANGUINOLENTUS, Gr.

Not common.

N. 4, Humber Bank, 7-6-07, WW. Little Coates, in dung, 8-7-09, WW.

### PHILONTHUS CRUENTATUS, Gmel.

N. 4, Cleethorpes, 12-5-08, W W. 9, Humberstone, in dung, 10-5-08, W W.

### PHILONTHUS LONGICORNIS, Steph.

N. 4, Cleethorpes, several by Mr. F. W. Sowerby, 19-9-09W W.

### PHILONTHUS VARIANS, Pk.

Common and widely distributed.

- N. 4, Freshney river flood refuse, in numbers, some with quite black elytra, 8-7-08, W W, Cleethorpes, 16-5-08, W W. 9, Theddlethorpe, A T. Humberstone, 21-6-00, A S. 11, Alford, 20-8-08, L N U, (W W).
- S. 13, Court Leys, 7-01, S C S.

### PHILONTHUS VENTRALIS, Gr.

Our only record:-Lincoln (Fowler, Brit. Col.)

### PHILONTHUS DISCOIDEUS, Gr.

N. 4, Cleethorpes, one specimen, 19-9-09, W W.

### PHILONTHUS NIGRITULUS, Gr.

This insect is now regarded as the same as P. Trossulus. It is very common in the Grimsby district and no doubt throughout the County.

N. 3, New Holland, 29-8-09, under seaweed, W W. 4, Freshney river flood refuse, in large numbers, 24-9-09, W W. Bradley, in dung in large numbers, 18-8-09, W W. 9, Humberstone, 11-5-07, W W.

### CAFIUS XANTHOLOMA, Gr.

Common on the coast, under seaweed.

N. 4, Humber shore at Grimsby, 8-6-07, under seaweed, W W.

S. 17, Wash foreshore, 26-8-97, L N U. (A T).

### ACTOBIUS PROCERULUS, Gr.

Our only record :- Lincoln (Fowler, Brit. Col).

### XANTHOLINUS FULGIDUS, F.

N. 10, Woodhall Spa, 7-8-93, L N U. (W F B). Lincoln, (Fowler, Brit. Col).

### XANTHOLINUS GLABRATUS, Gr.

Common.

N. 3, Cadney, 9-97, A T. New Holland, under seaweed, 29-8-09, W W. 4, Peak's fields, Grimsby, 1898, A S. Irby, 7-9-07, W W. 9, Humberstone, 7-08, W W. 11, Chapel, 23-8-87, J E M.

### XANTHOLINUS PUNCTULATUS, Payk.

A very common species.

N. 4, Freshney Bogs, under decaying phragmites, 14-3-07, W W. Cleethorpes, 12-5-08, W W. 9, Humberstone, 7-7-07, W W.

### XANTHOLINUS LINEARIS, OI.

Very common.

- N. 3, Goxhill, flood refuse, 25-12-09, W.W. 4, Freshney Bogs, 21-6-98, E.A.W.-P. Cleethorpes, 14-5-08, W.W. 6, Newton Cliff, 11-6-01, L.N.U. 7, Linwood Common, E.A.W.-P. 9, Humberstone, under tidal refuse, 20-3-09, W.W.
- S. 13, Hartsholme, L N U. (NAT. 1899, p. 287).

### LEPTACINUS PARUMPUNCTATUS, Gyll.

N. 4, Little Coates, near Freshney Bog, one specimen by sweeping, 5-8-09, W W.

### LEPTACINUS LINEARIS, Gr.

N. 4, Freshney flood refuse, one specimen, 12-9-08, W W. 9, Theddlethorpe, A T.

### BAPTOLINUS ALTERNANS, Grav.

N. 4, Croxby, two somewhat immature specimens from a rotten stump near the pond, taken by A B., 16-7-09, W W. Riby, two specimens with **Dorcus** in a stump, by A B., 5-8-09, W W.

### OTHIUS FULVIPENNIS, F.

N. 3. Barton-on-Humber, 20-4-07, T. Stainforth. 4, Irby, 20-6-07, W W. Beelsby, 17-9-08, W W. Bradley, 9-12-07, W W.

### OTHIUS LÆVIUSCULUS, Steph.

N. 4, Irby, one specimen in leaves, 1-8-08, W W. Clee, 23-9-09, several specimens, W W. 7, Moortown, in a sandpit with the following species, but not so common, 18-8-07, W W.

### OTHIUS MELANOCEPHALUS, Gr.

- N. 7, Moortown, in a sandpit in some numbers, 18-8-07, W W. 9, Mablethorpe, 1882, H. Bedford Pim (E M M., Dec., 1882). Humberstone, 20-3-09, several specimens under tidal refuse, W W.
- S. 17, Wash foreshore, 26-8-97, L N U. (A T).

### OTHIUS MYRMECOPHILUS, Kies.

N. 4, Beelsby, one specimen, 17-9-08, W W. Croxby, near the pond, 11-9-09, one specimen, W W.

### LATHROBIUM ELONGATUM, L.

Not uncommon.

- N. Freshney Bog, in refuse, one specimen, 29-4-08, W W, Beelsby, in leaves, one specimen, 17-9-08, W W. 6, Torksey. 16-5-99, Dr. C.
- S. 13, Hartsholme district, 24-5-94. L N U. (W F B).

### LATHROBIUMBOREALE, Hoch.

N. 4, Grimsby, one specimen in a garden, 20-12-09, W W. Near Lincoln, W W F., on March 18th, in a wood (E M M.), May 1882, p. 277.

### LATHROBIUM FULVIPENNE, Gr.

Common.

N. 4, Cleethorpes, 23-5-08, W W. Beelsby, 17-9-08, W W. Roxton Wood, 31-5-09, W W. Little Coates, a specimen in a mole's nest, 26-9-09, W W. 9, Humberstone, 29-4-08, W W.

### LATHROBIUM RUFIPENNE, Gyll.

A very rare capture.

N. 3, Brigg, on bank of Ancholme, a pair, 22-5-93, J. Coe. (See "Naturalist," 1893, page 251).

### LATHROBIUM BRUNNIPES, F.

Common.

N. 3, Cadney, 21-3-98, E A W-P. Little Coates, 20-4-07, W W. Near Grimsby, in hedge bottoms, 9-4-07, W W. Irby, 4-4-09, abundant in wet dead leaves in the woods, W W.

### LATHROBIUM LONGULUM, Gr.

Our only record :- Lincoln (Fowler, Brit. Col).

### LATHROBIUM FILIFORME, Gr.

N. 4, Croxby Pond, at side of, under decaying reeds, one specimen, 9-8-09, W W.

### LATHROBIUM MULTIPUNCTUM, Gr.

N. 4, Laceby, sandpit, one specimen. 27-7-09, W.W. Irby Dale, 27-3-10, a specimen under stone on hill side, W.W.

### ACHENIUM HUMILE, Nic.

N. 4, Bradley, two specimens from cracks in an ash stump in a field near the wood, 16-5-07, W W., and a single specimen in a rain pool on the road near the same field, 18-8-09, W W.

### STILICUS RUFIPES, Germ.

N. 3, Goxhill, in flood refuse, 25-12-09, one, W W.

4, Freshney, flood refuse, two specimens, 12-9-08, W W.

### STILICUS ORBICULATUS. Pk.

N. 4, Freshney, flood refuse, two specimes, 24-9-09, W W.

### STILICUS AFFINIS, Er.

A common species.

N. 3, Cadney, 3-00, E A W-P. 4, Great Coates, 8-9-96, L N U., A T. Irby, in horse dung, 4-4-07, W W. Freshney, flood refuse, in numbers, 12-9-08, W W.

### MEDON PROPINQUUS, Bris.

N. 4, Clee, in haystack refuse, in considerable numbers, 26-10-09, W W. 9, Humberstone, in refuse on shore, one specimen, 20-3-09, W W.

### MEDON MELANOCEPHALUS, F.

N. 4, Irby, 4-4-09, many specimens clinging to the under surface of stones lying on the grass near the chalk pit in the Dale, W W.

### SUNIUS DIVERSUS, Aub.

Our only record :- Lincoln (Fowler, Brit. Col).

### SUNIUS ANGUSTATUS, Payk.

A common species.

N. 4, Bradley Wood, by sweeping, 5-6-07, W W. Clee, in hay-stack, refuse, 18-3-09, W W. 9, Humberstone Sandhills, 24-3-07, W W.

### EVÆSTHETUS SCABER, Gr.

N. 4, Freshney flood refuse, three specimens, 24-9-09, WW. 8, Grainsby, one specimen from stable sweepings, 24-7-09, WW.

### STENUS BIPUNCTATUS, Er.

Our only record :- Lincoln (Fowler, Brit. Col).

### STENUS GUTTULA, Mull.

N. 4, Croxby pond, on warm moist clay bank, one specimen. 9-8-09, W W. 7, Linwood, one at stream side, 20-7-10, W W, 9, Mablethorpe, 12-6-93, L N U. (W W F).

### STENUS BIMACULATUS, Gyll.

N. 4, Bradley Wood, by sweeping, several, 26-9-07, W W. Irby common in dead wet leaves in the wood, 4-4-09, W W.

### STENUS JUNO, F.

N. 4, Irby, one specimen, 14-5-08, W W. Croxby pond side 9-8-09, one specimen, W W. 6, Marton drain, 1892, A T.

### (STENUS ATER.

There is some doubt about this record.

S. 13, w. L N U., 24-5-94).

### STENUS SPECULATOR, Lac.

N. 2, Bottesford, 4-98, M.P. 4, Roxton wood, 31-5-09, WW. Freshney, flood refuse, 24-9-09, several, WW. 6, Torksey, 16-5-99, Dr. C.

### STENUS PROVIDUS, v. Rogeri Kr.

N. 4, Freshney Bog, 25-7-07, W W. Bradley, 5-5-08, W W.

### STENUS BUPHTHALMUS, Gr.

N. 4, Croxby, in great abundance in the wet debris of reeds at side of pond running about in the sunshine, 9-8-09, W W. Bradley at pond side, 15-8-09, W W.

### STENUS MELANOPUS, Marsh.

N. 4, Croxby, one specimen on the dry, dusty road, 9-8-09, W W. Clee, one in haystack refuse, 26-10-09, W W. Bradley Wood, one specimen, by sweeping, 23-6-10, W W.

### STENUS INCRASSATUS, Er.

Our only record:—Boston (Fowler, Brit. Col.), (see E M M., July, 1864, p. 36, E. C. Rye).

### STENUS PUSILLUS, Er.

- N. 4, Freshney flood refuse, in very large numbers, 24-9-09, W W. Roxton wood, on wet ground, 31-5-09, one specimen, W W.
- S. Near Boston, E. C. Rye, 1861, (see E M M., 1864, as above).

### STENUS EXIGUUS, Er.

Our only record:—Lincolnshire (Fowler, Brit. Col.), (see E M M., 1864, as above).

### STENUS VAFELLUS, Er.

Our only record:—Lincolnshire Fens (Fowler, Brit. Col.), (see E M M., August, 1864, p. 59-65, E. C. Rye).

### STENUS CRASSUS, Steph.

Our only record:—Boston (Fowler, Brit. Col.), (see E M M. 1864, p. 86-90, E. C. Rye).

### STENUS ARGUS, Gr.

Recorded by Mr. Janson, as taken by Mr. Wollaston in Lincolnshire; Ent. Ann., 1856, p. 82-92.

### STENUS BRUNNIPES, Steph.

A common species.

N. 3, Cadney, 3-1900, E A W-P. 4, Great Coates, L N U, 8-12-96, A T. Bradley, one in fungus! 15-9-08, W W. Clee, in haystack refuse, common, 26-10-09, W W.

### OXYTELUS COMPLANATUS, Er.

- N. 3, Brocklesby, 14-6-1900, A.S. 4, Grimsby, 10-5-09, W.W. Little Coates, 5-8-09, one specimen, W.W. This species is uncommon in the Grimsby district.
- S. 13, Hartsholme, 24-5-94, L N U. (W F B).

### OXYTELUS TETRACARINATUS, Block.

An abundant species.

N. 4, Irby, in sheep's dung, 1-8-08, W W. Freshney, flood refuse, 2-7-08, in abundance, W W. Bradley, in dead leaves, abundant, 20-5-08, W W.

### OXYTELUS FAIRMAIREI, Pand.

N. 7, Linwood, 27-7-10, one specimen of this rare species in horse dung, W W.

### HAPLODERUS CÆLATUS, Gr.

Frequent in Grimsby district.

N. 4, Flood refuse of Freshney, in large numbers, 8-7-08, W W. Croxby pond side, under decaying reeds, 9-8-09. Beelsby, in rotten agaric, 5-9-09, W W. 9, Humberstone, in dung, 7-8-08, W W. 11, Sutton, 9-9-09, W W.

### TROGOPHLŒUS BILINEATUS, Steph.

N. 4, Croxby pond side, under decaying reeds, one specimen, 9-8-09, W W.

### TROGOPHLŒUS FULIGINOSUS, Gr.

N. 4, Bradley Wood, one specimen, by sweeping, 19-5-09, W W.

### TROGOPHLŒUS CORTICINUS, Gr.

N. 3, Goxhill, in flood refuse, 25-12-09, W W. 4, Freshney, flood refuse, very common, 24-9-09, W W.

Lincoln (Fowler, Brit. Col.)

### TROGOPHLŒUS HALOPHILUS, Kies.

Our only record: -Lincoln (Fowler, Brit. Col.)

### SYNTOMIUM ÆNEUM, Mull.

Our only record:-

N. 11, Well Vale chalkpit, near Alford, 23-11-1890, J E M. (Identified by C O Waterhouse).

### COPROPHILUS STRIATULUS, F.

N. 4, Cleethorpes, one specimen taken on street, 6-4-09, by Mr. C. Gifford (W W.) Grimsby, one on the wing, 10-4-09, W W. Clee, one in haystack refuse, 3-09, W W.

Lincoln, very abundant on the Lincoln pavements in spring, appearing as early as March 19th, 1882, W W F.; also (FOWLER, BRIT. COL.)

### LESTEVA LONGELYTRATA, Gaz.

- N. 3, Ulceby, 26-5-08, W W. 4, Irby, in the water net, 14-5-08, W W. 9, Humberstone, common under tidal rubbish on shore, 10-5-08, W W.
- S. 13, in the west of this division, 24-5-1894, L N U.

### LESTEVA SICULA, Er.

N. 4, Freshney, flood refuse, one specimen, 24-9-09, W W.

### OLOPHRUM PICEUM, Gyll.

N. 4, Scartho, in wet leaves in a wood, 10-3-07, W W. Irby, common in wet leaves in the woods, 4-4-09, W W.

### LATHRIMÆUM ATROCEPHALUM, Gyll.

N. 3, New Holland, 2-5-09, W W. 4, Irby, abundant in dead wet leaves in the woods, 4-4-09, W W.

### LATHRIMÆUM UNICOLOR, Steph.

N. 3, Cadney, 1898, E A W.P. Barton-on-Humber, 20-4-07, T. STAINFORTH. 4, Great Coates, 27-4-07, W W. Freshney flood refuse, 24-9-09, W W.

### PHILORINUM SORDIDUM, Steph.

N. 8, Tetney, by sweeping furze, one specimen, 9-6-07, W W.

### CORYPHIUM ANGUSTICOLLE, Steph.

Our only record :- Lincoln (Fowler, Brit. Col.)

### HOMALIUM RIVULARE, Pk.

A common species.

N. 3, Cadney, E A W-P. 4, Roxton Wood, in carcase of a crow, in numbers, 31-5-09, W W. 9, Humberstone shore, in carcase of seagull, 25-3-08, W W.

### HOMALIUM LÆVIUSCULUM, Gyll.

N. 9, Humberstone, 20-3-09, a single specimen, W W.

### HOMALIUM EXIGUUM, Gyll.

Our only record :- Lincoln (Fowler, Brit. Col.)

### HOMALIUM EXCAVATUM, Steph.

Not uncommon.

N. 4, Great Coates, 8-9-96, L N U. (A T.) Clee, in haystack refuse, 24-2-09, W W. Bradley, a specimen on a decaying fungus, 15-8-09, W W.

### HOMALIUM CÆSUM, Gr.

N. 3, Cadney, E A W-P. 4, Bradley, one, 19-5-09, W W. Freshney flood, one, 26-9-09, W W. Beelsby, one, 25-9-09, W W.

### HOMALIUM RUFIPES, Fourc.

We have no specific records.

Moderately common in the county, A T. (I have never found it in the Grimsby district, W W.)

### HOMALIUM SALICIS, Gyll.

Our only record :-

S. 13, Waddington (H. Matthews). "The specimen from the last mentioned locality was introduced as H. CRASSICORNE n.sp., but Mr. Rye was of opinion that it was only 'a depauperized immature example' of H. SALICIS." (FOWLER, BRIT. COL.)

### HOMALIUM IOPTERUM, Steph.

N. 4, Roxton Wood, 8-10-08, one specimen by sweeping, W W. Lincoln (Fowler, Brit. Col.)

### HOMALIUM CONCINNUM, Marsh.

N. 4, Clee, in numbers in cornstack refuse, 28-2-09, W W.

### HOMALIUM STRIATUM, Gr.

N. 4, Cleethorpes, one, 16-9-08, and several later, W W. Beelsby, in fungus, one, 17-9-08, W W.

### ANTHOBIUM MINUTUM, F.

N. 4, Freshney Bog, very abundant in flowers of Caltha palustris and by general sweeping, 28-5-07, W W, and taken there some years before by A T.

Lincoln, (FOWLER, BRIT. COL.)

### ANTHOBIUM TORQUATUM, Marsh.

Not common.

- N. 9, Humberstone, in flowers of hawthorn, 9-6-07, W W. North Somercotes, by C. Gifford, 18-6-09, W W.
- S. 13, Hartsholme, 24-5-94, L N U., (W F B.)

### PROTEINUS OVALIS, Steph.

A common species.

- N. 3, Cadney, E A W P. 4, Freshney bogs, by sweeping, 29-4-08. Scartho, in old turnips, 10-3-07, W W. 9, Humberstone, in carcase of seagull, 25-3-08, W W. 11, Ingoldmels, 21-9-1899, E A W—P.
- S. 15, Sapperton, 10-1900, S C S.

### PROTEINUS BRACHYPTERUS, F.

Not common.

N. 4, Beel-by. a specimen in fungus, 17-9-08, W W. Bradley, 18-9-08, W W. Little Coates, in fungus, 26-9-09, W W.

### PROTEINUS MACROPTERUS, Gyll.

N. 4, Waltham, one in fungus, 2-5-09, W W. Lincoln, (Fowler, Brit, Col.)

### MEGARTHRUS DENTICOLLIS, Beck.

N. 4, Flood refuse of Freshney, two specimens, 8-7-08, W W. Croxby, 11-9-08, W W.

### MEGARTHRUS AFFINIS. Mull.

N. 4, Clee, one specimen in haystack refuse, 18-3-09, W W. Little Coates, one, 8-7-09, W W.

### MEGARTHRUS DEPRESSUS, Pk.

The commonest species of the genus in the Grimsby district

N. 4, Flood refuse of Freshney, common, 8-7-08, W W. Waltham, in dung, 2-8-09, W W. 9, Humberstone, in sheep's dung, two specimens, 10-5-08, W W.

### MEGARTHRUS SINUATOCOLLIS, Lac.

N. 4, Beelsby, a specimen in fungus. 17-9-08, W W. Little Coates, one in fungus, 8-7-09, W W.

### PHLEOBIUM CLYPEATUM, Mull.

N. 6, Torksey, Mr. Stephen Pegler.

### PHLŒOCHARIS SUBTILISSIMA, Man.

Not uncommon

- N. 4, Irby, two specimens in fungus on a stump, 24-5-08, W W. Bradley, under bark of dead standing fir, 29-5-09, W W. Roxton Wood, under bark of decaying fir, 31-5-09, W W. Lincoln, (Fowler Brit, Col.)
- S. 13, Nocton, E A W., (Ent. M M., January 1868, p. 186).

### STENUS SUBÆNEUS, Er.

N. 3, Goxhill, one, 7-9-08, WW. 4, Laceby Sandpit, one, 27-7-09, WW. 9, Mablethorpe, 1882, by H. Bedford Pim (EMM., Dec., 1882, xix, 161). 11, Sutton, 9-9-09, one, WW. Lincoln (Fowler, Brit. Col).

### STENUS OSSIUM, Steph.

N. 4, Little Coates, a single specimen, 5-8-09, W W.

### STENUS IMPRESSUS, Germ.

Rather common.

N. 3, Cadney, A T. 4, Roxton Wood, 8-10-08, W W. Bradley, in leaves, common, 2-4-09, W W. Irby, 4-4-09, W W. 7, Moortown, 2-7-09, taken by Mr. F. W. Sowerby, W W.

### STENUS FLAVIPES, Steph.

A common species.

N. 4, Freshney Bogs, 7-6-1899, A T. Bradley, by sweeping, 18-5-08, W W. Croxby, 9-8-09, W W.

### STENUS PUBESCENS, Steph.

Rather common.

- N. 4, Bradley, in the water net, 2-5-08, W W. Irby, in the water net, 14-5-08, W W. 6, Marton drain, common, 23-5-1892, A T.
- S. 13, Hartsholme, L N U. (Nat. 1899, p. 287.)

### STENUS BINOTATUS, Ljun.

Probably commoner than the preceding.

- N. 4, Bradley, in water net, 18-5-08, W W. 6, Marton, 1895, A T. 9, North Somercotes, 18-6-09, W W.
  - S. 15. Brandon, 5-1901, S C S. 17, Boston (Fowler, Brit. Col.)

### STENUS NITIDIUSCULUS, Steph.

N. 3, Goxhill, in flood refuse, 25-12-09, W W. 4, Freshney Bog, 29-4-08, W W. Irby, 14-5-08, W W. Bradley, 7-4-08, W W.

### STENUS PICIPENNIS, Er.

N. 4, Irby, 14-5-08, W W.

### STENUS PICIPES, Steph.

A common species.

- N. 4, Freshney Bog, 29-4-08, W W. Bradley Wood, 20-5-09, W W. Beelsby, 5-9-09, W W.
- S. 13, Hartsholme, L N U. (Nat. 1899, p. 287).

### STENUS CICINDELOIDES, Gr.

- N. 6, Marton, 1895, AT. 11, Alford, at Well Vale, LNU., 20-8-08, one specimen, WW.
- S. 17, Boston, E C RyE (E M M., October, 1864, pp. 108-110).

### STENUS SIMILIS, Hbst.

A very common species.

- N. 3, Cadney, 9-1897, A T. 4, Little Coates, common, by sweeping, 24-5-07, W W. 6, Marton drain, 1892, A T. 9, Theddlethorpe, A T. 11, Trusthorpe, 6-1897, A T.
- S. 13, Hartsholme, common, 24-5-94, L N U. (W F B.) 15, Brandon, 5-1901, S C S. 17, Wash foreshore, 8-1897, L N U. (A T).

### STENUS SOLUTUS, Er.

Our only record.

N. 11, Alford, C O Waterhouse (Entered in Alford Nat. Soc. Records, in possession of Mr. A. Smith).

### STENUS TARSALIS, Ljun.

N. 6, Marton, 23-5-1892, AT.

### STENUS PAGANUS, Er.

N. 4, Roxton Wood, one specimen on muddy ground, 31-5-09, W W. Near Boston, E C RyE, 9-4-1860. (See Ent. W. Intell., May 19th, 1860, p. 52; also E M M, October, 1864, pp. 108-110).

### STENUS LATIFRONS, Er.

N. 4, Great Coates, 24-4-07, one specimen in a drain, W W. Near Boston, 9-4-1860, E C R. (See Ent. W. Intell. and E M M. as above).

### OXYPORUS RUFUS, L.

- N. 4, Near Peak's farm, 1898, A.S. Bradley Wood, one by sweeping, 18-10-06, W.W. Irby, in fungi, 24-5-08, W.W. 9, Mablethorpe, 30-8-1900, L.N. U.
- S. 15, Court Leys, 9-1900, S C S.

### BLEDIUS SPECTABILIS, Kr.

N- 9, Saltfleetby, 8-6-1899, L N U. (I have taken this species in this locality earlier than above date, A T). Surfleet, 30-8-01, A T.

### BLEDIUS TRICORNIS, Hbst.

N. 4, Cleethorpes (FOWLER, BRIT. Col.) (See also Cleethorpes, by J. Kidson Taylor, E M M., January, 1869, p. 200). Mr. H. Donisthorpe and W W. dug up several there, 4-10-08, and found them to occur only at a limited spot near the encampment.

### BLEDIUS BICORNIS, Germ.

N. 4, Cleethorpes (Fowler, Brit. Col.)., (also by J. Kidson Taylor, mentioned in E M M. with above). 9, Mablethorpe, 12-6-93, sand-casts noted, L N U. (W W F).

### BLEDIUS ARENARIUS, Pk.

N. 4, Cleethorpes (Fowler, Brit. Col.)., (also by J. Kidson Taylor, mentioned with above in E M M). Mr. Donisthorpe and W W. found it there 4-10-08. 9, Mablethorpe, L N U., 12-6-93, W W F. Theddlethorpe, in profusion on the sands, 4-95, A T.

### PLATYSTHETUS ARENARIUS, Fourc.

N. 4, Irby, in sheep's dung, 1-8-08, W W. 8, Waithe and North Thoresby, 17-6-09, A B. 9, Humberstone, on the wing, 7-8-08, W W.

### PLATYSTHETUS NODIFRONS, Sahl.

N. 4, Freshney, flood refuse, one specimen, 22-11-09, W W.

### **OXYTELUS RUGOSUS, F.**

Common.

N. 3, Cadney, A T. 4, Freshney, flood refuse, 8-7-08, W W. Grimsby, on the wing, 10-5-09, W W. 6, Torksey, 16-5-99, Mr. S. Pegler. 8, North Thoresby, 17-6-09, W W.

### OXYTELUS INSECATUS, Gr.

Our only record:

"Widely distributed from Lincolnshire and Lancashire southwards," one specimen on a door step, Lincoln, (Fowler, Brit. Col).

### OXYTELUS SCULPTUS, Gr.

Uncommon.

N. 4, Freshney flood, two specimens, 12-9-08, W W.

### OXYTELUS LAQUEATUS, Marsh.

Common.

N. 3, Somerby and Housham, 9-10-97, EAW-P. 4, Bradley, 3-5-08, WW. 9, Humberstone, in dung, 10-5-08, WW.

### OXYTELUS INUSTUS, Gr.

Common.

- N. 4, Little Coates, by sweeping, 27-5-07, W W. Under seaweed on the foreshore in large numbers, 7-6-07, W W. 6, Newton Cliff, 5-6-95, A T. 9, Humberstone, 27-8-09, W W. 11, Alford, 20-8-08, L N U. (W W).
- S. 17, Wash foreshore, 26-8-97, L N U. (A T).

### OXYTELUS SCULPTURATUS, Gr.

Common.

- N. 3, Cadney, 3-1900, E A W-P. 4, Irby, 20607, W W. Cleethorpes, 30-9-08, W W. 8, Waithe, 17-6-09, W W. 11, Ingoldmells, 21-9-99, E A W-P.
- S. 13, Court Leys, 6-1900, S C S.

### OXYTELUS MARITIMUS, Thoms.

N. 9, Humberstone, near shore, one specimen, 10-5-08, W W.

### OXYTELUS NITIDULUS, Grav.

A common species.

- N. 4, Freshney, flood refuse, 8-7-08, common, W W. Humber shore, under seaweed, 7-6-07, W W.
- S. 18, Guy's head, 18-8-06, Mr. Claude Morley.

"I took the good beetle Chrysomela fastuosa, Scop., on Lamium album, L., at Cadney, early in June, and sent it on to Dr. W. Wallace, of Grimsby, to verify."—E. Adrian Woodruffe-Peacock.

# CHECK-LIST OF LINCOLNSHIRE PLANTS.

I much regret to say after this Check-List was published and issued to the Union, it was discovered that four species had been omitted through the sticking of the sheets of the original manuscript. Would members kindly add the following ten records and corrections to their copies of the Check-List?

COCHLEARIA ARMORACIA, L. 1865, Britten. -1, 4, 5, 7, 8.

CUSCUTA EPILINUM, Weihe. = C. VULGARIS, Presl.

CUSCUTA EPITHYMUM, Murr. 1878, Lees. +7, 14.

CUSCUTA VULGARIS, Presl. 1853, E. Peacock. +(1), (2).

NYMPHOIDES PELTATUM, Rendle & Britten. 1895, Craster. +13, 15.

PARIETARIA RAMIFLORA, Moench. 1820, Ward. -17, 18.

SAPONARIA OFFICINALIS, L. 1820, Ward. -5, 6, 13, 14, 15, 17, 18.

STATICE LIMONIUM, L. = LIMONIUM VULGARE, Mill.

VIOLA ARVENSIS, Murr. 1851, Watson. +all.

VIOLA REICHENBACHIANA, Boreau. = V. SYLVESTRIS, Kit.

Many new divisional specimens and records have already been received, and before the end of this season much further additional matter may be expected, but all this material must wait for the full "Flora of Lincolnshire."

### E. ADRIAN WOODRUFFE-PEACOCK.

Sparrow and House Martin.—On the 3rd of June, Mrs. Booth, of Howsham School, saw a House Sparrow fly down from a House Martin's nest with an egg stuck on its beak. It laid it on a garden bed and returned. When Mr. and Mrs. Booth went to look for this egg, they found three; and I saw them in situ as placed there by the Sparrow. I have often known Sparrows occupy the nests of House Martins, but have never heard of egg removal before.—E. Adrian Woodruffe-Peacock.

### FURTHER NOTES ON

# LINCOLNSHIRE GALLED-PLANTS.

### By Miss S. C. Stow.

Since the publication of "Lincolnshire Galled-Plants" in the "Transactions for 1907," fresh galled species have been taken in the county, and other species previously taken have been now identified. Thanks are due to the late Mr. Connold, author of "Vegetable Galls," for help in naming critical specimens. North Lincs. (V.C. 54), Divisions 1—12. South Lincs. (V.C. 53), Divisions 13—18.

### By GALL-GNATS or MIDGES (Diptera).

### DIPLOTAXUS TENUIFOLIA, D.C.

Seed vessels by Cecidomyia brassica, Wtz.

D. 15. Saltisford, near Grantham, 6-1909. SCS.

### GALIUM MOLLUGO, L.

Stems by Cecidomyia gallicola.

D. 15. Little Ponton, 1904. SCS.

### HIERACIUM PILOSELLA, L.

Leaves by Cecidomyia pilosellæ, Bin.

D. 15. Harrowby Hill, Grantham, 4-9-1909. SCS.

### PRUNUS SPINOSA, L.

Leaves by Cecidomyia pruni, L.

D. 15. Sapperton, 6-1908. SCS.

### SALIX VIMINALIS, L.

Leaves by Cecidomyia clausilia, Bre.

D. 15. Great Ponton, 8-1905. S C S.

### SENECIO JACOBÆA and S. ERUCIFOLIUS, L.

Seed-heads by Diplosis jacobæa, Lew.

D. 12. Skirbeck, 10-9-1909. S C S.

### SENECIO VULGARIS, L.

Seed-heads by Urphora macnura, F. Low.

D. 15. Ropsley, 9-1908. SCS.

### By GALL-WASPS (Hymenoptera).

### QUERCUS.

Base of trunk by Aphilothrix radicis, Fab.

D. 13. Nocton, 10-6-1909. SCS.

### By APHIDES or GREEN-FLY (Hemiptera-Homoptera)

### BUXUS SEMPERVIRENS. L.

Shoots by Psylla buxi, L.

D. 15. Grantham, 1909. SCS.

### FAGUS SYLVATICA, L.

Leaves by Phyllaphis fagi, L.

D. 15. Grantham, 8-1909. SCS.

### URTICA DIOICA, L.

Shoots by Trioza urticæ, L.

D. 13. Court Leys. 1903. SCS.

### ABIES EXCELSA, De C.

Shoots by Adelges abietis, L.

D. 15. Little Ponton, 10-9-1905. SCS.

### By MITES (Acarina).

### TRIFOLIUM FILIFORME.

Flower-heads by Eriophyes plicator, var. trifolii, Nal.

D. 12. Skirbeck, 10-9-1909. SCS.

### By BEETLES (Coleoptera).

### TRIFOLIUM FILIFORME.

Stems by Apion pubescens, Kirby.

D. 12. Skirbeck, 10-9-1909, SCS.

### By MOTHS.

### PLANTAGO LANCEOLATA, L.

Flower spike by Tortrix paleana, Her.

D. 13. Court Leys, 8-1894. D. 15 West Willoughby Quarry, 27-8-1894, and Grantham, 1908. S C S.

### By EELWORMS (Anguiluilidæ).

### AGROSTIS ALBA, L.

Base of leaf by Tylenchus tritici, Bas.

D. 15. Brandon, 7-1907.

### By FUNGI.

### BETULA ALBA.

### Branch by Exoascus turgidus.

In the list of "Galled Plants," Transactions, 1907, the "Witches brooms," so common on this tree, were given as being caused by a mite "Eriophyes rudis," it is now found to be caused by Exoascus turgidus, a fungus. Mites are to be found among the "Brooms," but they are not the cause of the deformity. Divs. 2, 3, 6, 15. The buds are, as stated in the previous list, galled by Eriophyes rudis. D. 15. Denton and Belton Park. 8-1904. S C S.

# FIELD MEETINGS, 1909.

The Sixty-fourth Field Meeting was held 10th June, 1909, at NOCTON and POTTER HANWORTH. The day was somewhat cold, but this wooded area, with a wealth of spring and early summer blooms, made a charming place for research work. The Nocton ground was well worked and a large number of specimens noted, though no rarities were discovered. The keeper conducted the party to the fine chestnut that grows near the Hall, its spread being amongst the greatest in the country. There were many other finely grown trees, one curiously enough having nine stems and known for over a hundred years as the "Nine Brethren." As much time had been spent at Nocton, the Potter Hanworth Woods were somewhat hurriedly investigated, and the party finished at the Manor, where Alderman and Mrs. Fox kindly provided tea.

Miss S. C. Stow noted the following Galls:-

C 1:	1	Caridamaia malii	
Galium verum	by	Cecidomyia galii	
Galium aparine	by	Eriophyes aparinæ	
Rosa canina	by	Rhodites rosæ	
Cratægus monogyna	by	Eriophyes goniothorax	
Veronica chamædrys	by	Cecidomyia veronicæ	
Prunus spinosa	by	Eriophyes similis	
Salix alba	by	Nematus gallicola	
Ulmus	by	Schizoneura ulmi	
Barbarea vulgaris	by	Cecidomyia sisymbrii	
Acer pseudo-platanus	by	Phyllocoptes acericola	
Viola odorata	by	Urocystis violæ	
Corylus avellana	by	Eriophyes avellanæ	
Bursa bursa-pastoris	by	Crystopus candidus	
Quercus	by	Teras terminalis	
Quercus	by	Aphilothrix radicis	
Quercus	by	Spathegaster baccarum	

Mr. G. W. Mason reports as follows:-A very cold day with a north-east wind spoilt what might have been a good day for Entomologists, although the sun shone fitfully. Nocton Woods appeared to be splendid ground for Lepidoptera, but the weather was too cold even to find moths sitting on the tree trunks, and the long distance to be traversed prevented any effective work being done for larvæ with the beating stick. The following were observed by other members of the Union and myself, namely: -Pieris brassica, P. napi, Canonympha pamphilus, Xylophasia rurea, light examples of Tephrosia biundularia, T. punctularia, Cabera pusaria, Emmelesia albulata, Melanippe montanata, Sciaphila hybridana, Oecophora tinctella, and larvæ of Vanessa urtica (in hundreds on a clump of nettles just outside Nocton Wood), Porthesia similis, Pacilocampa populi, Diloba caruleocephala, Calymnia trapezina, Phigalia pedaria, Hybernia defoliaria, Cheimatobia brumata, Tortrix cratagana, T. xylosteana, and Laverna phragmitella (from bulrush heads). Numbers of V. urtica were reared, but no notable varieties appeared. More than a hundred L. phragmitella were bred from the few bulrush heads that were taken.

The Rev. E. Adrian Woodruffe-Peacock reports the flora as follows: - A variety of soils rarely covered at a single meeting of the Union, varied as woodland, pasture, meadow, garden ground, and roadside, lent a delightful charm to this outing. The plants were commensurate with the diversity of their environment. If nothing quite unknown to the Union's register was met with, the rarity of some of the species was interesting enough to satisfy the most importunate demands of the youngest neophyte of Flora. Alchemilla vulgaris was common on chalky boulder clay and drift sand. Athyrium Filix-famina and Habenarra virescens on Old River gravel, along with Luzula pilosa and Neckeria claviculata, a lovely wilding and one of our rarest now. Nymphoides peltatum was discovered for the second time in South Lincolnshire in the shallow water of the pond below Nocton Hall on chalky boulder clay. Over 200 species were recorded in all.

The sixty-fifth Field Meeting was held on July 8th, 1909, and a fair number of the members of the Union turned out to

study ground which fifty years ago was one of the richest in Lincolnshire—the GAINSBOROUGH DISTRICT—where the great Copper Butterfly was wont to disport itself in abundance. In more recent years the ground has been drained and the growth of the woods has brought about a complete change in the landscape, consequently in the flora and fauna of the area, and the great Copper and other rarities are now extinct.

Morton Carrs was reached in good time and the work of recording commenced. The nature of the soil was unfavourable for land shells, but the ditches yielded various species, most of them records for the district.

The report on the Lepidoptera by Mr. G. W. Mason is as follows:-Although the day was fine and sunny, insects on the whole were scarce. The following Lepidoptera were observed by members: -Pieris brassica, Argynnis selene (near Peacock's Hole), Canonympha pamphilus, Epinephele janira, Drepana falcataria, Xylophasia monoglypha, Metrocampa margaritaria, Amphidasys betularia (a crippled "type" male on a tree trunk), Tephrosia biundularia (two intermediate varieties between the type and var. delamerensis), Bupalus piniaria (common round Peacock's Hole, two females being taken, a somewhat rare occurrence), Thera variata, Melanippe sociata, M. montanata, Macaria liturata, Asthena luteata, Camptogramma bilineata, Cidaria conylata, Acronycta psi, Scoparia ambigualis, Crambus pascuellus, C. inquinatellus, Tortrix ribeana, T. unifasciana, T. viridana, T. heparana, Dictyopteryx læflingiana, Sericoris lacunana, Bactra lanceolana, Pædisca bilunana, P. occultana, Symæthis oxyacanthella, Tinea semifulvella, Argyresthia retinella, A. gædartella, A. brochella.

After the meeting, Mr. F. Baines of Gainsborough, exhibited at the White Hart Hotel, several rare Butterflies, including *Polyommatus dispar*, the extinct Large Copper, which were taken by Mr. Forrington very many years ago at Morton Carr. He told the members present that Mr. Forrington had taken several specimens there in the lane by the side of the Wood over the drain. He also exhibited two Large Coppers, male and female, taken by the late Rev. K. J. Miller, Walkeringham, which would probably be taken outside the County of Lincoln. He

also showed two Aporia cratagi (Black veined White), taken by himself in White's Wood Lane, Gainsborough, very many years ago.

The members were pleased to have the attendance of veteran collectors—Canon William Fowler and Mr. F. M. Burton—who gave interesting accounts of their finds fifty years ago.

The Rev. E. Adrian Woodruffe-Peacock reports on the flora as follows:-Though called Morton Carr Wood on the tongues of men and on old maps, the wood visited by the Union is in Blyton parish. The soil is Blown Sand. The whole vegetation has been most seriously injured by rabbit. Beeches of 50 years' growth showed by unmistakable marks what terrible neighbours hungry rabbits are when snow lies thick on the ground. Not once only, but periodically from the period of planting, the trees had been attacked, and many had been destroyed. It would almost seem the greater part of this woodland was killed off by rabbits, judging of their influence by marks left on the living trees, and by the rest of the flora. The lane to the west of the wood was where the late Rev. J. K. Miller, of Walkeringham, took Pyrola. Though the exact spot is known, -and this is the second time this species has been most thoroughly hunted for-it is no longer to be found. No doubt the rabbits have accounted for it, for the flora of the whole lane is suggestive of constant cropping by these prolific animals. The Botanical Secretary spent the whole day there studying it. as it is so little understood, except by foresters. Sagina procumbens, Rumex acetosella and Senecio jacobæa, were the predominant species. Luzula multiflora, Myosotis collina, Cerastium semidecandrum, Viola riviniana, Agrostis vulgaris, Holcus mollis, Galium saxatile, Aira præcox, Nardus stricta, Alchemilla arvensis, and Veronica arvensis, V. minima, (the rabbit-eaten form) were common by the road side. While Lysimachia vulgaris, Erodium vulgatum, Veronica chamædrys, V. serphllifolia and V. officinalis were rare. On the horse track were found Urtica urens, Polygonum hydropiper, Lycopsis, Prunella, Cerastium glomeratum, C. triviale, Myosotis versicolor, M. arvensis, and Capsella. The most curious example of rabbit environment was Anthriscus vulgaris, which here were perfect

plants, only a few inches high buried in moss. To those who know this species growing in the full sunlight and wind-protected, these miniature plants would have been a puzzle. The best species taken were Myrica gale, and Scutellaria galericulata. Many old friends from this district were not seen—Peucedanum palustre, like Drosera anglica, now perhaps extinct here, along with Silene anglica, and Scutellaria minor, which most certainly still exist there and lately flourished.

The Sixty-Sixth Field Meeting was held on August 10th, 1909, at BOURNE. This was a very successful meeting, a good number of members assembled and an attractive district was explored. Bourne has a most interesting water supply and the area round the "Well Head" received much attention. The Brickyards were visited and a large number of Selenite Crystals were thrown out with the clay, and many specimens were collected. This Geological feature was technically explained by Mr. H. Preston, F.G.S.

The President gives the following report on the Conchology: -The Conchologists, consisting of Rev. E. A. Woodruffe-Peacock, Messrs. H. Preston, W. Denison Roebuck, Arthur Smith and Thomas Stow, had an excellent day's work, the neighbourhood of Bourne proving a splendid collecting ground. The Grantham contingent, having to wait for the Lincoln train. filled up time by exploring the station-master's garden. They found the var. rava of Milax gagates, hitherto known only from two Lincolnshire localities, Limax maximus vars. mulleri and fasciata, etc. On the arrival of the Lincoln members, the scoops were put into the drain by the roadside, when numerous species of water shells were collected, including very fine examples of Sphærium lacustre var. brochoniana, Bythmia leachii, Valvata piscinalis and Limnaa palustris—besides various Planorbes. A little further on, a backwater proved very rich in smaller species, including Valvata cristata and Pl. fontanus. Moving on to the Well Head, the results were nil-except for Limnaa peregra. The next place visited was the brick-pits, where Helicella caperata was found on one of the tall grasses. In the neighbourhood of the Well Head were collected numerous fine examples of Hyalinia helvetica

and H. cellaria, and adults of Arion ater vars. aterrima and castanea. Auster Wood was then searched, and some heaps of stones yielded numerous species, including Helix nemoralis, Buliminus obscurus, Hyalinia helvetica, the var. hyalinia of Cochlicopa lubrica, etc., and on sticks were found Hyalinia radiatula, H. crystallina and H. alliaria. Pillow Wood was next examined, but yielded nothing but a broken example of Hygromia granulata and abundance of Pyramidula rotundata. In both woods the pretty little slug Arion intermedius, in its var. grisea, occurred plentifully on bits of wood.

By the roadside near these woods were found numerous examples, in many varieties, of *Helicella virgata*.

The great discovery of the day was made by Messrs. Peacock and Stow, who found Azeca tridens not uncommon on a patch of ground about three-quarters of a mile in area, this being only the second locality for Lincolnshire, and an entirely new record for Vice-County 53, Lincoln South.

Including this, twenty additions were made to the previously known list for the Bourne district (16 North of the Lincolnshire scheme), for which 50 species are now on record—and the Conchologists felt well rewarded with the success of their investigations.

The Rev. E. Adrian Woodruffe-Peacock writes on the flora:—From the point of view of Botany, the Bourne meeting was a most successful one. Some 250 notes were taken during the day. Though the soils were not as varied as at Nocton they furnished more true rarities. The best finds of the day were as follows:—The Well Head supplied Eupatorium cannabinum, Equisetum limosum and its variety, and E. palustre. The brick pit in the Oxford clay Vicia tetrasperma, which is yet unrecorded for the first six natural history divisions of the County. Bourne, Auster and Pillow Woods gave Calamagrostis epigeios, Carex remota, Euphorbia amygdaloides in flower and seed. Melampyrum pratense, Pyrus, torminalis growing freely enough, Sanicula, Scrophularia elala, a second record for the whole County. Viburnum opulus, and Vicia sylvatica. A brick wall top at Bourne gave Sagina procumbers

and S. ciliata, and a stunted specimen of Verbascum thapsus. The old Abbey garden yielded Parietaria, Ægopodium, and a fine Mespilus germanica. On going back to get further specimens of Azeca tridens which Mr. Stow had discovered, we took the rare hybrid grass Festuca pratensis × Lolium perenne, on low damp ground as usual.

The Sixty-seventh Field Meeting was held on Sept. 9th, 1909, in the BOSTON District.

This Meeting was kindly arranged by members of the Boston Society, several of whom conducted the Union members to some interesting places.

The party went by waggonette to Fishtoft Bridge, and alighting, worked along Hob Hole drain and by the Witham back to Boston, working the drains and ditches in Fishtoft en route.

The President contributes the following notes:-The Conchologists present, Messrs. W. Denison Roebuck, F.L.s. Thomas Stow, and Arthur Smith, F.L.S., worked diligently, first along the west side of the Hob Hole drain from Nunn's Bridge down to its confluence with the Witham, and then the roadside ditches in and round Fishtoft village. Of the twenty-five species found, the greater half (thirteen) were additional records for District 12, one of them-Vertigo antivertigo- quite new for the county of Lincoln. Of this species, a single example was found by Mr. Roebuck in a damp spot alongside Hob Hole drain, where also occurred Agriolimax lavis and abundance of small Succinea putris and a few young examples of Vitrina pellucida. Near by, Mr. Stow found a Carychium minimum, and a few examples of Hygrania hispida var. sericea and one Hyalinia nitidula also occurred. In very shallow watery hollows close alongside the drain were numerous small Limnæa peregra and Planorbis spirorbis and its variety leucostoma, a few small Aplexa hypnorum and a dead Bythinia tentaculata; and a shallow pond by the Coastguard station, at the outlet of the drain, yielded a few Planorbis crista var. imbricata. Turning towards Boston, abundance of Paludestrina jenkinsi and one P. stagnalis were found in brackish water ditches alongside the Witham, and a single Pupa muscorum

under a log. The common slug Agriolimax agrestis occurred everywhere in both its types. The roadside drains of Fishtoft and vicinity were investigated, and yielded abundance of Limnaa peregra, a few L. truncatula, a number of L. palustris vars. tincta and roseolabiata, plenty of Valvata cristata, Planorbis umbilicatus, Pl. vortex, Pl. spirorbis, and Aplexa hypnorum, and at one place numerous Spharium lacustre. Examples of Zua lubrica and Hygromia hispida were found, and H. aspersa and H. nemoralis also occurred, while Mr. Kime, of Boston, brought in a few immature H. hortensis. Although the surface geology of the area visited is not favourable for expecting a large number of species of land mollusca, there is no doubt that further work will yield additional material.

Miss Stow reports on the Galled plants found at this meeting as follows:—Senecio jacobæ and S. erucifolius by Diplosis jacobæa. The swollen seed-heads were very conspicuous on these two species. The latter was also found having the leaves galled by a mite, up to the present unnamed. Salix alba and S. fragilis by Nematus gallicola, Cratægus monogyna by Cecidomyia cratægi, Atriplex angustifolium by Aphis atriplicis, Rosa canina by Rhodites rosæ, Vicia cracca by Diplosis lotis, Bursa bursa-pastoris by Cystopus candidus, Ammophila arenaria by Eurytoma hyalipennis, Trifolium filiforme by Eriophyes plicator var. trifolii, and by Apion pubescens.

Miss S. Catherine Stow acted as Botanical secretary, and the following is extracted from her report. It contained 162 species and varieties, which is a remarkable record for estuarine alluvium, only varied by one little patch of shingly gravel not far from the Blue Anchor, which gives this district and natural history division Ammophila arundmacea, Sedum acre. There was Sagina apetala as well as S. procumbens, both the maritine Spergularia, Acer campestre, Ononis spinosa, Medicago arabica, near Skirbeck Church. Trifolium fragiferum and T. filiforme as much an alien there as Melilotus parviflorus. Buplcurum tenuissimum, and Carum segetum, along with Evanthe lachenalii. Dipsacus sylvestris was not far from Aster tripolium and its variety discoideus. Artemisia maritima in its true home might be sent off against A. vulgaris, an alien in Boston Dock, which is the flowering place of many foreign species. Senecio erucifolius was quite out of place on Hobhole

drain bank, with Cnicus acaulis too, unless chalk has sometimes been used there to protect the bank. Centaurea nigra and its variety decipiens were in evidence there too. Glaux, Armeria and Limonium were as much in their right place as Lycopus and Volvulus sepium. Solanum dulcamara was rightly there, but Linaria vulgaris quite out of place. Plantago coronopus was very rare, while P. maritima was just as common. Mercurialis annua was quite out of place, as was Phalaris canariensis. Juncus compressus and J. Gerardi were both there, but the former very rare. The two Triglochin, also, with Scirpus maritimus; one unknown Carex was unfortunately lost. Catabrosa aquatica was the best grass noted. It appears to be extending its range with us. Hordeum marinum was the only shore-grass observed.



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H Preston, F.G.S., Hawthornden Villa, Grantham,
Rev. E. A. Woodruffe-Peacock, L.TH., F.L.S., F.G.S., Cadney Vicarage, Brigg.
Rev. A. Hunt, M.A., Welton Vicarage, Lincoln.

Rev. Canon Wm. Fowler, M.A., Winterton, Doncaster. W. D. Roebuck, F.L.S., Hyde Park Road, Leeds.

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Cryptogams:—Miss Stow, 23, Avenue Road, Grantham,
Fungi:—Sir H. C. Hawley, Bart., Tumby Lawn, Boston.

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[C. S. Carter, M.C.S., 49, Eastgate, Louth.

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Kew, H. Wallis, 3, Herndon Road, Wandsworth, London, S.W.
Maples, Ashley K., 37, London Road, Spalding.
Robinson, J. H., Goxhill.
Sowerby, F. W., Stafford House, Cleethorpes.

# LINCOLNSHIRE NATURALISTS' UNION.

# Statement of Accounts from 1st January to 31st December 1910.

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24th January 1911. Exam

Examined and found correct,

E. E. BROWN, Auditor.

BRITISH MUSCUM 5 DEC 21 NATURAL HISTORY.



REV. J. CONWAY WALTER, B.A.

PRESIDENT 1900.

# The Presidents

OF THE

# Lincolnshire Laturalists' Union.

THE

# REV. J. CONWAY WALTER, B.A.

HE REV. JAMES CONWAY WALTER, who was President of our Union in 1900, is a man of many activities. He was the son of the Rev. Edward Walter, and was born at his father's Rectory at Langton, 29th January, 1831. He was educated at the Grammar School, Horncastle; the Proprietary School, Woolwich; and at St. Catherine's College, Cambridge, where he was Skerne Scholar, and where he graduated B.A., in 1853, in double Honors. After holding several curacies he was Vicar of Woodhall Spa and of Kirkstead from 1869 to 1889. Since 1890 he has been Rector of Langton and Vicar of Old Woodhall.

Mr. Walter, who has conducted five of the Union excursions, has been a devoted lover of nature from his boyhood. He has made curious experiments in hybridism, has been a great deer-stalker, and has detailed his experiences in three volumes: "Letters from the Highlands;" "Highland Forays;" and "Fin, Fur and Feather;" and more recently in a volume entitled "Stray Leaves, or Travel, Sport, &c.," which has been most favourably reviewed.

His pen, however, has not been confined to sporting topics, for Mr. Walter is an excellent local antiquary, and he has published "Records of Woodhall;" "Records of (32) Parishes round Horncastle;" and "A History of Horncastle," as well as divers smaller works.

He is also an amateur sculptor in wood, and has carved pulpit, reading-desk and lectern, in oak, for each of his two churches at Langton and Woodhall. His principal recreation is pedestrianism, and though no longer young he frequently walks twenty or thirty miles; and he has, in Switzerland and elsewhere, walked more than seventy miles in a single day. His house contains a remarkable collection of curiosities, antiquities and natural history objects from which he has at various times contributed to the County Museum, Lincoln.

# OCCURRENCE OF PISIDIUM SUPINUM—SCHMIDT—IN LINCOLNSHIRE.

It is interesting to record living examples of a shell which for the last few years have been regarded as a Holocene fossil. On the 24th July, 1908, I succeeded in taking the above at the mouth of the Brant—div. 13 W.—when it was identified by Mr. J. W. Taylor. It is also recorded by Mr. J. E. Cooper in the Journal of Conchology, Feb. 10th, 1909, page 294, as living in the Thames, in a sandy bottom with running water, in company with P. amnicum. In appearance it is very distinct from any other British Pisidium, being remarkably solid, sharply triangular, and very prominently beaked. As the conditions in which I took it were similar to those described by Mr. Cooper, there seems every probability of its occurring in other parts of the county.

J. F. MUSHAM, F.E.S.

# PRESIDENTIAL ADDRESS

TO THE

# LINCOLNSHIRE NATURALISTS' UNION, 1910,

BY

### W. DENISON ROEBUCK, F.L.S.

On coming to the end of my second year of office as your President, I have to thank you very much for an honour which I most highly appreciate.

In my previous address last year I reviewed the state of our knowledge as regards the Land and Freshwater Mollusca of our county, and the work upon that subject which is in course of preparation, and which, during the coming year, is intended to be prepared for early publication.

Special attention has been paid during the year, not only by myself, but by Mr. Musham and Mr. Smith, to working up the most neglected areas—and the Holbeach, Long Sutton, Crowland, Stamford, Axholme, and Horncastle districts have been energetically worked with good results.

In that address I drew attention to three species, the records of which needed confirmation, and two of these have been found.

One of them, Zonitoides excavatus, has been on record a long time, as found by Mr. F. W. Fierke at the Woodhall Spa excursion of the Union in one of its earliest years of existence. The confirmation came from the adjoining division, specimens occurring to Mr. Musham and myself in Tumby Wood.

The confirmation of the other species, its first discovery, and the subsequent investigation of its habitat, have proved one of the most interesting pieces of work done for a long time. This species is Limnaa glabra, one whose non-occurrence, or rather our want of knowledge of its occurrence, has long puzzled our conchologists. Till this year the only record has been of examples found on the south side of Lincoln city by Rev. Canon W. W. Fowler, the coleopterist. This locality was almost immediately destroyed, so the species had to be regarded as extinct. The distribution of the species outside our county added to the puzzle, for it has not a few localities in neighbouring parts of Yorkshire, on old common lands, of which my late friend, Mr. William Nelson, regarded it as a characteristic, and therefore, with the gradual disappearance of the old commons, a dying-out species.

Another interesting circumstance in regard to the life history of Limnaa glabra is the fact that it is one of a trio of molluscan species which associate together in their habitats in pretty much the same manner as such diverse animals as zebras and various species of antelopes do on African plains. The other two species are Planorbis spirorbis and Aplexa hypnorum, which are both common in many Lincolnshire localities.

The discovery of Limnaa glabra this year was made at our Scunthorpe meeting and—as was also the case with the Lincoln record—by a coleopterist.

It was our friend Dr. Wallace, who, sweeping a pond for water-beetles, found a few small shells, which, being submitted to the conchologists, were at once pronounced to be this long sought for species.

Circumstances prevented the immediate following up of this discovery, but a month later Mr. J. F. Musham and I enlisted the aid of Mr. Alexander M. Cobban, of Scunthorpe, for the purpose of confirming the record and of making as exhaustive a study as we could of its environment and surroundings, and the conditions under which it flourished. Thanks to Mr.Cobban's local topographical knowledge, the place was found without much difficulty, and the shell was found to be an abundant one in various stages of growth, and associated with Planorbis spirorbis var. rotundata, and Pisidium pusillum, all commonly, and one solitary example of Limnaa peregra. Water insects were in

great abundance, both coleoptera and hemiptera, and tadpoles were also present. The pond was large but very shallow and filled with vegetation, and it was only by standing ankle-deep on the margin that one could get to use the scoop for collecting. Presently we found it better to pluck up handfuls of the plants and search for the shells amongst them.

We collected all the plants which grew in the pond and submitted them to the Rev. E. A. Woodruffe-Peacock, who found them fully as interesting as we had found the shell. This well shows the interdependence of workers in different branches of natural history upon each other, for if the coleopterists had done a good turn to us, we were able to do a similar one to the hotanists.

Mr. Peacock reported to me that the plants were thirteen in number—as follows:

JUNCUS SYLVATICUS Reichb.

1851, Watson. -12, 15, 18.

J. BULBOSUS L.

1836, Dodsworth. + all.

HYPERICUM ELODES L.

1820, Ward. + 2, 5, 7-10.

MYOSOTIS SCORPIOIDES L.

1799, Young. + all.

HYDROCOTYLE VULGARIS L.

1746, Blackstone. — 9.

SAMOLUS VALERANDI L.

1836, Dodsworth. + all. POTENTILLA PALUSTRIS Scop.

1799, Young. — 3, 4, 9, 14, 15, 16, 17, 18.

GALIUM PALUSTRE L.

1820, Thompson. + all.

MYRIOPHYLLUM SPICATUM L.

1670, Ray. - 8.

POTAMOGETON POLYGONIFOLIUS Pourr.

1876, Fowler. + 1, 2, 3, 5, 17, 18.

ANAGALLIS TENELLA Murr.

1815, Peck. — 3, 8, 11, 12, 14, 17, 18.

LITTORELLA UNIFLORA Aschers.

1841, Drury. + 2, 5, (12). This is a new record for Division 2.

and last but not least,

### PILULARIA GLOBULIFERA L.

1010. Roebuck. + 2.

which is a new record for the whole county of Lincoln.

Some Mosses and Charæ were also collected on the margin of the pond and submitted to Mr. William Ingham, who named them as follows:—

SPHAGNUM CYMBIFOLIUM (Warn.) var. GLAUCESCENS (Warn.)
SPHAGNUM SUBNITENS Run & Warn. var. VIRESCENS Warn.
HYPNUM GIGANTEUM Schp.
HYPNUM ADUNCUM (Hedw.) var. INTERMEDIA Schpr.

Mr. Ingham added that there were a Nitella and a Chara, stating that the latter is probably C. vulgaris, and the former probably N. flexilis, but they cannot be named definitely in the absence of fruiting examples.

It was on the Myriophyllum spicatum that Mr. Peacock found small examples of the Limnaa.

Although one of the associates was found with the Limnaa there was no trace of the other, the Aplexa hypnorum. But our investigations were made in August and September, and the Aplexa is an early spring species. It is abundant enough in the county, and I found it myself plentifully in ditches in April so near as the Isle of Axholme.

As for the physiographical characteristics of the place where we found the Limnaa, Mr. Cobban, who is pre-eminently qualified from his intimate local knowledge and his geological acquirements, tells me that the pond is situate on the sandy commons north of Scunthorpe, amongst the blown sands, the home of the pigmy flints—at an elevation of 145 feet O.D. Here, masked by bracken and herbage, which again is surrounded by the wild arid sandy waste, it nestles a veritable haunt of nature, quite untouched by the hands of the husbandman and the busy workers of the iron and steel works so close at hand. The pool is a drinking place for many birds, some rare, all interesting, and in winter the haunt of wild fowl. The pool is situated on the lower portions of the Marlstone Rock beds where they join with the Middle Lias clays, which underlying clays hold up in a natural depression the water exuding from the marlstones.

The character of this habitat shows that search should be made on similar tracts of common lands, as Scotter, Brumby, Crosby and Risby Warrens, and a further examination of this Scunthorpe locality at other periods of the year, especially in the spring, would yield further results of interest and value.

An account of the insect-fauna of this pond, and also of the microscopic life, would also be very desirable, and no doubt our good friend Dr. Wallace will be able to enumerate the water beetles, the search for which has resulted in so good a find for the conchologists.

There is one species yet to be found of the three I mentioned as requiring confirmation, but this year we have not had the opportunity of searching Linwood Warren in the hope of finding Limax tenellus—a task reserved for next or a future year.

But as our work goes forward it follows that the more difficult it is to add to a long list. And a long list it is, as North Lincolnshire figures in the Census of British Mollusca this year as the area from which more species have been authenticated than from any other county in the British Isles.

Of late I have been looking into the Bibliography of Lincolnshire natural history, and although it is inevitably a dry subject, it cannot fail to be of some value to take stock of what our predecessors have done, so that good work in the past may not be lost sight of.

I will pass lightly over the subjects in which the most work has been done, and address myself more particularly to what we may find to be the most neglected groups.

In regard to Physiography, I will only refer to Christopher Merret's Table of the Washes in Lincolnshire—that is, Fossdyke and Crosskeys—published in the Philosophical Transactions in 1696, as among the earliest—Merret being a contemporary of Lister.

Previously to this, in 1684, Dr. Lister published his scheme of sands and clays in the North of England, particularly Lincolnshire and Yorkshire, which is important as being absolutely the first proposal of geological maps. Then, in 1700, Abraham de la Pryme published a paper upon Fossil Shells and Fishes at Broughton Quarries.

More recent work in Geology and Palæontology I need not dwell upon; we all know what has been done by such of our members as Mr. Burton and Mr. Preston.

In Meteorology we may refer to Mr. W. Veall's observations made in Boston during the years 1838 to 1852 and later, as being the earliest records of systematic weather-investigation published for the county.

In Botany, so far as the Flowering Plants are concerned, the records have been gathered up so completely by our friend, Rev. E. A. Woodruffe-Peacock, in his various papers, the latest being the summary Check-List published this year with our own Transactions, that I need not do more than refer to a paper which has just been published (Journal of Botany, Oct. 1910) by Mr. G. Claridge Druce, in which he reproduces Sibthorp's MS. list of plants noted in Lincolnshire, at Easton near Grantham, Spilsby and Long Sutton, about the year 1780, the MS. being in the Library of the Botanical Gardens at Oxford.

The Mosses have been enumerated for us at various times by Miss S. Catherine Stow, Mr. J. Larder, the Rev. Canon Fowler, and in the Reports of the Botanical Locality Record Club.

Miss Stow has also compiled for us the List of Hepatics, in the Naturalist for 1902, and in our Transactions for 1906.

In respect of Lincolnshire Lichens, we have no list and only a very few casual records.

There are various partial lists of Fungi—by Canon Fowler, Mr. Crossland and others, besides casual records and Lees' Outline Flora. I cannot but think that, if possible to induce competent mycologists to be present, it would be a good plan for the Union to have the September meeting in each year specially devoted to this branch of study.

The Freshwater Algæ have had some slight attention paid to them. A list of Diatoms collected at Sleaford by Dr. Lowe in 1856 was reprinted in the Naturalist in October 1896 (p. 304):

and in the same journal for Feb. 1902 (pp. 59-61) Mr. J. Larder gave a list of the Lincolnshire species, which was added to in 1905 by a list of Diatoms and Desmids found at Stamford by Mr. Arthur Smith (Nat., Oct. 1905, p. 316), and in 1903 Mr. Smith gave a list of 46 Diatoms found at Clee (Nat., Ap. 1903, p. 122).

As to the Marine Algæ, we appear to have nothing but casual and isolated records, and no one seems ever to have systematically collected them on our coast-line.

The Marine Zoology of our coast-line seems to have been similarly neglected for want of observers, except for the work done by the Grimsby naturalists while Mr. Arthur Smith was resident there.

We have only isolated records of the Echinodermata or the Coelenterata and Protozoa—while as for the Vermes there are only Mr. F. M. Burton's notes of the Zoophytes collected by our Union at Mablethorpe in 1901 (Nat., May 1901, p. 153) and Mr. G. R. Vine's list of two dozen Polyzoa which he collected at Cleethorpes in 1892.

What we know of the Foraminifera is the palæontological work of Messrs. Burrows, Sherborn and Bailey (1890).

Nor do we seem to have much more than a few casual records of Crustaceans.

So that altogether the natural history of the extensive coastline of our County is practically unknown and needs working by those who happen to have the opportunity.

As regards the terrestrial fauna, beginning with the lowest groups, we have no record for Freshwater Sponges.

What work has been done as regards the microscopic life of our fresh waters has been by our Secretary, Mr. Smith, and his friend, Mr. Walter J. Wood, who published a list of 66 species of Infusoria of the Grimsby District in 1902 (Nat., July 1902, pp. 209-210) and of 15 found at Stamford in 1905 (Nat., Oct. 1905, pp. 316-317).

As to the Worms inhabiting land and fresh waters we have only a record of *Pachydrilus verrucosus* from Grantham in 1897, and of the remarkable land-planarian *Rhynchodemus terrestris* found by Mr. H. Wallis Kew near Louth in the same year.

An interesting field of research, and not too difficult, is that of the wood-lice, which have not been worked with us, although the curious blind white one (*Platyarthrus hoffmannseggii*) which inhabits ants' nests is well-known to us, at Grantham and Mablethorpe.

A few microscopic crustacea were noted at Stamford in 1897 by Messrs. Smith and Wood (Nat., Oct. 1905, p. 317).

I now come to a group which though by no means well worked, has had much more attention paid to it, the Arachnida (spiders, mites and their allies). Here again as with the Mollusca the great, the immortal Lister is the pioneer—and the same volume, published in 1678, which has the first molluscan lists, has also the first enumeration of English Spiders, no small proportion of which will have been from Lincolnshire material. It would be of considerable service to us if some arachnologist would determine to what modern species Lister's polynominal designations apply, and thus establish for us the actual beginnings of the Lincolnshire spider-list.

In more recent years Spiders have been collected and enumerated by Mr. H. Wallis Kew (68 species, Nat., Feb. 1887, pp. 55-59), Mr. Arthur Smith (Nat., Sept. 1901, p. 269; and Nov. 1901, p. 332), and Rev. E. A. Woodruffe-Peacock (Nat., Aug. and Sept. 1898, pp. 244 and 264). Many of these records are based upon indisputable authority, that of the Rev. C. O. Pickard-Cambridge.

A kindred group, the Harvestmen or Phalangidea, were enumerated for us by Mr. Peacock, with additions by Mr. Smith (Nat., Nov. 1899, pp. 331-332; and Feb. 1900, p. 62).

The closely-allied group of the Pseudoscorpions or Cheliferidæ has been made the special subject of study by our old Lincolnshire worker Mr. H. Wallis Kew, who published lists in the Naturalist, July 1901, p. 193 (four species), and Aug. 1903, pp. 298-9 (seven).

The Water-Mites have been collected and studied assiduously for many years in the Kirton-Lindsey district by Mr. C. F. George, who has made the subject his own speciality. His lists, with full annotations and with descriptions and figures,

were published in the Naturalist (Aug. 1900, pp. 253-5, May 1901, pp. 159-160, and Jan. 1902, pp. 13-14).

The Gall-Mites have been studied of late years by Rev.E.A. Woodruffe-Peacock and Miss S. C. Stow, their list appearing in the Naturalist for Aug. 1903 (pp. 305-6) and in our Transactions for 1907.

Of the Myriopoda—the Centipedes and Millipedes—we appear only to have one single note, one by Mr. F. M. Burton, of Scolopendra electrica in 1851 at Lincoln.

Coming to Insects, we have no records whatever of the Collembola, the Thysanura, or the Thysanoptera.

Of the Orthoptera, apart from isolated records, we have a list of 10 at Alford by Mr. J. Eardley Mason (Nat., May 1896, p. 129); and one of 17 for the County by Mr. Eland Shaw (Ent. Mo. Mag., Ap. 1903, pp. 91-95).

Of the Neuroptera the earliest record is of a Dragon-fly named after the county—Agrion lincolniense Stephens, which is placed as a synonym of Erythromma naias by Lucas in his monograph.

The Alford species, 20 in number, were enumerated by Mr. J. Eardley Mason (Nat., May 1896, p. 129), and seven years later Mr. Eland Shaw published a list of 71 species for the county (Ent. Mo. Mag., Ap. 1903, pp. 91-95).

The Order Hymenoptera has only been partially worked—and a great field of investigation is open for the ardent student. The earliest record is by John Hill in 1758 in his English edition of Swammerdam's 'Book of Nature' in which he speaks of the Willow Bee (Megachile willughbiella). He says the construction of the cells of the Willow Bee is very extraordinary; nor are these found in combs; they are frequent in the fen countries and he has seen thousands of them in Lincolnshire, where they make themselves cases of the leaves, and bury themselves in the rotten part of the wood.

There are various well-defined groups composing this order Hymenoptera, but of some of these we have only casual records. Such is the case with the Ichneumonidæ and kindred groups which are parasitic on other insects.

Mr. George published a list of the Aculeate Hymenoptera of Kirton-in-Lindsey in Ap. 1888 (Nat., p. 107), with a few additions in June 1906 (Nat., p. 199).

The Rev. A. Thornley catalogued the Sawflies to the number of 50 in June 1899 (Nat., pp. 167-170), and the Rev. E. A. Woodruffe-Peacock and Miss S. C. Stow did the same for the gall-flies in May 1903 (Nat., pp. 185-6) and in our Transactions for 1907 and 1909.

The Coleoptera or Beetles have been enumerated by the Rev. A. Thornley and Dr. Wallace in our own Transactions, and three parts of their excellent list have already appeared (Trans. 1907-1908-1909), gathering up the threads of our knowledge to date.

The county has had the benefit of the residence of the author of the standard work on British Coleoptera, the Rev. Canon W. W. Fowler, but the only local paper he has published was one for Mablethorpe in 1881; but the value of his example and his work has been very considerable, and the same remark applies to the Rev. Alfred Thornley, whose energy during the time of his residence on our immediate boundary was a perpetual stimulus to work on the part of others.

The first considerable list for Lincolnshire was by the famous T. Vernon Wollaston, who collected a number of species in 1843 with Lincoln and Spridlington as his centres of investigation.

The order Lepidoptera (Butterflies and Moths) has, of course, had more votaries than any other group of insects, and yet the papers of any magnitude are few, and it is reserved for Mr. Guy W. Mason to be the author of the first county list—the one which is appearing in our Transactions, of which four parts have already come out (1906-1907-1908-1909).

Of local lists the neighbourhood of Lincoln city has been treated by Mr. W. D. Carr (Ent., Aug. 1894, pp. 232-237), the Butterflies of Scotter by Mr. Thomas Fyles (1859), the Louth Butterflies by Mr. R. W. Goulding and Mr. H. Wallis Kew (1885), Skegness by Mr. G. T. Porritt (1879), Wyberton parish by Mr.

J. C. Lane-Claypon (Nat., Dec. 1897, pp. 361-366), and Theddlethorpe St. Helens by Mr. A. E. Gibbs (1905).

Of course numerous notes have been published by many collectors, and the establishment of the Entomologist's Weekly Intelligencer in 1856 or so was the means of bringing out many records that would otherwise have been lost to us.

Among the prominent workers and collectors have been the Rev. R. P. Alington at Swinhope, Mr. W. Waldo Cooper at West Rasen, Mr. E. Tearle at Gainsborough, Mr. Thos. Fyles at Scotter, all about 1856 to 1859, Mr. V. T. Crow at Louth in the 'eighties,' the Rev. G. H. Raynor at Panton, Mr. J. F. Musham at Lincoln, Mr. A. Reynolds at Owston Ferry and Mr. W. Lewington at Market Rasen, all about 1895 or so.

The record of Lepidoptera in this county goes back as far as John Ray, a contemporary and friend of Lister, who recorded *Melitaa cinxia*, by which he doubtless meant *M. artemis*, the Greasy Fritillary.

The Diptera or two-winged flies have been the subject of an excellent List by Mr. Percy H. Grimshaw, based upon the Rev. A. Thornley's material, published in the Naturalist (May 1898, pp. 157-170, and Nov. 1899, pp. 341-8), in which about 255 species were enumerated. This was followed up by a list of Gall-Gnats which Mr. Peacock and Miss Stow contributed in 1907 and 1909 to our Transactions.

The Hemiptera or Bugs is an order which has in this county had the advantage of being collected and studied by a specialist. Mr. J. Eardley Mason, of Alford, devoted himself to this order, or rather to the sub-order Hemiptera Heteroptera, and published Lists in 1888, 1889, 1895, and 1898 (all in the Naturalist), the total number of species recorded by him amounting to 166. A few Homoptera have also been recorded by him, and later, in our Transactions for 1907 Miss Stow recorded thirteen Aphides causing galls on plants, and three more in the Transactions for 1909.

As to Mollusca, the Land and Freshwater Species have been so fully dealt with that it is unnecessary to say anything now. As to Marine and to Fossil Mollusca, we have again to look to Dr. Lister as the great precursor, as his book of 1678 contains descriptions of the commoner and more generally known species of this group. Since his time very little attention has been paid to the marine mollusca of the Lincolnshire Coast until Mr. F. M. Burton gave a list of what he obtained at Mablethorpe and Cleethorpes in August 1857. Subsequently to this, collecting was done by Messrs. J. T. Marshall, B. Sturges Dodd, Arthur Smith, and H. Wallis Kew, culminating in the publication by the last-named of a List of 187 species of Shells of the Lincolnshire Coast (Nat., Dec. 1889, pp. 357-365).

The Fishes of Lincolnshire have not been specially studied nor worked out, and the only list is Mr. Brogden's posthumous one of the Fishes of the Lincolnshire Wash and Fenland (Nat., Dec. 1899, pp. 357-351). There are, of course, numerous records published in the journals, and various interesting species have been noted, such as the Swordfish and Short Sunfish, the Greenland Shark, the Tope, etc., in Boston Deeps.

The Reptiles and Amphibians, although they may be considered to be quite well known, have never been critically studied, and no list has been published. The Natterjack Toad, first found by Sir Joseph Banks, occurs plentifully on the coast line. Of Lizards two have been reported as Lacerta agilis and L. viridis, but these names are evidently incorrect, and it remains to be shown whether we have any species but the common Zootoca vivipara.

The Ornithology of the County has had numerous votaries, and to a large extent has been well, if not quite evenly, worked out. The coast line and the mouth of the Humber are classic ground for the student of bird-migration, due to the long-continued steady and close observations carried out over so many years by the late Mr. John Cordeaux and Mr. G. H. Caton Haigh.

The claim of a few birds to inclusion in the British List depends either wholly, or in part, on their being obtained on the coast line of our county, such as the Greenish Willow Warbler, the Barred Warbler, the Lanceolated Warbler, the Yellow-browed Warbler, and the Red-breasted Flycatcher, to mention only a few.

Mr. Cordeaux's Birds of the Humber District is one of our ornithological classics—a work worthy of the county and of him who wrote it.

There is much detailed information on Lincolnshire Birds, but very few Lists beyond the late Mr. Brogden's for the South Lincolnshire Fenland (Nat., Jan. 1900, pp. 17-32), and not so much attention has been paid to the inland avifauna as compared with that of the more attractive coast-line. The Rev. F. L. Blathwayt has of late published various interesting papers dealing with the neighbourhood of Lincoln.

An interesting item of Lincolnshire Ornithology is that portion of Drayton's Polyolbion which deals in vigorous and resounding rhyme with the birds of Lincolnshire and the fens, and carries us back in imagination to the time before the drainage of the fens and the development of agriculture, when the county was a veritable paradise for wild fowl, to the days when the Bittern and the Dotterel and the Ruff and the Avocet, and many such other species now gone, were common residents with us, and when the Great Bustard roamed unrestrained over the Wolds.

Apart from field-work, there is much to be done in working out the Lincolnshire ornithology, and, before it becomes too late, to trace out the history of the Great Bustard, of the great Gulleries, and of the Decoys which formerly existed in numerous places.

The Mammalia of the County never found one to write a list until our Secretary, Mr. Smith, gathered up the threads and wrote in 1905 a most excellent and full enumeration of the nearly fifty species known (Nat., February 1905, pp. 45-49). The work that now remains to be accomplished is that of working out the local distribution of the species, investigating the credentials of some of the older records, and collecting the smaller and more critical species.

In making this general survey of the state of our knowledge, one feels much handicapped by the fact that the Victoria History of this County, which was to have included a full sketch of what is known in every order and class, is not yet published.

On the whole the Naturalists of Lincolnshire have to be congratulated on the great advance which has been made in our knowledge of the physical conditions and the animal and vegetable life of their county since the time when suitable media for publication became available.

Apart from other journals, the Transactions of our Union, and the pages of the Naturalist from about 1884 to within a short while ago, are full of Lincolnshire observations and information—not all of it the dry bones of science, but replete with suggestions for the future, reminiscences of the past.

The work that lies before us is to complete and co-ordinate our knowledge of our county, to work out the bearings which each subject has upon the others. In this connection the counsels of the Rev. Alfred Thornley, set forth in his presidential address of 1902 (Nat., April 1905, pp. 118-120), are as full of force now as ever they were—in which he commends to the specialist the cultivation of a general interest in the work of others, the necessity of detailed note-taking and the adequate labelling of all specimens, and above all the study of our objects in a state of nature, and with due consideration of all surrounding circumstances.

To which I would add the supreme importance of the study of the common forms, the working out of their distribution in detail as well as of their life-history and their variation. For it is the common species that are the dominant ones, and offer the most suggestive field for detailed observation. With regard to our museum specimens, too, it is necessary that these dominant forms should be exhibited so as to illustrate fully their characteristics and variation. Our records, too, should be more detailed and comprehensive, as the bald statements that have so long done duty to the discredit of our science are now ntirely inadequate.

Speaking of Museums, we have to congratulate the Curator of the Lincoln Museum on the admirable manner in which the collections are displayed and restricted so well to the proper and legitimate functions of a strictly County Museum; and I may emphasize once more that it should be regarded as the place to which, as a rule, all Lincolnshire antiquities and natural history collections should gravitate. We do not in the least overlook the claims which other museums in the county have upon their respective neighbourhoods, but as the Lincoln Museum is strictly a public one, it is not liable to the vicissitudes and the uncertainties entailed by more private ownership. I therefore hope that all patriotic Lincolnshire people who have it in their power will see that their County Museum is adequately supported.

I have now, in conclusion, to thank you very much for the honour of permitting me to preside over you for the past year, and to wish the Union every prosperity for the future.

# The 1909 Irruption of the Crossbill as observed in Lincolnshire.

As regards this great immigration of the Crossbill from N. Europe into the British Isles, the following is a short summary of all the published reports I have been able to find relating to Lincolnshire. The species was doubtless noticed in many districts and unrecorded, and also escaped notice in many others. The birds seem to have remained in the County for a whole year (July 1909-July 1910) and a few pairs almost certainly nested :-

Six were taken at the Outer Dowsing Lightship, July 1909. More than 20 noticed at Louth, 14 and 15 July 1909.

Six observed at Bourne, 25 November 1909.

Large parties inhabited the Fir Woods at Hartsholme, near Lincoln, from January to June 1910, and I myself many times saw them there in flocks of 20 or 30 birds, chiefly during the month of April. A few pairs most probably nested during April and May in the woods, as a bird was seen carrying nesting materials into the fir trees and pairs were also observed apart from the flocks, the males being in song. The flocks departed during June or early July for N. Europe. One bird was picked up dead at Donna Nook, on the coast, 9 July 1910.

A specimen was obtained from Hartsholme for the Lincoln Museum.

# THE LEPIDOPTERA OF LINCOLNSHIRE.

PART IV.

By G. W. Mason,

Barton-on-Humber.

I have included in this part the whole of the so-called Micro-Lepidoptera, so as to have all the records together, and consequently the easier for reference. My labour for the time being is ended, the compilation having given me the greatest pleasure. I must apologize for my initials appearing so frequently and prominently in the following Records, but in view of there being so few workers among the Tortrices and still less among the Tineæ I have thought it as well to give in detail so far as reasonably necessary the dates of my own captures and those of other persons, except in the case of the most abundant species.

The lack of workers in this branch of study arises, I fancy, from the absence of modern and popular works on the subject and within reach of a moderate purse. As a beginner, I felt very much confused, but what a delight it is to take up a fresh subject when everything is new. I have found Stainton's Manual of the very greatest assistance in helping me to classify and name species, and for the generous help of Miss E. Maude Alderson, of Worksop, and Mr. E. A. Atmore, of King's Lynn, who have without stint of labour and patience corrected my determinations and named other specimens which baffled me, I cannot adequately express my heartfelt thanks. They have always esteemed it a pleasure to look over any box of insects that I happened to send them, whether belonging to my own collection or to another person's which had been sent to me for correction. Mr. Louis B. Prout, Mr. Harwood and the late Mr. J. W. Tutt have also had a hand in identification.

Much work still remains to be done, and this List is nothing like complete; species new to the County keep turning up each year, which makes the work all the more interesting.

Mr. E. A. Atmore has provided me with a valuable list of moths taken by his brother, Mr. W. A. Atmore, in the neighbourhood of Grantham, which includes many of the minute and local species.

Where the less common and rarer species have been identified, or the identifications confirmed, I have placed the initials, or, in some cases, the name of the verifier in brackets after the record to give it further weight. Where the referee's initials in a parenthesis occur before the recorder's name, the reference is to the particular record occurring before it; but where the initials are placed after the recorder's name then the reference is to all the records of the captor.

The collections of Mr. V. T. Crow and Mr. J. F. Musham in the Louth and Lincoln Museums respectively, though small, contain many useful additions to the County list, both collections having been through my hands, and some of the obscure species through the hands of Mr. Atmore. In time I hope to be able to publish a supplementary List, and make it as complete as the Macro List, and more worthy to take its place as a County List.

I have used the following further contractions:-

(E.M.A.) signifies Miss E. Maude Alderson.

(E.A.A.) ., Mr. E. A. Atmore.

(W.A.A.) ,, Mr. W. A. Atmore.

(L.B.P.) , Mr. Louis B. Prout.

# Pyralides.

# AGLOSSA PINGUINALIS, L.

Common in stables and outbuildings.

- N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.
- S. Lincoln Dist., J F M. Divs. 13, 15.

# AGLOSSA CUPREALIS, Hb.

N. Panton, one 7-1896, GHR.

# PYRALIS GLAUCINALIS, L.

Frequent.

- N Ashby (Brigg) Dist., RTC. Barton-on-Humber, one 25-8-1906, GWM. Binbrook, 1909, SBS. Gainsborough; 1860, FMB.; 1860, E. Tearle. Lincoln, 1848, FMB. Panton, scarce, GHR. Theddlethorpe, 1904, A.E. Gibbs (Ent., 1905, p. 81).
- S. Lincoln Dist., J F M.

# PYRALIS FARINALIS, L.

Common.

- N. Lincoln, F M B. Divs. 2, 3, 6, 7, 8, 10.
- S. Allington, P. Wynne. Divs. 15,

#### SCOPARIA AMBIGUALIS, Tr.

Very common on tree trunks in woods, dozens flying off on the approach of the collector.

- N. Louth Dist., V T Crow. Divs. 2, 3, 5, 7, 8, 9, 10, 11.
- S. Lincoln Dist., J F M.

#### SCOPARIA CEMBRÆ, Haw.

Occasional.

- N. Barton-on-Humber, 22-7-1904 (E M A.), 5-8-1905, 15-8-1905, G W M.
- S. Lincoln Dist., IFM.

#### SCOPARIA DUBITALIS, Hb.

Usually a common species of this Genus.

N. Lincoln, 1840-50, FMB. Risby Warren, common 5-7-1906, GWM.

#### SCOPARIA LINEOLEA, Curt.

N. Skegness, 16-7-1879, G T P.

#### SCOPARIA MERCURELLA, L.

N. Ashby (Brigg) Dist., R T C. Lincoln, 1840-50, F M B. Louth Dist., V T Crow (E A A). Legsby; Panton; G H R. Theddlethorpe, 1904, A. E. Gibbs (Ent., 1905, p. 81).

#### SCOPARIA ULMELLA, Dale.

N. Welton Wood, 19-7-1909, F G Whittle (Ent., 1909, p. 282).

#### SCOPARIA CRATAEGELLA, Hb.

N. Louth Dist., V T Crow, (E A A). Panton, G H R. Wrawby Moor, 9-8-1905, G W M. (E M A).

## SCOPARIA RESINEA, Haw.

- I have taken this species frequently in and and about the garden.
- N. Barton-on-Humber, 18-7-1904, 19-7-1904, 20-7-1904, 27-6-1905, 27-7-1907, 9-7-1908, 13-7-1909, 25-7-1909, G W M. (E M A).

#### SCOPARIA TRUNCICOLELLA, Sta.

Common on tree trunks in woods.

N. Ashby (Brigg) Dist., RTC. Barton-on-Humber, 24-8-1900, (EMA); Linwood, 3-8-1908; GWM. Scunthorpe, 25-8-1910, FWS. Sweetingthorns Wood, very common, 25-7-1908; Wrawby Moor, 1-9-1907 (EMA.), 8-8-1908 (EMA); GWM.

#### SCOPARIA ANGUSTEA, St., Wd.

N. Barton-on-Humber, 9-8-1904 (E A A), 28-8-1907 (E M A), 24-8-1910 (E A A), G W M. Louth Dist., V T Crow.

## NOMOPHILA NOCTUELLA, Schiff.

N. Burwell Woods, 1904, A E Gibbs (Ent. 1905 p. 81). Gainsborough Dist.; Lincoln, 1840-50; F M B. Panton, 7-1894, G H R. Near Pelham's Pillar Wood, 28-5-1904, G W M.

#### PYRAUSTA AURATA, Scop.

N. Gainsborough, FMB. Legsby; Newball; GHR. Market Rasen, 1877-79, FAL.

#### PYRAUSTA PURPURALIS, L.

Frequent.

- N. Ailby, 20-6-1891, E.W. Ashby (Brigg) Dist., R.T.C. Friesthorpe, 1857, R.P.A. Gainsborough Dist., F.M.B. Langworth, 5-1892; Panton, 9-1892; G.H.R. Newball, 1893, C.D. Ash. Scunthorpe, 6-8-1900, A.T.
- S. Allington, one 1909, P. Wynne. Lincoln Dist., J F M.

#### PYRAUSTA OSTRINALIS, Hb.

This is probably only a variety of purpuralis.

S. Lincoln Dist., some of Mr. J. F. Musham's specimens in the Lincoln Museum are like this variety. Lincoln, 1840-50, F M B. (Recorded as Pyrausta punicealis, which may be referable either to aurata, Scop. or ostrinalis, Hb).

## HERBULA CESPITALIS, Schiff.

N. Ashby (Brigg) Dist., RTC. Louth Dist., V. T. Crow. Panton, 1-8-1894, GHR. Theddlethorpe, 1904, A.E. Gibbs (Ent. 1905 p. 81).

# EURRHYPARA URTICATA, L.

A common and conspicuous species.

- N. Lincoln, F M B. Divs. 2, 3, 4, 5, 6, 8, 11,
- S. Lincoln Dist., J F M. Divs. 13,

#### SCOPULA LUTEALIS, Hb.

Abundant.

N. Gainsborough, F M B. Divs. 2, 3, 4, 5, 7, 8, 9, 10,

# SCOPULA OLIVALIS, Schiff.

Common.

- N. Gainsborough, 1860, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.
- S. Allington, P. Wynne. Divs. 13, 15,

# SCOPULA PRUNALIS, Schiff.

Common.

N. Saxby (Barton), 1892, C D Ash. Divs. 3, 7, 8, 9, 10, 11.

#### SCOPULA FERRUGALIS, Hb.

N. Saxby (Barton), C D Ash.

## BOTYS FLAVALIS, Schiff.

N. Gainsborough; Lincoln, 1840-50; F M B.

#### BOTYS RURALIS, Scop.

Very common.

- N. Lincoln, F M B. Divs. 1, 2, 3, 4, 5, 6, 7, 8, 10.
- S. Lincoln Dist., J F M. Divs. 13, 15.

#### BOTYS FUSCALIS, Schiff.

N. Barton-on-Humber, 10-8-1907, G W M. Lincoln, 1840-50, F M B. Hatton; Langworth, 22-5-1893; Newball; Panton; G H R.

#### EBULEA CROCEALIS, Hb., Tv.

To be found among fleabane (Inula dysenterica).

N. Gainsborough, 1860; Lincoln; FMB. Legsby; Panton; GHR.

#### EBULEA SAMBUCALIS, Schiff.

A common species.

- N. Lincoln, 1848, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 9.
- S. Skellingthorpe, 1900, Rev. W. Beecher. Divs. 13.

## SPILODES STICTICALIS, L.

N. Lincoln, 1852, F M B.

## SPILODES VERTICALIS, L.

- N. Gainsborough Dist.; Lincoln, 1852; F M B. Moortown, one 18-8-1907, G W M.
- S. Lincoln Dist., J F M.

# PIONEA FORFICALIS, L.

Abundant.

- N. Lincoln, 1852, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 10, 11.
- S. Skellingthorpe, 9-6-1902, J F M. Divs. 13, 15,

# OROBENA STRAMINALIS, Hb.

N. Ashby (Brigg) Dist., R T C. Louth, V T Crow. Legsby, common; Panton; G H R. West Ashby, 1902, F S A.

# DIASEMIA RAMBURIALIS, Dup.

"Lincs., 1873."—One so labelled in lot 158 of Mr J A Clark's Collection sold at Stevens' Auction Rooms, February 22 and 23, 1910 (see Ent. Record, 1910, p. 94).

# CATACLYSTA LEMNATA, L.

Frequent.

- N. Ashby (Brigg) Dist., R T C. Lincoln, 1848, F M B. Louth, V T Crow. Market Rasen; 1877-79, F A L.; one or two most years, W L. Marton Drain, common, 8-6-1901, A T. Mablethorpe; Panton; G H R. Theddlethorpe, males common, 26-6-1906, G W M. West Ashby, 1903, F S A.
- S. Lincoln Dist., J F M.

#### PARAPONYX STRATIOTATA, L.

N. Gainsborough, 1860, F M B.

#### HYDROCAMPA NYMPHÆATA, L.

Frequent.

- N. Ashby (Brigg) Dist., RTC. Binbrook, 1909, SBS. Croxby, 6-1909; Irby; FWS. Gainsborough; Lincoln; FMB. Louth, VT Crow. Hatton; Panton; GHR. Sweetingthorns Wood, 25-7-1908 and 14-7-1909, GWM. West Ashby, 1903, FSA.
- S. Lincoln Dist., J F M.

#### HYDROCAMPA STAGNATA, Don.

Common in suitable localities.

- N. Lincoln, F M B. Divs. 3, 4, 5, 6, 7, 8.
- S. ||Cowbit, Chas M Hufton. Divs. 13, 18.

# Pterophori.

#### CHRYSOCORIS FESTALIELLA, Hb.

- N. Ashby (Brigg) Dist., R T C. Linwood, 23-7-1908 and 29-5-1909, G W M (E M A). Panton, 5-1892, G H R.
- S. Skellingthorpe, 9-6-1910, G W M.

## PLATYPTILIA BERTRAMI, Rossl.

N. Ashby (Brigg) Dist., R T C. Panton, among tansy, 7-1894, G H R. Skegness, 1902, F S A.

# PLATYPTILIA GONODACTYLA, Schiff.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, common among coltsfoot, G W M. Panton, G H R.

# AMBLYPTILIA ACANTHODACTYLA, Hb.

N. Panton, 9-1892, G H R. West Ashby, 1901, F S A.

# AMBLYPTILIA COSMODACTYLA, Hb.

N. ¶Panton, GHR.

S. ¶ Lincoln, G H R.

# OXYPTILUS TEUCRII, Greening.

N. Ashby (Brigg) Dist., RTC. Risby Warren, two, 5-7-1906, GWM:

# MIMÆSEOPTILUS BIPUNCTIDACTYLA, Haw.

N. Hornby Wood (Ailby), Alford, one, 16-7-1891, E W. Lincoln, 1848, F M B.

# MIMÆSEOPTILUS PTERODACTYLUS, L.

Very common.

- N. Lincoln, 1840-50, F M B. Divs. 3, 4, 6, 7, 8, 9, 10, 11.
- S. Lincoln Dist., J F M. Divs. 13,

## OEDEMATOPHORUS LITHODACTYLUS, Tr.

N. Market Rasen, one, 13-8-1904, GWM (EMA and JW Tutt).

#### PTEROPHORUS MONODACTYLUS, L.

- N. Goxhill, one, 7-9-1906, G W M (J W Tutt). Panton, 22-7-1893, G H R. West Ashby, 1901, F S A.
- S. Lincoln Dist., J F M.

## ACIPTILIA GALACTODACTYLA, Hb.

S. Skellingthorpe, bred, 22-6-1904, J F M.

## ACIPTILIA PENTADACTYLA, L.

A common species.

- N. Louth, V T Crow. Divs. 2, 3, 4, 7, 8, 10, 11, 12.
- S. Lincoln Dist., J F M. Divs. 13,

#### ALUCITA HEXADACTYLA, L.

Common.

N. Lincoln, 1848, FMB, Divs. 2, 3, 4, 6, 7, 8, 10, 12.

# Crambi.

# CHILO PHRAGMITELLUS, Hb.

S. Lincoln Dist., J F M.

# SCHENOBIUS FORFICELLUS, Thab.

N. Middle Rasen, 1877-79, FAL. Saxby (Barton), 1892, CD Ash. By side of ponds near Skegness, 1895, A H Waters (Ent., 1895, p. 339).

# PLATYTES CERUSSELLUS, Schiff.

S. Ropsley, W A A.

# CRAMBUS FALSELLUS, Schiff.

N. Skegness, A H Waters (Nat. Chronicle, 1895, p. 86).

# CRAMBUS PRATELLUS, L.

Very common. A small white form taken at Panton, 7-1894, G H R (E A A).

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 6, 7, 9, 11.
- S. Skellingthorpe, 9-6-1910, G W M. Divs. 13,

#### CRAMBUS HAMELLUS, Thnb.

N. Scunthorpe, one, 25-8-1910; Wrawby Moor, one, 28-8-1909; G W M.

#### CRAMBUS PASCUELLUS, L.

Frequent.

- N. Lincoln, 1840-50, F M B. Morton Carr, 7-7-1909, G W M. Panton, G H R. Wrawby Moor, 7-7-1906, G W M.
- S. Lincoln Dist., J F M. Stamford, 29-6-1905, L N U.

#### CRAMBUS MARGARITELLUS, Hb.

N. Scunthorpe, H H Corbett (See Circular 226 Yorks. Naturalists' Union).

N.B.—Dr. Corbett told me he found several in a marshy spot about ten years ago, G W M., 25-8-1910.

#### CRAMBUS PINELLUS, L.

Local.

- N. Market Rasen; 6-8-1906 and 5-8-1907, G W M.; two or three in 1893, W L. Willingham, 1877-79, F A L. Wrawby Moor, 7-8-1905, G W M.
- S. Lincoln Dist., two, J F M.

#### CRAMBUS LATISTRIUS, Haw.

N. Skegness, 1895, A H Waters (Ent., 1895, p. 339).

#### CRAMBUS PERLELLUS, Scop.

Frequent.

N. Ashby (Brigg) Dist., R T C. Binbrook, 7-1909, S B S. Cleethorpes, F W S. Hornby Wood (Aby), Alford, 16-7-1891, E W. Hatton; Newball; Panton; G H R. Skegness, 16-7-1879, G T P. Theddlethorpe, 26-6-1906, G W M.

#### CRAMBUS WARRINGTONELLUS, Zell.

This is now considered a form of perlellus.

N. Ashby (Brigg) Dist., R T C. Hatton, 15-6-1896, G H R (E A A). Saxby (Barton), C D Ash. Skegness, 16-7-1879, G T P.

## CRAMBUS SELASELLUS, Hb.

N. Humberstone foreshore, one 12-8-1909, G W M. (E M A). Skegness, one July, 1895, A. H. Waters (Ent. 1895, p. 339).

## CRAMBUS TRISTELLUS, Fb.

Abundant.

- N. Lincoln, 1840-50, FMB. Divs. 2, 3, 4, 6, 7, 9, 10, 11, 12.
- S. Lincoln Dist., J F M. Divs. 13,
- var. paleellus, St.
- N. Lincoln, 1840-50, F M B.
- var. petrificellus, St.
- N. Lincoln, 1840-50, F M B.

# CRAMBUS INQUINATELLUS, Schiff.

Frequent on dry, sandy warrens.

N. Market Rasen, 6-8-1906, 5-8-1907; Moortown, 18-8-1907;
 Morton Carr, 7-7-1909; Raventhorpe, 14-7-1909; Scunthorpe, 25-8-1910; Wrawby Moor, 12-8-1905; G W M. Scunthorpe, H H Corbett (see Y N U. Circular 226).

#### CRAMBUS GENICULEUS, Haw.

N. Binbrook, 2-1909, S B S. Lincoln, 1840-50, F M B. Mother Wood, Alford, one 22-6-1891, E W.

#### CRAMBUS CULMELLUS, L.

Abundant; the commonest species of the genus.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 6, 7, 8, 11,
- S. Lincoln Dist., J F M. Divs. 13,

#### CRAMBUS HORTUELLUS, Hb.

Another very common species.

- N. Haugh (Alford), one 12-6-1891, E.W. Divs. 2, 3, 4, 7, 8, 9, 10, 11,
- S. Lincoln Dist., J F M. Divs. 13,

#### ANERASTIA LOTELLA, Hb.

N. Skegness, 16-7-1879, G T P.

## MYELOPHILA CRIBRUM, Sehiff.

Recorded as Oncocera cardul.

N. Lincoln, 1840-50, F M B.

# HOMŒOSOMA NIMBELLA, Zell.

†" Lincolnshire."

N. Barton-on-Humber, 24-7-1905, G W M., (E M A). Skegness, 16-7-1879, G T P. Theddlethorpe, 1904, A E Gibbs (Ent., 1905, p. 81).

## HOMŒOSOMA NEBULELLA, Hb.

N. Theddlethorpe, 1904, A E Gibbs (Ent., 1905, p. 81).

# EPHESTIA ELUTELLA, Hb.

N. Barton-on-Humber, 18-7-1904, G W M. (E M A.).

# EPHESTIA PASSULELLA, Bar.

N. Cleethorpes, 14-8-1910, FWS (EAA).

## EUZOPHERA PINGUIS, Haw.

N. Legsby, 7-1894, G H R.

#### PHYCIS BETULÆ, Goze.

N. Ashby (Brigg) Dist., RTC. Newball, bred, 17-6-1893,

#### NEPHOPTERYX SPISSICELLA, Fb.

N. Pelham's Pillar Wood, larvæ 5-6-1909, and bred 31-7-1909 and 3-8-1909, larvæ 11-6-1910 and subsequently bred; Wrawby Moor, larvæ 8-6-1909 and bred 27-7-1909; G W M.

# PEMPELIA PALUMBELLA, Fb.

† "Lincolnshire." To be found upon heaths.

N. Ashby (Brigg) Dist., RTC. Lincoln, 1840-50, FMB. Moortown, two, 18-8-1907, GWM. Skegness, 8-1895, A H Waters (Ent. 1895, p. 339).

## RHODOPHÆA ADVENELLA, Gn.

Among hawthorn.

N. Ashby (Brigg) Dist., RTC. Market Rasen, bred 1901, GWM (EMA). Panton, 28-7-1896, GHR.

# RHODOPHÆA TUMIDELLA, Zinck.

N. Lincoln Dist., J F M.

## GALLERIA MELLONELLA, L.

Recorded as Galleria cereana. In and about bee-hives.

N. Lincoln, 1848 and 1840-50, F M B.

# APHOMIA SOCIELLA, L.

N. Gainsborough, F M B.

S. || Cowbit, Chas M Hufton.

# ACHRŒA GRISELLA, Fb.

In and about bee-hives.

N. Kirton-in-Lindsey, bred 4-7-1909, G W M. Panton, 8-1892, G H R (E A A).

# Tortrices.

# TORTRIX PODANA, Scop.

Common.

N. Greenfield Wood (Alford), 6-8-1891, E.W. Divs. 2, 3, 4, 7, 8, 11.

S. Skellingthorpe, J F M. Divs. 13,

# TORTRIX CRATÆGANA, Hb.

Not common.

N. Lincoln, i840-50, F M B.

S. Lincoln Dist., J F M. Potterhanworth, bred 4-7-1909; Skellingthorpe, bred 1910; G W M.

#### TORTRIX XYLOSTEANA. L.

Common in woods.

- N. Bradley, 1-4-1908; Brocklesby, bred 14-7-1908; Holton-le-Moor, bred 13-7-1908; Linwood, 23-7-1908, 1-8-1910; Market Rasen, bred 9-8-1906; Moortown, 18-8-1907; Wrawby Moor, bred 2-7-1906; G W M. Louth Dist., V T Crow. Panton, 6-1893, G H R. Welton Wood, 26-7-1909, F G Whittle.
- S. Potterhanworth, bred 10-7-1909; Skellingthorpe, bred 11-7-1910; G W M.

#### TORTRIX SORBIANA, Hb.

- N. Maltby Wood, V T Crow. Risby Warren, 5-7-1906 (E M A); Roxton Wood, 3-7-1909; G W M. Welton Wood, 19-7-1909, F G Whittle.
- S. Skellingthorpe, J F M.

#### TORTRIX ROSANA, L.

Very common.

N. Barton-on-Humber, common; Bradley, 1-8-1908; Goxhill, 3-8-1907; Moortown, 18-8-1907 (E M A); G W M. Louth Dist., V T Crow. Panton, 7-1896, G H R. Skegness, 1902; West Ashby, 1902; F S A. Well, 18-7-1909, F G Whittle.

#### TORTRIX CINNAMOMEANA, Tr.

N. Bradley Wood, 6-8-1909; Pelham's Pillar Wood, bred 1-7-1909 and taken 10-7-1909; GWM. Louth Dist., VT Crow.

#### TORTRIX HEPARANA, Schiff.

Common.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, common, G W M. Cleethorpes, F W S. Goxhill, 3-8-1907; Grimsby, 8-8-1909; Morton Carr, 7-7-1909; G W M. Louth Dist., V T Crow. Panton, 7-1892, G H R. Skegness, 1902, F S A.

#### TORTRIX RIBEANA, Hb.

Very common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 5, 6, 7, 8, 11.
- S. Lincoln Dist., J F M. Divs. 13,

#### TORTRIX CORYLANA, Fb.

Frequent.

N. Alford, 6-7-1891, E.W. Ashby (Brigg) Dist., R.T.C. Bradley, 1-8-1908, G.W.M; 9-7-1909, F.W.S. Goxbill, one 8-1907, F.P.H.B. Legsby, 8-1894, G.H.R. Lincoln, 1840-50, F.M.B. Linwood, 1-8-1908; Market Rasen, 15-8-1908; G.W.M. Louth Dist., V.T.Crow. Scotton Common, 14-8-1901, A.T.

#### TORTRIX UNIFASCIANA, Dup.

Very common.

Ne Ashby (Brigg) Dist., R T C. Divs. 2, 3, 4, 5, 7, 9, 11.

#### TORTRIX COSTANA, Fb.

- N. Barton-on-Humber, bred 7-1905, GWM. Legsby, GHR.
- S. Skellingthorpe, JFM.

#### TORTRIX VIBURNANA, Fb.

N. Lincoln, 1840-50, FMB. Linwood, common 23-7-1908 (EMA); Market Rasen, bred 8-1907 (EMA); Raventhorpe, 14-7-1909; GWM.

#### TORTRIX PALLEANA, Hb.

- N. Ashby (Brigg) Dist., RTC. Freshney Bogs, larvæ very common by sweeping 26-5-1910 and subsequently bred, GWM. Legsby, 6-1894, GHR. Linwood, 1909, SBS. Pelham's 'Pillar Wood, 11-6-1910, FWS. and GWM. Saxby (Barton), CD Ash. Theddlethorpe, 26-6-1906, GWM.
- S. Skellingthorpe, bred 21-6-1910, GWM.

#### TORTRIX VIRIDANA, L.

Only too common, sometimes completely stripping the oaks of their leaves.

- N. Lincoln, 1848, FMB. Divs. 2, 3, 4, 5, 6, 7, 8, 10, 11,
- S. Lincoln Dist., JFM. Divs. 13,

#### TORTRIX MINISTRANA, L.

Common.

- N. Ashby (Brigg) Dist., R T C. Div. 2, 1895, C D Ash. Goxhill, 31-5-1908; Limber, 8-6-1907; Linwood, 8-6-1908; Pelham's Pillar Wood; Roxton Wood, 19-6-1909; Wrawby Moor, 8-6-1909; G W M. Legsby; Newball; G H.R. Louth, V T Crow. Tothill, 1880, C D Ash.
- S. Skellingthorpe, 9-6-1910, GWM.
- var. ferrugana, Hb.
  - N. Linwood, 1908; Wrawby Moor, 1909; G W M.

# TORTRIX FORSTERANA, Fb.

Common among ivy.

- N. Alford, one larva 11-6-1891, E.W. Ashby (Brigg) Dist., R.T.C. Barton-on-Humber, common among ivy, G.W.M. Binbrook, 7-1909, S.B.S. Cleethorpes, F.W.S. Lincoln, 1848, 1852, F.M.B. Louth Dist., V.T.Crow. Panton, G.H.R. Skegness, 1902, F.S.A.
- S. || Cowbit, Chas M Hufton. Lincoln Dist., J F M.

# AMPHISA GERNINGANA, Schiff.

N. Louth Dist., V T Crow.

# , PERONEA SPONSANA, Fb.

Among beech.

N. Barton-on-Humber, one 19-10-1907, G W M. Louth Dist., V T Crow. Panton, among beech at the Rectory, G H R. Wrawby Moor, one 2-10-1909, G W M.

#### PERONEA SCHALLERIANA, L.

Among sallows.

N. Ailby (Alford), 29-8-1891, E.W. Croxby Pond, one 14-9-1907; Ferriby Quarry, 29-8-1908, including a dark form; G.W.M. Louth Dist., V.T. Crow.

#### PERONEA COMPARANA, Hb.

N. Ferriby Quarry, 29-8-1908, G W M.

#### PERONEA VARIEGANA, Schiff.

Very common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 6, 7, 8, 11.
- S. Lincoln Dist., J F M. Divs. 13,
- var. asperana, Fb.
  - N. Lincoln, 1848, F M B.

## PERONEA CRISTANA, Fb.

Recorded as Peronea crystalana.

N. Lincoln, 1840-50, F M B.

#### PERONEA HASTIANA, L.

N. Little Coates, larvæ in willow tops 11-8-1909, and subsequently bred 9-1909; Market Rasen, 13-5-1905; G W M (E M A).

#### PERONEA ASPERSANA, Hb.

N. Hatton, bred 30-7-1896, G H R.

#### PERONEA SHEPHERDANA, St.

N. Hatton, bred from Sanguisorba, 18-7-1826, GHR.

## RHACODIA CAUDANA, Fb.

A singular looking moth, having a notch in its fore-wings.

N. Maltby Wood, V T Crow. Scunthorpe, several about sallow 25-8-1910; Wrawby Moor, one 7-8-1905; G W M.

#### TERAS CONTAMINANA, Hb.

Common.

- N. Ashby (Brigg) Dist., RTC. Barton-on-Humber, very common, GWM. Lincoln, 1840-50, FMB. Louth Dist., VTCrow. Panton; Sutton-on-Sea; GHR. Saleby, one 4-10-1891, EW. West Ashby, 1901, FSA.
- --- var. ciliana, Hb.
  - N. Lincoln, 1840-50, F M B.
- var. rhombana, St.
  - N. Lincoln, 1840-50, F M B.

# DICTYOPTERYX LŒFLINGIANA, L.

Frequent.

- N. Ashby (Brigg) Dist., RTC. Limber, 20-7-1907; Linwood, 23-7-1908; GWM. Louth Dist., VT Crow. Morton Carr, 7-7-1909; Raventhorpe, 14-7-1909; Wrawby Moor, 9-7-1910; GWM. Theddlethorpe, 1904, AE Gibbs (Ent., 1905, p. 81). Woodhall Spa, 6-7-1892, GHR.
- S. Lincoln Dist., J F M.

## DICTYOPTERYX HOLMIANA, L.

N. Barton-on-Humber, 29-7-1905 and 8-1908; Bradley, 9-8-1909; Market Rasen, 15-8-1908; GWM. Louth Dist., VT Crow.

#### DICTYOPTERYX BERGMANNIANA, L.

Common, the larvæ a pest among garden roses.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, abundant in my garden among roses; Binbrook, bred 30-6-1909; Bradley, 1-8-1908; G W M. Binbrook, 1909, S B S. Louth Dist., V T Crow. Panton, 8-7-1892, G H R.

# DICTYOPTERYX FORSKALEANA, L.

N. Bradley, 9-8-1909, G W M. Broughton, 1895, C D Ash. Irby, 7-1908, F W S. Louth Dist., V T Crow (E A A). Saxby (Barton), C D Ash.

# ARGYROTOXA CONWAYANA, Fb.

Abundant in woods.

- N. Ashby (Brigg) Dist., R T C. Divs. 2, 3, 4, 7, 10, 11,
- S. Skellingthorpe, 9-6-1910, GWM. Divs. 13,

# PTYCHOLOMA LECHEANA, L.

Frequent.

- N. Acthorpe Wood, larvæ in spun-up leaves of poplar, 1-6-1905; Barton-on-Humber, bred 16-6-1906; Pelham's Pillar, Wood, 13 and 21-6-1906; G W M. Ashby (Brigg) Dist., R T C. Louth Dist., V T Crow. Legsby, bred from sallow 21-6-1894; Newball, bred from sallow 6-6-1893; G H R. Pelham's Pillar Wood, pupæ 5-6-1909, F W S.
- S. Skellingthorpe, larvæ 9-6-1910, and subsequently bred, G W M.

# PENTHINA CORTICANA, Hb.

- N. Market Rasen, bred from birch 17-6-1905 (E M A); Pelham's Pillar Wood, 10-7-1909, G W M.
- S. Lincoln Dist., J F M.

# PENTHINA BETULÆTANA, Haw.

Frequent among birch.

N. Legsby, G H R. Linwood, 23-7-1908 (E M A); Market Rasen, 6-8-1906, 15-8-1908 (E M A); Moortown, 18-8-1907; Scotton Common, 28-7-1905 (E M A); Wrawby Moor, 24-8-1908 (E M A); G W M.

# PENTHINA CAPRÆANA, Hb.

A local species.

N. Legsby; Newball; 1896, G H R. Linwood, one 23-7-1908, G W M (E M A).

# PENTHINA PRUNIANA, Hb.

Among blackthorn.

N. Ashby (Brigg), R T C. Panton, 17-6-1896, G H R. Roxton Wood, 19-6-1999; Theddlethorpe, 26-6-1996; Wrawby Moor, 7-7-1996 (E M A); G W M.

#### PENTHINA OCHROLEUCANA, Hb.

- N. Bradley, 18-7-1910, F.W.S. Goxhill, 18-7-1909, G.W.M. Panton, 18-6-1896, G.H.R.
- S. Lincoln Dist., J F M (E A A).

#### PENTHINA VARIEGANA, Hb.

Very common.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, abundant; Brocklesby, 23-6-1908; Broughton, larvæ, 23-5-1908; Raventhorpe, 14-7-1909; Theddlethorpe, 6-1906; G W M. Louth Dist., V T Crow. Welton Wood, 12-7-1909, F G Whittle.

#### PENTHINA GENTIANA, Hb.

N. Barton-on-Humber, bred from teazle in 1907, GWM. Scotton Common, 28-7-1905, LNU (EMA).

#### HEDYA OCELLANA, Fb.

Common.

- N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, common; Donna Nook, bred 6-7-1906 from sea-buckthorn (E M A); Goxhill, 29-7-1908; Grimsby, 6-8-1910; G W M. Mable-thorpe, bred 7-1894, G H R. Sutton-on-Sea, 25-7-1909, F G Whittle.
- S. Lincoln Dist., J F M.

## HEDYA DEALBANA, Frol.

Common.

N. Bradley, 18-7-1910, F.W.S. Freshney Bogs, 6-8-1910; Goxhill, 3-8-1907; Limber, 20-7-1907; Market Rasen, 5-8-1907; Wrawby Moor, 28-7-1909; G.W.M. Welton Wood, 19-7-1909, F.G. Whittle.

#### HEDYA SERVILLANA, Dup.

S. Ropsley, one only, W A A.

# SPILONOTA TRIMACULANA, Haw.

Frequent.

N. Ashby (Brigg) Dist., R T C. Binbrook, 6-1909, S B S. Mablethorpe, 5-6-1896; Panton, bred 1-6-1894 (E A A); G H R. Goxhill, 9-7-1906 and larvæ 27-5-1908; Theddlethorpe, 27-6-1906; G W M (E M A).

# SPILONOTA ROSÆCOLANA, Dbl.

Often confused with the next species, which it closely resembles.

S. Lincoln Dist., J F M (E A A).

# SPILONOTA ROBORANA, Tr.

Common.

N. Barton-on-Humber, larvæ abundant in wild rose; Goxhill, bred 4-7-1908; Market Rasen, 15-8-1908; G W M. Louth Dist., V T Crow. Panton, 7-1892, G H R.

#### PARDIA TRIPUNCTANA, Fb.

Abundant.

- N. Louth Dist., V T Crow. Divs. 2, 3 7, 8, 9, 10, 11,
- S. Skellingthorpe, 9-6-1910, G W M. Divs. 13,

#### ASPIS UDMANNIANA, L.

Frequent; the larva spins up in bramble leaves.

N. Ferriby Quarry, larvæ 12-6-1909; Goxhill, 1906; Ludborough, bred 1906; Theddlethorpe, 6-1906, including a variety with the blotch absent on right fore-wing; GWM. Lincoln, 1840-50, FMB. Mablethorpe; 24-7-1909, FGWhittle; GHR. Panton, GHR. Theddlethorpe, 1904, AEGibbs (Ent., 1905, p. 81).

## SERICORIS BIFASCIANA, Haw.

N. Ashby (Brigg) Dist., RTC.

# SERICORIS RIVULANA, Scop.

N. Newball, 4-7-1896, G H R.

# SERICORIS URTICANA, Hb.

Fairly common.

N. Ashby (Brigg) Dist., RTC. Donna Nook, bred 7-1906 (EMA); Theddlethorpe, very common, 6-1906, a beautiful form was bred from a larva found on sea-buckthorn, in which the ground colour is of a faint rosy tint, and the darker markings also suffused with rose (EMA); Wrawby Moor, 7-7-1906 (EMA); GWM. Louth Dist., VT Crow. Sutton-on-Sea, 25-7-1909, FG Whittle.

# SERICORIS LACUNANA, Dup.

Abundant.

- N. Panton, bred 6-7-1894, G H R (E A A). Divs. 2, 3, 4, 5, 7, 9, 11,
- S. Lincoln Dist., J F M (E A A). Divs. 13,

## ROXANA ARCUANA, Clerck.

S. Skellingthorpe, a few 9-6-1910, G W M.

# ORTHOTÆNIA STRIANA, Schiff.

- N. Ferriby Quarry, 28-6-1908, G W M.
- S. Great Gonerby, W A A.

# ORTHOTÆNIA BRANDERIANA, L.

A local species.

N. Linwood, larvæ in rolled-up leaves of aspen 8-6-1908 and subsequently bred, G W M (E M A). Newball, 4-7-1896, G H R.

# ORTHOTÆNIA ERICETANA, Westw.

N. Panton, 20-7-1896, GHR (EAA).

#### CNEPHASIA MUSCULANA, Hb.

Common.

- N. Ashby (Brigg) Dist., R T C. Legsby; Newball; Panton; G H R. Louth Dist., V T Crow (E A A). Limber, 20-7-1907; Linwood, a finely marked specimen 29-5-1909 (E A A); Pelham's Pillar Wood, 11-6-1910; Roxton Wood, 22-5-1909; Wrawby Moor, 12-5-1906; G W M.
- S. Hartsholme Woods, 24-5-1894, L N U. Skellingthorpe, 9-6-1910, G W M.

## SCIAPHILA NUBILANA, Hb.

- N. Panton, 6-7-1894, GHR.
- S. Great Gonerby, common, W A A.

## SCIAPHILA CONSPERSANA, Dougl.

N. Sutton-on-Sea, 25-7-1909, F G Whittle. Theddlethorpe, 1904 A E Gibbs (Ent., 1905, p. 81).

## SCIAPHILA SUBJECTANA, Gn., St.

Common.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, common, 20-6-1906 (E M A); Bradley, 1-8-1908; Goxhill, 3-8-1907; Theddlethorpe, 26-6-1906 (E M A); G W M. Louth Dist., V T Crow.

#### SCIAPHILA VIRGAUREANA, Tr.

Abundant.

N. Ashby (Brigg) Dist., R T C. Divs. 2, 3, 4, 7, 8, 9, 10,

## SCIAPHILA PASCUANA, Hb.

- N. Wrawby Moor, bred 18-7-1909 from ox-eye daisy, G W M (E M A).
- S. Ropsley, of frequent occurrence, W A A.

# SCIAPHILA CHRYSANTHEANA, Dup.

N. Ashby (Brigg) Dist., R T C. Legsby, 14-7-1893; Panton, bred 26-6-1893 on lychnis; G H R.

## SCIAPHILA HYBRIDANA, Hb.

Common.

- N. Ashhy (Brigg) Dist., R T C. Barton-on-Humber, 14-6-1908; Holton-le-Moor, 12-6-1908; Linwood, 27-5-1901; Theddlethorpe, 27-6-1906 (E M A); G W M. Newball, 6-1893 (L B P); Panton, 17-6-1896; G H R.
- S. Nocton, 10-6-1909, G W M.

# SPHALEROPTERA ICTERICANA, Haw.

N. Burwell Woods, 1904, A E Gibbs (Ent., 1905, p. 81).

#### CAPUA FAVILLACEANA, Hb.

N. Ashby (Brigg) Dist., R T C. Legsby, 5-1895, G H R. Limber, 8-6-1907; Linwood, 30-5-1909; G W M (E M A).

#### BACTRA LANCEOLANA, Hb.

Common in marshy spots.

N. Barton-on-Humber, common locally; Holton-le-Moor, 12-6-1908; Morton Carr (Peacock's Hole), 7-7-1909; Raventhorpe, 14-7-1909; Risby Warren, common; Wrawby Moor, common; G W M. Louth Dist., V T Crow.

#### PHOXOPTERYX SICULANA, Hb.

N. Newball, two, C D Ash.

#### PHOXOPTERYX INORNATANA, H.-S.

N. Ashby (Brigg) Dist., RTC.

#### PHOXOPTERYX LUNDANA, Fb.

Frequent.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, 30-5-1905;
Limber, 11-5-1907; Moortown, 18-8-1907; Roxton Wood, 22-5-1909; G W M. Langworth, 5-1892, G H R. Lincoln, 1840-50, F M B. Louth Dist., V T Crow. Muckton, C D Ash.

## PHOXOPTERYX MITTERPACHERIANA, Schiff., Wilk.

N. Newball, C D Ash.

#### PHOXOPTERYX LACTANA, Fb.

Common in woods.

N. Louth Dist., V T Crow (E A A). Market Rasen, 6-8-1906 (E M A), 23-7-1908; Moortown, 18-8-1907; Wrawby Moor, 7-9-1907; G W M. Usselby, 2-8-1909, F W S.

#### GRAPHOLITHA RAMELLA, L.

Common among birch.

N. Linwood, 3-8-1908; Moortown 18-8-1907; Scotton Common,
 2-9-1905 (E M A); Usselby, 14-8-1909; Wrawby Moor,
 7-9-1907; G W M. Scotton Common, one 14-8-1901, A T.

# GRAPHOLITHA NISELLA, Clerck.

N. Lincoln, 1840-50, F M B. Panton, bred from sallow, 7-1892, G H R.

# GRAPHOLITHA SUBOCELLANA, Don.

N. Ashby (Brigg) Dist., RTC. Langworth, 5-1892, GHR (LBP).

# GRAPHOLITHA TRIMACULANA, Don., Wilk.

A common species.

N. Barton-on-Humber, bred 21-6-1906 (E A A); Goxhill, 18-7-1909; G W M. Louth Dist., V T Crow (E A A). Panton, 7-1892, G H R.

#### GRAPHOLITHA PENKLERIANA, Fisch.

N. Bradley, two 1-8-1908, G W M (E M A and Mr Harwood). Welton Wood, one 28-7-1910, F W S (E A A).

## GRAPHOLITHA OBTUSANA, Haw.

N. Newball, C D Ash.

## GRAPHOLITHA NÆVANA, Hb.

N. Barton-on-Humber, larvæ common in young shoots of holly in 1908 and subsequently bred, G W M. Panton, 20-7-1893, G H R (E A A).

#### PHLEODES TETRAQUETRANA, Haw.

A common species.

- N. Ashby (Brigg) Dist., RTC. Linwood, 30-5-1909; Market Rasen, 13-5-1905, 12-6-1905 (EMA); GWM. Newball, 4-5-1893; Panton, 5-1892; GHR (LBP).
- S. Hartsholme Wood, Nat. 1894, p. 254.

## PHLEODES IMMUNDANA, Fisch.

N. Ashby (Brigg) Dist., RT C.

## HYPERMECIA CRUCIANA, L.

Among sallow.

N. Linwood, 1-8-1910; Little Coates, 11-8-1909 (E M A); Market Rasen, 5-8-1907; G W M. Newball, bred 7-6-1893, G H R. Tealby, bred from sallow, 6-1909, S B S.

# BATODES ANGUSTIORANA, Haw.

Common.

N. Barton-on-Humber, frequent; Grimsby, 8-8-1909; Raventhorpe, 14-7-1909; G W M. Bradley, 18-7-1910; Cleethorpes, 14-8-1910; F W S. Lincoln, 1840-50, F M B. Newball, bred from sallow, 11-6-1893, G H R.

## PÆDISCA BILUNANA, Haw.

Among birch.

N. Morton Carr, 8-7-1909, G W M (E M A). Panton, 6-1892. G H R.

## PÆDISCA RATZBURGHIANA, Sax.

N. Ashby (Brigg) Dist., RTC.

# PÆDISCA RUBIGINOSANA. H.-S.

Among Scotch fir.

N. Sweetingthorns Wood (Raventhorpe), one 25-7-1908, G W M (E M A and Mr. Harwood).

# PÆDISCA CORTICANA, Hb.

Abundant in July and August in woods on tree trunks.

N. Bradley, 1-8-1908; Freshney Bogs, 6-8-1910; Linwood, common; Moortown, several 18-8-1907 (EMA); Sweetingthorns Wood, 25-7-1908; Wrawby Moor, 1-9-1907 (EMA), also bred in 1909; GWM. Panton, 7-1893; Woodhall Spa; GHR. Saxby (Barton), CDAsh. Welton Wood, 19-7-1909, FGWhittle.

## PÆDISCA PROFUNDANA, Fb., Wilk.

S. Ropsley, WAA.

## PÆDISCA OPHTHALMICANA, Hb.

S. Ropsley, WAA.

## PÆDISCA OCCULTANA, Dougl.

Among larch.

N. Legsby, 28-6-1894, G H R (E A A). Limber, two 20-7-1907 (E A A); Morton Carr, a fine example 7-7-1909 (E A A); Raventhorpe, 14-7-1909; G W M.

#### PÆDISCA SOLANDRIANA, L.

Common and very variable.

N. Goxhill, 29-7-1908; Holton-le-Moor, bred 28-7-1908; Limber, bred 1907; Market Rasen, 1-8-1904; Moortown, 18-8-1907 (E M A); Scotton Common, 28-7-1905 (E M A); Scunthorpe, 25-8-1910; Wrawby Moor, common; G W M. Legsby, 8-1895, G H R. Louth, V T Crow (E A A). Usselby, 2-8-1909, F W S.

#### EPHIPPIPHORA SIMILANA, Hb.

N. Newball, bred from birch 30-7-1893, GHR. Scotton Common, AT; fairly common among birch 17-9-1904 (LBP), GWM. Wrawby Moor, 1-9-1907, GWM.

#### EPHIPPIPHORA CIRSIANA, Zell.

N. Ashby (Brigg) Dist., R T C. Louth Dist., V T Crow (E A A).

# EPHIPPIPHORA PFLUGIANA, Haw.

Among thistles.

- N. Ashby (Brigg) Dist., R T C. Legsby; Newball; Panton, 5-1892 (L B P); G H R. Linwood, 6-1909, S B S. Louth, V T Crow. Wrawby Moor, one 3-6-1909, G W M.
- S. Skellingthorpe, 9-6-1910, G W M.

# EPHIPPIPHORA BRUNNICHIANA, Frol.

Among coltsfoot.

N. Ashby (Brigg) Dist., RTC. Newball, 6-1896, GHR. Saxby (Barton), CD Ash.

# EPHIPPIPHORA INOPIANA, Haw.

A local species, among fleabane.

N. Louth Dist., V T Crow (E A A).

# EPHIPPIPHORA FŒNELLA, L., Wilk.

N. Lincoln, 1840-50, F M B (recorded as Spilonota fanella).

# EPHIPPIPHORA NIGRICOSTANA, Haw.

S. Ropsley, frequent, W A A.

# EPHIPPIPHORA SIGNATANA, Dougl.

S. Ropsley, one only, WAA.

# EPHIPPIPHORA TRIGEMINANA, St.

Among ragwort.

N. Ashby (Brigg) Dist., RTC. Mablethorpe; 5-6-1896, GHR; larvæ found in great abundance on sandhills by WHB Fletcher 10-1880 and 1882 (See EMM., vol. 22, p. 269). Panton, 8-7-1894, GHR (LBP). Wrawby Moor, 2-6-1906, GWM (EMA).

#### EPHIPPIPHORA TETRAGONANA, St.

In a Wood near Grantham, 9-8-1885, habits, time of appearance, and food plant discussed. (E M M, April 1887, p. 260).

- N. Lincoln, 1840-50, F M B.
- S. Grantham, freely met with, W A A.

#### EPHIPPIPHORA POPULANA, Fb.

N. Freshney Bogs, larva on sallow 26-5-1910, bred 7-1910, G W M. Newball, bred from sallow 7-1893, G H R.

# SEMASIA IANTHINANA, Dup.

S. Ropsley, WAA.

## SEMASIA RUFILLANA, Wilk.. Zell.

S. Ropsley, W A A.

#### SEMASIA WŒBERIANA, Schiff.

To be found in gardens and orchards.

N. Barton-on-Humber, 22-7-1906 (E M A) and 3-8-1909, G W M. Louth Dist., V T Crow.

# COCCYX SPLENDIDULANA, Gn.

S. Ropsley, of frequent occurrence, WAA.

# COCCYX ARGYRANA, Hb.

- N. Legsby, 5-1895, G H R.
- S. Grantham, common, W A A.

# COCCYX TÆDELLA, Clerck., L.

Common among spruce fir.

N. Ashby (Brigg) Dist., RTC. Broughton, 1895, CD Ash. Hatton; Legsby; Panton, 5-1892; GHR. Holton-le-Moor, 12-6-1908; Pelham's Pillar Wood, 10-7-1909; Roxton Wood, 19-6-1909; Wrawby Moor, 2-6-1906 (EMA); GWM.

# COCCYX NANANA, Tr.

N. Bradley Wood, one, 8-1909, GWM (EAA).

# HEUSIMENE FIMBRIANA, Haw.

N. Ashby (Brigg) Dist., RTC.

# RETINIA BUOLIANA, Schiff.

N. Wrawby Moor, larvæ common in young shoots of Scotch fir in 1906 and subsequently bred, G W M (E M A).

#### RETINIA PINICOLANA, Dbl.

To be beaten from Scotch fir.

- N. Market Rasen, 6-8-1900 and 2-8-1909, G W M.
- S. Lincoln Dist., J F M.

#### RETINIA TURIONANA, Hb.

N. Ashby (Brigg) Dist., RTC.

## CARPOCAPSA SPLENDIDANA, Hb.

The larva is found among acorns in the autumn.

N. Moortown, 18-8-1907; Wrawby Moor, 12-8-1905 and bred 1907, including the smoky black variety; G W M.

#### CARPOCAPSA GROSSANA, Haw.

N. Lincoln, 1840-50, F M B. Pelham's Pillar Wood, 4-6-1906, G W M (E M A).

#### CARPOCAPSA POMONELLA, L.

Probably abundant everywhere in orchards, the larva doing an immense amount of damage to the fruit of apple trees, but I have only four distinct records.

N. Ashby (Brigg) Dist., RTC. Barton-on-Humber, 9-8-1907, GWM. Cleethorpes, 1909 and 1910, FWS. Louth Dist., VT Crow.

## ENDOPSIA NIGRICANA, St.

N. Wrawby Moor, one, 17-6-1905, G W M (E M A).

#### STIGMONOTA PERLEPIDANA, Haw.

- N. Newball, 6-5-1893, G H R.
- S. Ropsley, common, W A A.

# STIGMONOTA INTERNANA, Gn.

N. Ashby (Brigg) Dist., R T C. Linwood, two, 29-5-1909, G W M. Saxby (Barton), C D Ash.

## STIGMONOTA NITIDANA, Fb., Wilk.

S. Ropsley, one only 1887, W A A. Skellingthorpe, one, 9-6-1910' G W M (E A A).

## STIGMONOTA REGIANA, Zell.

- N. Binbrook, one 31-5-1909, GWM. Louth Dist., VT Crow.
- S. Lincoln, 2-7-1901, RTC.

## DICRORAMPHA POLITANA, Hb.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, bred 8-r908 from roots of yarrow, G W M. [Miss E M Alderson and Mr Harwood agree in thinking my specimen is politana.]

#### DICRORAMPHA PETIVERELLA, L.

- N. Barton-on-Humber, bred abundantly from roots of yarrow in 1908, G W M.
- S. Ropsley, W A A.

## DICRORAMPHA PLUMBANA, Scop.

N. Barton-on-Humber, bred 6-1908 from roots of yarrow, G W M. (Miss E M Alderson thinks my specimens are plumbana).

## DICRORAMPHA SATURNANA, Gn.

N. Barton-on-Humber, common each year in the garden among tansy, G W M. Hatton, 1-6-1896, G H R. (L B P).

## DICRORAMPHA PLUMBAGANA, Tr.

N. Barton-on-Humber, bred 7-1908 from roots of yarrow, G W M. (E M A). Legsby, 8-6-1894, G H R. (L B P). Theddle-thorpe, one 25-6-1906, and one 26-6-1906, G W M. (E M A).

#### DICRORAMPHA ACUMINATANA, Zell.

N. Elsham, 27-6-1908, taken in the early evening flying over low herbage by the roadside, G W M. (E M A).

#### DICRORAMPHA CONSORTANA, St.

S. Great Gonerby, rare, W A A.

## PYRODES RHEEDIELLA, Clerck, L.

- N. Lincoln, 1848, F M B. Newball, 6-5-1893, G H R. (L B P).
- S. Grantham, common, WAA.

#### CATOPTRIA ALBERSANA, Hb.

Among honeysuckle.

- N. Broughton, 1895, C D Ash. Legsby, 6-1896; Newball; G H R. Lincoln, 1840-50, F M B. Linwood; 6-1909, S B S; 31-5-1909, G W M. Market Rasen, 13-5-1905, G W M.
- S. Skellingthorpe, 9-6-1910, G W M.

## CATOPTRIA ULICETANA, Haw.

Common among furze.

- N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, common 25-5-1906; Freshney Bogs, 26-5-1910; Linwood, 8-6-1908 and 29-5-1906; Market Rasen, 13-5-1905; Wrawby Moor, 2-6-1906; G W M. Manton Warren, common amongst furze, 29-5-1901, A T.
- S. Hartsholme Woods, (Nat. 1894, p. 254).

#### CATOPTRIA HYPERICANA, Hb.

N. Raventhorpe, 14-7-1909, G W M (E M A). Near Louth, 1904, A E Gibbs (Ent. 1905, p. 81).

#### CATOPTRIA CANA, Haw., St., Wd.

N. Ashby (Brigg) Dist., RTC. Goxhill, 18-7-1909, GWM (EMA). Panton, 6-1893, GHR.

#### CATOPTRIA FULVANA, St., Wilk.

S. Ropsley, W A A.

#### CATOPTRIA SCOPOLIANA, Haw., St., Wd.

S. Grantham, WAA.

#### TRYCHERIS AURANA, Fb.

- N. Cleethorpes, 14-8-1910, F W S. Louth Dist., V T Crow.
- S. Grantham; Ropsley; WAA.

#### CHOREUTES MYLLERANA, Fb.

N. Lincoln, 1840-50, FMB. Newton Cliff, by drain 18-6-1901, AT.

#### SYMÆTHIS PARIANA, Clerck., L.

N. Lincoln, 1840-50, F M B.

## SYMÆTHIS OXYACANTHELLA L.

Abundant among nettles.

- N. Great Carlton, 1880, C D Ash. Divs. 2, 3, 4, 5, 7, 8, 9,
- S. Skellingthorpe, 9-6-1910, GWM. Divs. 13,

#### EUPŒCILIA NANA, Haw.

S. Skellingthorpe, two 9-6-1910, G W M (E A A).

#### EUPŒCILIA ATRICAPITANA, St.

N. Theddlethorpe, 1904, A. E. Gibbs (Ent. 1905, p. 81).

#### EUPŒCILIA MACULOSANA, Haw.

- N. Legsby, 1-6-1894, G H R. Linwood, 8-6-1908, G W M.
- S. Ropsley, common, WAA.

#### EUPŒCILIA ANGUSTANA, Hb.

N. Louth Dist., V T Crow (E A A). Linwood, 12-6-1905 (E A A); Wrawby Moor, 9-8-1905 (E A A) and 7-9-1907; G W M.

#### EUPŒCILIA ROSEANA, Haw.

N. Barton-on-Humber, common among teazle, 26-7-1906 and also bred freely from teazle heads, G W M. Lincoln, 1840-50, F M B.

#### EUPŒCILIA CILIELLA, Hb.

S. Ropsley, common, W A A.

#### XANTHOSETIA ZŒGANA, L.

Frequent.

N. Hatton, 11-7-1896, dark variety, G H R. Hubbard's Hills, V T Crow. Lincoln, 1848, F M B. Linwood, 1-8-1910; Moortown, 18-8-1907; Wrawby Moor, 21-7-1908; G W M. Martin, 1901, F S A. Panton, both the type and the coppercoloured variety are fairly common at light, G H R. Saxby (Barton), 1892, rare, C D Ash.

#### XANTHOSETIA HAMANA, L.

Frequent.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, 29-6-1904, 10-7-1905, G W M. Binbrook, 6-1909 at light, S B S.

Grimsby, 13-8-1909; Pelham's Pillar Wood, 3-7-1909; Theddlethorpe, 26-6-1906; GWM. Lincoln, 1840-50, FMB. Louth Dist., VT Crow. Mother Wood (Alford), one, 3-7-1891, EW. Panton, GHR. Well, 13-7-1909, FG Whittle.

- var. diversana, Hb.

N. Lincoln, 1840-50, F M B.

LOBESIA RELIOUANA, Hb.

N. Ashby (Brigg) Dist., RTC. Newball, 6-5-1893, GHR.

#### ARGYROLEPIA HARTMANNIANA, Clerck.

N. Hatton, very common among scabious, 6-1896; Panton; G H R.

#### ARGYROLEPIA BADIANA, Hb.

N. Ashby (Brigg) Dist., RTC. Well, 13-7-1909, FG Whittle.

#### ARGYROLEPIA CNICANA, Dbl.

N. Wrawby Moor, one, 17-6-1905, G W M (E M A).

#### CONCHYLIS STRAMINEA, Haw.

Frequent.

N. Barton-on-Humber, 29-6-1904 (E M A) and 20-6-1906, G W M. Hatton, 1-6-1896; Mablethorpe, 5-6-1896; Panton, 5-1895; Woodhall Spa, 29-5-1896; G H R. Well, 13-7-1909, F G Whittle. Wrawby Moor, 7-7-1906, G W M.

# APHELIA OSSEANA, Scop.

Frequent.

N. Hatton; Mablethorpe, 7-1896; Newball, 4-7-1896; Panton 7-6-1894; G H R. Linwood, 1-8-1910; Theddlethorpe, 30-6-1906, G W M.

#### TORTRICODES HYEMANA, Hb.

Common in woods in March.

N. Aby (Alford), one, 22-3-1891, E.W. Ashby (Brigg) Dist., R.T.C. Lincoln, 1852. F.M. B. Linwood, 1909, S.B.S; bred 22-3-1909, G.W.M. Pelham's Pillar Wood, larvæ 5-6-1909 and 11-6-1910; Wrawby Moor, abundant in March; G.W.M. Saxby (Barton), C.D. Ash.

# Tineæ.

# DASYSTOMA SALICELLA, Hb., St., Sta.

N. Lincoln, 1840-50, F M B.

S. Barrowby, several, W A A.

#### EXAPATE CONGELATELLA, Clerck., Hein.

N. Ashby (Brigg) Dist., R T C.

#### DIURNEA FAGELLA, Fb., Sta.

Abundant on tree trunks in April.

- N. Lincoln, 1852, F M B. Divs. 2, 3, 5, 6, 7, 8, 10,
- S. Hartsholme, 28-4-1904, J F M. Divs. 13,

#### SEMIOSCOPUS AVELLANELLA, Hb., St., Sta.

- N. Ashby (Brigg) Dist., R T C. Market Rasen, one, 1-4-1907; Wrawby Moor, a few among young birches, 7-4-1909; Linwood, 17-4-1911; G W M.
  - S. Hartsholme, 28-4-1904, J F M.

# EPIGRAPHIA STEINKELLNERIANA, Schiff., Sta.

N. Lincoln, 1840-50, 1852, F M B.

#### TALÆPORIA PSEUDO-BOMBYCELLA, Hb.

S. Hartsholme; bred 6-1894, G H R.; bred 12-6-1904, J F M.

#### FUMEA INTERMEDIELLA, Brd.

N. Gainsborough; 1859, E Tearle; 1860, F M B.

#### SCARDIA CORTICELLA, Curt., Sta.

N. Market Rasen, 5-8-1907, G W M. (E M A). Wrawby Moor, 8-8-1908, F P H B.

#### SCARDIA PARASITELLA, Hb., Sta.

N. Lincoln, 1840-50, F M B. (Recorded as Tinea parasitella).

# SCARDIA GRANELLA, L., Sta.

N. Limber, 20-7-1907, G W M (E M A). Lincoln, 1840-50, F M B.

# SCARDIA CLOACELLA, Haw., St.

Common.

N. Barton-on-Humber, 3-6-1905 (E M A); Bradley, 1-8-1908;
 Limber, 8-6-1907; Theddlethorpe, 27-6-1906 (E M A);
 Wrawby Moor, 8-6-1909 (E M A); G W M. Lincoln, 1840-50, F M B. Panton, 6-1893, G H R. Saxby (Barton),
 C D Ash. Well, 10-7-1909, F G Whittle.

# SCARDIA ARCELLA, Fb., Sta.

N. Ashby (Brigg) Dist., RTC. West Ashby, 1902, FSA.

# BLABOPHANES RUSTICELLA, Hb., Sta.

Common.

- N. Alford, 29-5-1891, E.W. Ashby (Brigg) Dist., R.T.C. Barton-on-Humber, 24-5-1907; Binbrook, 31-5-1909; Limber, 8-6-1907 (E.M.A.); Linwood, 30-5-1909; G.W.M. Louth Dist., V.T. Crow. Panton, 5-1896, G.H.R. Saxby (Barton), C.D. Ash.
- S. Lincoln Dist., J F M.

# TINEA FULVIMITRELLA, Sodof., Sta.

- N. Linwood, 12-6-1905, G W M (E M A).
- S. Skellingthorpe, 9-6-1910, G W M.

# TINEA TAPETZELLA, L., St., Sta.

A common species.

- N. Ashby (Brigg) Dist., RTC. Barton-on-Humber, one in the house 7-7-1908, GWM. Louth, VT Crow. Panton, GHR.
- S. Lincoln Dist., J F M.

#### TINEA PELLIONELLA, L., Sta.

Another common species in houses.

N. Barton-on-Humber, 15 and 29-8-1907 (EMA); Grimsby, 8-8-1909; GWM.

# TINEA FUSCIPUNCTELLA, Haw., Sta.

N. Ashby (Brigg) Dist., RTC.

#### TINEA LAPELLA, Hb., Sta.

N. Ashby (Brigg) Dist., RTC. Brocklesby, 12-6-1906 (E M A); Usselby, 14-8-1909; G W M.

#### TINEA MERDELLA, Zell., H.-S.

S. Grantham, one specimen, W A A.

## TINEA SEMIFULVELLA, Haw., Zell., Sta.

N. Morton Carr, 7-7-1909, G W M. Panton, 18-6-1906, G H R. Saxby (Barton), C D Ash.

# LAMPRONIA QUADRIPUNCTELLA, Fb., St., Sta.

S. Grantham, one only, W A A.

## LAMPRONIA LUZELLA, Hb., St., Sta.

S. Ropsley, a few specimens, a very local species., W A A. Skellingthorpe, one 9-6-1910, G W M.

# LAMPRONIA PRÆLATELLA, Schiff., Sta.

S. Near Grantham, abundantly, W A A.

# LAMPRONIA RUBIELLA, Bjerk., Sta.

N. Newball, 20-5-1893; Panton, 5-1893; G H R.

S. Grantham, W A A.

# INCURVARIA MUSCALELLA, Fb., Sta.

N. Alford, 26-5-1891, E.W. Ashby (Brigg) Dist., R.T.C.

#### INCURVARIA PECTINEA, Haw., Sta.

N. Ashby (Brigg) Dist., RTC. Market Rasen, two 13-5-1905, GWM. (EMA).

# MICROPTERYX CALTHELLA, L, Sta.

Common

- N. Freshney Bogs, abundant 26-5-1910, FWS and GWM. Irby, 12-6-1909, FWS. Louth, 1-6-1905, GWM (EMA).
- S. Skellingthorpe, 9-6-1910, G W M.

#### MICROPTERYX SEPPELLA, Fb., Sta.

- N. Pelham's Pillar Wood, common, 11-6-1910, G W M.
- S. Ropsley, abundant, WAA. Skellingthorpe, 9-6-1910, GWM.

#### MICROPTERYX MANSUETELLA, Zell., Sta.

- N. Newball, C D Ash.
- S. ¶" Near Grantham it is particularly attached to flowers of Mercurialis perennis, and to those of Carex in woods, and flies in sunshine (W A A)."

#### MICROPTERYX THUNBERGELLA, Fb., Sta.

- N. Newball; C D Ash; 6-5-1893, G H R. Pelham's Pillar Wood, 4-6-1906, G.W M (E M A).
- S. ¶ "At Grantham, Atmore has obtained it by beating hawthorn, the moth resting on the blossoms and flying by day."

#### MICROPTERYX PURPURELLA, Haw., St.

N. Ashby (Brigg) Dist., R T C.

#### MICROPTERYX SEMIPURPURELLA, St., Sta.

N. Ashby (Brigg) Dist., R T C. Goxhill, one 25-4-1907, F P H B (E M A).

#### MICROPTERYX UNIMACULELLA, Zett., Sta.

N. Ashby (Brigg) Dist., R T C.

# MICROPTERYX SUBPURPURELLA, Haw., St., Sta.

Common.

N. Ashby (Brigg) Dist., R T C. Bradley Wood, 14-5-1910; Limber, 11-5-1907 and 15-5-1909 (E M A); Linwood, 16-5-1910; Roxton Wood, 22-5-1909; Wrawby Moor, several 9-5-1908; G W M. Panton, 5-1892, G H R.

# NEMOPHORA SWAMMERDAMMELLA, L., Sta.

Common.

- N. Broughton Woods, 23-5-1908 (E M A); Linwood, common, 29-5-1909; G W M. Langworth, 5-1893; Legsby; Newball; G H R. Lincoln, 1840-50, F M B. Louth; Maltby Wood; V T Crow. Tothill, C D Ash.
- S. Lincoln Dist., J F M.

# NEMOPHORA SCHWARZIELLA, Zell., Sta.

- N. Binbrook, several 28-5-1909, GWM. Freshney Bogs, 26-5-1910, LNU (EAA). Louth Dist., VT Crow.
- S. Ropsley, common, WAA.

#### NEMOPHORA PILELLA, Fb., Sta.

N. Limber, one 21-5-1909, G W M (E M A).

#### NEMOPHORA METAXELLA, Hb., Sta.

N. Saxby (Barton), C D Ash.

#### ADELA FIBULELLA, Fb., Sta.

N. Ashby (Brigg) Dist., RTC. Legsby, 6-6-1893, GHR (EAA). Newball, CDAsh. Pelham's Pillar Wood, one 6-1907, JP.

#### ADELA DEGEERELLA, L., Sta.

Common in woods.

- N. Ashby (Brigg) Dist., R T C. Croxby, one 8-1908, F W S. Gainsborough, 1860, Edwin Tearle. Great Coates, A T. Legsby; Newball; G H R. Limber; 1900, A S; 20-7-1907, G W M. Lincoln, 1840-50, F M B. Little Coates, 7-7-1909, 26-6-1910, F W S. Market Rasen, 6-1897, W L. Pelham's Pillar Wood; Roxton Wood, 19-6-1909, G W M.
- S. Lincoln Dist., J F M. Little Bytham, 9-6-1903, A T. Skellingthorpe, 9-6-1910, G W M.

#### ADELA VIRIDELLA, L., Scop., Sta.

Common in woods.

- N. Ashby (Brigg) Dist., R T C. Broughton, 1895, C D Ash. Gainsborough, A T. Legsby; Newball; Panton; G H R. Lincoln, 1840-50, F M B. Linwood; 6-1909, S B S; abundant 23-5-1909, F W S. Maltby Wood, V T Crow. Pelham's Pillar Wood, 1906, 30-5-1908 and 11-6-1910; Wrawby Moor, common, 12-5-1906 G W M.
- S. Lincoln Dist., JF M.

#### SWAMMERDAMMIA COMBINELLA, Hb.

N. Louth Dist., V T Crow (E A A). Newball, C D Ash. Panton, 5-1896, G H R.

#### SWAMMERDAMMIA CÆSIELLA, Hb.

- N. Usselby, 23-7-1908, G W M (E M A).
- S. Ropsley, rather common, W A A.
- var. griseocapitella, Sta., H.-S., D.L.
- N. Linwood, 23-7-1908, G W M (E M A).

# SWAMMERDAMMIA LUTAREA, Haw., Sta., Hein.

S. Ropsley, one only, WAA.

# SWAMMERDAMMIA OXYACANTHELLA, Dup.

N. Ashby (Brigg) Dist., RTC.

# SWAMMERDAMMIA PYRELLA, Vill., Sta.

Common.

N. Ashby (Brigg) Dist., R T C. Barton-on-Humber, 13-5-1907 (E M A), and bred; Gainsborough, larvæ 7-7-1909; Thornton Curtis, 11-5-1909; G W M. Cleethorpes, 8-1909 and 1910, F W S. Saxby (Barton), C D Ash.

#### SCYTHROPIA CRATÆGELLA, L., St., Sta.

The larvæ are gregarious, living in webs spun over the foodplant.

- N. Linwood, bred 1901, GWM. Newball, bred 17-6-1896, GHR.
- S. Lincoln Dist., JFM.

#### HYPONOMEUTA VIGINTIPUNCTATUS, Retz., Zell., Sta.

S. Ropsley, one only 1886, W A A.

#### HYPONOMEUTA PLUMBELLUS, Schiff., Sta.

N. Louth Dist., V T Crow.

# HYPONOMEUTA IRRORELLUS, Hb., Sta.

N. Lincoln, 1840-50, F M B.

#### HYPONOMEUTA PADELLUS, L., Sta.

Common, the larvæ spinning webs and often doing considerable damage to fruit trees.

- N. Alford Dist., common 9-8-1891, E.W. Bradley, 15-7-1910, F.W.S. East Torrington, Edmund Turnor. Maltby Wood, larvæ very abundant 21-7-1905, also in 7-1906, C.S.C.
- S. Little Bytham, AT. Skellingthorpe, 6-7-1905, JFM.

#### HYPONOMEUTA CAGNAGELLUS, Hb.

N. Louth Dist., V T Crow.

#### PRAYS CURTISELLUS, Don., St., Sta.

Common.

N. Cleethorpes, 30-7-1909 and 14-8-1910, F.W.S. Goxhill, 3-8-1907 (E.M.A) and 18-7-1909; Pelham's Pillar Wood, 10-7-1909; G.W.M. Louth Dist., V.T. Crow. Panton, 6-1893, G.H.R. Saxby (Barton), C.D. Ash. Well, 18-7-1909, F.G. Whittle.

# PLUTELLA CRUCIFERARUM, Zell., Sta.

A great pest.

N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, . 6, 7, 8, 9, 11,

# PLUTELLA PORRECTELLA, L., Sta.

N. Barton-on-Humber, common in the garden, G W M. Panton, larvæ very destructive to garden rocket, G H R. Saxby (Barton), the like, C. D. Ash.

# CEROSTOMA SEQUELLA, Clerck., L., Sta.

N. Louth, V T Crow (E A A).

# CEROSTOMA VITTELLA, L., Sta.

N. Louth Dist., V T Crow. Pelham's Pillar Wood, bred 8-7-1906, G W M. (E M A).

#### CEROSTOMA RADIATELLA, Don., Sta.

N. Bradley, 9-8-1909, F W S. Louth, V T Crow. Legsby, 14-7-1893; Panton; G H R. Roxton Wood, 19-6-1909; Wrawby Moor, 12-8-1905 (E M A), 7-4-1909 (E M A); G W M.

#### CEROSTOMA COSTELLA, Fb., Sta.

Frequent in woods.

N. Bradley Wood, 6-8-1909; Moortown, 18-8-1907; Roxton Wood, 19-6-1909; Usselby, 2-8-1909; G W M. Louth Dist., V T Crow (E A A). Legsby, 14-7-1893; Panton, 15-7-1893; G H R. Welton Wood, 26-7-1909, F G Whittle.

#### CEROSTOMA SYLVELLA, L., Sta.

S. Ropsley rather common, W A A.

#### CEROSTOMA HORRIDELLA, Tr., Gn., Sta.

N. Newball, larva beaten from blackthorn, G H R.

#### HARPIPTERYX SCABRELLA, L., St., Sta.

N. Saxby (Barton), C D Ash.

#### HARPIPTERYX NEMORELLA, L., St., Sta.

Among honeysuckle.

N. Goxhill, larvæ 27-5-1908 and bred 2-7-1908; Pelham's Pillar Wood, larvæ on honeysuckle 4-6-1906; G W M. Welton Wood, 23-7-1909, F G Whittle.

#### HARPIPTERYX XYLOSTELLA, L., Sta.

Common.

N. Alford, one 9-8-1891, E.W. Ashby (Brigg) Dist., R.T.C. Bradley, 9-8-1909, F.W.S. and G.W.M. Goxhill, 3-8-1907; Linwood, 1-8-1910; Moortown, 18-8-1907; Usselby, 14-8-1909; G.W.M. Lincoln, 1840-50, F.M.B. Louth Dist., V.T. Crow. Panton, 7-1892, G.H.R. Saxby (Barton), larvæ abundant on snowberry, C.D. Ash.

#### ORTHOTELIA SPARGANELLA, Thnb., Sta.

Larvæ on Sparganium ramosum.

- N. Barton-on-Humber, pupæ 22-7-1909 and subsequently bred; Goxhill, pupæ 18-7-1909 and subsequently bred; G W M.
- S. Lincoln Dist., J F M.

#### PHIBALOCERA OUERCANA, Fb., Sta.

Common.

N. Alford, 22-8-1891, E.W. Divs. 2, 3, 4, 7, 8, 10, 11,

#### DEPRESSARIA COSTOSA, Haw., Sta.

Common among furze.

N. Cleethorpes, 1909, F W S. Goxhill, bred from broom 27-7-1909 (EMA); Linwood, larvæ beaten out of furze 29-5-1909 and subsequently bred (EMA); Wrawby Moor, 7-9-1907 on the heath at dusk (EMA); GWM.

#### DEPRESSARIA FLAVELLA, Hb.

N. Barton-on-Humber, bred from Centaurea nigra 27-7-1909, GWM. Louth Dist., VT Crow.

#### DEPRESSARIA ASSIMILELLA, Tr., Sta.

S. Gonerby Road, bred from larvæ, W A A.

#### DEPRESSARIA ARENELLA, Schiff., Sta.

N. Ashby (Brigg) Dist., R T C. Elsham, two 21-4-1900, G W M (E M A). Louth, V T Crow. Panton, G H R.

#### DEPRESSARIA PROPINQUELLA, Tr., Sta.

- N. Lincoln, 1840-50, F M B.
- S. Grantham, WAA.

#### DEPRESSARIA SUBPROPINQUELLA, Sta.

S. Grantham, WAA.

#### DEPRESSARIA ALSTRŒMERIANA, Clerch., L., Sta.

N. Lincoln, 1840-50, FMB. Louth, VT Crow. Panton, GHR. Saxby (Barton), CD Ash. Wrawby Moor, 9-5-1908, GWM (EMA).

#### DEPRESSARIA CAPREOLELLA, Zell., Sta.

Lincolnshire, 1871-73, C S Gregson.

#### DEPRESSARIA LITURELLA, Hb.

- N. Panton, common, G H R. Sutton-on-Sea, 27-7-1909, F G Whittle.
- S. Ropsley, bred freely, W A A.

#### DEPRESSARIA CONTERMINELLA, Zell., Sta.

N. Freshney Bogs, larvæ common on sallow 26-5-1910, and subsequently bred, G W M. Lincoln, 1840-50, F M B. Mable-thorpe, among sallow, G H R.

#### DEPRESSARIA OCELLANA, Fb., Sta.

- N. Mother Wood (Alford), one, 15-4-1891, E W.
- S. Lincoln Dist., two, I F M.

#### DEPRESSARIA YEATIANA, Fb., Sta.

N. Barton-on-Humber, 14-9-1904 and 17-10-1904, G W M (E M A).

## DEPRESSARIA APPLANA, Fb., Haw., Sta.

Very common.

- N. Lincoln, 1840-50, F M B. Divs. 2, 3, 4, 6, 7, 8, 9, 10, 11,
- S. Lincoln Dist., J F M. Divs. 13,

#### DEPRESSARIA CILIELLA, Sta.

- N. Barton-on-Humber, bred 7-1907 (E M A); Goxhill, at sugar 15-7-1908; G W M.
- S. Lincoln Dist., JFM (EAA).

#### DEPRESSARIA PIMPINELLÆ, Zell., Sta.

S. Ropsley, one only, WAA

#### DEPRESSARIA ALBIPUNCTELLA, Hb., Sta.

N. Lincoln, 1840-50, F M B.

#### DEPRESSARIA CHÆROPHYLLI, Zell., Sta., H.-S.

S. Ropsley, WAA.

#### DEPRESSARIA HERACLEANA, De Geer, Sta.

Larvæ common on Heracleum spondylium.

N. Panton, 8-1892, G H R. Divs. 2, 3, 7, 8, 9, 10, 11,

#### GELECHIA PINGUINELLA, Tr.

N. Newball; Panton; Sutton-on-Sea; G H R.

#### GELECHIA HIPPOPHAELLA, Schr.

N. Mablethorpe, larvæ common on Hippophae rhamnoides; Sutton-on-Sea, 23-8-1894; GHR. Theddlethorpe, bred 8-1906, GWM.

#### GELECHIA VELOCELLA, Fisch.

N. Ashby (Brigg) Dist., RTC.

#### GELECHIA ERICETELLA, Hb.

Common on heaths.

N. Ashby (Brigg) Dist., R T C. Broughton, 23-5-1908; Holton-le-Moor, 12-6-1908; Linwood Warren, abundant; Wrawby Moor, common; G W M.

#### GELECHIA DIFFINIS, Haw., Sta.

N. Broughton, 1895, C D Ash. Market Rasen, two in 1895, W L.

#### GELECHIA SCALELLA, Scot.

N. Lincoln, 1840-50, F M B. Newball, 4-5-1895, G H R.

# BRACHMIA MOUFFETELLA, Schiff., Sta.

N. Bradley Wood, 6-8-1909, G W M (E M A).

# BRYOTROPHA TERRELLA, Hb., Sta.

N. Ashby (Brigg) Dist., RTC. Panton, GHR. Sweetingthorns Wood, 25-7-1908; Theddlethorpe, 27-6-1906; GWM (EMA).

# BRYOTROPHA DESERTELLA, Dougl., Sta.

N. Barton-on-Humber, 19-7-1908 in the house, G W M (E M A).

# BRYOTROPHA SENECTELLA, Zell., Sta.

S. Ropsley, W A A.

# BRYOTROPHA SIMILIS, Dougl.

S. Ropsley, W A A.

# BRYOTROPHA AFFINIS, Dougl., Sta.

S. Ropsley, W A A.

# BRYOTROPHA DOMESTICA, Haw., Sta.

S. Grantham, on old walls, W A A.

#### LITA TRICOLORELLA, Haw., Sta.

S. Ropsley, W A A.

#### LITA MACULIFERELLA, Dougl., Sta.

S. Ropsley, W A A.

#### TELEIA PROXIMELLA, Hb. Sta.

N. Epworth, larvæ on birches 28-8-1906, and bred 7-6-1907; Scotton Common, bred from birch 6-1906; G W M (E M A).

# TELEIA VULGELLA, Hb., Sta.

N. Goxhill, 3-8-1907, G W M (E M A).

S. Grantham, W A A.

# TELEIA LUCULELLA, Hb., Sta.

N. Holton-le-Moor, 12-6-1908; Market Rasen, 12-6-1905; G W M (E M A). Newball, 6-5-1893, G H R.

# TELEIA FUGITIVELLA, Zell., Sta.

N. Louth Dist., V T Crow (E A A).

#### NANNODIA STIPELLA, Hb.

S. Ropsley, common, WAA.

# NANNODIA HERMANNELLA, Fb., Sta.

S. Lincoln Dist., JFM (EAA).

# ERGATIS ERICINELLA, Dup., Sta.

On heaths.

N. Market Rasen, 5-8-1907 (EMA); Sweetingthorns, over heather 25-7-1908; Wrawby Moor, 8-8-1908; GWM.

# MONOCHROA TENEBRELLA, Hb., St.

S. Great Gonerby, WAA.

# LAMPROTES ATRELLA, Haw., Sta. .

S. Ropsley, abundant 1885 amongst Hypericum, W A A.

# ANACAMPSIS LIGULELLA, Zell., Sta.

S. Great Gonerby, W A A.

# ANACAMPSIS ANTHYLLIDELLA, Hb., Sta.

S. Great Gonerby, WAA.

# TACHYPTILIA POPULELLA, Clerck., L., Sta.

N. Linwood Warren, larvæ in rolled-up leaves of aspen 8-6-1908 and subsequently bred, G W M. Louth Dist., V T Crow.

S. Ropsley, common, WAA.

# The Lepidoptera of Lincolnshire.

#### BRACHYCROSSATA CINERELLA, Clerck., L.

N. Theddlethorpe, three 27-6-1906, GWM (EMA).

#### CERATOPHORA RUFESCENS, Haw., Sta.

N. Barton-on-Humber, 4-9-1907 (E M A) and 27-7-1908, G W M.

S. Ropsley, W A A.

#### CHELARIA HUBNERELLA, Don., Sta.

N. Louth Dist., V T Crow. Market Rasen, 15-8-1908; Pelham's Pillar Wood, 17-9-1910; G W M.

#### ANARSIA SPARTIELLA, Schr., Sta.

Great Gonerby, common, WAA.

# HYPSILOPHUS SCHMIDIELLUS, Heyd.

Scotton Common, AT.

#### HYPSILOPHUS MARGINELLUS, Fb.

N. Lincoln, 1840-50, FMB. (Recorded as Macrochila marginella.)

#### PLEUROTA BICOSTELLA, Clerck., L., Sta.

N. Ashby (Brigg) Dist., RTC. Legsby, 14-6-1895, GHR.

#### HARPELLA GEOFFRELLA, L., Sta.

Lincoln, 1840-50, F M B. (Recorded as Enicostomia geoffrozella.)

#### DASYCERA SULPHURELLA, Fb.

Common.

N. Alford, 4-6-1891, E.W. Divs. 1, 2, 3, 4, 5, 8, 9, II.

Lincoln Dist., J F M. Divs. 13,

# OECOPHORA FULVIGUTTELLA. Zell., H.-S.

Ropsley, common, W A A.

# OECOPHORA ANGUSTELLA, Hb., Sta.

Grantham, a few on tree trunks 1885 and 1886, a scarce species, W A A.

# OECOPHORA TINCTELLA, Hb., Sta., Tr.

N. Panton, 11-6-1896, G H R.

Nocton, 10-6-1909, G W M. S.

# OECOPHORA FUSCESCENS, Haw., Sta.

N. Saxby (Barton), C D Ash.

# OECOPHORA PSEUDOSPRETELLA, Sta., Hein.

A dreadful pest in houses.

N. Ashby (Brigg) Dist., R T C. Divs. 2, 3, 4, 5, 7, 8, 9, 10,

S. Lincoln Dist., J F M. Divs. 13,

# ENDROSIS FENESTRELLA, Scop., Sta.

As great a pest as the last.

- N. Louth, V T Crow. Divs. 2, 3, 4, 7, 8,
- S. Lincoln Dist., J F M. Divs. 13,

# PANCALIA LATREILLELLA, Curt., Sta.

N. Alford, several, 1-6-1891, JEM (EW).

# ROSLERSTAMMIA ERXLEBENNELLA, Fb., Sta.

Mr E A Atmore says that this is a very local insect and generally found in few localities, and those in the south or south-west. Mr Raynor, however, states that Newball Wood is full of *Tilia parvifolia*.

N. Langworth, 18-8-1892, G H R (E A A).

#### GLYPHIPTERYX FUSCOVIRIDELLA, Haw., Sta.

Frequent.

- N. Ashby (Brigg) Dist., R T C. Broughton, 1895, C D Ash. Linwood, 8-6-1908; Market Rasen, 12-6-1905 (E M A); Pelham's Pillar Wood, 11-6-1910; Wrawby Moor, 2-6-1906 and 7-7-1906 (E M A); G W M. Panton, 6-1893, G H R.
- S. Skellingthorpe, 9-6-1910, GWM.

#### GLYPHIPTERYX EQUITELLA, Scop.

N. Barton-on-Humber, common in the garden about stonecrop 19-7-1908, G W M. Legsby, 8-6-1894, G H R (E A A).

# GLYPHIPTERYX FISCHERIELLA, Zell.

Frequent.

N. Freshney Bogs, 26-5-1910; Goxhill, common 31-5-1908; Wrawby Moor, common in early evening flying about bramble and furze 2-6-1906 (E M A); G W M.

# PERITTIA OBSCUREPUNCTELLA, Sta.

S. Ropsley, W A A.

# HELIOZELE SERICIELLA, Haw., Sta.

- N. Bradley Wood, 14-5-1910 (E A A); Roxton Wood, 22-5-1909 (E M A); G W M.
- S. Grantham and Ropsley, common, W A A.

# ARGYRESTHIA EPHIPPELLA, Fb., Sta.

- N. Barton-on-Humber, 9-7-1908, GWM (EMA).
- S. Ropsley, W A A.

# ARGYRESTHIA NITIDELLA, Fb., Sta.

Abundant, along every hedge-row.

N. Panton, 2-7-1893, GHR (EAA). Divs. 2, 3, 4, 7, 8 or 9,

#### ARGYRESTHIA ALBISTRIA, Haw., Sta.

N. Bradley, 8-1909; Theddlethorpe, 27-6-1906 (E M A); G W M. Legsby, 31-7-1894, G H R (E A A). Saxby (Barton), C D Ash.

#### ARGYRESTHIA MENDICA, Haw., Sta.

S. Ropsley, common, W A A.

#### ARGYRESTHIA GLAUCINELLA, Zell., Sta.

A local species.

S. Skellingthorpe, 9-6-1910, G W M (E A A).

#### ARGYRESTHIA RETINELLA, Zell., Sta.

N. Morton Carr, 7-7-1909; Pelham's Pillar Wood, 10-7-1909; Wrawby Moor, 7-7-1906, 9-7-1910; G W M.

#### ARGYRESTHIA CURVELLA, L., Sta.

N. Barton on Humber, larvæ on apple, bred 6-1906; Theddlethorpe, 27-6-1906; G W M (E M A). Cleethorpes, 11-7-1909, F W S.

#### ARGYRESTHIA GŒDARTELLA, L., Sta.

Common in woods.

N. Louth, V T Crow. Limber, 5-8-1907; Market Rasen, 5-8-1907 (E M A); Moortown, 18-8-1907 (E M A); Morton Carr, 7-7-1909; Wrawby Moor, common; G W M.

#### ARGYRESTHIA BROCHELLA, Hb., Sta.

Common among birch.

- N. Ashby (Brigg) Dist., R T C. Grimsby, 8-8-1909; Limber, 20-7-1907; Market Rasen, bred 6-1907; Morton Carr, 7-7-1909; Raventhorpe, 14-7-1909; Wrawby Moor, common; G W M. Lincoln, 1840-50, F M B. Louth Dist., V T Crow.
- S. Lincoln Dist., J F M.

# GRACILLARIA ALCHIMIELLA, Scop.

Frequent.

N. Ashby (Brigg) Dist., RTC. Broughton, 1895; Muckton; CDAsh. Limber, 8-6-1907; Linwood, 12-6-1905; Pelham's Pillar Wood, 4-6-1906; GWM. Little Coates, 9-7-1909, F\_WS. Newball, GHR.

#### GRACILLARIA STIGMATELLA, Fb., Sta.

N. Market Rasen, 23-8-1895, G H R.

#### GRACILLARIA ELONGELLA, L., Sta.

N. Ashby (Brigg) Dist., RTC. Legsby, 8-1895, GHR.

#### GRACILLARIA TRINGIPENNELLA, Zell., Sta.

S. Great Gonerby, WAA.

#### GRACILLARIA SYRINGELLA, Fb., Sta.

The larvæ do considerable damage to the foliage of lilac and ash.

N. Broughton, 1895, C D Ash. Divs. 2, 3, 4, 5, 6, 7, 8,

#### GRACILLARIA AUROGUTTELLA, St., Sta.

N. Saxby (Barton), a large colony on Hypericum in a small plantation, very local, C D Ash.

#### ORNIX AVELLANELLA. Sta.

S. Ropsley Rise, common, W A A.

#### ORNIX ANGLICELLA, Sta.

N. Ashby (Brigg) Dist., R T C. Linwood, 14-4-1893, G H R: (E A A). Thornton, 11-5-1909, G W M.

#### ORNIX TORQUILLELLA, Sta.

N. Newball, 6-5-1893, GHR (EAA).

#### ORNIX GUTTEA, Haw.

S. Ropsley, common, W A A.

# COLEOPHORA FABRICIELLA, Vill., Sta.

S. Great Gonerby, W A A.

# COLEOPHORA ALCYONIPENNELLA, Kol., Sta.

S. Ropsley, W A A.

#### COLEOPHORA PYRRHULIPENNELLA, Tisch., Zell., Sta.

N. Wrawby Moor, 7-7-1906, G W M (E M A).

# COLEOPHORA ALBICOSTA, Haw., Sta.

N. Linwood, 29-5-1909, G W M (E A A).

S. Great Gonerby, WAA.

# COLEOPHORA ANATIPENNELLA, Hb. Sta.

N. Ashby (Brigg) Dist., RTC.

# COLEOPHORA CURRUCIPENNELLA, Fisch., Zell., Sta.

N. Ashby (Brigg) Dist., RTC.

# COLEOPHORA DISCORDELLA, Zell., Sta.

N. Horkstow, C D Ash.

# COLEOPHORA THERINELLA, Tgstr., Sta.

S. Ropsley, WAA.

#### COLEOPHORA MURINIPENNELLA, Fisch., Zell., Sta.

- N. Linwood, 30-5-1909, G W M (E A A).
- S. Great Gonerby, common, WAA.

#### COLEOPHORA GLAUCICOLELLA.

N. Barton-on-Humber, bred 29 and 30-7-1909 from Juneus glaucus GWM (EAA).

#### COLEOPHORA OBTUSELLA.

N. Chapel, larvæ taken by JEM. (Nat. 1887 p. 290). Lincoln, see Meyrick p. 660.

#### COLEOPHORA LARIPENNELLA, Zett.

N. Theddlethorpe, 27-6-1906, G W M. (E M A).

#### COLEOPHORA LARICELLA, Hb., Sta.

Probably common in all larch woods.

N. Ashby (Brigg) Dist., R T C. Broughton, larvæ 23-5-1908; Limber, bred 20-6-1907; Welton (Lincoln), cases on larches 20-5-1907; G W M.

#### COLEOPHORA NIGRICELLA, St., Sta.

N. Ashby (Brigg) Dist., RTC. Barton-on-Humber, bred from hawthorn 7-1907, GWM (EMA).

#### COLEOPHORA FUSCEDINELLA, Zell., Sta.

N. Ashby (Brigg) Dist., R T C. Newball, bred from birch 2-7-1893, G H R. Market Rasen, 5-8-1907 (E M A); Wrawby Moor, cases common on birch, bred 4-6-1906 (E M A); G W M.

# COLEOPHORA GRYPHIPENNELLA, Bouche, Sta.

N. Broughton, 1895; Saxby (Barton); C D Ash.

#### COLEOPHORA SICCIFOLIA, Sta.

N. Newball, 4-5-1893, G H R (E A A).

# COLEOPHORA VIMINETELLA, Heyd., Zell., Sta.

S. Ropsley, W A A.

# COLEOPHORA SOLITARIELLA, Zell., Sta.

S. Ropsley, common, W A A.

# COLEOPHORA LUTIPENNELLA, Zell., Sta.

N. Bradley, 1-8-1908 (E M A); Market Rasen, 5-8-1907 (E M A); G W M.

S. Ropsley, common, W A A.

# COLEOPHORA LIMOSIPENNELLA, Fisch., Sta.

N. Linwood, bred 6-7-1909 from birch, G W M.

# BEDELLIA SOMNULENTELLA, Zell.

N. Saxby (Barton), C D Ash.

# CHAULIODUS ILLIGERELLUS, Hb., Sta.

S. Ropsley, WAA

# CHAULIODUS CHÆROPHYLLELLUS, Goze.

N. Barton-on-Humber, 19-7-1908, G W M (E M A). Linwood, 14-4-1893, G H R (E A A).

# LAVERNA OCHRACEELLA, Curt., Sta.

S. Great Gonerby, WAA.

# LAVERNA PHRAGMITELLA, Bent., Sta.

Larvæ in heads of bulrush.

- N. Holton-le-Moor, bred 1908, G W M.
- S. Nocton, bred in numbers 1909, G W M.

#### LAVERNA HELLERELLA, Dub.

S. Ropsley, WAA.

# LAVERNA ATRA, Haw., Sta.

N. Barton-on-Humber, 20-6-1906 (E M A) and 9-7-1908, G W M.

#### CHRYSOCLYSTA LINNEELLA, Clerck., L., Sta.

N. Lincoln, 1848, 1840-50, F M B. (Recorded as Glyp: linnwella).

# CHRYSOCLYSTA AURIFRONTELLA, Hb., H.-S.

N. Ashby (Brigg) Dist., RTC. Louth Dist., VT Crow (EAA). Wragby, 30-5-1896, GHR.

# ANTISPILA PFEIFFERELLA, Hb., Sta.

N. Saxby (Barton), C D Ash.

# ELACHISTA GLEICHENELLA, Fb., Sta.

- N. Pelham's Pillar Wood, 10-7-1909, GWM (EMA).
- S. Ropsley, scarce 1885 and 1886, WAA.

# ELACHISTA MAGNIFICELLA, Tgstr., Sta.

N. Linwood, 3-8-1908, G W M (E M A).

# ELACHISTA ALBIFRONTELLA, Hb., Sta.

N. Legsby, 6-6-1892; Panton, 4-6-1893; G H R.

# ELACHISTA ATRICOMELLA, Sta.

S. Ropsley; Great Gonerby; W A A.

# ELACHISTA LUTICOMELLA, Zell., Sta.

S. Ropsley, W A A.

# ELACHISTA NIGRELLA, Hb., Haw., Sta.

S. Ropsley, W A A.

# ELACHISTA SUBNIGRELLA, Dougl., Sta.

S. Ropsley, W A A.

#### ELACHISTA OBSCURELLA, Sta.

S. Ropsley, W A A.

#### ELACHISTA ZONARIELLA, Tgstr., Sta.

S. Ropsley, plentiful, W A A.

#### ELACHISTA ADSCITELLA, Sta.

S. Ropsley, rather common, W A A.

#### ELACHISTA CERUSSELLA, Hb., St., Sta.

N. Barton-on-Humber, bred 9-1908 from ribbon or reed-grass, G W M (E M A).

#### ELACHISTA TRIATOMEA, Haw., St., Sta.

N. Pelham's Pillar Wood, 10-7-1909; Theddlethorpe, 24-6-1906 (E M A); G W M.

#### ELACHISTA COLLITELLA, Dup., Frey.

S. Ropsley, one specimen, W A A.

#### ELACHISTA RUFOCINEREA, Haw., Sta.

Abundant.

N. Greenfield Wood, 22-5-1891, EW. Divs. 2, 3, 7, 8, 11,

#### ELACHISTA ARGENTELLA, Clerck.

Common.

N. Mother Wood (Alford), 29-5-1891, E.W. Divs. 3, 5, 7, 8 or 9 11.

#### TISCHERIA COMPLANELLA, Hb., Sta.

- N. Broughton, 1895, C D Ash. Limber, 8-6-1907 (E M A); Roxton Wood, 19-6-1909; Wrawby Moor, 9-7-1910; G W M.
- S. Skellingthorpe, 10-6-1909, GWM.

# TISCHERIA MARGINEA, Haw., St., Sta.

N. Panton, 6-1893, G H R. Saxby (Barton), C D Ash.

# LITHOCOLLETIS CAVELLA, Zell.

N. Brocklesby, 11-5-1907 (E M A); Usselby, bred 8-1909 (E A A); Welton (Lincoln), 20-5-1907 (E M A); G W M.

#### LITHOCOLLETIS BLANCARDELLA.

N. Ashby (Brigg) Dist., bred from apple, RTC.

#### LITHOCOLLETIS OXYACANTHÆ.

N. Saxby (Barton), larvæ abundant in hawthorn leaves, C D Ash (E A A).

#### LITHOCOLLETIS CORYLI, Nicelli, Sta.

S. Ropsley Rise, common, W A A.

#### LITHOCOLLETIS SPINICOLELLA, Kol., Sta.

S. Ropsley, common, WAA.

#### LITHOCOLLETIS FAGINELLA, Mann., Sta.

N. Ferriby Quarry, common, bred from beech leaves 9-1908, GWM. Saxby (Barton), C D Ash.

#### LITHOCOLLETIS SALICICOLELLA, Sircom., Sta.

S. Ropsley, common, WAA.

#### LITHOCOLLETIS ULMIFOLIELLA, Hb., Sta.

N. Usselby, 14-8-1909 (E A A), bred 8-1909 from birch (E M A), G W M.

#### LITHOCOLLETIS SPINOLELLA, Dup., Sta.

S. Ropsley, common, W A A.

#### LITHOCOLLETIS QUERCIFOLIELLA, Fisch., Zell., Sta.

N. Ashby (Brigg) Dist., R T C. Brocklesby, 11-5-1907 (E M A);
 Freshney Bogs, 26-5-1910 (E A A); Limber, 8-6-1907 (E M A);
 Pelham's Pillar Wood, 5-8-1909 (E M A);
 Wrawby Moor, 28-7-1909 (E M A);
 G W M.

#### LITHOCOLLETIS MESSANIELLA, Zell., Sta.

N. Saxby (Barton), larvæ on Ilex, C D Ash.

# LITHOCOLLETIS CORYLIFOLIELLA, Haw., Sta.

S. Grantham; Ropsley; WAA.

# LITHOCOLLETIS ULICICOLELLA, Vaughan, Sta.

S. Great Gonerby, among furze, W A A.

# LITHOCOLLETIS ALNIFOLIELLA, Hb., Sta.

N. Limber, 15-5-1909 (E M A); Usselby, bred 8-1909 (E A A); G W M.

# LITHOCOLLETIS HEEGERIELLA, Zell., Sta.

N. Ashby (Brigg) Dist., RTC.

# LITHOCOLLETIS CRAMERELLA, Fb., Sta.

N. Ashby (Brigg) Dist., R T C. Limber, 8-6-1907 (E M A) and 15-5-1909; Linwood, 29-5-1909; Roxton Wood, 22-5-1909; Usselby, 14-8-1909 (E M A); G W M.

# LITHOCOLLETIS SYLVELLA, Haw., Sta.

S. Ropsley, common, W A A.

# LITHOCOLLETIS EMBERIZÆPENNELLA, Bouche, Sta.

N. Butters Wood, Goxhill, 31-5-1908, G W M (E M A).

#### LITHOCOLLETIS NICELLII, Zell., Sta.

S. Ropsley, common, W A A.

# LITHCOLLETIS TRIFASCIELLA, Haw., St., Sta.

- N. Wrawby Moor, 6-10-1907, G W M. (E M A).
- S. Ropsley, common, W A A.

# LYONETIA CLERCKELLA. L.

N. Barton-on-Humber, 7-7-1908, G W M. Saxby (Barton), C D Ash.

#### CEMIOSTOMA SPARTIFOLIELLA, Hb., St., Sta.

N. Barton-on-Humber, 20-7-1910, in the garden, G W M (E A A).

#### CEMIOSTOMA LABURNELLA, Heyd., Sta.

N. Barton-on-Humber, 29-8-1909; Gainsborough, larvæ 7-7-1809, and subsequently bred; Grimsby, 8-8-1909; GWM. Louth Dist., V T Crow. Saxby (Barton), larvæ very destructive to laburnums, C D Ash.

#### CEMOISTOMA SCITELLA., Zell., Sta.

S. Grantham; Great Gonerby; W A A.

# OPOSTEGA CREPUSCULELLA, Fisch., Zell., Sta.

N. Risby Warren, 5-7-1906, G W M (E M A).

# NEPTICULA ATRICAPITELLA, Haw., Sta.

N. ¶ Near Alford, Fletcher.

# NEPTICULA RUFICAPITELLA, Haw., Sta.

N. ¶ Woods near Alford, Fletcher.

# NEPTICULA BASIGUTTELLA, Hein.

N. ¶ Near Alford, Fletcher.

# NEPTICULA ANOMALELLA, Goze., Sta.

N. ¶ Alford, Fletcher.

#### NEPTICULA FLETCHERI, Tutt.

N. ¶ Woods near Alford, Fletcher.

# NEPTICULA PYGMÆELLA, Haw., Sta.

N. ¶ Near Louth, Fletcher.

# NEPTICULA OXYACANTHELLA, Sta., Frey.

N. ¶ Alford; Louth; Fletcher.

#### NEPTICULA SEPTEMBRELLA, Sta.

S. Ropsley, common, W A A.

# NEPTICULA SUBBIMACULELLA, Haw., St., Sta.

S. Ropsley, W A A.

#### NEPTICULA FLOSLACTELLA, Haw., St., Sta.

S. Ropsley, common, WAA.

# NEPTICULA SALICIS, Sta., Frey.

S. Ropsley, W A A.

# NEPTICULA MICROTHERIELLA, Wing., Sta.

S. Ropsley, common, W A A.

# NEPTICULA ARGENTIPEDELLA, Zell., Sta., Frev.

N. Pelham's Pillar Wood, 5-6-1909, GWM (EAA).

#### NEPTICULA ANGULIFASCIELLA, Sta.

S. Ropsley, one specimen, W A A.

#### NEPTICULA RUBIVORA, Wocke.

N. Lincolnshire Coast, in the greatest profusion, by W H B Fletcher, W Warren (E M M, vol. 20, pp. 186-188).

#### NEPTICULA GRATIOSELLA, Sta.

S. Grantham; Ropsley; WAA.

# NEPTICULA AURELLA, Fb., Sta.

N. Ashby (Brigg) Dist., RTC.

#### NEPTICULA GEI, Wocke.

N. ¶ Near Alford: "N. goi is certainly double-brooded, probably as far north as Alford in Lincolnshire, the larvæ being taken during the whole of October there."

# NEPTICULA SPLENDIDISSIMELLA, H.-S., Frey.

N. ¶ Sandhills near Mablethorpe, Fletcher.

#### TRIFURCULA IMMUNDELLA, Zell., Sta.

S. Gonerby Road, WAA.

#### TRIFURCULA PULVEROSELLA, Sta.

S. Ropsley, one specimen 6-1891, WAA.

# LINCOLNSHIRE COLEOPTERA.

#### BY THE

REV. A. THORNLEY, M.A., F.L.S., F.E.S., Nottingham,

and

W. WALLACE, M.B., Ch.B., Grimsby.

# (Fourth Paper).

The following twenty-three species are additions to the already published sections:—

#### BRADYCELLUS COGNATUS, Gyll.

N. 2, Scunthorpe, sandy and muddy sides of ponds and streams, 11-6-10, W E SHARP, F E S.

# BEMBIDIUM BRUXELLENSE, Wesin.

N. 2, Scunthorpe, 25-8-10, Dr. Corbett (L N U. & Y N U).

# ALEOCHARA CUNICULORUM, Kr.

N. 2, Scunthorpe, one specimen on the warren, 25.8-10 (L N U & Y N U), W W. 3, Wrawby Moor, 10-9-10, by J H Robinson, W W. 4, Irby, several specimens about the mouth of a rabbit burrow, 24-8-10, W W.

# OXYPODA LENTULA, Er.

N. 4, Croxby Pond, 14-7-10, one specimen at roots of plants near the sallows, W W.

## OXYPODA LONGIUSCULA, Gr.

No. 2, Scunthorpe, 11-6-10, by sifting roots of grass, moss, etc. (W E Sharp). 4, Freshney Bog, in flood refuse, 1-9-09, W W. Croxby Pond, 14-7-10, in large numbers at roots of plants near the sallows, W W.

#### OXYPODA BRACHYPTERA, Steph. '

N. 3, Ulceby, several specimens by J H Robinson, 8-9-10, W W.

#### HOMALOTA HALOBRECTHA, Shp.

A shore species.

N. 9, Humberstone, amongst tidal refuse, several specimens, 16-4-11, W W.

#### HOMALOTA MONTICOLA, Th.

N. 3. Wrawby Moor, a fine male, 10-9-10, by J H Robinson, W W.

#### HOMALOTA, EREMITA, Rye.

N. 2, Scunthorpe, 11-6-10, W E SHARP.

#### HOMALOTA CORIARIA, Kr.

N. 2, Scunthorpe, 11-6-10, by sifting roots of grass, moss, etc. (W E Sharp).

#### HOMALOTA DIVISA, Mark.

N. 3, Wrawby Moor, 10-9-10, several by J H Robinson, W W. Goxhill, 2-5-10, W W. 9, Saltfleet, one on the sandhills, 31-7-10, W W.

#### HOMALOTA AUTUMNALIS, Er.

N. 2, Scunthorpe, 11-6-10 (W E SHARP). 4, Bradley Wood, one by sweeping, 23-6-10, W W.

# HOMALOTA ATRICOLOR, Shp.

Probably a common species.

N. 4, Bradley, abundant in dung, 4-5-10, W W. 9, Humberstone, 21-8-10, W W.

# HOMALOTA CAUTA, Er.

N, 4, Bradley, in dung, 4-5-11, W W. 9, Humberstone, 16-4-11, W W.

# HOMALOTA ATERRIMA, Gr.

N. 2, Scunthorpe, 25-8-10, W W. 3, Goxhill, in a carcase, 3-5-10, W W. 4, Bradley, in dung, 4-5-11, W W.

# TACHYPORUS HUMEROSUS, Er.

N. 2, Scunthorpe, 11-6-10, by sifting roots of grass and moss, W E Sharp.

# XANTHOLINUS OCHRACEUS, Gyll.

Not common.

N. 4, one on Grimsby street, 5-1911, W W. 9, Donna Nook, 15-5-10, one on sandhills, W W.

#### STENUS MELANARIUS, Steph.

N. 2, Scunthorpe, 11-6-10, by sifting roots of grass, moss, etc. W E Share.

#### STENUS PALLIPES, Gr.

N. 3, Goxbill, one specimen, 9-1-11, by J H Robinson, W W.

#### BLEDIUS HINNULUS, Er.

A newly described species.

N. 4, Cleethorpes, 21-8-10, not common, and only occurring in a small area, W W.

It is pointed out by D Sharp, M.A., F.R.S., in the Entomologist's Monthly Magazine, Feb., 1911, that two species of Bledius have been included in one specific name—Bleornis, and that the specimens taken by J Kidson Taylor at Clethorpes (see L N U Trans., 1909, p. 145) are Hinnulus.

The specimens occurring further south on the coast are probably all **Bicornis**, for I took it (**Bicornis**) in the greatest profusion at Saltfleet, 31-7-10, W W,

#### BLEDIUS FRACTICORNIS, Pk.

N. 2, Scunthorpe, 11-6-10, sandy and muddy banks of ponds and streams, W E Sharp.

#### PLATYSTETHUS CORNUTUS, Gr.

N. 2, Scunthorpe, sandy and muddy banks of ponds and streams, 11-6-10, W E SHARP.

# HOMALIUM PUNCTIPENNE, Th.

N. 4, Irby, one under bark, 17-4-1911, and several a few days after by J H Robinson, W W.

# Heteromera.

#### BLAPS MUCRONATA, Lat.

"The Churchyard Beetle," apparently not common.

- N. 3, Cadney, 7-1898, E A W-P. 4, Grimsby, one in a house, 1906, taken by A B.—the only|specimen I have seen in this town! W W. 8, Grainsby, several crushed specimens in the church, 7-1908, W W.
- S. 13, Court Leys, 1896, S C S. 15, Sapperton, 6-1901, S C S. 16, Crowland Abbey Churchyard, 28-6-1910, W D-R & A S.

#### CRYPTICUS QUISQUILIUS, L.

Occurs only on the coast, and is not common.

N. 4, Cleethorpes (Fowler, Brit. Col.), one there by A B. 30-6-07, W W. 9, Theddlethorpe and Mablethorpe, 8-6-96, A T. North Somercotes, 1-5-03, C S C. 11, Trusthorpe, two specimens 6-1897, A T.

#### MICROZOUM TIBIALE, F.

Not common in sandy areas, coast and inland.

N. 2, Scunthorpe, 11-6-10, W E SHARP. 9, Humberstone, one specimen by A B 29-6-08, and another was brought to me later from near Grimsby, W W. Donna Nook, one on the sandhills 15-5-10, W W.

#### SCAPHIDEMA METALLICUM, F.

Frequent.

N. 2, Scunthorpe, on Crosby Warren 25-8-10, L N U, W W. 3, Cadney, several 21-3-98 E A W-P. Goxhill, in flood refuse 25-12-09, W W. 4, Cleethorpes, on old posts 15-6-07, by R Charlton, W W. 6, Riseholme Park (Fowler, Brit. Col.). 9, Mablethorpe, 1882, H Bedford Pim (E M M), December 1882, xix., p. 16; also there by A T 8-6-1896. Humberstone, in little groups on dead hawthorn boughs in company with Lissodema quadripustulatum 22-6-07, W W.

# TENEBRIO MOLITOR, L.

We have few records.

- N. 3, Goxhill, 1910, W W. 4, Grimsby, 1906, one in a house by A B. Cleethorpes, one in a granary by F W Sowerby 27-5-10, W W. 8, Louth, not uncommon, R W Goulding.
- S. 13, Court Leys, 8-1898, SCS.

#### GNATHOCERUS CORNUTUS, F.

N. 4, Grimsby, in a bakery 2-7-10, taken by A B in the flour and debris in numbers, males and females, W W.

# TRIBOLIUM FERRUGINEUM, F.

N. 4, Grimsby, 9-1910, dead specimens in rice from a shop, A B, W W.

# HELOPS STRIATUS, Fourc.

Has not occurred in Grimsby District.

N. 2, Scunthorpe, on Crosby Warren, 25-8-10, one specimen L N U, MR E G BAYFORD. 3, Ashby, A T. 9, Mablethorpe District, A T.

#### LAGRIA HIRTA, L.

Frequent by sweeping and beating.

- N. 2, Scunthorpe, 6-8-00, L N U. 3, Cadney, 19-8-1899 E A W-P. 4, Little Coates, 15-7-07, several by beating the sallows, W W. 7, Linwood, by sweeping, 20-7-10, W W. 8, Holton-le-Clay, sweeping, 5-6-08, W W. 9, Theddle-thorpe, common on the sandhills, 13-6-93, A T. Humberstone, 28-7-08, W W. 10, Woodhall Spa and Tumby, one specimen, L N U. (NAT. 1899, p. 68.)
  - S. 13, Court Leys, 11-8-1898, S.C.S. 15, Sapperton, 6-1901, S.C.S.

#### CISTELA MURINA, L.

Local and rare in Grimsby District.

- N. 2, Scunthorpe, 11-6-10, by general sweeping and beating, W E SHARP. 4, Ravendale, 23-6-07, three specimens beaten from hawthorn, W W (the only record for Grimsby District).
  7, Linwood, 8-6-08, W W. 8, Donington-on-Bain, August and September 1908, sent by Rev W Wright Mason to A T. 9, Theddlethorpe, 6-1896, A T.
- S. 15, Ancoates, L N U, A T. Sapperton, 4-6-or, S C S.

#### ORCHESIA MICANS, Pz.

Local.

- N. 4, Cleethorpes, larvæ, E G Bayford (Nat. 1898, pp. 71 & 116). 9, Humberstone, larvæ in old black fungoid growths (boleti?) on growing ash trees produced eight specimens 12-7-07, W W. I found several mature specimens on these fungoid growths actively moving about in the sunshine 28-7-08, W W.
- S. 13, Court Leys, 8-1897, SCS.

#### CLINOCARA TETRATOMA, Thoms.

Our only records:-

N. 4. Little Coates, one specimen by sweeping, 9-7-09, W W. 6, Spridlington (Fowler, Brit. Col).

# MELANDRYA CARABOIDES, L.

Our only record:-

S. 13, Hartsholme, A T.

# SALPINGUS CASTANEUS, Panz.

Not common.

N. 2, Manton Common, beaten from Pinus sylvestris, 9-97, A T; also in same locality, 4-98, E A W-P. 4, Little Coates, one specimen under bark of paling, 8-05, W W. 7, Usselby, 2-8-09, F W Sowerby, W W.

# SALPINGUS ÆRATUS, Muls.

Our only record:-

N. 4, Bradley, by sweeping near sallows, one specimen, 29-8-07, W W.

# LISSODEMA QUADRIPUSTULATA, Marsh.

N. 9, Humberstone, 7-7-07, on dead hawthorn boughs lying on the ground. They occurred in little groups in company with Scaphidema metallicum, W W.

# RHINOSIMUS RUFICOLLIS, L.

N. 2, Ashby, 1899, Dr. C. 3, Cadney, 1898, E A W-P. 4, near Grimsby, one specimen on sycamore trunk, 9-12-07, by A B. W W. Ravendale, by A B., 12-9-08, W W.

# RHINOSIMUS VIRIDIPENNIS, Steph.

Records from Grimsby District only.

N. 4, Bradley Wood, one by sweeping, 4-6-07, W W. Weelsby, 3-7-08, by A B. W W. Ravendale, by A B., 6-6-09, W W.

# RHINOSIMUS PLANIROSTRIS, F.

Fairly common.

- N. 3, Cadney, 21-3-1898, E A W-P. 4, Bradley Wood, 4-6-07, by sweeping and in old posts.
   7, Moortown, 18-8-07, W W.
- S. 13, Court Leys, 9-1900, S C S.

# ŒDEMERA NOBILIS, Scop.

Evidently very local.

N. 6, Newton Cliff, a pair, 5-6-1895, A T. (E M M. Oct., 1895, p. 240), and a male in the same locality by Mr. Stow, 2-6-01, 11, Alford, C O WATERHOUSE (Alford Nat. Soc. Records).

# NACERDES MELANURA, L.

Rather common about Grimsby in summer.

N. 4, Cleethorpes, 1898, A S. Grimsby, many specimens on the streets in the sunshine, 7-1908, W W. 9, Mablethorpe, 6-1897, A T. 11, Trusthorpe, three specimens on the woodwork of the promenade, 6-1897, A T.

# PYROCHROA SERRATICORNIS, Scop.

"The Cardinal Beetle," commonly seen sunning itself on decaying stumps in the rotton wood of which its larvæ are often found.

- N. I, Althorpe, larvæ under willow bark developed into imagines 10-5-08, WW. 2, Bottesford, 21-5-00, EAW-P. 3, Cadney, 6-1898, EAW-P. 4. Little Coates, 1897, AS. Cleethorpes, LNU, 5-7-94, WFB (entered as P. COCCINEA in the 'Naturalist' report Dec. 1894, p. 352, but I feel sure it is only this common species AT.) 6, Newton Cliff, 22-6-01, AT. 7, Linwood, larvæ, 1908, by Miss Cameron. 9, Humberstone, 1897, AS. 8, Louth District, common, RW Goulding.
- S. 13, Court Leys, 6-1899, SCS. 15, Little Ponton, 7-6-1898, E A W-P. 18, Near Spalding, 6-1904, W E SHARP.

# MORDELLESTINA ABDOMINALIS, F.

Our only record.

S. 13, Nocton, E A WATERHOUSE, (E M M, Jan. 1868, p. 186-7).

# ANASPIS FRONTALIS, L.

A common species especially by beating hawthorn flowers.

- N. 2, Broughton, 3-6-1895, L N U, (Nat. 1895, p. 236).
   Brocklesby, 14-6-00, A S. 4, Freshney Bogs, 21-6-98, E A W-P. 6, Newton Cliff, 2-6-01, L N U. 7, Linwood, 30-5-98, E A W-P. 8, Holton-le-Clay, 5-7-08, W W.
- S. 13, Court Leys, 1899, S C S.

#### ANASPIS RUFILABRIS, Gyll.

Not nearly so common as the preceding.

N. 3, Pelham Woods, 2-7-10, WW. 4, Bradley Woods in numbers, 24-5-07 on hawthorn and anthriscus, WW. Little Coates, 9-7-09, F W Sowerby, WW. 7, Linwood, 8-6-08, WW.

#### ANASPIS GEOFFROYI, Mull.

- N. 2, Broughton, 3-6-95, L N U (Nat. 1895, p. 236). 4, Irby, one specimen on an umbelliferous flower by F W Sowerby, 16-6-10, the only instance of its occurrence in the Grimsby District, W W. 6, Torksey, 16-5-1899, S Pegler.
- S. 13, Court Leys, 5-1901, SCS. Lincoln (Fowler, Brit. Col.)

#### ANASPIS RUFICOLLIS, F.

Not uncommon by beating and sweeping, but generally occurs singly.

- N. 4, Immingham, 9-1901, A.S. Bradley Wood, 26-5-07, W.W. 8, Holton-le-Clay, 5-7-08, W.W. Ludborough, 5-7-10, A.B.
- S. 13, Court Leys, 23-6-1899, S C S.

# ANASPIS SUBTESTACEA, Steph.

Our only record.

N. 4, Bradley, in the Gears Wood, 23-6-10, two specimens by sweeping, both in net at once, W W.

#### ANASPIS MACULATA, Fourc.

The commonest species of the germs.

- N. 2, Broughton, 3-6-95, L N U (Nat. 1895, p. 236). 3, Cadney, 7-1898, E A W-P. 4, Freshney Bogs, 6-1900, A S. 6, Torksey, 16-5-99, S Pegler. 7, Linwood, 8-6-08, W W. 11, Alford, at Well Vale, 20-8-08, L N U, W W., this is very late in the year.
- S. 13, Court Leys, 26-6-1899. S C S.

#### METŒCUS PARADOXUS, L.

Our only records.

N. South Elkington, 1884, R W Goulding. 11, Alford, J E M (Nat. World, Dec. 1885, ii., 236).

#### NOTOXUS MONOCEROS, L.

Confined to the coast sandhills, where it is common.

N. 4, Cleethorpes, 30-6-07, several and some specimens having very little yellow colouring upon them, W W. 9, Mablethorpe (Fowler, Brit. Col.) and 30-6-00, L N U. Donna Nook, 31-5-06, L N U, W W. 11, Trusthorpe, common 6-1897, A T.

#### ANTHICUS FLORALIS, L.

A common species.

- N. 3, Cadney, 6-10-1898, A T. 4, Clee, haystack refuse, 3-99, W W. Freshney, flood refuse 8-7-08, W W. 9, Theddlethorpe, 8-1893, A T. 11, Trusthorpe, 6-1897, A T.
- S. 13, Court Leys, 9-1900, S C S.
- var. Quisquillus, Th., is nearly as common as the type in the Grimsby District.
  - N. 4, Great Coates, 7-07, WW. Cleethorpes with type 4-10-08, WW.

#### ANTHICUS ANTHERINUS, L.

A coast species.

N. 8, North Reston, R W Goulding. 9, Humberstone, 24-3-07, abundant at roots of grass on the sandhills, also taken later, W W.

# MELOE PROSCARABÆUS, L.

- 'The Oil beetle.' "Not uncommon in the county" (WWF), but our only specific record is:—
- N. 9, Humberstone, on a sunny day, 56-5-09, two large females taken by AB on the sandy road leading to the shore, WW.

#### MELOE VIOLACEUS, Marsh.

N. 8, Hubbard's Valley, near Louth, H. Wallis Kew, Nat. World, March 1886.

# FIELD MEETINGS, 1910.

The Union held its Sixty-eighth Field Meeting at FRESHNEY BOG, near Grimsby, on May 26th. A very representative number of Members attended and were augmented by members of the Grimsby Naturalists' Society. A fine day favoured the party assembled and they at once drove from Grimsby Station to that area so well beloved by the late John Cordeaux.

Mr. G. W. Mason reports:—The weather was entirely favourable for insects, but they were backward and rather scarce. Among the Macro-Lepidoptera nothing of importance occurred except one specimen of Eupithecia pygmaeata, which was the best catch of the day. It is a very local species, the best time to take it being in the late afternoon. Micropteryx calthella was taken abundantly in the sweeping net, and the following also occurred, i.e., Sericoris lacunana, Catoptria ulicetana, Nemophora schwarziella, Gracillaria syringella, Glyphipteryx fischeriella, and Lithocolletis quercifoliella. Larvæ of Cheimatobia brumata, Hypsipetes sordidata, Cleocera viminalis, Ephippiphora populana, and Depressaria conterminella (the last named commonly) were found in spun up shoots of sallow, and the larvæ of Tortrix palleana were being continually swept up in the coleopterists' nets. A pupa of Dasycera sulphurella was also taken.

The Rev. E. A. Woodruffe-Peacock reports:—This meeting from the botanical point of view was most successful, though the ground has been worked so fully during the last fifty years by the late John Cordeaux and others, that nothing unusual was expected to turn up. In passing through the ozier holt, not only recording the flora, but also noticing insect visitors to the flowers, a furious conflict was observed between a coleopteron and a dipteron in a large Taraxacum officinale flower. The beetle in this case was the aggressor, and yet was only a very little larger than the fly. Unluckily I was near no brother naturalists, and had no insect tubes in my pocket; for the future I shall never go out without them, for I gathered the flower without disturbing the conflict,

and had the insects in full view under a strong lens for some time. I have watched insects visiting plants ever since the hot summer 1868, but I never remember seeing such a voracious struggle before. Victor and victim were both thickly covered with the pollen they were scattering on all sides in their struggles. After the fight was over the fly was rapidly consumed by its adversary. The subject of insect visitors to plants requires much more detailed work than it has ever yet received from any naturalist. The specimens should be preserved like shells in separate tubes just as taken from the flowers.

The most striking fact of this visit is the ash and oak holt on the peat and fresh water alluvium of Aylesby Beck. The oak found there is natural enough in such circumstances. The ash, on the other hand, is quite out of place, and no doubt was planted there between 40 and 50 years ago. On pure fenland peat, slightly limy-water peat, the ash is practically unknown. On mixtures of peat and its subsoil, such as Oxford clay, it grows fairly well when planted, but never naturally. The wood from such places is of little value. Along the Aylesby Beck peat the cause of its successful growth is the heavily charged lime water from the blow wells of the bog. Iris pseudacorus, which is especially a lime-shore water loving plant, was in the wood, but I noticed no young ashes on the peat, though there were a few on the pure fresh water alluvium. I saw no Erica or Calluna; perhaps where they cannot grow, ash can do fairly well even on peat.

The best species taken and a new record for North Lincolnshire was Cardamine amara, L. I have had many a talk with the late John Cordeaux about its absence from the northern part of this county. It is curious he never observed it. I can only suppose at the time it is in flower, shooting is over, and he was busily engaged with his beloved migrants, and so never visited this ground at the right season. Menyanthes and Parnasia are still found in the bog, with Carex pulicaris, C. binervis, and Orchis latifolia. Just beyond in a marshy field Pedicularis sylvatica and Stellaria uliginosa were conspicuous. I never saw larger specimens of the former. Stellaria Holostea and Listera ovata were both in evidence on the wood edge. Epipactis palustris, as Cordeaux says, 'is gone for

ever,' I fear, though there is a specimen in the County Herbarium from this bog.

Dr. Wallace reports upon Coleoptera: The most interesting species taken were:—Bradycellus placidus, Gyll., one by sweeping in a very marshy spot, and Poophagus sisymbrii, F., occurred on aquatic plants.

Mr. W. Denison Roebuck writes:—The Conchological party had a good time in Freshney Bog and added several species to the list for Division 4, including Agriolimax lavis, and some very fine varieties of Helix aspersa and H. nemoralis were collected. Cacilioides acicula turned up at Little Coates Sandpit, as was shrewdly suspected by the conchologists who noted the place on passing it in the forenoon.

The return was made to Grimsby for tea, which was provided by Dr. Felton, (President of the Grimsby Society), at the Clarence Hotel, after which the reports were made.

The Sixty-ninth Field Meeting was held at CROWLAND, on June 28th. The remoteness of this locality was the cause of a very small attendance. The President and Secretary arranged to go over night and devoted the whole of their time to the Mollusca; the neighbourhood was very systematically investigated, the result being that the list for Division 16, S.E. was raised from 23 to 47 species, the results in fresh water species being very good. A search in the garden of Mr. Pitts' house yielded Limax flavus and Milax sowerbyi. Spharium lacustre was found, but Aplexa hypnorum which Messrs. Roebuck and Musham had found so common early in the year about Holbeach, did not occur.

Worthy of note was the finding of *Blaps mucronata* in Crowland Abbey Burial ground—the first record for Lincolnshire South.

The Seventieth Meeting was held at WELTON WOOD, July 28th. The attendance was not large though the area investigated was most interesting.

The President was unable to be present but reported that of the specimens sent to him, five additions were made to the division. Messrs. Smith and Howard collected the mollusca and found Cyclostoma elegans and Helix laminata in their haunt on the chalky sides of a drive in the Wood, one of the few stations in the County for the former species.

The Rev. E. A. Woodruffe-Peacock writes:—Mr. J. S. Sneath acted as botanical recorder for this meeting, as the Secretary, much to his regret, was away in Ireland. This wooded district is rich in good things but has never been properly worked, I fear. There is a difficulty about doing so without large scale maps. Welton Wood according to the Drift Map is on Purple Boulder Clay. Orby Wood close by on the lower and middle chalk. Now, one thing or another is certain about the notes of this meeting and others, even my own made years ago. Either the boundaries of Welton Wood according to the map were overpassed, and a chalk soil visited, or the so called Purple Boulder Clay just where it thins out on the chalk, must be nearly entirely composed of chalk fragments. I mean to a much greater extent than any Purple Boulder Clay, I personally know, has been.

The following is a selection from Mr. Sneath's list of plants observed:—Lychnis flos-cuculi, Vicia sepium, v. sylvatica, Geum urbanum × rivale, Sanicula, Pimpinella major, Galium palustre, G.Witheringii, Picris echioides, Campanula latifolia, Scrophularia nodosa, Origanum, Calamintha clinopodium, Plantago media, Listera ovata, Epipactis latifolia, Orchis pyramidalis, O. maculata, Ophrys muscifera, Habenaria bifolia, and Linaria minor, a railway ballast casual at Willoughby Station. An area which is so rich to constant application would surely supply even more.

The Seventy-First Meeting was held in conjunction with the Yorkshire Naturalists' Union at SCUNTHORPE, on August 25th. There was a good attendance of Lincolnshire members, some good work was done, and new species were recorded. The finding of Linnaa glabra was a most interesting discovery and is referred to in the President's address in this part of the Transactions. An exhaustive report of the meeting appeared in "The Naturalist" for November 1910.

Dr. Wallace reports upon *Coleoptera*: A large number of species were taken by working chiefly over the sandy warren: several of these are new to our county list and many new division records were made.

The following are the most interesting, and those marked

thus \* are new to the county and have the recorder's name appended: Broscus cephalotes, L., Amara bifrons, Gyll., Amara tibialis, Pk., Calathus fuscus, F., Calathus flavipes, Fourc., Calathus mollis, M., Anchomenus gracilis, Gyll., \*Bembidium bruxellense, Wesm., (one captured and named by Dr. Corbett), Dromius quadrinotatus, Pz., Hydroporus nigrita, F., Hydroporus gyllenhallii, Sch., \*Aleochara cuniculorum, Kr., one specimen taken by W. W. at the entrance to a rabbit burrow. Aleochara nitida, Gr., Autalia impressa, Ol., Staphylinus stercorarius Ol., two fine specimens on the wing; Necrophorus humator, Goez., Silpha rugosa, L., \*Choleva fumata, Spence, Choleva grandicollis, Er., Nitidula bipustulata, L.; these last five species occurred under dead rabbits. \*Choleva angustata, F., one specimen by sweeping by W.W., \*Cryptophagus lycoperdi, Hbst., in large numbers in Scleroderma vulgare by W.W. Pocadius ferrugineus occurred in all stages of development in puff-balls. Malthodes marginatus, Lat., Cis alni, Gyll., \*Cis pygmæus, M., by Mr. Bayford who also reports an interesting variety of Phyllodecta vitellina having the head and thorax bronze-green and the elytra blue. \*Longitarsus atricillus, L., one specimen by W.W. \*Longitarsus membranaceus, Foud., taken by Mr. F. W. Sowerby and named by Mr. Tomlin. Scaphidema metallicum, F., Helops striatus, F., one by Mr. Bayford, Apion affine, Kirby, Cionus blattaria, F., Rhinoncus castor, F.

In the above list we find species that occur almost exclusively on the coast, viz:—Broscus cephalotes and Calathus mollis. Mr. T. Stainforth found the former, but it is not new to this district, having been recorded many years ago from near Twigmoor, (see L.N.U., Trans., 1907, p. 195). Calathus mollis, however, is, I believe, very rarely found away from the coast sandhills, and its capture to-day by Dr. Corbett is of great interest.

Mr. G. W. Mason reported for the Lepidoptera:—Considering the general dullness of the weather, the lepidopterists had a satisfactory day on the whole. The best find was a fine specimen of Agrotis pracox, which was taken by Mr. C. P. Arnold, at rest on the sand. This species is usually taken on the coast, and it is interesting to find it established so far inland. It was taken by Dr. Corbett in the same locality in 1901. Some examples of the curious Rhacodia caudana were beaten out of sallow bushes. The

following moths new to the district were taken:—Crambus hamellus, Rhacodia caudana and Pædisca solandriana.

Among the Orthoptera taken by Mr. Bayford were:— Forficula auricularia, L., Stauroderus bicolor, Charp., and Gomphocerus maculatus, Thunb.

As to Conchology Mr. W. Denison Roebuck stated that the general results of the day were disappointing, only seventeen species having been found, but one of them was a most important discovery—Linnua glabra. This was found by Dr. Wallace, in company with its usual associate Planorbis spirorbis var. rotundata, and was an addition to the fauna of North Lincolnshire, the only previous record for the county having been in South Lincolnshire.

The botanists were led by the Rev. E. Adrian Woodruffe-Peacock, who writes that the course taken rewarded the study given to the ground. In all, 132 species of flowering plants, horsetails and ferns were observed, and their associations and frequency noted.

The sand flora of the exploited iron-stone pits yielded nothing very interesting. The as yet untouched moorland flora, from which the pits have been evolved, has been much influenced by the constant pumping from the iron pits. Cerastium arvense was not so common there as in the iron pits. Galeopsis tetrahit only by ditches; Fragraria vesca on the higher ground, rare; Galium saxatile was galled by Cecidomyia galii; Hypericum humifusum, sporadic and rare; Narthecium local and still in flower; Leontodon hirtum rare; Ornithopus perpusillus local and very rare; Sagina ciliata was most curiously mixed with S. procumbens; Viola Riviniana was known by its seeds.

The damp spots, flashes and shallow ponds lying on the Lower Lias Clay supplied the most interesting combinations of the day. Betula glutinosa is here only found when the soil is wet.

Later work on the Limnæa glabra flash, carried out by Mr. W. Denison Roebuck and some friends revealed the fact that there were still new species to be found in the county. Pilularia globulifera was sent to me among other plants from this flash, and a Nitella, the specimen was very poor, and may turn out to be flexilis, and, if so, a new record for the county. Truly of botany it

may be said, it is never exhausted. This district will have to be fully explored next season again.

In the Mycological section Mr. Crossland stated that the best finds were three or four specimens of Hydnum auriscalpium on decaying cones of Pinus sylvestris. One of the prettiest sights was a little forest of Mycena sanguinolenta, with their fibrillose bases growing on a rolling fir cone. Another uncommon find was a pair of Volvaria parvula growing from the sand in the hill among the rabbit burrows. In the same habitat were quantities of Bovista capiformis. Rhizina inflata was seen in plenty in one part of the wood, near some charcoal.

The Seventy-Second Field Meeting was held at STAMFORD, 23rd. The Rev. E. A. Woodruffe-Peacock writes:-This was a most successful and enjoyable meeting, but too late in the season for Stamford's best plants, such as Spiranthes autumnalis, now I fear extinct, Cardamine amara, still in good plenty, and Trifolium ochroleucon, which is seriously threatened by the advance of quarries. One of the limestone quarries Supplied Solidago virgaurea, the garden Michaelmas Daisy, or cultivated form of Aster tripolium, also Lepidium sativum. Lycium was in a hedge. A brickyard gave Resedu luteola. The rifle range, where T. ochroleucon grows so well, which will shortly be destroyed, Scabiosa succisa, Senecio erucifolius and Hypericum A quarry in a wood in Rutland over the county border, gave Viola hirta, Calamintha clinopodium, Astragalus glycyphyllus, Inula coniza, Erigeron acris, Serratula tinctoria, and Centaurium umbellatum. The road side in All Saints parish, Stamford, gave Hypericum humifusum. The river side Lythrum salicaria, Sium erectum, Scirpus lacustris. A disused quarry just outside Stamford Calamintha montana. The town walls Parietaria, Festuca rigida, and Saxifraga tridactylites, and a hedge foot Solanum nigrum. The meeting was continued on the 29th by Messrs. Reobuck and Peacock, and hundreds of soil notes on plants were taken in the two days.

The conchological results were good, and a goodly number of additions for Div. 16, S.W., were the result.

The great abundance of Limnaa stagnalis in its former-noted habitat was observed and the locality photographed.

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# LINCOLNSHIRE NATURALISTS' UNION.

# Statement of Accounts from 1st January to 31st December 1911.

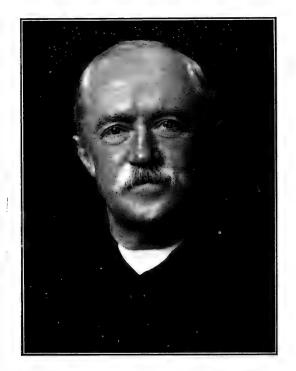
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30th January 1912.

Examined and found correct,

E. E. BROWN, Auditor.

BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.



REV. ALFRED THORNLEY, M.A.

PRESIDENT 1901-2.

## The Presidents

OF THE

## Lincolnshire Laturalists' Union.

THE

# REV. ALFRED THORNLEY, M.A., F.L.S., F.E.S., &c.

HERE suddenly appeared at an early Union meeting

"a little gentleman with a big sweeping net, who wanted to know what everybody was collecting, and to learn the scientific names of everything from plants to the smallest insects." "He had the memory, too, to carry them all." We were asked his name several times that day, and at first had to plead ignorance. Later we discovered a friend, and "what a jewel of a worker had been added to our numbers." As soon as he joined us he became one of our most sincere students of nature, and most indefatigable recorders. No day was too long, years ago; no method of study too restricted if it led to increased accuracy; though at times the evenings and nights were all too short to get the results worked out. Well do we still remember a day together at Newton Cliff, when the dried "warp" of the Trent bed gave the Coleopterist a rare beetle: so like a common one that it took us half an hour to sort them out for Dr. W. W. Fowler's critical inspection. It was on that day that sweeping each plant separately for insects was first started, with most surprising and satisfactory results. Since then we have moved on to taking the insects directly from the flowers they visit in glass tubes. The idea, however, is still the old one; the right and only truly scientific one, when an accurate note is made on the spot at the same time.

The Insecta generally, and Coleoptera particularly, were Mr. Thornley's special study, as long as he remained an active field worker for the Union. For many years he personally kept the Lincolnshire Registers for the whole Insecta; yet his interest in every other branch of enquiry was unflagging. The work he did was prodigious, when it is remembered he had a scattered country parish on his hands, and was as active in it as in everything else he has undertaken. Yet the Lincolnshire and Nottinghamshire demands on his time were not enough to satisfy his energies. He at one time undertook a section of Scotch Coleoptera work, too. Without making any application for the position, he was pressed to give up his living. South Leverton, in order to take his present post, Superintendent of Nature Study in Nottinghamshire and Leicestershire, and finally did so in 1904. What was the gain of the two joint counties, the Union lost, without grudging it. Perhaps Mr. Thornley's most remarkable characteristic is the way he encourages other workers with their feet hardly yet on the ladder of knowledge by personal example. The range of his unobtrusive information is a help, not a hindrance, in drawing out the best in other workers, for nothing comes amiss to him in Nature, thanks to his splendid scientific training at Oxford. Since he left us for practical field teaching, many a schoolmaster has assured us that "no better field lecturer and demonstrator can be imagined. He seems to know everything quite naturallymammals, birds, plants, insects, snails and slugs, with the pests of the garden and field; all are alike to him in interest." Another would-be beginner said: "I should like to know just as much science as Mr. Thornley has forgotten. It would be a good start for me or anyone,"

Mr. Thornley was educated at Manchester Grammar School, and at Merton College, Oxford, M.A., 1882; First Class Final Honour School, Natural Science, 1879; Fellow of the Entomological Society, 1892; Linnean Society, 1895: Meteorological Society, 1910; Society for Psychical Research, 1909; President of Nottingham Naturalists' Society, 1897-1900; and of the L.N.U., 1901-1902. He is the author of many short papers on Entomology and Natural History subjects in The Naturalist, and in the Entomologist's Monthly Magazine, and Annals and Magazine of Scotch Natural History. He was Editor of the Lincolnshire Entomology in The Victoria County History, which is not yet published we regret to say.

## PRESIDENTIAL ADDRESS

TO THE

## LINCOLNSHIRE NATURALISTS' UNION, 1911,

BY

W. WALLACE, M.B., Ch.B., Grimsby.

In rising to address you on this occasion, I must first express to you my thanks for having placed me in such an honourable position as President of the Lincolnshire Naturalists' Union.

I will simply say I am proud of it.

Though not a native of the county, I am deeply interested in its Natural History; and I was delighted on coming to reside in it to find such a number of enthusiastic workers.

On joining the Union, I was immediately struck with the systematic manner in which all the branches of study were pursued, and I at once resolved to confine my attention to my favourite order of insects—the *Colcoptera*—on which I shall address you to-day.

I am delighted to see our Union prospering, and I shall always do my best for it.

The study of nature is such a vast subject that, though we are charmed with all its beauties and wonders, each of us has become a specialist, more or less, and confines his attention to one or but few branches. Yet all these branches are so intimately related that, if we wish to make a complete study of one, we must have some knowledge of the others. Here is the great advantage we have as a Union: we study this County thoroughly, and, by our published Transactions, each of us benefits in the pursuit of his own chosen branch.

To really understand the Natural History of our County, we must, bearing in mind its position, study its Geology, its Physiography and Climatic conditions, and interpret their relations to its existing fauna and flora; and having done this, we shall, by our united efforts, have contributed something that will help to solve problems of the deepest scientific interest.

A little point illustrative of this occurred on the occasion of our visit to Scunthorpe last year:—We found on the sandy warren specimens of Calathus mollis and a colony of Broscus cephalotes. Both of these beetles are curiously associated with sandy areas and almost always found on the sea coast. They are both found commonly at Cleethorpes, where the latter species establishes itself in colonies, and the heads of the beetles are to be seen just protruding from the burrows ready to drag in any passing insect.

Now neither of these species flies, and we must look upon them as definitely established on these Scunthorpe sand-dunes. How have they come to be stranded so far from the coast?

Mr. Peacock gives what I consider the true explanation. He suggests that we may regard them as having travelled with the slowly moving sand-dunes from their old home in the semimarine or estuarine conditions of the Trent Valley (for we know that these dunes have travelled S.W. to N.E. till they came to the foot of the Lincolnshire Limestone Escarpment) and that the flora has travelled along with the blown sand.

The Coleopterist so associates in his mind these two species with the sea-shore that he is at a loss to explain their presence so far inland, and immediately invokes the knowledge of the Geologist and Botanist.

Since our Union was established in 1893, much really good work has been done, and, year by year, we get to know more of the wonders of nature around us. Of late we have devoted more attention to Entomology, a great achievement being Mr. G. W. Mason's published List of the Lepidoptera of Lincolnshire: this, with the Rev. E. A. Woodruffe-Peacock's Check List of Lincolnshire Plants, will always be a great boon to students, in this county at any rate, so closely are the flora and insect fauna related.

In the study of our *Coleoptera* we shall find that a knowledge of our county's flora is of almost equal importance to that of its geology and geographical position; so many of the species are plant-feeders and in not a few cases they are the active agents in securing the fertilization of plants.

Thus it follows, in making our records, that we must try to work intelligently and thoughtfully, noting, at least mentally, what we consider important points of environment, etc., besides the locality and date. A simple register of species as to whether present or absent is of course fundamental, but the other circumstances added may enable a life-history to be made—a point of great value in the case of those species which are of importance in connexion with economic agriculture.

You may ask, where have our Coleoptera come from?

It is agreed that the insect fauna of the British Isles is not autochthonous, it is simply an extension of the Palæarctic faunistic area of North Western Europe, an extension which occurred after the last glacial epoch, and while these islands were yet continuous with the continental area. There are but few instances of forms found in Britain and not occurring on the continent, as though the isolation of our land and the changed conditions had not been prolonged enough yet to allow of the development of more than those initial stages of differentiation which we call "varietal."

As before mentioned, our County was stocked with its Coleoptera after the last glacial epoch, probably any earlier fauna having been destroyed by the prolonged cold. Our geologists have told us of the great changes our County has undergone since then. Following upon this comes the agency of man; the moorlands are laid down as pastures or covered with houses, forests are cut down, the ancient mosses and fens are drained, and many of our Coleoptera which cannot accommodate themselves to altered environment pass away to return no more, or are rendered very local.

Again, other species do not appear to be so wrapt up in their surroundings; they are at home under most diverse conditions, and form what we term our 'common species.' Then we have a large section which owe their very existence to the farmer and agriculturist, and in some seasons lay claim to the fruits of his labour.

We have, therefore, good reason for making our records, for nature is ever altering the land, the fauna and the flora, so that even in our own time we shall see great changes.

The county of Lincoln is the second largest in England: its total length is 75 miles by 48 in breadth, and it contains 1.777,179 acres, 85 per cent. being under cultivation. Though we have no mountains with their characteristic species, we have sea-coast with sandhills, salt-marsh, marshlands, chalk wolds, heaths, sandy commons and woodlands. The Fenland area, once so distinctive in its fauna, has lost its former glories, but we find much in the long ditches to cheer us in this respect. Then we have our chalk-pits, sandpits, ponds and streams, all happy hunting grounds for the coleopterist.

Another interesting fact, from the coleopterist's point of view, is the introduction of foreign species at the port of Grimsby, especially amongst timber from the Baltic—such striking species as Acanthocinus adilis, Monohammus sartor, and M. sutor mentioned elsewhere in our lists. None of these species have been found in our county under conditions that would imply that they had become established here, but at some future date we may have them recorded from our woodlands.

When we come to look through our county records of Coleoptera, we find that the first considerable list refers to the districts of Lincoln and Spridlington, and was contributed in 1843, by Mr. T. Vernon Wollaston. Then we have records in The Entomologists' Weekly Intelligencer from the Boston district by W. K. Bissill and Mr. E. C. Rye, dated about 1858. Later, in his fine work, "Geodephaga Britannica," the Rev. W. F. Dawson has left us many records; and then, to mention but a few contributors, we have Mr. H. Wallis Kew, Mr. H. Bedford Pim and others.

All these, however, and those in a paper by himself on the Mablethorpe species are included by a former President of our

Union, the Rev. Canon W. W. Fowler, in his great work on the British Coleoptera published in 1887.

The stimulus given to the study by this work was felt in our county as in all others.

After this date we find many names associated with our records—Mr. J. Eardley Mason, Mr. W. F. Baker, Mr. R. W. Goulding, Mr. G. W. Mason and others who are continually sending specimens to us.

Turning for a moment to the Grimsby district, I am told by our esteemed secretary, Mr. A. Smith, that when he was a boy he knew well a poor cobbler, Mr. C. K. Tero, living in a two-roomed cottage in the "eight foot" between Kent Street and Church Street, Grimsby. This humble naturalist, after the manner of Thomas Edwards, the Scottish Naturalist, was most devoted to Entomology and accumulated a large collection of local Lepidoptera and Coleoptera. His collections were held and cherished by his family until beyond redemption, then scattered, and there are no traces of them now. He imparted, however, a stimulus and help to Mr. Smith in these days which has been handed on to us.

Mr. Smith worked at the Grimsby Coleoptera as well as at almost all other branches of Natural History, and he founded the Grimsby and District Antiquarian and Naturalists' Society.

While Mr. Smith was still at Grimsby all our records were supervised and enormously expanded by the work of our esteemed friend the Rev. A. Thornley, aided by the constant efforts of the Rev. E. A. Woodruffe-Peacock, who helps so much in every branch.

To Miss S. C. Stow we owe most of our knowledge of the species of the South V.C. 53.

In his preparation of a list of our Coleoptera for the Victoria County History of Lincolnshire, Mr. Thornley brought everything quite up to date and it is owing to his methodical work and well-known ability as a coleopterist, that we can publish the list we have.

All references to the County in the Entomological publications and in the 'Naturalist,' bearing on our County Coleoptera have been incorporated and this has been rendered an easy task owing to the industry of our former President, Mr. W. Denison Roebuck, to whom we are also indebted for a number of our records.

During the last few years a lot of careful work has been done in the Grimsby district with the help of Mr. A. Bullock, Mr. F. W. Sowerby and other members of the Grimsby Naturalists' Society, so that I can safely say that, with regard to Coleoptera, that district is by far the best worked area of our County.

There is however a great deal yet to be done before we can say we know much of the *Coleoptera* of our County: the 'myrmecophilous species' (those living in company with ants) have not been investigated at all, and those inhabiting the nests of mammals and birds we know little about. Then again there are some Divisions of the County from which we have no records at all, and those from the South V.C. are markedly deficient.

As you know we are printing, in our Transactions, a section of the County Coleoptera each year, and also additions to the published sections. These lists will soon be completed and our records will be up to date.

On reviewing our lists I might perhaps refer to a number of conspicuous species, especially amongst the Geodephaga, which appear to have left us:—

The beautiful Cicindela sylvatica used to be found in Dawson's time on Manton Common but is never now heard of in our County: Cicindela maritima occurred at Cleethorpes in 1869 and probably later, but there is no trace of it now, its old haunts being the site of a golf course; and we have never located the beautiful Carabus nitens though recorded from North Lincolnshire long ago. Badister peltatus, Stenolophus vespertinus, Acupalpus cansputus and Anchomenus livens, all occurred near Boston in Mr. E. C. Rye's time, but we have never heard of them again, possibly the result of drainage of that fen area.

I was interested in turning over the leaves of a copy of Dawson's "Geodephaga Britannica" to find between the pages an old signed letter of his to a friend, referring to a projected visit to the "fumigatum locality" in Lincolnshire. This, we know, referred to the little Bembidium fumigatum, but where it is or was located we do not know.

(Particulars of all these species will be found in our Transactions).

Now let me refer briefly to some species still found in our county, and that are of special interest. Some of them are considered rare in Britain, and indeed in a few cases they appear to be unique; others from their otherwise known distribution are unexpected in this county, e.g.:

Calathus fuscus, formerly regarded as having a southern distribution occurs on our sandy commons and on the coast sandhills. Pogonus luridipennis, of which I took seven specimens this year at Humberstone, all in a very restricted area of salt marsh, was first found in this county at Saltfleet, in 1902, by Mr. C. S. Carter. This insect is almost confined to salt marshes on the south coast of England where it is rare. Bembidium stomoides, discovered by Mr. Thornley, at Torksey, is unexpected so far south. Bembidium paludosum, taken by myself at Linwood, is likewise a northern insect. Pelobius tardus, seems to find its northern limits in our county. Ilybius subaneus, one of our water beetles, was a most notable capture at Holton-le-Moor, few instances of its occurrence in Britain being recorded. Ochthebius auriculatus, is a comparatively recent addition to the British fauna: specimens were taken at Cleethorpes by Mr. S. 1896, and I have taken several since then. Henoticus serratus, a great rarity, one specimen of which I took at Roxton Wood will be included in the list in our Transactions dealing with the Clavicornia. Phædon concinnus found about the salt marshes at Cleethorpes and Humberstone, first, by Mr. A. Bullock, is chiefly found in Britain about the Solway Firth. Longitarsus nigerrimus, Gyll. I found at Cleethorpes; it was new to the British list. Codiosoma spadix found at Humberstone, seems to be confined to the South-Eastern coasts of England. Further notes on all these will be found in their proper place in our Lists.

I could mention very many more of our records interesting from the rarity of the species, or from their unusual distribution, but I will refer only to one more: - Cryptocephalus exiguus: This I think is by far the most interesting species we have. We are indebted to the Rev. A. Thornley and the Rev. E. A. Woodruffe-Peacock, who discovered it at Freshney Bog. Here, on this little area of fenland, we have it well established appearing year by year, and this is the only known locality in the British I accompanied Mr. St. J. K. Donisthorpe, on July 2nd, 1908, on his visit, and we found it in large numbers, but we could not conclude anything as to its food plant. Early the following year I was distressed to find that the whole area had been set on fire, and the flames had spread into the adjacent wood, reducing the vegetation to a charred mass. It certainly looked as if we should never see the little insect again. However, a sunny day in the following July found nature smiling again and Cryptocephalus still in its old favourite spot.

We could wish Nature had chosen it a more safe retreat than the outskirts of a spreading town, for it can be only a few years before the whole area is changed and our little native will have passed away.

Having endeavoured in my remarks, perhaps in a tedious manner, to tell you of the progress made in the study of our County Coloptera, I wish I could say something to attract others to this interesting study.

Here sportive Nature revels not so much in varied colour as in form and sculptured surface. Numbers she has armed with glittering mail which reflects a lustre like that of burnished gold; in others she lights up the dazzling radiance of polished gems, and, however small they be, she has given to these her valued miniatures the most delicate touch and highest finish of her pencil.

## LINCOLNSHIRE COLEOPTERA.

#### BY THE

REV. A. THORNLEY, M.A., F.L.S., F.E.S., Nottingham,

W. WALLACE, M.B., Ch.B., Grimsby.

## Fifth Paper.

The following five species are additions to the already published sections:—

#### HYDROPORUS OBSCURUS, Stm.

N. 7, Linwood, abundant in a sphagnum pond in the wood, 5-6-11, L N U. W W.

#### HELOPHORUS MULSANTI, Rye.

N. 3, New Holland, 29-8-09, in deep ponds of brackish water, W W.

## MYRMEDONIA LIMBATA, Payk.

N. 7, Linwood, 5-6-11, one fine male specimen on the ground near a rabbit burrow by AB, LNU. WW.

## STENUS ATER, Mann.

N. 4, Freshney Bog, by beating a haystack, 11-9-10, one male, W W. Again there, a male at side of river, 22-5-11, W W.

#### STENUS CANALICULATUS, Gyll.

- N. 2, Scunthorpe, 11-6-10, sandy and muddy sides of ponds and streams, W E Sharp.
- S. Boston, E C Rye (E M M., July, 1864, pp. 36-43.) Lincoln, banks of Witham, (Fowler, Brit. Col.).

Our very complete knowledge of the flora of the county renders the study of the following plant-feeding species specially interesting.

We are indebted to Dr. Joy for the determination of difficult species, and also to Mr. W. E. Sharp, especially for his help in the confusing genus *Longitarsus*.

## Longicornia.

This is the group popularly known as the "Longhorns." The larvæ of most of the species live in the solid wood of trees, causing much damage. We may expect some additions to this list when our woodlands have been better investigated.

## AROMIA MOSCHATA, L.

- "The Musk Beetle." We have but few records of this beautiful insect.
- S. 18, Holbeach, specimens taken by L. Curtis and shown to members of L N U (See Trans, L N U, 1907). Lincoln, Mr. J. F. Musham states that specimens were repeatedly brought to him alive at his shop in Lincoln between 1885 and 1895, and he found one on a tree trunk on the South Common.

#### CALLIDIUM VIOLACEUM, L.

Rare.

- N. 4, Grimsby, one specimen in Eleanor Street, by A B., June, 1907. W W.
- S. 13, Court Leys, July, 1901, SCS.

#### CLYTUS ARIETIS, L.

The "Wasp Beetle," not uncommon in our woods.

- N. 3, Cadney, two specimens, 19-6-1898, E A W-P. Pelham Woods, Mr. T. Stainforth. 4, Ravendale, July, 1905, W W. Bradley Wood, on dead fir branches on the ground, 18-6-08, stridulating by a movement of the closed elytra against the thorax, W W. Roxton Wood, 31-5-09, W W. 6, Cherry Willingham, 18-6-1910, sent by Rev. H. Wardale Hall, W W. 7, Linwood, 5-6-11, L N U., W W. 8, Louth, 1885, R. W. Goulding.
- S. 13, Court Leys, July, 1897, S C S:

## CLYTUS MYSTICUS, L.

Our only records:-

S 13, Stapleford, June, 1898, S C S. Court Leys, June, 1900, S C S.

## RHAGIUM INQUISITOR, F.

Appears to be local and uncommon.

N. 7, Linwood, 4-6-1900, several, Grimsby and Louth Nat. Socs, (We have not found it since).

#### RHAGIUM BIFASCIATUM. F.

No recent records.

S. Lincoln, June, 1898, J E M, (Nat. 1900, p. 246). 13, Lincoln. 24-5-1894, larvæ L N U, (Nat. 1894, p. 254).

#### TOXOTUS MERIDIANUS, Panz.

Not uncommon, very variable in size and colour.

- N. 2, Ashby, 1898, Dr. C. 3, Brocklesby, 1906, W W. 4, Irby, 20-6-07, W W. Croxby, two specimens, 2-7-08, A B and W W. Bradley Wood, a pupa under bark, by A B, emerged August 7, 09, W W. 6, Newton Cliff, 5-6-1895, A T. 7, Market Rasen, 16-6-11, by J. H. Robinson, W W.
- S. 13, Court Leys, 1896 and 1898, S C S.

## STRANGALIA QUADRIFASCIATA, L.

A rare species.

N. 7, I examined and determined a damaged specimen of this rare species, in Hull Museum: it had been taken at Market Rasen, W W.

## STRANGALIA ARMATA, Hbst.

Local.

N. 2, Ashby, 1899, Dr. C. 7, Linwood, common, 5-8-09, A B and FWS. 8, Woods, near Louth, HWK, (Nat. World, July, 1886), Louth, RW Goulding. 10, Woodhall Spa and Tumby, two specimens (Nat. 1899, p. 68), LNU.

#### STRANGALIA MELANURA, L.

Very uncommon.

N. 4, Bradley, one specimen, 9-6-1910, F W Sowerby, the only instance of its occurrence in the Grimsby district. 7, Linwood, one male, 5-8-1909, F. W. Sowerby. 8, Louth, R W Goulding.

## GRAMMOPTERA TABACICOLOR, De. G.

Our only record.

Lincoln, (Fowler, Brit. Col.)

## GRAMMOPTERA RUFICORNIS, F.

Common.

- N. 4, Immingham, 27-6-01, AS. Bradley Wood, common, by beating hawthorn flowers, 24-5-07, WW. Little Coates, on nettles, feeding on aphides! 25-5-07, WW. 7, South Kelsey, 7-6-1911, EAW-P.
- S. 13, Court Leys, 10-6-1899, SCS.

## ACANTHOCINUS ÆDILIS, L

All our specimens of this striking insect have been taken about the Grimsby docks and were doubtless imported with timber. Each year one hears of, or receives two or three specimens.

N. 4, Grimsby, 25-5-01, AS. One from the docks, Aug. 1909, another, a fine male, sent me from the docks, Sept. 21, 09, stridulated loudly by rubbing the prothorax up and down, W W. A female, Aug. 5, 1911, was sent having been found on a carter's coat at the deal yards.

#### LEIOPUS NEBULOSUS, L.

Not uncommon in woods.

- N. 4, Bradley Wood, one by sweeping, 26-6-07, AB., WW., again, 23-8-07, WW. Croxby, by beating bushes, one, 9-8-09, WW. 7, Moortown, in a wood, 3-7-10, WW.
- S. Lincoln (Fowler, Brit. Col.)

## POGONOCHÆRUS FASCICULATUS, De. G.

A rare capture.

N. 4, Grimsby, August, 1910, one specimen found by AB in a garden, has most likely been brought from the North in wood as it is really a native of Scotland, or it may be an import from the Baltic, W W.

## POGONOCHÆRUS BIDENTATUS, Th.

N. 2, Ashby, 1899, Dr. C. 3, Cadney, 10-1897, one EAW-P, Pelham Wood, 11-6-10, one on the wing by FWS, WW. 4, Irby, one under beech bark, 17-4-11, again 19-4-11, by JH Robinson, WW. 8, Louth (Hubbard's Hills), RW Goulding.

## MONOCHAMMUS SARTOR, F.

Considered a foreign species.

- N. 4, Grimsby, one specimen taken on Royal Dock side by Mr. Curtis, 1898, A S. 6, Lincoln, from J E M, taken in a sitting room at Lincoln during August, 1897, confirmed by W W F, (A T).
- S. 13, "One specimen taken by a groom in a stable at Boothby Graffoe Rectory . . . . "(Fowler, Brit. Col.)

#### MONOCHAMMUS SUTOR, L.

Also considered a foreign species.

N. 4, Grimsby, a specimen brought to me, July 1907, from near the Grimsby Docks, had doubtless been imported with timber, W W, (identification confirmed by Dr. Joy).

#### AGAPANTHIA LINEATOCOLLIS, Don.

We have no information as to whether this beautiful insect is still found in its old haunts.

N. 6, "I have taken it in abundance in Langworth Wood, near "Lincoln, on a patch of Heracleum sphondylium, not yet in "flower; on June 11th, 1885, I took fifty specimens, and a "few days previously as many as these had been taken in "the same ride in the wood. The Rev. J. A. Mackonochie "has found it in the same localty this year (1889) but much "more sparingly," (FOWLER, BRIT. COL.)

Specimems from this locality were exhibited to South London Ent. Soc., Feb. 4, 1886, (See E M M, March 1886, XXII., also Ent. March 1886, XIX., also E M M, Aug. 1885, XXII.)

#### SAPERDA CARCHARIAS, L.

Very uncommon.

- N. 11, Skegness, 8-1911, a specimen which I have identified was taken by Eric Hillman, A T.
- S. 'Lincoln' (FowLer, Brit. Col.)
  'Lincoln' Aug. 30, 1907, Mr L Barker, W W.

#### SAPERDA POPULNEA, L.

N. 6, "Langworth Wood, Lincoln. I know of no record of the capture of this insect further north (in Britain) than the last mentioned localty in which I have found it sparingly" (Fowler, Brit. Col.) 7, Market Rasen, 5-8-07, G W Mason. Linwood, several on young aspens, 5-6-11, confined to a small area, L N U, W W.

## Phytophaga.

## BRUCHUS CISTI, F.

Our only record :-

N. 15, Ancaster stone quarry, on Helianthemum, 16-6-1896, A T.

## BRUCHUS RUFIMANUS, Boh,

Our only records:-

N. q, Mablethorpe, 8-1901, AT.

S. 13, Conrt Leys, 25-5-1899, S C S.

#### BRUCHUS LENTIS, Boh.

In the modern catalogues, classed as a foreign species.

Lincoln, bred from lentils recently imported from Egypt (E M M., vi. 1891; xxvii, 171, W W F).

#### DONACIA SPARGANII, Ahr.

Evidently local.

N. 9, Humberstone, 26-7-11, four specimens by sweeping Sparganium ramosum in a ditch on the salt marshes, W W.

#### DONACIA DENTIPES, F.

This conspicuous species, though common one season in the Grimsby district, may be absent the next.

N. 4, Little Coates, 18-5-1899, A S. Great Coates, on aquatic plants, 19-6-08, W W. 9, Theddlethorpe, 6-1896, A T. Tetney, 9-6-07, W W.

#### DONACIA LIMBATA, Pz.

Local.

N. 3, Cadney, 1898, E A W-P. 9, Theddlethorpe, on Carex, 6-1896, A T. Tetney, 22-6-11, two specimens by sweeping aquatic plants on the roadside to the lock, W W.

#### DONACIA SIMPLEX, F.

A common species on aquatic plants in the ditches.

N. 4, Freshney Bogs, 21-6-1898, E A W-P. 6, Marton drain, 1-6-1894, A T. 7, Linwood, 8-6-08, W W. 9, Theddlethorpe, 6-1896, A T. Saltfleet, 31-7-10, W W.

#### DONACIA VULGARIS, Zsch.

Our only record :-

N. 4, Croxby Pond, one specimen, 14-7-10, F W Sowerby, W W.

#### DONACIA CLAVIPES, F,

Our only record :-

N. 9, Theddlethorpe, 6-1896, AT.

#### DONACIA SEMICUPREA, Panz.

Our only records:-

N. 3, Brocklesby, 14-6-1900, A. S. 4, Croxby, one, 14-5-10, F W Sowerby, W W.

S. Lincoln (FOWLER, BRIT. COL.).

## DONACIA SERICEA, L.

This beautiful species is found on aquatic plants abundantly in our ditches.

N. 3, Cadney, 1898, E A W-P. 4, Freshney Bogs, 21-6-1898, E A W-P. Irby Dale in abundance and of the most striking colours on yellow Iris just bursting into flower, 27-5-11, W W. 7, Linwood, 5-6-11, L N U., W W. 9, Theddlethorpe, 6-1896, A T.

#### DONACIA BRACCATA, Scop.

Local, and in each case not far from the coast.

N. 4, Little Coates, five specimens on Carex riparia, 12-7-11, WW. 9, Theddlethorpe, 6-1896, very abundant on Arundo, AT. 11, Trusthorpe, 6-1897, on Arundo, AT.

#### DONACIA AFFINIS, Kunz.

Our only record :-

N. 9, Theddlethorpe, 6-1896, on Carex, A T.

#### ZEUGOPHORA SUBSPINOSA, F.

We have no recent record.

N, 6, Langworth Wood (Fowler, Brit. Col.).

#### LEMA LICHENIS, Væt.

A very common species.

N. 3, Cadney, A T. 4, Great Coates, 8-9-96, L N U, A T. Freshney Bogs, 21-6-1898, E A W-P. 7, Linwood, 5-6-11, W W. 8, Louth, H W K. 11, Alford, C O Waterhouse.

#### LEMA MELANOPA, L.

Not so common as the former species,

- N. 3, Cadney, 9-1897, not uncommon, AT. 4, Great Coates, 8-9-1896, LNU, AT. 9, Humberstone sandhills, 24-3-07, WW.
- S. Near Lincoln, in a wood, 18-3-1882, W W F. (E M M, May, 1882, p. 277).

## CRIOCERIS ASPARAGI, L.

Recorded only from South VC only.

S. 13, Brant Broughton, 2-6-1899, Dr. Sharp. 14, Cranwell, SCS.

#### CRYPTOCEPHALUS PUSILLUS, F.

 N. 4, Bradley Wood, a few specimens on White Poplar and Oak, 23-8-07, W W. Irby. 7-9-07, W W. 6, Torksey, 23-7-01, Dr. Eland Shaw. 7, Moortown, on young birches, 18-8-07, W W.

## CRYPTOCEPHALUS LABIATUS, L.

Local.

4, Ravendale, by sweeping plants on a chalky bank, 23-6-07, the only locality we know in the Grimsby District, W W. 5, Scotton Common, 22-6-1898, E A W-P. 7, Moortown, 18-8-07, common by beating young birches and oaks, W W. Usselby, 2-8-09, F W Sowerby. Linwood, 5-6-11, L N U, W W.

## CRYPTOCEPHALUS EXIGUUS, Schn.

A very interesting record.

N. 4, Freshney Bogs, June 21-1898, EAW-P., AT. (Nat. 1898) p. 265), two specimens, and six more July 13-1898 by A.T. The species occurs there each year commonly, WW. was added to the Catalogues as British under the name C. Wasastjernæ, Gyll., by Mr. Rye, on specimens taken by Mr G R Crotch, locality however uncertain (in Ent. Annual 1864, p. 72), and was afterwards taken by Dr. Power at "Woodbastwick, near Horning" (Norfolk), (Ent. Mo. Mag. Vol. VII., p. 154, Dec. 1870). It appears to be found nowhere else in Britain now, than at Freshney Bog.

#### CRYPTOCEPHALUS FRONTALIS, Marsh.

Our only record:-

S. 15, Sapperton, a pair, June 1901, SCS.

## TIMARCHA TENEBRICOSA F.

"The Bloody-nosed Beetle."

S. 13, Branston Wood near Lincoln, 3-5-09 sent by the Rev. W. Wright Mason, WW. 15, Sapperton, June, 1901, SCS.

#### TIMARCHA VIOLACEO-NIGRA, De. G.

Neither this nor the preceeding species has been found in the Grimsby District.

- Scotton Common, 22-6-1898, EAW-P. 7, Linwood Warren, 4-6-1900, Grimsby and Louth Societies, and again many dead and lethargic specimens lying scorched in the sun on the road and in wheel ruts on the Warren, 5-6-11, WW.
- S. 13, Hartsholme, 24-5-1894, L N U., (W F B.)

## CHRYSOMELA MARGINATA, L.

A rare capture.

4, Cleethorpes one specimen, 7-9-07, sweeping at night, WW On Oct. 4-1908, Mr. Donisthorpe and I found the elytra in a toad's vomit in the very same spot as above WW.

#### CHRYSOMELA STAPHYLEA, L.

Common.

3, New Holland, 29-8-09, WW. 4, Great Coates, 8-9-96, L N U., A T. 5, Scotton Common, 1898, E A W-P. S. 17, Wash foreshore, 8-1897, L N U., A T.

## var. sharpi, Fow.

N. 4, Cleethorpes, 4-10-08, one specimen by Mr. Donisthorpe, and WW.

#### CHRYSOMELA POLITA L.

Common.

- N. 1, Althorpe, under willow bark, 18-4-08, sent by G W M., W W.
  2, Manton District, A T.
  3, Somerby and Housham, 9-10-97, E A W-P.
  4, Great Coates, 8-9-96, L N U., A T.
  6, Marton Drain, A.T.
  7, Linwood, A S.
  8, Louth District, common, R W G.
  Ludborough, 28-5-1901, A S.
  9, Humberstone, A S.
- S. 13, Court Leys, SCS. 15, Sapperton, June, 1901, SCS.

#### CHRYSOMELA ORICHALCIA, Mull.

- N. 3, Thornton Abbey, by sweeping in Butter's Wood, a number taken, 18-7-09, all being var. hobsoni, W.W. 6, Torksey, type form with var. hobsoni, 1896, S. Pegler.
- S. Lincoln, (Fowler, Brit. Col.) 15, Honington, var. hobsoni, (Fowler, Brit. Col.)

#### CHRYSOMELA VARIANS, Schal.

Appears to be rare.

- N. 7, Linwood, 5-6-11, one by sweeping road side near the Warren, LNU., (WW.)
- S. 13, Byard's Leap Gorse, (Grantham), from Hypericum perforatum, SCS.

#### CHRYSOMELA MENTHRASTI, Suf.

Appears to be rare.

S. 15, Grantham, three specimens, 1906, Mr. T. Stow.

## CHRYSOMELA FASTUOSA, Scop.

Always a local insect.

N. 2, Bottesford, "as a lad I used to find it at a wall foot in one spot only, but have never seen it there since," EAW-P. 3, Cadney, 4-6-10, and 5-9-11, single specimens on Lamium album by EAW-P., sent to WW: in the second case the plant was not in flower. "I have never seen it in this parish before," EAW-P.

## CHRYSOMELA DIDYMATA, Scrib.

Our only record.

N. 4, Great Coates, 28-9-1896, on Hypericum LNU., (AT.)

## CHRYSOMELA HYPERICI, Forst.

Our only record.

N. 4, Cleethorpes, 4-10-08, one by sweeping the sandhills, Mr. Donisthorpe, and WW.

## MELASOMA POPULI, L.

Local.

N. 4, Tetney Road near Grimsby, A.S., the only instance of its occurrence in the Grimsby District. 5, Scotton Common, very common both imago and pupa on Salix repens, 14-8-01, A.T. 7, Linwood, 4-6-1900, Grimsby and Louth Socs: on aspen, 5-6-11, L.N.U., (W.W.)

#### MELASOMA LONGICOLLE, Suff.

Our only record :-

N. 6, "Langworth Wood, common in July, I know of no locality further south," (Fowler Brit. Col.).

#### PHYTODECTA RUFIPES, De G.

Very local and uncommon.

N. 6, Langworth Wood, (Fowler Brit. Col.). 7, Linwood on young aspen, 5-6-11, LNU. I have never taken it there before, WW. A specimen was also taken there by GWM, 30-5-09, WW.

#### PHYTODECTA VIMINALIS, L.

Very local.

N. 7, Linwood, 4-6-1900, Gy. and Louth Socs. and again there 20-7-10, 5-6-11, abundant on sallow, WW.

#### GASTROIDEA VIRIDULA, De G.

This species seems to have occurred frequently in the County, but never in the Grimsby District.

- N. 6, Marton Drain, A.T. Torksey, 20-5-1896, in great abundance, dock leaves eaten to shreds, A.T. Burton Chateau, Gate Burton, (Gainsboro.), 7-6-01, and 22-6-01, the Rumex leaves almost destroyed by the larvae, A.T.
- S. 15, Brandon, Sept. 1900, SCS. Little Ponton, 1898, EAW-P.

#### GASTROIDEA POLYGONI, L.

A very common species.

- N. 2, Bottesford, 1900, EAW-P. 3, Brocklesby, 14-6-00, AS. 4, Freshney Bogs, 21-6-1898, EAW-P. Grimsby in the greatest profusion on Polygonum aviculare on a waste area, and swarming in the sunshine on the adjacent houses, 10-9-11, WW. 7, Linwood, 4-6-00, Grimsby, and Louth Socs., 9, Theddlethorpe, 8-1893, AT. 11, Sutton, 9-9-09, AB.
- S. 13, Hartsholme Woods, 24-5-1894, LNU. (WFB.). 15, Sapperton June, 1901, SCS.

#### PHÆDON TUMIDULUS. Germ.

A very common species.

- N. 2, Bottesford, 1900, M.P. 3, Cadney, 4-98, E.A.W.P. 4, Freshney Bogs, June, 1900, A.S. 6, Torksey, 16-5-99, Pegler, 9, Tetney, on Heracleum leaves, 30-5-11, W.W. 11, Gibraltar Point, L.N. U., 15-8-1891, W.W.F.
- S. 13, Court Leys, 2-1899, SCS. 15, Brandon, Sept. 1900, SCS.

#### PHÆDON ARMORACEÆ, L.

This is the "Mustard Beetle or Black Jack," local, in Sandy areas.

N. 2, Scunthorpe, by general sweeping and beating, 11-6-10, WES. 3, Barton-on-Humber, 1-7-11, two specimens by sweeping, LNU. (WW). 7, Linwood, 16-5-10, several, FWS.

#### PHÆDON COCHLEARIÆ, F.

A common species.

- N. 1, Althorpe, under willow bark, 18-4-08, sent by GWM. (WW). 3, Cadney, 13-3-1898, EAW-P. 4, Freshney Bogs, 21-6-1898, EAW-P. 6, Torksey 16-5-1899, S. Pegler, 7, Holton-le-Moor, 12-6-08, LNW. (WW). 9, Mablethorpe, Aug. 1907, Mr. F. Rhodes, 10, Woodhall Spa, 7-8-1893, LNU. (WFB). 11, Trusthorpe, AT.
  - 5. 13, Court Leys, 1898, SCS.

#### PHŒDON CONCINNUS, Steph.

This salt-marsh species is a most important record.

N. 3, New Holland, two specimens, 2-5-09, WW. 4, Cleethorpes, 19-5-08, and 3-6-08, by sweeping about the salt marshes, WW. 9, Humberstone salt marshes, the first specimen taken by AB. 25-4-06, and several later.

#### PHYLLODECTA VULGATISSIMA, L.

N 2, Scunthorpe, 25-8-10, L N U. (W W). 4, Great Coates, 8-9-96, L N U. (A T): again there, under bark of sallows, 9-12-06, W W. 11, Sutton, 9-9-09, A B. (W W).

#### PHYLLODECTA CAVIFRONS, Th.

Not common.

N. 4, Freshney Bog, 26-9-09, WW. Lincoln, (Fowler, Brit. Col.)

#### PHYLLODECTA VITELLINÆ, L.

A common species.

- N. 2, Scunthorpe, 25-8-10, a variety, with head and thorax bronzegreen, and elytra blue, LNU. Mr. E. G. Bayford, 4, Freshney Bogs, common, 21-6-1898, also in same locality in large groups on leaves of sallow, partially eaten on upper surfaces and in colonies under bark, 12-9-08, WW. 7, Linwood, on aspen leaves, 5-6-11, WW. 10, Revesby, LNU.
- S. 13, Stapleford, 29-6-1899, SCS,

#### HYDROTHASSA AUCTA F.

Not common.

N. 3, Cadney, 7-1898, EAW-P. 4, Freshney Bogs, 7-6-1899, AT. Bradley Woods, 5-6-07, WW.

## HYDROTHASSA MARGINELLA, L.

- N. 3, Cadney, 1898, EAW-P. 4, Freshney Bogs, 21-6-98, AS. again, paired on aquatic plants in ditches, 24-4-07, WW. 6, Marton Drain, 1892, AT.
- S. 13, Hartsholme, 24-5-1894, L N U. (WFB).

#### PRASOCURIS JUNCI. Brahm.

Common in ditches on Veronica Beccabunga.

N. 3, Cadney, 9-1897, AT. 4, Freshney Bogs, 21-6-1898, Irby, 24-8-10, in extraordinary numbers on many plants in a ditch, W W.

## PRASOCURIS PHELLANDRII, L.

Not uncommon about ditches.

- 2, near Burringham, Mr. E. G. Bayford, 4, Freshney Bogs, 21-6-1898, E A W-P. 8, Tetney, 16-5-07, A B. (W W). 9, Mablethorpe, Aug. 07, Mr. F. Rhodes.
- S. 13, Hartsholme Woods, 24-5-94, L N U. (W F B).

## PHYLLOBROTICA QUADRIMACULATA, L.

Our only record:-

N. 5, Morton Carr near Gainsboro., one specimen, 8-7-1909, LNU. (WW).

## LUPERUS RUFIPES, Scop.

Occurs on birch on the commons.

N. 2, Broughton Woods, 6-95, L N U. (A T). 5, Scotton Common, 22-6-1898, E A W-P. 7, Moortown, 18-8-07, common by beating young birches, W W. Linwood, 8-6-08, W W.

## LUPERUS FLAVIPES, L.

- N. 2, Broughton Woods, 6-95, L N U. (AT). 4, Grimsby, 1897, a chance specimen in a garden, AS.
- S. 13, Hartsholme Woods, 24-5-1894 L N U. (A T).

## LOCHMÆA CAPREÆ, L.

Common on the heaths.

N. 2, Scunthorpe, 20-8-10, L N U. (W W). 7, Linwood, 4-6-06, on young birches, W W.

## LOCHMÆA SUTURALIS, Th.

Common on heather.

N. 2, Manton Common, 13-10-1897, AT. 3, Scunthorpe, 25-8-10, L N U. (W W). 7, Linwood, 30-9-97, nigrescent forms, E A W-P., also 16-5-10, F W S. named by Mr. Tomlin. Holton-le-Moor, 12-6-1908, L N U. (W W).

## GALERUCELLA VIBURNI, Ph.

Very local.

- N. 4, Bradley Wood, in one small area on Viburnum opulus, several specimens by beating, 1906, but not found there again W W.
- S. 'Lincoln,' 21-5-1899, M P.

## GALERUCELLA NYMPHÆÆ, L.

We have never conformed this record.

N. 4, Freshney Bogs, one, 21-6-1898, EAW-P. (see Nat. 1898, p. 265).

#### GALERUCELLA LINEOLA, F.

N. 4, Great Coates, 8-9-1896, LNU. (AT). It may be found about the osier beds there in May and June commonly each year, WW. 7, Moortown, 3-7-10, one specimen in a marshy wood, WW.

## GALERUCELLA CALMARIENSIS, L.

Rare.

N. 4, Freshney Bogs, one specimen, 24-5-10, by F. W. Sowerby, named by Mr. Tomlin.

#### GALERUCELLA TENELLA, L.

N. 4, Freshney Bogs, 7-6-1899, A.T. abundant there on leaves of leaves of Spiraa 29-4-08, W.W. 7, Linwood, 30-5-98, E.A.W.P.

#### ADIMONIA TANACETI, L.

A local species.

N. 7, Linwood, larvæ abundant in the field near the Warren, 21-6-03, they were probably feeding on Scabiosa, but not on Tansy, G W M. 8, Louth, Larvæ found feeding on Scabiosa, H W K. (see Ent. M M. Aug. 1888, xxv. 72, and Young Naturalist, October, 1885, H W K.). Greasy-field and Grisel's Bottom, near Louth, H W K., Nat. World, June, 1886. 'Greasy Meadow,' R. W. Goulding, Redhill, Goulceby, 3-11-1900, R. W. Goulding.

#### SERMYLA HALENSIS, L.

Common in sandy areas.

- N. 2, Manton District, 9-1897, AT. Broughton, 8-9-08, LNU. (AB). 4, Irby, 8-1908, one specimen—the only one I have seen in the Grimsby District, WW. 7, Moortown, 18-8-07, several, WW. 8, Louth, R. W. Goulding, 9, Mablethorpe, R. W. Goulding: also in the same locality I have taken it abundantly on the short grass of the inner sandhills, AT. Theddlethorpe, abundant in valleys of sandhills, 8-1893, AT. 11, Chapel, JEM. Sutton, 9-9-09, AB.
- S. 13, Hartsholme, 15-9-1898, SCS. Caythorpe, 8-1901, SCS.

## LONGITARSUS NIGERRIMUS, Gyll.

A notable capture.

N. 4, Cleethorpes, 7-9-07, I took four specimens by sweeping at night, but subsequent visits to the same spot have failed to find it. The species was new to Britain and on being identified by Dr. Joy, was added to the British Lists, (see EMM., May, 1908), WW. 3, New Holland, one specimen by sweeping near a salt marsh, 2-5-09, WW.

## LONGITARSUS LURIDUS, Scop.

A very common species and very variable as to colour, black specimens occurring which Mr. W. E. Sharp considers to be called (in error) niger, Koch.

N. 3, Cadney, 1897, AT. Somersby and Howsham, 9-10-97, EAW-P. 4, Bradley Wood, 26-9-07, and black forms (see above), 18-5-08, WW. Cleethorpes, black forms 30-9-08, WW. 6, Torksey, 16-5 1899, Dr. C., 11, Alford, 23-11-1890, JEM.

#### LONGITARSUS BRUNNEUS, Duft.

It seems uncertain whether this species is distinct from the preceding (luridus).

#### LONGITARSUS SUTURELLUS, Dugt.

Rare in Grimsby District.

- N. 2, Scunthorpe, 11-6-10, by sifting roots of grass, moss, etc., W. E. Sharp, 3, Cadney, 9-1897, AT. 4, Bradley, 7-4-08, one W W. 6, Marton Drain, A T. 9, Mablethorpe, 1882, H. Bedford Pim, (recorded as Suturalis,) see EMM. Dec. 1882, xix, 161.
- S. 13, Hartsholme, LNU. Nat. 1899, p. 286

#### LONGITARSUS ATRICILLUS, L.

N. 2, Scunthorpe, 25-8-10, W W. & F W S., (named by Tomlin), 4, Irby Dale, by sweeping the hill sides, in numbers, 1-8-08, W W. Croxby, 15-7-09, W W.

## LONGITARSUS PATRUELIS, Al.

Our only record:-

N. 6, Langworth Wood, (Fowler, Brit. Col.).

## LONGITARSUS MELANOCEPHALUS, De G.

A common species.

- N. 3, Cadney, 9.1897, AT. Barton-on-Humber, 20-4-07, Mr. T. Stainforth, 4, Great Coates, 8-9-1896, LNU. (AT). Cleethorpes, 7-9-07, WW. 9, Humberstone, 29-4-08, WW.
- S. 13, Court Leys, 8-1898, SCS.

## LONGITARSUS MEMBRANACEUS, Foud.

N. 2, Scunthorpe, 25-8-10, FWS. (named by Tomlin).

#### LONGITARSUS FEMORALIS, Marsh.

N. 6, Newton Cliff, a few in flower of Cynoglossum 18-6-01, A T. Also a previous record, 5-6-1895, at same place in flower of Cynoglossum H. S. Gorham, (recorded wrongly in E M M. Oct. 1895, p. 240, as L. distinguendus, which it is not, A T.). Barton Chateau, (Gainsborough), common in flowers of Echium, 22-6-01, A T.

#### LONGITARSUS PUSILLUS, Gyll.

N. 2, Manton Common, 9-1897, AT. 4, Cleethorpes, 7-9-08, abundant by sweeping at night, but I have not taken it since, W W.

#### LONGITARSUS JACOBÆAE. Wat.

N. 2, Scunthorpe, 25-8-10, LNU. (WW). 3, Cadney, 9-1897,
 AT. 4, Cleethorpes, LNU., 5-7-1894, WFB. and 7-9-07,
 WW. 7, Moortown, 18-8-07, abundant on Senecio jacobea,
 WW. 9, Theddlethorpe, 1893, AT. 10, Woodhall Spa,
 LNU. 7-8-1893, WFB. 11, Sutton, 9-9-09, AB.

#### LONGITARSUS OCHROLEUCUS, Marsh.

N. 1, Epworth, 14-8-1898, one specimen, AT. 11, Gibraltar Point, 15-8-1891, L N U. determined by W W F. (see Nat. Feb., 1892, p. 49.)

#### LONGITARSUS GRACILIS, Kuts.

N. 2, Scunthorpe, 25-8-10, Mr. Bayford.

#### LONGITARSUS LAEVIS, Brit. Cats = SUCCINEUS, Foud.

N. 4, Cleethorpes, 20-7-09, and 26-6-11, W W.

#### HALTICA LYTHRI, Aub.

N. 4, Croxby, two specimens on thistles near the pond, Aug., 1906, W W. Again 9-8-09, near the pond I found the larvæ, yellow pupæ and perfect insects in abundance under the wet bark of the fences, W W.

#### HALTICA PUSILLA, Dujt.

N. 2, Manton Common, 13-9-1897, A.T. Broughton Woods, 8-9-08, L.N.U., (W.W.) Scunthorpe, on heather, 25-8-10, W.W. 3, Cadney, July 1898 E.A.W.P. 4, Irby Dale in large numbers on Epilobium hirsutum, 20-6-07, W.W. 7, Linwood Warren, 30-9-1897, E.A.W.P. Usselby, 2-8-09, F.W. Sowerby, W.W.

S. 13, Court Leys, 1898, SCS.

## PHYLLOTRETA PUNCTULATA, Marsh.

Our only record.

N. 11, Trusthorpe, 6-1897, AT.

#### PHYLLOTRETA VITTULA, Redt.

N. 4, Irby, 2 specimens, 20-6-07, W W.

#### PHYLLOTRETA UNDULATA, Kuts.

A very common species.

N. 3, Cadney, 21-3-1898, E A W-P. 4. Grimsby, in a garden, 1898,
 A S. Irby, 20-6-07, W W. 8, Grainsby, under bark, 17-10-08,
 W W. 9, Humberstone sandhills, 9-4-07, W W. 11, Well Vale, Alford, 23-11-1890, J E M.

#### PHYLLOTRETA NEMORUM, L.

This is the 'Turnip-Fly' or 'Turnip Flea,' but in the Grimsby district it is not nearly so common as the preceding species.

- N. 2, Bottesford, 1900, E A W-P. 3, Brocklesby, 14-6-00, A S. 4, Irby, 20-6-07, W W. Freshney Bogs, 29-4-08, W W.
- S. 13, Court Leys, 8-1898, S.C.S. Sapperton, 6-1901, S.C.S.

#### PHYLLOTRETA EXCLAMATIONIS, Thunb.

Our only record. A rare species evidently.

N. 6, Marton drain, 1-6-1894.

#### APHTHONA NONSTRIATA, Goez.

N. 2, Scunthorpe, 11-6-10, W. E. SHARP, 4, Great Coates, LNU., 8-9-96, AT. Freshney Bogs, 3-7-08, and Irby Dale, 24-5-08, on leaves of Iris pseudacorus, WW.

#### APHTHONA ATROCŒRULEA, Steph,

Not common.

N. 3, Cadney, 4-1898, EAW-P., and 6-10-1898, AT. Barton-on-Humber in chalk pit, 1-7-11, LNU. (WW). 4, Little Coates, 22-5-11, one in river, WW. Laceby sandpit by sweeping, 27-7-09, WW. Irby, 11-5-10, WW.

#### APHTHONA ATRATULA, Brit. Cat.

N. 11, Alford, two specimens by sweeping in a chalk pit, 20-8-08, L N U. (W W).

#### BATOPHILA RUBI, Pk.

Common in woods in Grimsby District.

N. 4, Great Coates, L N U., 8-9-96, A T. Bradley Woods, 23-5-07, W W. Irby, 20-6-07, W W. 6, Langworth Wood, (FOWLER, BRIT. COL.), 7, Linwood, 30-5-1898, E A W-P. 11, Alford, C. O. Waterhouse.

#### SPHÆRODERMA TECTACEA, F.

This and the next species are frequent on thistles.

- N. 3, Thornton Abbey, 18-7-09, WW. 4, Weelsby, 1898, AS. 7, Linwood, 5-8-07, F. W. Sowerby, WW. 9, Humberstone, on thistles, 28-7-08, WW.
- S. 15, Brandon, 9-1900, SCS.

## SPHÆRODERMA CARDUI, Gyll.

Sometimes confounded with the former species.

- N. 4, Weelsby 1898, AS. Croxby, 14-7-10, WW.
- S. 15, Little Bytham, 17-7-1900, LNU.

#### APTEROPEDA ORBICULATA, Marsh.

Has not been found in the Grimsby, District.

- N. 5, Scotton Common, 1898, EAW-P. 11, Alford, C. O. Waterhouse.
- S. 13, Skellingthorpe Wood, 22-11-1911, one in moss, sent by J F M. to W W.

#### MNIOPHILA MUSCORUM, Koch.

Our only record.

N. 6, Langworth Wood, (Fowler, Brit. Col.).

#### PODAGRICA FUSCICORNIS, L.

Our only record.

S. 15, Sapperton, 7-1901, SCS.

#### MANTURA RUSTICA, L.

A common species.

- N. 3, Cadney, 21-3-1898, EAW-P. 4, Scartho, 18-3-09, in haystack refuse, WW. Roxton Wood, 31-5-09, WW. 6, Marton Drain, 1-6-1894, AT. 9, Humberstone sandhills, 9-4-07, WW.
- S. 13, Hartsholme, 24-5-1894, AT.
- var. suturalis, Weise. Our only record.
  - N. 4, Roxton, 31-5-09, WW.

#### CREPIDODERA TRANSVERSA, Marsh.

Common.

N. 2, Broughton, 8-9-08, L N U. (W W.) 3, Cadney, 4-7-11, E A W-P. 4, Freshney Bog, 21-6-1898, E A W-P. 6, Marton drain, A T. 7, Linwood, 20-7-09, W W. 9, Humberstone 19-7-09, A B. (W W.) 11, Alford, C O Waterhouse.

## CREPIDODERA FERRUGINEA, Scop.

Common.

- N. 2, Scunthorpe, 6-8-1900, L N U. 3, Cadney, 7-1898, E A W-P.
   4, Freshney Bogs, 6-1900, A S. Cleethorpes, 20-7-09, W W.
   8, Holton-le-Clay, 5-7-08, W W.
   11, Trusthorpe, A T.
- S. 13, Brandon, 9-1898, S C S. 17, Wash foreshore, L N U., 8-1897, A T.

#### CREPIDODERA RUFIPES, L.

Recorded only from the Grimsby District.

N. 4, Bradley Road, by sweeping, 10-5-07, A B. (W W.) Ravendale, 23-6-07, abundant by sweeping a chalky bank, W W. Croxby, 20-6-07, A B., W W. Irby, 11-6-10, F W Sowerby.

## CREPIDODERA HELXINES, L.

Our only record.

Lincoln, (Fowler, Brit. Col.)

#### CREPIDODERA AURATA, Marsh.

A common species.

N. 3, Cadney, AT. 4, Great Coates, LNU, 8-9-96, AT. 7, Linwood, 5-6-11, WW. 10, Revesby, LNU, Lincoln 21-5-1899, LNU.

#### CREPIDODERA SMARAGDINA, Foud.

This species has possibly been confused with the preceding.

N. 4, Freshney Bogs, 9-5-08, on the Sallows, W W.

#### HIPPURIPHILA MODEERI, L.

Local.

- N. 3, Goxhill, 9-1-11, J H Robinson, 4. Freshney Bogs, 7-6-1899, A T and 11-9-10, W W. 6, Marton drain, 1-6-1894, A T. 7, Linwood, 5-6-11, a few by sweeping in a marshy spot, L N U, W W.
- S. 18, near Spalding, 6-1904, W E Sharp.

#### CHAETOCNEMA HORTENSIS, Fourc.

Not common.

N. 3, Cadney, 9-1897, A T. Barton-on-Humber, 20-4-07, Mr T Stainforth. 4, Roxton Wood, 6-4-07, A B, W W. Bradley 26-9-07, A B, W W.

#### PLECTROSCELIS CONCINNA, Marsh.

- "The Tooth-legged Flea Beetle or Hop Flea." Common in the county. The beetles devour the cotyledon leaves of turnips and hops.
- N. 3, Cadney, 1898, A.T. 4, Great Coates, 13-3-1898, E.A.W-P. Cleethorpes, 16-9-08, W.W. 6, Marton drain, A.T. 7, South Kelsey, 9-7-1898, E.A.W-P. 9, Humberstone sandhills, 9-4-07, W.W. 11, Trusthorpe, 6-1897.
- S. 13, Court Leys, 8-1898, S C S.

## PSYLLIODES CHRYSOCEPHALA, L.

Confined to the coast.

- N. 4, Cleethorpes, 19-9-09, two specimens and one of var. anglica F, FWS. 9, Mablethorpe, 8-1881, abundant, var. anglica, F. rare WWF. 11, Trusthorpe sandhills, with var. anglica, 6-1897, on Lycopsis and low herbage quite close to Sutton, A T. Sutton, 9-9-09, with var. anglica, A B, WW.
- S. 17, Wash foreshore, 8-1897, L N U, A T. Leamlands 18-8-1906, Claude Morley.

#### PSYLLIODES NAPI, Koch.

Our only records.

N. 4, Little Coates, 1907, WW, and two by FW Sowerby, 1911.

#### PSYLLIODES CUPREA, Koch.

- N. 3, Cadney, 9-1897, AT. 4, Great Coates, 8-9-1896, LNU, AT. Cleethorpes, 7-9-07, WW. 9, Humberstone, 7-7-07, WW. 10, Woodhall Spa and Tumby, one specimen, LNU, (NAT. 1899, p. 68).
- S. 13, Court Leys, 1898, SCS.

#### PSYLLIODES AFFINIS, Pk.

Our only records.

N. 2, Scunthorpe, 11-6-10, in rotten wood, W E Sharp. 3, Cadney, two specimens on under-side of leaves of Hyoscyamus niger by E A W-P, 22-9-11, W W. 6, Marton drain, 1-6-1894, A T.

## PSYLLIODES MARCIDA, Ill.

Our only records.

N. 9, Mablethorpe, (Fowler, Brit. Col.) Theddlethorpe, abundant on Cakile 6-1896, AT.

#### PSYLLIODES CHALCOMERA, Ill.

Our only records.

N. 4, Cleethorpes, 30-9-08, by sweeping thistles, WW. 9, Humberstone, on Carduus nutans, 7-7-07, WW.

#### PSYLLIODES PICINA, Marsh.

- N. 2, Bottesford, 1900, M.P. 4, Freshney Bog, 21-6-98, EAW-P. and 26-5-10, F. W. Sowerby, 6, Torksey, 1896, AT.
- S. Lincoln, (Fowler, Brit. Col.)

#### CASSIDA NEBULOSA, L.

Our only records.

- N. 4, Freshney Bog, one on nettles, 24-8-07, WW.
- S. 13, Nocton, (Fowler, Brit. Col.)

## CASSIDA SANGUINOLENTA, F.

Our only record.

N. 4, Cleethorpes, L N U., 5-7-1894, W F B.

## CASSIDA NOBILIS, L.

Our only records.

S. 13, Hartsholme, one, LNU. (Nat 1899, p. 286), 15, Grantham, 1900, Mr. Worsdale.

## CASSIDA FLAVEOLA, Thunb.

Fairly common.

- N. 2, Bottesford, 1900, M P. 4, Irby, 20-6-07, W W. Freshney Bogs, 26-5-10, F W Sowerby. 6, Marton drain, 13-7-1894, A T. 7, Linwood, 5-6-11, L N U. (W W.) 8, Ludborough, 28-5-1901, A S.
- S. 13, Hartsholme, L N U. (Nat. 1899, p. 286).

## CASSIDA EQUESTRIS, F.

A rare species.

N. 4, "a specimen given me many years ago by C K Tero, taken by him in the locality of Grimsby," A S. Side of Croxby Pond, 20-6-07, one specimen, W W.

#### CASSIDA VIRIDIS, L.

A common species.

- N. 3, Cadney, 1898, E A W-P. 4, Great Coates, 8-9-96, L N U. A T. 6, Newton Cliff, 6-1895, A T. 8, Muckton Wood, 25-5-1885, J W K. (see Nat. World, Jan. 1886, p. 1), also near Louth; larva described (see Young Naturalist, Oct. 1885, p. 232, H W K.) 9, Humberstone shore, on thistles, 7-7-07, W W., and Tetney, 13-8-08, on thistles, on which occasion some had just emerged, and I found a number of pupæ, W W. 11, Sutton, 9-9-09, A B. (W W.)
- S. 13, Court Leys, 1899, S C S. Hartsholme, L N U. (Nat. 1899, p. 286).

## Rhynchophora.

## BRACHYTARSUS FASCIATUS, Forst.

Rare.

- N. 6 Torksey, 16-5-1899, Dr. C.
- S. 13, Nocton (Fowler, Brit. Col.), also Nocton, E A W., (see E M M., Jan. 1868, pp. 186-7.)

#### BRACHYTARSUS VARIUS, F.

Rare.

S. 13, Nocton (Fowler, Brit. Col.), also Nocton, E A W. (see E M M. Jan. 1868, pp. 186-7).

#### APODERUS CORYLI, L.

N. 4, Reported doubtfully from near Waltham Station, 1897, by by A.S. It has not again occurred in the Grimsby District.
6, Langworth Wood, (Fowler, Brit. Col.) Lincoln, May 31, 1899, L. N. U.

#### ATTELABUS CURCULIONOIDES, L.

Local.

N. 2, Broughton Woods, 6, 1895, L N U. (A T.) 7, Linwood, 30-5-1898, E A W-P. Moortown, on young oaks and birches, 18-8-1907, W W.

#### RHYNCHITES ÆQUATUS, L.

An uncommon species.

- N. 4, Bradley Wood, two specimens beaten from hawthorn flowers, 24-5-07, W W. Irby, one from hawthorn, 24-5-08, W W.
- S. 13, Court Leys, May 1901. S C S.

## RHYNCHITES ÆNEO-VIRENS, Marsh.

Our only record.

S. 13, Nocton, EAW. (EMM, Jan. 1868, p.p. 186-7).

#### RHYNCHITES MINUTUS, Herbst.

Not uncommon.

N. 4, Bradley Wood, by sweeping, 26-6-07 and 19-5-09, WW. 7, Linwood, 4-6-1900, LNU, again 16-5-10, FW Sowerby, named by Mr. Tomlin.

#### RHYNCHITES NANUS, Payk.

N. 1, Haxey and Epworth, two from birch on the heaths, 14-7-1898, AT. 7, Moortown, from birches in heathery woods, 18-8-07 and 3-7-10, W W. Usselby, 2-8-09, F W Sowerby. Linwood, 8-6-08, W W.

#### RHYNCHITES PUBESCENS, F.

Our only record.

N. 6, Langworth Wood (Fowler, Brit, Col.)

#### DEPORAUS MEGACEPHALUS, Germ.

N. 7, Moortown, in numbers by beating birches in a heathery wood, 18-8-07, W W. Linwood, 20-7-10, W W.

#### DEPORAUS BETULAE, L.

- N. 2, Broughton, 3-6-95, L N U. 4, Freshney Bogs, 1898, A T. Bradley Wood, one specimen, 19-5-09, the only one I have taken in Grimsby district, W W. 5, Scotton Common, 22-6-98, E A W-P. 7, Linwood, 30-5-1898, E A W-P. Moortown, on birch, 18-8-07, in numbers, W W.
- S. 13, Hartsholme, on birch, 24-5-94, LNU, AT.

#### APION POMONAE, F.

Not uncommon.

- N. 4, Beelsby, in a wood by sweeping, 24-5-07, A B, W W Bradley, in large numbers in dead leaves, 2-4-09, W W. 7, Holton-le-Moor, 12-6-08, L N U, A B, W W. 9, Humberstone common by sweeping, 4-10-08, W W. 10, Woodhall, 7-8-93, L N U, (NAT. 1893, p. 313.)
- S. 13, Court Leys, Sept. 1900, SCS.

## APION SUBULATUM, Kirby.

Our only record.

Lincoln, 21-5-1899, LNU.

#### APION ULICIS, Forst.

Very common on gorse, in fact seldom absent.

N. 2, Manton, on gorse, 9-1897, A.T. 3, Howsham, on gorse, 1898, E.A.W-P. 4, Beelsby, on gorse, Oct. 1906. 5, Scotton Common, 1898, E.A.W-P. 7, Linwood, 8-6-08, W.W. 10, Woodhall Spa, 10-1901, S.C.S.

#### APION MINIATUM. Germ.

Our only record.

S. 13, Court Leys, Sept. 1900, S C S.

#### APION CRUENTATUM. Walt.

N. I, Haxey and Epworth, two specimens, 14-7-1898, AT. 10, Woodhall Spa, LNU, 7-8-1893, (WFB.) Nat. Oct. 1893, p.p. 312-314.

#### APION HAEMATODES, Kirby.

Our commonest red Apion.

N. 2, Scunthorpe, 26-8-10, W W. 3, Wrawby Moor, 10-9-10, J H Robinson, W W. 4, Little Coates, 8-1906, W W. 6, Torksey, 16-5-1899, S. Pegler. 7, Moortown, 18-8-07, W W. 9, Humberstone, 4-10-08, W W.

#### APION RUBENS, Steph.

N. 3, Cadney, Sept. 1897, AT. Wrawby, 10-9-10, JH Robinson, WW.

#### APION VICIÆ, Pk.

N. 3, Thornton Abbey, 18-7-09, W W. 4, Bradley, 23-6-10, W W. 7, Moortown, 18-8-07, W W. 8, Holton-le-Clay, several by sweeping roadsides, 5-7-08, W W. 11, Trusthorpe, 6-1897, A T. Alford, 20-8-08, L N U. (W W).

#### APION APRICANS, Hbst.

- "The Purple Clover Weevil," an abundant species, the larvæ feed upon the unripe seeds.
- N. 3, Cadney, A T. 4, Bradley Wood, 8-06, W W. 6, Marton drain, A T. 7, Linwood, 15-6-10, F W Sowerby. 9, Saltfleet, 31-7-10, W W. 11, Trusthorpe, 6-1897, A T.

#### APION DICHROUM, Bed.

An abundant species.

- N. 2, Bottesford, 1900, E A W-P. 3, Cadney, 9-1897, A T. Bradley Wood, Aug. 1906, W W. 7, Moortown, Aug. 18-07, W W. 9, North Somercotes, 18-6-09, C Gifford. 11, Ingoldmells, 21-9-99, E A W-P.
- S. 13, Court Leys, 8-1898, S C S. 17, Wash Foreshore, 8-1897, L N U. (A T).

#### APION NIGRITARSE, Kirby.

Frequent.

- N. 3, Cadney, 6-10-98, A.T. 4, Little Coates, 24-8-07, W.W. 7, West Rasen, 30-8-11, E.A.W-P. 9, Tetney, 13-8-08, W.W. 11, Alford, C.O. Waterhouse.
- S. 13, Skellingthorpe Wood, in moss, by J F M., 2-11-11, W W.

#### APION ÆNEUM, F.

Found commonly on Malva sylvestris, in Grimsby District.

N 3, Cadney, 9-1897, A.T. 4, Great Coates, on M. sylvestris, 23-7-08, W.W. 9, Humberstone, on M. sylvestris, 23-7-08, W.W.

#### APION HYDROLAPATHI, Kirby.

Our only record.

N. 3, Cadney, 1897, AT.

#### APION HUMILE, Germ.

A very common species.

- N. 2, Ashby, 1899, Dr. C. 3, Cadney, 10-1897, EAW-P. 4, Freshney Bogs, 21-6-1898, EAW-P. 5, Scotton Common, 1898, EAW-P. 6, Torksey, 16-5-1899, S. Pegler. 7, Moortown, 18-8-07, WW. 8, Grainsby, under bark, Dec. 1908, WW. 9, Humberstone sandhills, March 1907. WW. 11, Trusthorpe, 6-1897, AT.
- S. 17, Wash Foreshore, 8-1897, LNU, AT.

#### OTIORRHYNCHUS TENEBRICOSUS, Hbst.

N. 2, Scawby, 3-6-95, LNU, AT. 3, Pelham Wood, 12-5-07, WW. 4, Croxby, in large numbers, by beating a hedge of Symphoricarpus racemosus near the pond, Aug. 06, WW. Irby, 20-6-07, WW. 7, Tealby, Aug. 1910, WW. 8. Binbrook, 28-5-09, by GWM, WW.

#### OTIORRHYNCHUS ATROAPTERUS, De G.

Our only record.

N. 6, Torksey, 16-5-1899, S Pegler.

#### OTIORRHYNCHUS SCABROSUS, Marsh.

Our only record.

'Lincoln.' (FOWLER, BRIT, COL.)

#### OTIORRHYNCHUS LIGNEUS, Ol.

N. 4, Cleethorpes, (FOWLER, BRIT. COL.) common there by sweeping salt marsh, Sept. 7-07, WW. 9, Humberstone, by sweeping, Aug. 1906, WW.

#### OTIORRHYNCHUS PICIPES, F.

Common in woods but also found on the coast.

- N. 2, Broughton, 3-6-95, L N U (NAT. 1895, p. 236). 3, Cadney, 3-98, E A W-P. 4, Croxby Woods, 8-1906. Cleethorpes, 20-7-09, W W. 7, Linwood, 8-6-08, W W. 10, Holbeck, 1-8-97, J E M. 11, Trusthorpe, 6-1897, A T.
  - S. 13, Court Leys, 15-8-98, S C S. 15, Sapperton, 6-01, S C S.

#### OTIORRHYNCHUS SULCATUS. F.

Not an uncommon species.

- N. 2, Scunthorpe, 25-8-10, Mr E G Bayford. 3, Cadney, 4-1898. Barton-on-Humber, 3-5-08, larvæ at fern roots in greenhouse sent by G W M, to be named by Editor of 'Gardening.' 4, Grimsby, one on the street, Aug. 1906, again May 26-11. 6, Welton, 20-5-07, L N U. 8, near Louth, H W K. (NAT. WORLD, Sept. 1886).
- S. Lincoln, ravaging roots of maiden hair fern, WWF, EMM, Jan. 1893, p 18. 13, Court Leys, 8-1898, SCS.

#### OTIORRHYNCHUS RUGIFRONS, Gyll.

Our only record.

N. 4, Cleethorpes, (Fowler, Brit. Col.)

#### OTIORRHYNCHUS OVATUS, L.

Common on sandy places, coast and inland.

N. 2, Scunthorpe, Crosby Warren, 25-8-10, L N U, W W. 3, Brigg, 6-1895, A T. 4, Cleethorpes, 7-9-07, W W. 7, Moortown, in sandpit, 18-8-07, W W. 9, Theddlethorpe, common, A T. Humberstone, 8-1900, A S. 11, Trusthorpe, 6-1897, common, A T. Ingoldmells, 21-9-99, E A W-P.

S. 17, Wash Foreshore, 8-1897, L N U, A T.

#### OTIORRHYNCHUS MUSCORUM, Bris.

Our only record.

N. 9, Mablethorpe, Aug. 1881, WWF.

#### TRACHYPHLŒUS ARISTATUS, Gyll.

"Mr E W Morse took it in some numbers on the banks of River Witham (with T. alternans, Gyll. and T. scabriculus, Linn.) below Boston, Lincs., under cut herbage left in heaps to rot." Mr E A Newbery, in E M M, Feb. 1909.

#### TRACHYPHLŒUS OLIVIERI, Bedl. (= squamulatus, Ol.)

Banks of Witham below Boston, see E M M, Feb. og.

#### TRACHYPHLŒUS SCABER, L.

N. 2, Manton Common, one specimen, 21-3-1898, E A W-P, AT.

#### TRACHYPHLŒUS SCABRICULUS, L.

N. 7, Moortown, one in a sandpit, Aug. 07, WW. Banks of Witham below Boston, see EMM, Feb. 09.

#### TRACHYPHLŒUS ALTERNANS, Gyll.

Banks of Witham below Boston. See E M M., Feb. 1909, Mr. E. A. Newbery.

## STROPHOSOMUS CORYLI, F.

Common in woods by beating.

N. 2, Broughton Woods, 6-95, L N U., A T. 3, Cadney, A T. 4, Bradley Wood, 26-6-07, W W. Roxton Wood, W W. 7, Holton-le-Moor, 12-6-08, L N U. (W W.) 10, Woodhall Spa, 10-1901, S C S.

S. 13, Hartsholme, L N U. NAT. 1899, p. 287.)

#### STROPHOSOMUS RETUSUS, Marsh.

N. 4, Bradley Wood, 26-6-07, in numbers by sweeping the middle drive near centre of the wood, W W. Waltham, by sweeping a grass field, 13-7-08, in numbers, W W.

#### STROPHOSOMUS FABER, Hbst.

N. 5, Scotton Common, 1898, E A W-P. 7, Linwood, 4-6-1900. Grimsby and Louth Nat. Socs.

#### APION RADIOLUS, Kirby.

Found commonly on M. sylvestris, in Grimsby District.

N. 4, Scartho, 30-7-08, on M. sylvestris, W W. 8, Holton-le-Clay, 5-7-08, W W. 9, Humberstone, on M. sylvestris, 28-7-08, W W.

#### APION ONOPORDI, Kirby.

S. 17, Wash foreshore, common 8-97, L N U., A T.

#### APION CARDUORUM, Kirby.

Common on thistles.

N. 2, Scunthorpe, 25-8-10, W W. 3, Cadney, 2-4-98, A T. 4, Cleethorpes, 4-10-08, common, W W. 9, Theddlethorpe, r893, A T.

#### APION VICINUM, Kirby.

A rare species.

N. 8, Tetney, one in the water net, 16-4-08, AB, WW.

#### APION MINIMUM Herbst.

N. 7, Linwood, one specimen by beating sallows on roadside near the warren, 8-6-08, W W.

## APION VIRENS, Herbst.

Not uncommon in Grimsby District.

N. 4, Bradley Wood, 29-8-07, WW. Cleethorpes, 9-9-08, WW. Irby, 1-8-08, WW. 9, Tetney, 9-8-11, WW.

## APION ASTRAGALI, Payk.

Very local.

N. 6, Newton Cliff, in profusion on Astragalus, 18-6-01, AT.

S. 13, Skellingthorpe Wood (Fowler, Brit. Col.)

## APION PISI, F.

A very common species.

N. 2, Scunthorpe, 11-6-10, W E SHARP. 3, Cadney, 1897, A T. 4, Grimsby, in gardens, Aug. 1906, W W. 7, Moortown, 18-8-07, W W. 9, Theddlethorpe, 1893, A T. 11, Trusthorpe, 1893, A T.

## APION ÆTHIOPS, Hbst.

A common species.

N. 3, Thornton Abbey, 18-7-09, W.W. 4, Irby, 20-6-07, W.W. 7, Moortown, 18-8-07, W.W. 11, Trusthorpe, 6-1897, A.T.

S. 17, Wash Foreshore, 8-1897, L N U, A T.

## APION ONONIS, Kirby.

Common on Rest Harrow.

N. 3, New Holland, 20-8-09, W W. 4, Cleethorpes, 21-7-08, W W. Ravendale, 9-07, W W. 9, Humberstone, 28-7-08, W W.

#### APION ERVI, Kirby.

Frequent in the Grimsby District.

N. 4, Freshney Bog, 13-7-1898, A T. Bradley, 28-8-07, W W. 11, Trusthorpe, 6-1897, A T. Alford, 20-8-08, L N U, W W.

#### APION VORAX, Hrbst.

Generally taken singly by sweeping.

N. 3, Cadney, 9-1897, AT. 4, Freshney Bog, 9-5-08, WW. Bradley, in dead leaves, 2-4-09, WW. 11, Trusthorpe, 6-97, AT.

## APION LOTI, Kirby.

Our only record.

N. 4, Cleethorpes, one specimen, 7-9-07, W W.

#### APION MELILOTI, Kirby.

N. 3, Barton-on-Humber, 1-7-11, abundant on Melilotus officinalis in a chalk pit, L N U, W W.

#### APION SENICULUM, Kirby.

Not common.

N. 4, Ravendale, 23-6-07, W.W. Irby, 1-8-08, W.W. 11, Alford, 8-8-08, L.N.U. (W.W).

## APION TENUE, Kirby.

N. 3, Cadney, 9-1897, A.T. 4, Scartho, one 18-3-09, W.W. 7, Moortown, Aug. 1907, W.W. 11, Saltfleet, in great abundance on the sandhills, 31-7-10, W.W.

#### APION SIMILE, Kirby.

N. 7, Moortown, 3-7-10, W W.

#### APION PUBESCENS, Kirby.

N- 4, Freshney Bogs, two specimens, 1-10-09, by F W Sowerby, and three from the flood refuse 26-9-09, W W. 12, Skirbeck, stems of *Trifolium filiforme* galled by this beetle (see L N U. Trans. 1909, p. 149).

#### APION AFFINE, Kirby.

N. 2, Scunthorpe, 25-8-10, W W. 6, Torksey, 16-5-1899, Dr. C 7, Moortown, Aug. 1907, W W.

#### APION MARCHICUM, Hbst.

N. 2, Scunthorpe, 25-8-10, W W. 7, Linwood, 20-7-10, W W. Moortown, 3-7-10, W W.

#### APION VIOLACEUM, Kirby.

A common species.

N. 3, Thornton Abbey, 5-6-10, W W. 4, Freshney Bogs, 21-6-1898, E A W-P. 6, Torksey, 16-5-1899, Dr. C. 9, North Somercotes, 18-6-09, C. Gifford, W W. 11, Trusthorpe, 6-1897, A T.

#### STROPHOSOMUS LATERALIS, Pk.

N. 7, Holton-le-Moor, 12-6-08, several specimens by A B., L N U. W W.

#### EXOMIAS ARANEIFORMIS, Sch.

N. 4, Beelsby, 24-5-07, on wet branches on the ground, W W. Bradley Wood, 26-6-07, W W. Croxby, 2-7-08, four specimens, A B., W W.

#### OMIAS MOLLINUS, Boh.

Evidently local.

N. 2, Brigg, 4-6-95, sweeping Barnetby Road, A.T. 6, Torksey, 16-5-99, Dr. C.

#### BRACHYSOMUS ECHINATUS, Bons.

N. 2, Broughton, 3-6-95, L N U. (NAT. 1895, p. 236). Brigg, by sweeping 4-6-1895, A T. 4, Bradley Wood, at sap of freshly felled fir trees and by sweeping, 24-5-07, W W. Roxton Wood, 4-6-10, F W Sowerby.

### SCIAPHILUS MURICATUS, F.

Frequent by sweeping in woods.

N. 3, Cadney, 1898, E A W-P. 4, Freshney Bogs, 21-6-98, E A W-P. Bradley Wood, 27-5-07, W W. Irby Dale, 20-6-07, W W, 7, Linwood Common, 30-9-97, E A W-P.

#### TROPIPHORUS TOMENTOSUS, Marsh.

Occurs singly by sweeping in woods.

- N. 3, Thornton Abbey, 18-7-09, W W. 4, Beelsby Wood, 24-5-07, W W. Bradley Wood, 19-5-09, W W. Roxton Wood, 31-5-09, W W. 6, Torksey, 20-6-96, A T.
- S. 13, Nocton, E A W. (E M M., Jan. 1868, pp. 186-7).

#### LIOPHLŒUS NUBILUS, F.

Frequent on dry dusty roads, and by sweeping in woods.

- N. 2, Brigg, several, 4-6-95, A.T. 3, Cadney, 23-6-98, A.T. 4, Waltham, 1897, A.S. Laceby, several walking on roads, 14-6-07, W.W. Bradley Wood, sweeping, 4-6-07, several, A.B., W.W. 8, Ludborough 28-5-01, A.S. 9, Humberstone, 6-6-01, A.S.
- S. 13, Brandon, 4-9-98, S C S.

#### POLYDRUSUS MICANS, F.

N. 4, Bradley Wood, 26-6-07, by beating sallows, W W. Freshney Bogs, 9-7-09, F W Sowerby.

#### POLYDRUSUS PTERYGOMALIS, Sch.

By beating and sweeping in woods; rather common.

- N. 3, Roxton Wood, 11-8-07, W W. 4, Bradley Wood, 26-6-07, W W. Irby, 20-6-07, W W. 7, Linwood Warren, 30-9-97, E A W-P. 10, Woodhall Spa, and Tumby, one specimen, L N U. (Nat. 1899, p. 68). 11, Alford, C O Waterhouse.
- S. 13, in the west of this area, 24-5-1894, L N U.

#### POLYDRUSUS FLAVIPES, De G.

Our only record.

N. 6, "Langworth Wood, Lincoln, where I have found it sparingly and might have taken a number of specimens, but I passed it over as P. pterygomalis." (FOWLER, BRIT. COL.).

#### POLYDRUSUS CERVINUS, L.

A common species by beating and sweeping in woods.

- N. 1, Haxey and Epworth, 14-7-98, A.T. 2, Broughton, 6-1895,
   L. N.U. (NAT. 1895, p. 236.)
   3, Roxton Wood, 1-8-0-7, W.W.
   4, Freshney Bogs, 13-7-1898, A.T. Bradley Wood, 27-5-07,
   W.W. 7, Linwood, 4-6-00, Grimsby and Louth Nat. Socs.
- S- 13, Court Leys, 6-1900, S C S.

#### POLYDRUSUS CHRYSOMELA, Ol.

An interesting capture.

N. 9, Humberstone, one by sweeping, 20-7-09, W W.

## PHYLLOBIUS OBLONGUS, L.

A common species.

- N. 2, Broughton Woods, 6-1895, L N U., A T. 3, Cadney, 1898, E A W.P. 4, Freshney Bog, 21-6-1898, E A W-P. Bradley Wood, 5-1907, W W. 8, Ludborough, 28-5-01, A S. 9, Tetney Haven, on poplars, 30-5-11, W W.
- S. 13, Court Leys, 6-1899, S C S.

#### PHYLLOBIUS CALCARATUS, F.

Frequent in the county, A T. (I have not seen a specimen in the county, W W.)

## PHYLLOBIUS URTICÆ, De G.

Very common on nettles.

- N. 2, Brigg, 6-1895, L N U., A T. 3, Cadney, 1898, E A W-P.
  4, Freshney Bogs, 21-6-98, E A W-P. 7, South Kelsey, 6-7-98, E A W-P. 8, near Louth, H W K., NAT. WORLD, Sept. 1886. 9, Tetney Haven, 30-5-11, W W. 11, Trusthorpe, 6-1897, A T.
- S. 13, Hartsholme, 24-5-94, L N U., W F B. 15, Sapperton, June 1901, S C S.

#### PHYLLOBIUS PYRI, L.

- N. 2, Broughton Woods, 6-1895, L N U., A T. 3, Cadney, 1898, E A W-P. 4, Freshney Bogs, 1900, A S. Irby Dale Woods, 20-6-07, W W. 6, Torksey, 16-5-1899, Mr. S. Pegler. 7, Linwood, 1898, E A W-P. 11, Trusthorpe, 6-1897, A T.
- S. 13, Hartsholme, 24-5-1894, L N U., W F B. 18, near Spalding, June, 1904, very abundant on long grass on banks of River Welland (W E Sharp, F E s).

#### PHYLLOBIUS ARGENTATUS, L.

- N. 2, Broughton Woods, 6-1895, LNU, AT. 3, Brocklesby, 14-6-1900, AS. 4, Bradley Wood, 27-5-07, WW. 6, Welton 20-5-07, LNU. 7, Linwood, 4-6-1900, Grimsby and Louth Nat. Socs. 8, Muckton Wood, HWK. (NAT. WORLD, Sept. 1886.)
- S. 13, Hartsholme, 24-5-1894, on birch, L N U, W F B. 15, Little Ponton, 7-6-1898, E A W-P.

#### PHYLLOBIUS MACULICORNIS, Germ.

Common in Grimsby District.

N. 2, Broughton Woods, 6-1895, LNU, AT. Cadney, 7-1898, EAW-P. 4, Irby, 20-6-07, WW. 7, Linwood, 5-1906, AB, WW.

#### PHYLLOBIUS POMONÆ, Ol.

In the Grimsby District this species occurs only on the coast and on the chalk districts.

- N. 4, Ravendale, by sweeping herbage on the chalky hill sides, 23-6-07, WW. 6, Newton Cliff, 2-6-01, L N U, A T. 7, Linwood, 8-6-08, WW. 9, Humberstone, on thistles, 7-7-07, WW. Tetney, near shore, 30-5-11. 11, Trusthorpe, 6-97, A T.
- S. 13, Hartsholme, 24-5-94, L N U, W F B.

#### PHYLLOBIUS VIRIDIÆRIS, Laich.

Very common on nettles.

- N. 2, Broughton Woods, 6-95, L N U, AT. 3, Cadney, 4-1898, E A W-P. 4, Freshney Bogs, 6-1900, A S. 6, Newton Cliff, 2-6-01, L N U, A T. 7, Linwood, 1898, E A W-P. 8, near Louth, H W K, (NAT. WORLD, Sept. 1886). 9, Tetney, 30-5-11. 11, Trusthorpe, 6-1897, A T.
- S. 13, Court Leys, 26-6-99, SCS. 15, Little Ponton, 1898, EAW-P.

#### PHYLLOBIUS VIRIDICOLLIS, F.

Very Local.

N. 4, Cleethorpes, (Fowler, Brit. Col.) we have never taken it there. Freshney Bogs, 21-6-1898, EAW-P and AT. It occurs in the bog every year in a limited area only, WW.

#### TANYMECUS PALLIATUS, F.

N. 3, Cadney, a single specimen by sweeping, July 1895, AT. (see E M M, Oct. 1895.) 9, Humberstone, 21-5-07, a single specimen under a stone, W W.

#### PHILOPEDON GEMINATUS, F.

Abundant on the coast sandhills.

N. 4, Cleethorpes, 18-7-07, W.W. 9, Theddlethorpe, Mablethorpe, abundant, A.T. 11, Trusthorpe, 6-97, abundant A.T.

## ATACTOGENES EXARATUS, Mærsh.

Our only records.

N. 3, Brigg, 4-6-1895, AT. 7, Linwood, 5-6-11, LNU, a crushed specimen on road and one by sweeping, WW.

#### BARYNOTUS OBSCURUS, F.

Found singly and not common.

N. 2, Bottesford, 1900, M.P. 3, Pelham Wood, 12-5-07, W.W. Cadney, in shells of Helix nemoralis, L., 24-4-09, E.A.W-P, W.W. 4, Barnoldby-le-Beck, under a stone, Aug. 1906, W.W. Humber Bank, 7-6-07, W.W. 8, near Louth, C.S. Carter, (NAT. 1902, p. 227.)

#### BARYNOTUS ELEVATUS, Marsh.

No record from Grimsby District.

- N. 8, Haugham Pasture, R W Goulding, (NAT. WORLD, Aug. 1886). 9, Mablethorpe, Aug. 1907, Mr F Rhodes, of Bradford
- S. Near Boston, E C Rye, April 9-1860 (Ent. W. Intell., May 1860, p. 52).

## ALOPHUS TRIGUTTATUS, F.

Our only record.

S. 13, Court Leys, 5-1899 S C S.

#### SITONES GRISEUS, F.

Evidently uncommon.

N. 6, Torksey, AT. 7, Linwood Common, 30-9-1897, EAW-P.

## SITONES REGENSTEINENSIS, Hbst.

N. 3, Thornton Abbey, on broom and furze, common 18-7-09, WW. 4, Irby, on furze, 24-5-08, WW. 9, Humberstone, on furze, 28-7-08, WW. 10, Woodhall Spa, abundant, 9-1901, SCS.

#### SITONES CRINITUS. Hbst.

Not common.

N. 3, Cadney, 4-1898, EAW-P. Barton-on-Humber, one specimen, 20-4-07, WW.

#### SITONES TIBIALIS, Hbst.

N. 3, Thornton Abbey, 18-7-99, W W. 4, Little Coates, on furze, 27-5-08, W W. 9, Humberstone, on furze, common, 9-6-07, W W.

## SITONES HISPIDULUS, F.

Very common.

- N. 2, Manton district, very common, 9-1897, AT. 3, Cadney, 9-1897, very common, AT. 4, Great Coates, 28-9-96; AT. 5, Cleatham, 9-9-98, EAW-P. 7, Linwood, EAW-P. 9, Theddlethorpe, 8-1893, AT. 11, Alford, 23-10-1890, JEM.
- S. 13, Court Leys, 9-98, S.C.S. 14, Cranwell, 9-1901, S.C.S. 17, Wash Foreshore, 8-1896, L.N.U., A.T.

#### SITONES HUMERALIS, Steph.

Has not occurred in Grimsby District.

- N. 3, Cadney, 4-1898, E A W-P.
- S. 13, Court Leys, 9-1898, SCS.

#### SITONES FLAVESCENS, Marsh.

Specially common near the coast.

N. 2, Broughton, 8-9-08, L N U., A B., W W. 4, Cleethorpes, Sept. 7-07, abundant by sweeping the Salt Marshes, W W. 9, Theddlethorpe, 8-1893, A T. 11, Alford, 20-8-08, L N U. W W.

#### SITONES PUNCTICOLLIS, Steph.

- N. 2, Manton District, 9-1897, A T. 3, Cadney, 9-1897, A T. 4, Bradley Wood, 28-9-07, W W. 7. Linwood, 5-8-09, F W Sowerby. 8, Holton-le-Clay, 5-7-08, W W. 9, Theddle-thorpe, 8-1893, A T. 11, Alford, C O Waterhouse.
- S. 15, Little Ponton, 7-6-98, E A W-P. 17, Wash Foreshore, 8-1897, L N U., A T.

#### SITONES SUTURALIS, Steph.

Not a common species.

- N. 3, Thornton Abbey, 5-6-10, W W. 4, Weelsby, 1898, A S, Ravendale, 23-6-07, W W. 9, Tetney, 30-5-11, one specimen, W W.
- S. 14, Cranwell, 9-1901, S C S.

## SITONES LINEATUS, L.

One of our commonest beetles. This is the species particularly referred to by the term "Bean and Pea Weevil."

- N. 2, Manton Common. 1898, E A W-P. 3, Cadney, 1898, E A W-P. 4, Little Coates, 18-5-1899, A S. 5, Scotton Common, 1898, E A W-P. 6, Manton, 4-98, E A W-P, 7, Linwood, 1898, E A W-P. 9, Theddlethorpe, 8-1893, A T. 11, Ingoldmells, 21-9-1899, E A W-P. 12, Frieston, 8-8-1899, L N U.
- S. 13, Court Leys, S C S. 14, Cranwell, 9-1901, S C S. 15, Little Ponton, 7-6-98, E A W-P. 17, Wash Foreshore, 8-1897, L N U., A T.

#### SITONES SULCIFRONS, Thunb.

Not common.

- N. 4, Great Coates, 8-9-1896, L N U., A T. Bradley Wood, 28-9-07, W W. 6, Marton drain, A T.
- S. 17, Wash Foreshore, 8-1897, L N U., A T.

#### HYPERA PUNCTATA, F.

In sandy areas.

N. 2, Manton District, 9-1897, AT. 4, Cleethorpes, 7-9-07, WW. Bradley Wood, 26-7-07, WW. 9, Theddlethorpe, common on Anmophila, 8-1893, AT. Mablethorpe, 30-8-00, LNU.

## HYPERA RUMICIS, L.

- N. 3, Brocklesby, 14-6-00, A S. 4, Little Coates, 2-7-08, W W. 6, Torksey, 20-5-96, A T. 7, Linwood, 1898, A S.
- S. 13, Brandon, July 1896, S C S.

#### HYPERA ALTERNANS, Steph.

N. 4, Freshney Bogs, 21.6-1898, AT.; again there a pair, June 1910, WW. 9, Theddlethorpe, 6-1896, AT. Humberstone, 23-5-10, AB., WW.

#### HYPERA POLYGONI, L.

- N. 3, Cadney, 9-1897, A.T. 4, Bradley Wood, 28-9-07, W.W. Croxby, 15-7-09, W.W. 7, Linwood, June 1900, Grimsby and Louth Nat. Socs. 9, Theddlethorpe, 4-1895, A.T.
- S. 13, Canwick, in moss, 13-1-12, by J F M, WW.

#### HYPERA SUSPICIOSA, Hbst,

- N. 2, Broughton Wood, 3-6-1895, L N U., A T. 3, Roxton Wood, 11-8-07, W W. 4, Freshney Bogs, 21-6-1898, E A W-P. It occurs there each year, WW.
- S. 13, Court Leys, June 1899, S C S.

#### HYPERA VARIABILIS, Hbst.

N. 3, Cadney, 9-1897, A T. 4, Great Coates, 8-9-95, L N U., A T. Cleethorpes, 30-8-07, W W. 7, Linwood Warren, E A W-P. 9, Theddlethorpe, 4-1895, A T.

## HYPERA MURINA, F.

- N, 4, Cleethorpes (Fowler, Brit. Col.) Again there 19-5-08 and 4-10-08, W W.
- S. 13, Court Leys, Sept. 1900, S C S.

## HYPERA PLANTAGINIS, De G.

Our only record,

N. 9, Theddlethorpe, 4-95, AT.

## HYPERA NIGRIROSTRIS, F.

A common species: often on the wing.

- N, 2, Hibaldstow, 23-5-98, E A W-P. 3, Cadney, A T. 4, Great Coates, 5-1899, A S. 9, Theddlethorpe, 1893, A T.
- S. 13, Court Leys, Sept. 1898, S C S.

#### CLEONUS SULCIROSTRIS, L.

Frequent on the coast sandhills.

N. 9, Theddlethorpe and Mablethorpe, 4-95, A T. Donna Nook, three specimens sprawling on the dry sandhills, 15-5-10, W W. 11, Ingoldmells, 21-9-1899, E A W-P.

#### LIOSOMA OVATULUM, Clair.

Frequent by sweeping and in moss in woods.

- N. 4, Irby Dale Wood, by sweeping, 20-6-1907, W W. Freshney Bogs, sweeping, 2-5-08, W W. Beelsby, in moss, 5-9-09, W W. 7, Linwood, 16-5-10, F W Sowerby.
- S. 13, Skellingthorpe Wood, in moss, 2-11-11, J F M, W W.

#### CURCULIO ABIETIS, L.

The 'Pine Weevil,' our only record.

S. 13, Hartsholme, 24-5-1894, L N U, A T.

## ORCHESTES QUERCUS, L,

- N. 3, Cadney, 1899, EAW-P. 4, Bradley Wood, 8-06, WW. Roxton Wood, 31-5-09, WW. 5, Scotton Common, 14-8-01, AT. 7, Moortown, 18-8-07, WW. Linwood, 5-8-09, FW Sowerby.
- S. 13, Court Leys, 1899, SCS.

#### ORCHESTES ALNI, L.

Our only record.

N. 4, Cleethorpes, "I know of no locality further north than Cleethorpes, Lincolnshire." (Fowler, Brit. Col.)

#### ORCHESTES ILICIS, F.

N. 4, Bradley Wood, 5-6-07, one by general beating, WW. 7, Moortown, 18-8-07, one by sweeping, WW. 11, Well Vale Park, July 13-1887, JEM, identified by WWF.

#### ORCHESTES AVELLANÆ, Don.

Our only record.

N. 4, Bradley Wood, one specimen, Aug. o6, WW.

## ORCHESTES FAGI, L.

Occurs only on beech trees.

N. 3, Cadney, 3-1900, E A W-P. Pelham Wood, 12-5-07, W W, again there in very large numbers, 2-7-10, A B. 4, Croxby, 15-7-09, by F W Sowerby. 7, Linwood, 16-5-10, F W Sowerby.

## ORCHESTES RUSCI, Hbst.

N. 3, Cadney, (Burnt Wood) on birch, 9-97, AT. 4, Bradley Wood, 18-5-08, WW, one specimen, the only instance of its occurrence in Grimsby District. 7, Moortown, very common by sweeping under birch, 18-8-07, WW.

#### ORCHESTES STIGMA, Germ.

An uncommon species.

N. 6, Langworth Wood (Fowler, Brit. Col.) 7, Linwood, 4-6-00, Grimsby and Louth Nat. Societies, and again there by Mr F W Sowerby, 5-8-09, named by Tomlin.

#### ORCHESTES SALICIS, L.

All our records are from the Grimsby district, where it is a common species. It will no doubt be found widely.

N. 3, Roxton Wood, 4-6-10, FWS, WW. 4, Freshney Bogs, common, 13-7-98, AT. Bradley Wood, 8-06, 29-5-09, WW. Irby, Sept. 7-07, AB.

#### ORCHESTES SALICETI, F.

Found singly not uncommonly.

N. 4, Freshney Bogs, 7-6-99, AT, again by sweeping there one specimen, 5-8-09, and in flood refuse one specimen, 24-9-09, W W.

#### RHAMPHUS FLAVICORNIS. Clair.

Occurs singly by sweeping.

N. 4, Freshney Bog, by sweeping, one specimen, 5-8-09, W W. 7, Moortown, Aug. 18-07, W W. 9, Humberstone, by sweeping roadside leading to shore, one specimen, 5-8-09, W W.

#### GRYPIDIUS EQUISETI, F.

In marshy places on equisetum.

N. 3, Barton-on-Humber, Mr T Stainforth. 4, Freshney Bogs, Aug. o6, and general there, 26-5-10, L N U, W W. 6, Torksey, A T.

#### ERIRHINUS BIMACULATUS, F.

N. 6, Torksey, several specimens on scirpus? 1896, AT. Lincoln, banks of Witham, (Fowler, Brit. Col.)

#### ERIRHINUS ACRIDULUS, L.

N. 3, Brocklesby, 14-6-1900, AS. 4, Great Coates, LNU, 8-9-96, AT. 6, Marton Drain, AT. 9, Tetney Haven, in salt marshes, 8-8-09, WW.

#### THRYOGENES NEREIS, Pk.

Not common.

N. 4, Irby Dale, sweeping aquatic plants, 9-6-11. Great Coates, 7-7-11, WW. 9, Theddlethorpe, on carex, 6-1896, AT.

## DORYTOMUS, VORAX, F.

N. 3, Pelham Woods, T Stainforth. 'Lincoln,' abundant in cracks of willow bark near a row of aspens to the south of town (Fowler, Brit. Col).

## DORYTOMUS MACULATUS, Marsh.

A common species.

N. 2, Scunthorpe, 11-6-10, W E Sharp, F E S. 3, Roxton Wood, 5-8-09, F W S. 4, Freshney Bogs, 21-6-1898, A T. Light coloured specimens, abundant there by beating sallows 15-7-07, and darker forms in crevices of branches, 29-4-08, W W. 7, Market Rasen, 1-4-07, on sallow catkins, by G W M, W W.

#### DORYTOMUS PECTORALIS, Gyll.

A common species.

N. I, Haxey and Epworth, two from a species of salix on the heath, 14-7-1898, A.T. 4, Freshney Bog, by beating sallows generally in company with the preceding species, 15-7-07, W.W. Bradley Wood, on sallow, 26-9-07, W.W. 6, Langworth Wood, (Fowler, Brit. Col.)

## TANYSPHYRUS LEMNÆ, F.

Generally taken in the water net where Lemna grows.

N. 4, Bradley, in a stagnant pond, 7-4-08, AB, WW. Irby dale ponds, common, 24-5-08, WW. Freshney Bog, 5-8-09, one by sweeping! WW. 6, Manton drain, AT.

## BAGOUS ALISMATIS, Marsh.

The only species of the genus recorded in the county.

N. 4, Irby Dale on Alisma plantago, one specimen, 9-6-11, W W. Little Coates, by sweeping a ditch 22-6-11, W W. 9, Theddlethorpe, 6-1896, devouring the parenchyma of Potamogeton, A T. Humberstone, 26-7-11, very abundant by sweeping Alisma plantago, in a ditch, W W. Lincoln, (Fowler, Brit. Col.)

## ANOPLUS PLANTARIS, Næz.

N. I, Haxey and Epworth, several on birches on the heath, 14-8-1898, AT. 4, Freshney Bog! 1898, AT., the only instance of its occurrence in the Grimsby District, 5, Scotton Common, common, 22-6-1898, AT. 7, Moortown, 18-8-07, and Linwood, 20-7-10, abundant on birches and by sweeping beneath them, W W. 11, Sutton, 9-9-09, by A B.

## ELLESCHUS BIPUNCTATUS, L.

Our only record.

N. 6, Langworth Wood (Fowler, Brit. Col.)

## (ELLESCHUS SCANICUS, Payk.

A doubtful species.

"Introduced as British by Mr. Walton on a single immature specimen taken by Mr. Wollaston in Lincolnshire" (FOWLER, BRIT. COL.) This is placed in the list of doubtful species in our latest British Catalogue.)

## TYCHIUS MELILOTI, Steph.

N. 3, Barton-on-Humber, 1-7-11, abundant on Melilotus officinalis in a chalk pit, L N U., W W.

## MICCOTROGUS PICIROSTRIS, F.

Frequent by sweeping in woods in the Grimsby District.

N. 3, Cadney, 9-1897, A T. 4, Bradley Wood, 5-6-07, W W. Irby Woods, 20-6-07, W W. Roxton Wood, 4-6-10, F W S.

S. 17, Wash Foreshore, 26-8-1897, L N U., A T.

#### GYMNETRON VILLOSULUS, Gyll.

- N. 11, Skegness, 16-8-1903, T Stow, galls on seed-vessels of Veronica anagallis, L. (see L N U. Trans., 1907, p. 152).
- S. 13, Brandon, from galls on V. anagallis, SCS., AT. 15, Great Ponton, 25-8-1905, John Hawkins (see LNU. Trans., as above).

#### GYMNETRON BECCABUNGÆ, L.

N. 4, Little Coates, 28-5-07, one specimen, W.W. 7, Linwood, 5-8-09, F.W.S.

#### GYMNETRON MELANARIUS, Germ.

A rare species.

N. 4, Roxton Wood, 31-5-09, one by sweeping, W W.

#### GYMNETRON PASCUORUM, Gyll.

Our only record.

N. 4, Freshney Bogs, 2-7-08, Mr. Donisthorpe noted the species when sweeping there with W W., but it has not turned up again.

#### **GYMNETRON LABILIS, Hbst.**

Occurs sparingly by sweeping.

N 4, Freshney Bogs, 7-6-99 & 21-6-98, AT. 11-6-07, WW. Bradley Wood, 18-6-08 one WW.

## GYMNETRON ANTIRRHINI, Ph.

Not uncommon.

N. 3, Barton-on-Humber, on Linaria vulgaris, by G W M., autumn 1907, W W. Cadney, on L. vulgaris, 18-9-11, E A W-P., W W. Swallow, 24-7-08, several by A B., on L. vulgaris, W W.

#### MECINUS PYRASTER. Hbst.

Rather common.

- N. 2, Manton, 1898, E A W-P. 3, Cadney, A T. 4, Bradley Wood, 8-06, W W. Cleethorpes, 4-10-08, W W. 6, Torksey, 16-5-99, Dr. C. 9, Theddlethorpe, 1893, A T. 11, Skegness, 6-1905, S C S., galls on flower stalks of Plantago lanceolata, L N U. Trans. 1907, p. 152.
- S. 13, Court Leys, 8-1898, S.C.S. 14, Rauceby, 13-8-1902, galls on flower stalks of F. lanceolata, S.C.S. 17, Wash Foreshore, common, 8-1897, L.N.U., A.T.

#### MECINUS COLLARIS, Germ.

There is no other record than :-

N. 4, Cleethorpes (Fowler, Brit. Col.)

#### ANTHONOMUS ROSINAE, Des Goz.

- N. 2, Manton Common, 21-3-1898, E A W-P., A T. 4, Ravendale, two specimens beaten from hawthorn, 23-6-07, W W., named by Dr. Joy.
- S. 13, Court Leys, 1899, S C S.

#### ANTHONOMUS PEDICULARIUS, L.

- N. 9, Humberstone, one specimen on the shore 3-5-09, WW,, named by Dr. Joy.
- S. 13, Court Leys, 5-1901, S C S.

#### ANTHONOMUS RUBI, Hbst.

- N. 3, Cadney, AT. 4, Great Coates, LNU, 8-9-96, AT Bradley Wood, 28-9-07, WW. Irby, 7-9-07, AB.
- S. 13, Court Leys, 8-1898, SCS.

#### CIONUS SCROPHULARIÆ, L.

N. 3, Brigg, 6-1895, AT. Croxby Pond side, 20-6-07, AB. Freshney Bog, 2-7-08, one from Scrophularia aquatica, WW. 5, Redhill, (Nat. 1902, p. 149). 6, Burton Chateau, (Gainsborough), 22-6-01, AT. 8, Louth District, July 1901, CS Carter, also Goulceby, HWK, (see Nat. 1902, p. 149). 9, Mablethorpe, Aug. 1907, FRhodes, (sent to record by JW Carter, Bradford.)

#### CIONUS HORTULANUS, Marsh.

Our only record.

N. 6, Langworth Wood, (Fowler, Brit. Col.)

#### CIONUS BLATTARIÆ, F.

N. 2, Scunthorpe, L N U, 26-8-10, W W. 3, Barton-on-Humber, on S. aquatica, fairly common, 1-7-11, L N U, WW. 8, Farforth, C S Carter.

#### CIONUS PULCHELLUS, Hbst.

N. 2, Scunthorpe, L N U, 26-8-10, one specimen, W W. 3, Ulceby, one specimen side of stream by sweeping, 26-5-08, AB, W W.

#### OROBITIS CYANEUS, L.

- N. 3, Roxton Wood, by sweeping, 1-8-07 and 31-5-09, WW. 4, Bradley Wood, 28-9-07, WW.
- S. 13, Nocton, E A W. (E M M, Jan. 1868, p.p. 186-7).

## CRYPTORHYNCHUS LAPATHI, L.

Of rare occurrence.

N. 4, Freshney Bogs, 21-6-1898, EAW-P, the only instance of its occurrence there. 6, Torksey, on willows, 20-6-96, AT. 9, Mablethorpe, 3-4-1886, HW Kew, (see Science Gossip, Sept. 1886, p. 208).

#### ACALLES TURBATUS, Boh.

Our only record.

N. 6, Torksey, 1898, (Pegler).

#### CŒLIODES RUBICUNDUS, Hbst.

N. 5, Scotton Common, 24-6-1898, EAW-P. 7, Moortown, sweeping, 18-8-07, WW. Linwood, 5-8-09, FWS.

#### CŒLIODES QUERCUS, F.

- N. 3, Roxton Wood, by beating young oaks, 1-8-07, W W. 4, Bradley Wood, 5-6-07 and 19-5-09, several specimens, W W. 7, Moortown, 18-8-07, W W.
- S. 13, Court Leys, 6-1900, SCS. In a wood near Lincoln on March 18-1882, WWF (EMM, May 1882).

## CŒLIODES RUBER, Marsh.

Our only record.

S. 13, Nocton, E A Waterhouse (E M M., March, 1868, p. 231).

## CŒLIODES ERYTHROLEUCUS, Gmel.

Our only record.

Lincoln (FOWLER, BRIT. COL.)

## CŒLIODES FULIGINOSUS, Marsh.

- N. 3, Immingham, June 1901, AS. Bradley, one specimen, 11-4-08, WW. Cleethorpes, two specimens, 4-10-08, WW. Laceby sandpit, 27-7-09, one, WW. 6, Newton Cliff, 5-6-95, AT. Torksey, 1896 (Pegler). 7, Linwood, 4-6-00, Grimsby and Louth Nat. Socs.
- S. 15, Sapperton, October 1900, S.C.S. "Lincoln," abundant on pavements, &c., from early spring (Fowler, Brit. Col.)

## CŒLIODES QUADRIMACULATUS, L.

Very common on nettles (U. dioica).

- N. 2, Broughton, 6-1895, L N U. (Nat. 1895, p. 236).
  3, Cadney, 1897, E A W-P.
  4, Freshney Bogs, 21-6-1898, E A W-P.
  5, Scotton Common, 1898, E A W-P.
  6, Torksey, 1896 (Pegler).
  8, Ludborough, 28-5-01, A S.
  9, Theddlethorpe, 1896, A T. 10, Holbeck, L N U., 1897, J E M.
  11, Gibraltar Point, 1891, L N U. (W W F.)
- S. 13, Court Leys, 8-1898, S C S. 15, Sapperton, 6-1901, S C S.

## POOPHAGUS SISYMBRII, F.

Probably local.

N. 4, Irby Dale, ponds, a pair in water net from Hottonia palustris 24-5-08, W.W. Freshney Bogs, 26-5-10, F. W. Sowerby.

#### CEUTHORHYNCHUS ASSIMILIS, Ph.

N. 3, Roxton Wood, 11-5-07, W W. 4, Freshney Bog, 16-6-07, W W. Grimsby on the street, 11-6-07, W W. Cleethorpes, 27-6-09, in garden, FW S., W W. 7, Moortown, 18-8-07, W W. 9, Theddlethorpe, 1893, A T. 10, Woodhall, 7-8-93, L N U (NAT. 1893, p. 373).
11, Alford, C O Waterhouse. Trusthorpe Sandhills, common, 6-1897, A T.

#### CEUTHORHYNCHUS COCHLEARIÆ, Gyll.

N. 3, Roxton Wood, 31-5-09, a few, W W. Barton-on-Humber, 1-7-11, L N U., W W. 4, Freshney Bogs, 7-6-1900, A T, also 11-6-07, and 27-5-08, W W. 7, Linwood, 5-6-11, W W.

## CEUTHORHYNCHUS ERICÆ, Gyll.

Local and uncommon.

N. 5, Scotton Common, June 22-1898, E A W-P.

#### CEUTHORHYNCHUS ERYSIMI, F.

N. 3, Cadney, 1898, E A W P. 4, Great Coates by sweeping, Capsella bursa-pastoris etc. on roadside, 18-7-07, W W. Little Coates, 29-4-08, W W. Cleethorpes, 18-9-10, F W S, W W. 7, Moortown, 18-8-07, W W. 9, Theddlethorpe, 1893, A T. 11, Trusthorpe, 6-1897, A T.

#### CEUTHORHYNCHUS CONTRACTUS, Marsh.

N. 3, Cadney, 4-1898, E A W-P. 4, Great Coates; Turnip Weevil in Great Coates Parish, description of ravages of a beetle which Ed. Newman names Nedygus Contractus (evidently this species, AT). John Cordeaux, Ent., April, 1870, p. 60-61. Little Coates, 29-4-08, W W. Cleethorpes, 18-9-10, FWS. 7, Linwood, 16-5-10, FWS.

S. 13, Court Leys, June, 1901, SCS.

## CEUTHORHYNCHUS CYANIPENNIS, Germ.

N. 4, Little Coates, 11-6-07, W W.

#### CEUTHORHYNCHUS CHALYBÆUS, Germ.

N. 1, Haxey and Epworth, 2 specimens, 14-7-1898, AT. 4, Great Coates, 25-7-08, one, WW. Bradley Wood, 18-6-08, one, WW.

## CEUTHORHYNCHUS QUADRIDENS, Pz.

N. 4, Little Coates, one, 11-6-07, WW. Croxby, one, 15-7-09, WW. Bradley in leaves, one, 2-4-09, WW. 9, Mablethorpe (Fowler, Brit, Col.). 11, Trusthorpe, 6-97, AT.

## CEUTHORHYNCHUS GEOGRAPHICUS, Goez.

Our only record.

S. 15, Ancaster large quarry from Echium flower, 16-6-96, A T.

#### CEUTHORHYNCHUS POLLINARIUS, Forst.

- N. 3, Cadney, July, 1898, EAW-P. Roxton Wood, 8-10-08, WW. 4, Great Coates, 8-9-96, AT. Beelsby, 24-5-07, AB., WW. 5, Scotton Common, 1898, EAW-P. 11, Alford, CO Waterhouse.
- S. 15, Little Ponton, 7-6-1898, E A W-P.

#### CEUTHORHYNCHUS PLEUROSTIGMA, Marsh.

- "The Turnip Gall Weevil," the larvæ produce the nodules on the turnip and swede and on cabbage roots.
- N. 2, Bottesford, 1893, on Brassica napus, E A W-P. Bottesford, 1876, on Brassica rutabaga, E A W-P. Hibaldstow, 7-1902, on Brassica sinapistrum, E A W-P. 3, Cadney, 1896, EAW-P. 4, Immingham, June, 1901, A S. 4, Freshney Bogs, 2-7-08, W W. 5, Kirton Lindsey, 1900, E A W-P. 6, Torksey, (Pegler). 11, Sutton, 9-9-09, A B.
- S. 13, Court Leys, 11-02 and 2-1903, S C S.

## CEUTHORHYNCHUS ALLIARIÆ, Bris.

Our only record.

N. 9, Theddlethorpe, 6-1898, A T.

#### CEUTHORHYNCHUS PUNCTIGER, Gyll.

In a wood near Lincoln on March 18, 1882, WWF., in EMM, May 1882, p. 277. (But this locality is not stated in Fowler, Brit. Col).

#### CEUTHORHYNCHUS MARGINATUS, Pk.

N. 4, Bradley, June 26-07, and Sept. 26-07, W.W. Ravendale, 23-6-07, W.W. Lincoln, (FOWLER, BRIT. COL.)

#### CEUTHORHYNCHUS RUGULOSUS, Hbst.

N. 4, Great Coates, one specimen, 25-7-08, WW. Cleethorpes, Mr. Donisthorpe informs me he swept one there, Oct. 4-08, WW.

## CEUTHORHYNCHUS ASPERIFOLIARUM, Gyll.

- N. 4, Freshney Bogs, one by sweeping, 24-8-07, WW. 6, Newton Cliff, in flowers of Cynoglossum, 5-6-95, AT, and 2-6-01, AT. Burton Chateau, in flowers of Echium, 22-6-01, AT. 9, Mablethorpe, (Fowler, Brit. Col.) Saltfleetby, 8-6-99, LNU.
- S. 13, Brandon, Sept. 1898, S.C.S.

#### CEUTHORHYNCHUS ARCUATUS, Hbst.

There are no recent records.

N. 4, Cleethorpes, (Fowler, Brit. Col.), also by E C Rye, in E M M, June 1869, p.p. 2-6.

#### CEUTHORHYNCHUS CHRYSANTHEMI, Germ.

- N. 6, Newton Cliff, 5-6-95, AT.
- S. 15, Ancaster, 16-6-96, AT.

#### CEUTHORHYNCHUS LITURA, F.

- N. 3, Cadney, 9-1897, on Cnicus arvensis, A.T. Brigg, 6-95, A.T. Goxhill, 7-9-08, W.W. 4, Great Coates, 8-9-1896, L.N.U., A.T. 7, Moortown, abundant by sweeping Ragwort, 18-8-07, W.W. 9, Tetney Haven, on thistles, common, 13-8-08, W.W. 11, Sutton, 9-9-09, A.B., W.W.
- S. 13, Brandon, Sept. 1900, SCS. 17, Wash Foreshore, 8-1897, LNU, AT.

#### CEUTHORHYNCHIDIUS FLORALIS, Pk.

- N. 4, Bradley, by sweeping wayside, Capsella, etc., 29-8-07 and 29-5-09, common, W.W. Cleethorpes, in a garden, 4-9-10, F.W.S. 6, Marton drain, A.T. 7, Moortown, 18-8-07, W.W. 11, Trusthorpe, 6-1897, A.T.
- S. 13, Court Leys, May 1907, SCS.

#### CEUTHORHYNCHIDIUS MELANARIUS, Steph.

Our only record.

N. 11, Alford, C O Waterhouse.

#### CEUTHORHYNCHIDIUS HORRIDUS, F.

N. 4, Cleethorpes (Fowler, Brit. Col.) Irby Dale, by sweeping thistles, etc., one in a sandy spot, 24-8-1910, W.W. 9, Humberstone, near shore on thistles, one, 28-7-08 and 8-8-08, W.W. Side of Tetney Haven, by sweeping thistles, one, 13-8-08, W.W.

## CEUTHORHYNCHIDIUS MIXTUS, Muls.

A very rare capture.

N. 5, Gainsborough (one specimen, Crotch.) "..... the species seems to require some further confirmation as British," (FOWLER, BRIT. COL.)

#### CEUTHORHYNCHIDIUS TROGLODYTES, F.

- N. 2, Scunthorpe, 25-8-10, W W. 3, Cadney, 1898, E A W-P.
  4, Freshney Bogs, June 1900, A S. Bradley Wood, 28-9-07, W W. 5, Scotton Common, 1898, E A W-P. 6, Torksey, 16-5-99, S Pegler. 7, Linwood, 16-5-10, F W S. 9, Humberstone, 7-7-07, W W. 11, Trusthorpe, 6-1897, A T.
- S. 13, Hartsholme, 24-5-94, L N U. (W F B). 17, Wash Fore-shore, 8-1897, L N U., A T.

## RHYTIDOSOMUS GLOBULUS, Hbst.

No recent records.

- N. 6, Langworth Wood, Lincoln, where I captured a pair by general sweeping on Sept. 26-1881, (Fowler, Brit. Col).
- S. 13, Nocton, E A Waterhouse (E M M. Jan. 1868, pp. 186-7).

#### AMALUS HÆMORRHOUS, Hbst.

No recent records.

- N. 4, Cleethorpes (Fowler, Brit. Col).
- S. 13, Nocton, E A Waterhouse, E M M. Jan. 1868, pp. 186-7.

#### RHINONCUS PERICARPIUS, L.

- N. 4, Great Coates, L N U, 8-9-1896, A T. Freshney Bogs, 29-4-08, several by sweeping; Bradley Wood, several by sweeping, 23-6-10, W W. 6, Torksey, 1896 (Pegler).
- S. 13, Wisby and Donnington plantations in moss, 20-11-11, by J F M, W W.

#### RHINONCUS GRAMINEUS, F.:

N. 2, Scunthorpe, 11-6-10, by general sweeping, W E Sharp, F E S. 4, Great Coates, 8-9-1896, L N U., A T. 'Lincoln' one specimen in flood refuse (FOWLER, BRIT. COL).

#### RHINONCUS PERPENDICULARIS, Reich.

- N. 2, Scunthorpe, by general sweeping, 11-6-10, WE Sharp, FES. 11, Trusthorpe, 6-1897, AT. Sutton, 9-9-09, several by AB., WW.
- S. 15, Brandon, Sept., 1900, S C S. 18, near Spalding, June, 1904, W E Sharp.

#### RHINONCUS CASTOR, F.

- N. 2, Scunthorpe, 25-8-10, W.W. 3, Cadney, 9-1897, A.T. 7, Moortown, 18-8-07 and 3-7-10, W.W.
- S. 13, Wisby and Donnington plantations in moss, 20-11-11, by J F M, W W.

#### RHINONCUS BRUCHOIDES, Hbst.

Our only record.

Lincoln, "I have found a few specimens at Lincoln in flood refuse but I know of no record further north (Fowler, Brit. Col)'

#### EUBRYCHIUS VELATUS, Beck.

N. 4, Cleethorpes (Fowler, Brit. Col.) 9, Tetney, in numbers on Myriophyllum spicatum under water in beautiful condition, 9-8-11, W W.

#### LITODACTYLUS LEUCOGASTER, Marsh.

N. 2, Broughton, 8-9-08, in the water net, L N U., A B. (W W). 9, Theddlethorpe, A T. Humberstone in brackish ditch, 26-8-08, taken in the water net in numbers by C Gifford, W W. Tetney Haven, 20-5-11, several fresh specimens under water on Myriophyllum spicatum, W W.

## PHYTOBIUS COMARI, Hbst.

Our only record.

N. 9, Mablethorpe (Fowler, Brit. Col).

## PHYTOBIUS QUADRITUBERCULATUS, F.

Our only record.

N. 3, Cadney, 4-1898, E A W-P.

#### PHYTOBIUS CANALICULATUS, Fab.

Our only record.

N. 4, Little Coates, by sweeping, one specimen, 22-6-08, W W.

#### LIMNOBARIS PILISTRIATA, Steph.

- N. 4, Freshney Bogs, 21-6-98, A T. 27-5-08, many specimens by sweeping, W W. Cleethorpes, 17-9-09, one W W. 9, Humberstone, 7-9-08, one, W W.
- S. 15, Little Ponton, 7-6-1898, E A W-P. (It should be noted that until Mr. Champion separated them (E M M. 2nd series xvi. 224) two British species were confounded under one name—Baris T. Album. Certainly all those from Divs. 4 and 9 belong to L. pilistriata, and probably that from Div. 15.

#### BARIS LEPIDII, Germ.

N. 4, Freshney flood refuse, one, 8-7-08, WW. Cleethorpes sandhills, one, 30-9-08, WW. 6, Torksey, 1896 (Pegler).

#### BALANINUS VENOSUS, Grav.

Our only record.

S. 13, Court Leys, Sept. 1900, SCS.

#### BALANINUS VILLOSUS, F.

Occurs singly by beating.

N. 3, Roxton Wood, one, 31-5-09, W W. 4, Bradley Wood, one 14-6-07, and one 18-6-08, W W.

#### BALANINUS SALICIVORUS, Pk.

- N. 4, Freshney Bogs, 21-6-1898, AT., and 28-5-07, WW. Bradley Wood, common, 29-5-09, WW. 6, Torksey, from willows, 1896, AT. 7, Linwood, 16-5-10, FW Sowerby.
- S. 13, Hartsholme Woods, 24-5-1894, L N U., A T.

## BALANINUS PYRRHOCERAS, Marsh.

N. 7, Linwood, 16-5-10, F W Sowerby. Moortown, 3-7-10, W W.

## CALANDRA GRANARIA, L.

- "The Granary Weevil." In shops and warehouses in the county, occurs no doubt commonly.
- N. 4, Grimsby, in a flour shop, 17-9-09, F W Sowerby, W W. 6, Torksey, C S Carter.

## CALANDRA ORYZÆ, L.

In such habitats as the preceding species.

N. 4, Clee, in flour in a baker's shop, March, 1900, W W.

#### CODIOSOMA SPADIX, Hbst.

A rare capture so far north.

N. 9, Humberstone, 18-6-08, one specimen on the sands by A B. W W.

#### MAGDALIS ARMIGERA, Fourc.

N, 3, Cadney and Poolthorne, 1898, E A W-P. 4, Croxby, one specimen, 18-7-09, by F W Sowerby, W W.

#### MAGDALIS CERASI, L.

Our only record.

N. 7, Linwood, 30-5-1898, E A W-P.

#### MAGDALIS PRUNI, L.

Our only record.

N. 3, Brocklesby, 14-6-00, A S.

#### MAGDALIS BARBICORNIS, Lat.

Our only record.

N. 4, Bradley Wood, by beating, one male, 5-6-07, W W.

## SCOLYTUS DESTRUCTOR, Ol.

"The Elm-bark Beetle."

Our records of the occurence of this very important beetle are few.

N. 4, On September 3rd, 1908, a small piece of wood, probably Elm, was brought to me with a series of burrows under the bark. In one of the burrows a male had been found and was given to me with the wood; in another burrow I found a white soft pupa, which developed into another very small male in a few days. The wood was said to have certainly come from the country quite near to Grimsby, WW

Mr. A. Smith informs me that in the County Museum there is a piece of Elm in bark with the beetle, from near Lincoln, W W.

#### SCOLYTUS PRUNI, Ratz.

N. 3, Barton on Humber, 1900, G W M. (See Reports of Injurious Insects etc. during 1900, p. 69-72, by Miss E A Ormerod).

S. 13, Court Leys, 6-1900, S C S.

#### SCOLYTUS RUGULOSUS, Ratz.

N. 3, Barton on Humber, 1900, G W M. (See Reports of Injurious Insects etc. during 1900, p. 69-72, by Miss E A Ormerod).

#### HYLASTES ATER, Payk.

N. 3, Wrawby Moor, one male specimen on the wing, 4-5-1908, taken by G W M, W W.

#### HYLASTINUS OBSCURUS, Marsh.

S. 15, Brandon, 1899, SCS.

#### HYLESINUS CRENATUS, F.

N. 4, Clee, 7-1908, Mr C Gifford found a specimen in a ditch of water, WW. 6, Torksey, out of old tree (elm), near the station, 7-1896, AT. 8, Louth, J Carter. 9, Humberstone, a dead specimen with reddish elytra in a burrow in dead ash tree just under the bark, WW.

#### HYLESINUS OLEIPERDA, F.

- N. 4, Little Coates, 15-7-07, by sweeping near ash tree, W W. Roxton Wood, two specimens, 31-5-09, W W. 8. Holton-le-Clay, in water net, no doubt from an overhanging ash tree, 5-7-08, W W.
- S. 13, Nocton, E A W, (E M M, Jan. 1868, p. 186-7).

#### HYLESINUS FRAXINI, F.

The 'Ash-bark Beetle,' produces the familiar round bores in the bark of decaying ash trees. Very common, often on the wing.

N. 3, Cadney, 9-1897, AT. Pelham Wood, 12-5-07, WW. 4, Grimsby, in small numbers, settled on my coat whilst walking in the town, 30-3-07, a fine sunny day, WW. Laceby, in large numbers on new wood being erected as a fencing, 10-5-1908, AB, WW. 7, Linwood, 6-5-10, FWS. 8, Louth, RW Goulding.

#### MYELOPHILUS PINIPERDA, L.

'The Pine Beetle.'

- N. 4, Irby, two specimens under bark of Pinus sylvestris, 4-4-1909, WW. Croxby, a specimen by sweeping by C Gifford, 15-7-09, WW.
- S. 13, Hartsholme, 24-5-1894, LNU, WFB.

## PHLEOPHTHORUS RHODODACTYLUS, Marsh.

N. 8, North Thoresby, a few in tunnels in branches used as peasticks in a garden, 27-4-07, W W.

## CRYPHALUS TILIÆ, Panz.

There is no other record than:—'Neighbourhood of Lincoln in the bark of a tree called "bass" by the country people, in numbers (Turner); the locality is mentioned as "Fisherwick," near Lincoln, but I know of no such place; it may perhaps be "Fiskerton"; the "bass" is abundant in Langworth Wood, \* \* \* \* but I have not come across this species' (Fowler, Brit. Col.) (See also E M M., Feb. 1865, p. 212, occurrence of a Cryphalus (tiliæ) new to Britain; a large number taken by Chas. Turner, near Lincoln.)

## PITYOGENES BIDENTATUS, Hbst.

N. 7, Usselby, one specimen by F W Sowerby, 2-8-09, W W,

#### TRYPODENDRON DOMESTICUM, L.

N. 3, Cadney, 1898, EAW-P. 4, Clee, a single specimen on a railway sleeper by C. Gifford, 25-5-09, WW.

# Additions and Corrections

TO

## THE CHECK LIST

OF

# LINCOLNSHIRE PLANTS,

1909.

The publication of this new list brought in many additions to the information already possessed. The Sibthorp manuscripts have also carried back the recorded history of some species many years. A short visit paid by Mr. G. C. Druce, F.L.S., of Oxford, has been most remarkably fruitful too. Our local workers have still kept on sending additions for their various divisions. I trust they will continue steadily to do so, for it is only in this way that the flora can ever be fully known. These additions and corrections bring the information up to the end of the season 1911.

ACER CAMPESTRE, L. 1836, J. Nicholson. -17.

ACER PLATANOIDES, L. 1911, Bassett. +10. (Planted).

ADOXA MOSCHATELLINA, L. 1834, Bayley. -1, 9, 12, 16, 17, 18.

AGROSTIS CANINA, L. 1815, Peck. -4, 6, 8, 9, 14, 15, 16, 17, 18.

AIRA CARYOPHYLLEA, L. 1851, Watson. +1, 2, 3, 7, 10, 13, 15,

ALISMA RANUNCULOIDES, L. 1780, Sibthorp. -4, 6, 12, 15, 17, 18.

ALOPECURUS GENICULATUS, L. 1851, Watson, -2, 12, 16.

AMMOPHILA ARENARIA, Link. 1780, Sibthorp. +4, 9, 11, 12.

AMSINCKIA, Lehm. = BENTHAMIA, Lindl.

ANAGALLIS FŒMINA, Mill. 1831, Drury. -1, 6, 18.

ANAGALLIS LATIFOLIA, L. 1908, Carter. +2, 4, 8.

ANTENNARIA DIOICA, Gaertn. 1780, Sibthorp. +(2), (15).

ANTHEMIS ARVENSIS, L. 1855, Bogg. -1, 4, 5, 6, 9, 12, 16, 17, 18.

ANTHRISCUS VULGARIS, Bernh. 1865, Britten. -1, 7, 14, 17, 18.

ARENARIA LEPTOCLADOS, Guss. 1876, Fowler. -1, 4, 6, 8, 9, 10, 17.

ARTEMISIA MARITIMA, L. v. GALLICA, Willd. 1723, Blair. -4, 11, 12,

ASTRAGALUS DANICUS, Retz. 1780, Sibthorp. +2, 5, 6, 13, 14, 15.

ATRIPLEX PATULA, L. v. ERECTA, Huds. 1851, Watson. +2, 3, 5, 7, 9, 12, 14.

ATRIPLEX PEDUNCULATA, L. 1691, Plukenet. +(11), (12), (17).

ATRIPLEX TATARICA, L. 1911, Druce. +12.

17.

BALLOTA NIGRA, L. v. RUDERALIS, Koch. 1911, Hurst. +12.

BARBAREA VERNA, Aschers. 1893, W.-P. +5, 7, 8, 14.

BARBAREA VULGARIS, Ait. 1820, Thompson. -4, 17.

BENTHAMIA LYCOPSIOIDES, Lindl. +2, 4, 8, 13.

BERBERIS AQUIFOLIUM, Pursh. 1874, W.-P. +2, 3, 5, 7, 8.

BERBERIS VULGARIS, L. 1820, Ward. -4, 9, 12, 16, 17.

BETULA TOMENTOSA, Reith. 1829, Oldfield. +2, 5, 7, 11, 12.

BROMUS GIGANTEUS, L. 1851, Watson. -4, 5, 6, 9, 12, 17, 18.

BROMUS INTERRUPTUS, Druce. 1911, Druce. +16.

CAKILE MARITIMA, Scop. 1834, Bayley. +4, 9, 11. v. SINUATIFOLIA, DC. 1907, Mason. +9.

CALAMINTHA MONTANA, Lam. 1837, Dodsworth. +3, 6, 8, 10, 11, 14, 16.

CALLITRICHE OBTUSANGULA, Le Gall. 1877, Lees. +2, 5, 11, 16, 17.

CALYSTEGIA SOLDANELLA, Br. 1834, Bayley. +4, 9, 11.

CAMPANULA LATIFOLIA, L. 1820, Ward. -3, 4, 5, 9, 12, 14, 16, 17, 18.

CANNABIS SATIVA, L. 1799, Young. +1, 3, 5, 7, 13, 18.

CARDAMINE AMARA, L. 1838, Browning. +4, 16.

**CARDAMINE HIRSUTA**, L. 1820, Ward. -1, 5, 6, 14.

CARDUUS CRISPUS × NUTANS, 1895, Lees. +2, 3, 6, 7, 8, 10, 13.

CAREX ACUTIFORMIS, Ehrh. 1836, Dodsworth. -2, 4, 5, 17, 18.

CAREX AXILLARIS, Good. = CAREX REMOTA × VULPINA.

CAREX CURTA, Good. 1868, Charters. +5, 7.

CAREX DIANDRA, Schrank. 1878, Fowler. +5, 10.

CAREX DIVISA, Huds. 1851, Watson. +3, 4, 11, 12.

CAREX ECHINATA, Murr. 1851, Watson. +2, 5, 7, 15, 18.

CAREX FULVA, Host. 183, Dodsworth. +2, 5, 7, 8, 14, 16.

CAREX GOODENOWII, Gay. 1799, Young. - 3, 4, 9, 10, 14, 15, 17, 18.

CAREX HIRTA, L. 1836, Dodsworth. - 10, 12, 17. v. HIRTIFORMIS,
Pers. 1911, Fowler. +7.

CAREX INFLATA, Huds. 1815, Peck. -9, 10, 11, 12, 14, 15, 16, 17, 18.

CAREX REMOTA × VULPINA. 1911, T. W.-P. + 3. (Seeds aborted. This was the last specimen the late Canon Fowler verified for the L.N.U.)

CAREX RIPARIA, Curt. 1838, Dodsworth. -6, 7, 17.

CATABROSA AQUATICA, Beauv. 1851, Watson. +2, 3, 7, 8, 11, 12, 13, 15.

CAUCALIS NODOSA, Scop. 1780, Sibthorpe. -1.

CENTAUREA CALCITRAPA, L. 1890, Bayldon. +4, 6, 10, 13.

CERASTIUM VISCOSUM, L. v. APETALUM, Dum. 1895, Mason. + 16.

CHARA FRAGILIS, Desv. 1862, Carrington. +2, 3, 7, 9, 12, 13, 16.

CHARA HISPIDA, L. 1780, Sibthorp. +1, 3, 4, 7, 10, 15, 16.

[CHARA TOMENTOSA, L. 1780, Sibthorp. Mr. Druce implies some doubt.]

CHARA VULGARIS, L. v. PAPILLATA, Wallr. 1883, Beeby. +12, 14, 16.

CHELIDONIUM MAJUS, L. 1834, Bayley. +all.

CHENOPODIUM ALBUM, L. v. VIRIDE, L. 1893, W.-P. +1, 3, 4, 11, 12, 13.

CHENOPODIUM HYBRIDUM, L. 1890, Jarvis. +7, 12, 15.

CHENOPODIUM RUBRUM, L. 1836, Dodsworth. -6, 7, 14, 17. v. PSEUDO-BOTRYOIDES, Wats. 1900, Smith, +4, 18.

CHRYSANTHEMUM PARTHENIUM, Bernh. 1820, Ward. -1, 4, 6, 17.

CHRYSANTHEMUM SEGETUM, L. 1835, E. J. Nicholson. -17, 18.

CICHORIUM INTYBUS, L. 1820, Ward. -2, 9.

CIRCAL LUTETIANA, L. 1834, Bayley. - 1, 9, 17.

CNICUS CAULESCENS, Pers. 1856, Fowler. +5, 8, 9, 10, 11, 13, 15.

CNICUS ERIOPHORUS, Roth. 1805, Turner. +1, 8, 11, 12, 13, 14, 15, 16.

COCHLEARIA ANGLICA, L. 1805, Salt. +9, 12, 17, 18.

COCHLEARIA ARMORACIA, L. 1865, Britten. -1, 4, 5, 7, 8.

CORIANDRUM SATIVUM, L. 1865, Turner. +6, 8, 14, 16.

CRATÆGUS LACINIATA, Wallr. 1877, Lees. +7, 13.

CRATÆGUS OXYACANTHA, L. 1855, Bogg. -1, 2, 4, 5, 9, 11, 16, 17.

CREPIS BIENNIS, L. 1820, Ward. +1, 3, 8, 10, 12, 15, 16.

CREPIS TARAXACIFOLIA, Thuill. 1890, Jarvis. +2, 4, 7, 9, 13, 15, 16.

CUSCUTA EPILINUM, Weihe. = C. VULGARIS, Presl.

CUSCUTA EPITHYMUM, Murr. 1878, Lees. +7, 14.

CUSCUTA VULGARIS, Presl. 1853, E. Peacock. +(1), (2).

CYNODON DACTYLON, Pers. 1836, Dodsworth. +(12), 17.

CYTISUS SCOPARIUS, Link. 1820, Ward. -4, 9, 12, 17, 18.

DIGITALIS PURPUREA, L. 1820, Ward. -1, 4, 9, 12, 14, 16, 17.

DIPSACUS PILOSUS, L. 1780, Sibthorp. +7, 11, 12, 15, 16.

ECHINOCHLOA, Beauv. = PANICUM, L.

ECHINODORUS, Rich. = ALISMA, L.

ECHIUM VULGARE, L. 1820, Ward. -17, 18.

EPILOBIUM TETRAGONUM, Curt. 1851, Watson, -1, 4, 5, 9, 12, 17, 18.

EQUISETUM MAXIMUM, Lam. 1850, Ffytche. +3, 7, 8, 10, 11, 15, 16.

ERODIUM CHÆROPHYLLUM, Cav. 1895, Mason. +13.

ERYNGIUM MARITIMUM, L. 1696, C. Merrett, junr. +4, 9, 11, 12.

EUPHORBIA EXIGUA, L. 1838, Dodsworth. -4, 6, 9, 17.

EUPHORBIA LATHYRIS, L. 1878, Fowler. -1, 3, 4, 5, 6, 9, 13, 16, 17.

FESTUCA PRATENSIS, Huds. 1820, Thompson. -1, 8, 10, 14, 15, 17, 18.

FESTUCA RIGIDA, Kunth. 1836, Dodsworth. -1, 3, 4, 11, 12, 17, 18.

FESTUCA RUBRA, L. 1825, Sinclair. -12, 14, 17.

FUMARIA BORÆI, Jord. 1896, Mason. +18.

FUMARIA OFFICINALIS, L. 1836, Dodsworth. -9.

GALEOPSIS ANGUSTIFOLIA, Ehrh. 1837, Dodsworth. -1, 9, 12, 17, 18.

GALIUM ERECTUM, Huds. 1780, Sibthorp. +2, 5, 15.

GENISTA ANGLICA, L. 1780, Sibthorp. +2, 3, 5, 6, 7, 10, 13, 15.

GENISTA TINCTORIA, L. 1780, Sibthorp. -1, 6, 10, 12, 17, 18.

GENTIANA AMARELLA, L. 1780, Sibthorp. -1, 4, 7, 9, 12, 16, 17, 18.

GENTIANA CAMPESTRIS, L. 1780, Sibthorp. +2, 3, 5, 13, 15.

GENTIANA PRÆCOX, Towns. 1805, Cullum. +3, 15.

GERANIUM DISSECTUM, L. 1836, J. Nicholson. +all.

GERANIUM LUCIDUM, L. 1836, J. Nicholson. -1, 9, 12, 13, 14, 16, 17, 18.

GERANIUM PUSILLUM, L. 1851, Watson. -4.

GLYCERIA FLUITANS, Br. 1851, Watson. +all.

GNAPHALIUM ULIGINOSUM, L. 1836, J. Nicholson. -4, 5, 6, 12, 17.

HABENARIA VIRIDIS, Br. 1831, Drury. -1, 4, 5, 6, 9, 16, 17, 18.

HELLEBORINE LATIFOLIA, Druce. 1780, Sibthorp. +8, 11, 15, 16.

HERACLEUM ANGUSTIFOLIUM, Sm. 1896, Mason. +11, 12, 13, 15, 18.

HIPPOPHAE RHAMNOIDES, L. 1699, Mapletoft. +(3), (5), 9, 11, (15).

HIPPURIS FLUVIATILIS, Weber. 1900, Mason. +16.

HOTTONIA PALUSTRIS, L. 1820, Ward. +all.

HYDROCHARIS MORSUS-RANÆ, L. 1837, Dodsworth. -2, 7.

HYDROCOTYLE VULGARIS, L. 1746, Blackstone. +all.

JUNCUS COMPRESSUS, Jacq. 1868, Charters. -1, 2, 4, 8, 10.

JUNCUS DIFFUSUS, Hoppe. = J. EFFUSUS × INFLEXUS.

LACTUCA VIROSA, L. 1840, Miller. -2, 8, 16, 18.

LASTRÆA FILIX-MAS, Presl. 1851, Watson. - 17, 18.

LATHYRUS PALUSTRIS, L. 1780, Sibthorp. +6, (9), (12), (15).

LAVATERA ARBOREA, L. 1890, Browne. +11, 18.

LEMNA GIBBA, L. 1836, Dodsworth. -1, 2, 5, 8, 10, 15, 17.

LEMNA MINOR, L. 1836, Dodsworth. +all.

LEPIDIUM CAMPESTRE, Br. 1836, Dodsworth. -5, 8, 11.

LEPIDIUM DRABA, L. 1893, Fowler. -6, 7, 14, 15, 17.

**LEPIDIUM SATIVUM,** L. 1895, Sneath. +3, 4, 12, 13, 14, 16.

LILIUM MARGATON, L. 1910, W.-P. +3.

LINARIA CYMBALARIA, Mill. 1836, Dodsworth. - 1, 4, 13.

LINUM USITATISSIMUM, L. 1661, Childret. +1, 3, 4, 5, 11, 13, 15, 18.

LITHOSPERMUM ARVENSE, L. 1757, Pulteney. -1, 9, 17.

LITTORELLA UNIFLORA, Aschers. 1841, Drury. +2, 5, (12).

LOLIUM ITALICUM, Braun. 1898, W.-P. +2, 4, 6, 8, 10, 12, 13.

LOTUS CRASSIFOLIUS, Pers. 1911, Druce. -11.

LUZULA MULTIFLORA, DC. 1851, Watson. -6, 8, 9, 12, 14, 16, 17, 18.

LUZULA SYLVATICA, Gaud. 1857, Bogg. -1, 3, 5, 6, 9, 12, 14, 17, 18.

LYCIUM CHINENSE, Mill. 1886, Kew. -4, 6.

LYCOPERSICUM ESCULENTUM, Hill. 1911, W.-P. +3.

LYCOPSIS ARVENSIS, L. 1836, J. Nicholson. -16, 17, 19.

LYCOPUS EUROPÆUS, L. 1820, Ward. -6, 18.

LYSIMACHIA VULGARIS, L. 1780, Sibthorp. -8, 15.

LYTHRUM SALICARIA, 1799, Young. +all.

MALVA ROTUNDIFOLIA, L. 1836, J. Nicholson. -8.

MALVA SYLVESTRIS, L. 1780, Sibthorp. -1.

.MELAMPYRUM PRATENSE, L. 1820, Ward. -3, 6, 9, 12, 13, 14, 17, 18.

MELILOTUS ALBA, Desc. 1836, Dodsworth. -1, 9, 17.

MELILOTUS INDICA, All. 1893, M. G. Peacock. -1, 3, 7, 10, 14, 15, 17, 18.

MELILOTUS OFFICINALIS, Lam. 1890, Jarvis. -1, 9, 12.

MENTHA AQUATICA × ARVENSIS, v. PALUDOSA, Sole. 1895, Mason. +10, 12, 14, 18.

MENTHA ARVENSIS, L. v. ALLIONII, Bor. 1892, Mason. +10, 18.

MENTHA LONGIFOLIA, Huds. 1670, Ray. +1, 4, 8, 10, 11, 12, 16.

MENTHA ROTUNDIFOLIA, Huds. 1911, Reynolds. +11.

MIMULUS LANGSDORFFII, Donn. 1864, Charters. +2, 7, 8, 15.

MYOSOTIS SYLVATICA, Hoffm. 1856, Thompson. +3, 4, 7, 10, 12, 13, 15, 16.

MYOSOTIS VERSICOLOR, Sm. 1851, Watson. -1, 8, 17, 18.

MYOSURUS MINIMUS, L. 1856, Thompson. +1, 2, 12, 15, 17.

NEOTTIA NIDUS-AVIS, Rich. 1780, Sibthorp. +2, 7, 8, 10, 11, 13, 15, 16.

NYMPHÆA LUTEA, L. 1830, Allen. -4, 12, 15.

NYMPHOIDES PELTATUM, Rendle & Brit. 1895, Craster. +13, 15.

CENANTHE AQUATICA, Poir. 1780, Sibthorp. -4, 6, 8.

**CENOTHERA BIENNIS, L.** 1886, Burgess. +2, 3, 6, 11, 13, 18.

CENOTHERA ODORATA, Jacq. 1910, L. N. U. +2.

ONOBRYCHIS VICIÆFOLIA, Scop. 1726, Bacon. -4, 6, 7, 12, 14, 18.

ONONIS REPENS, L. 1820, Ward. -1, 5, 10, 14, 17.

ONOPORDUM ACANTHIUM, L. 1840, Miller. -4, 8, 17.

ORCHIS MORIO, L. 1836, Dodsworth. +all.

ORCHIS USTULATA, L. 1780, Sibthorp. +2, 3, 5, 13, 15.

OROBANCHE ELATIOR, Sutton. 1805, Dalton. +3, 5, 6, 13, 15, 16.

OSMUNDA REGALIS, L. 1780, Sibthorp. +1, 2, 5, 10, 12, 15.

OXYCOCCUS QUADRIPETALA, Gilib. 1780, Sibthorp. +1, 2, 6, 7, 10, 12.

PANICUM CRUS-GALLI, L. 1911, Hurst. +12.

PAPAVER HYBRIDUM, L. 1889, Fowler. +1, 2, 3, 4, 10, 13.

PAPAVER RHŒAS, L. v. REYNOLDSII, Mihi. 1911, Reynolds. [With yellow sap.]

PAPAVER SOMNIFERUM, L. 1856, Thompson. -2, 5, 8, 13, 14, 16, 17, 18.

PARIETARIA RAMIFLORA, Moench. 1820, Ward. -17, 18.

PASTINACA SATIVA, L. = PEUCEDANUM SATIVUM, Benth. & Hooker.

PETASITES FRAGRANS, Presl. 1879, Burgess. +3, 7, 8, 11, 12.

PETASITES OVATUS, Hill. 1805, Relhan. -6, 9, 13, 17, 18.

PHALARIS CANARIENSIS, L. 1872, Britten. -1, 7, 8, 9, 10, 15.

PHYLLITIS SCOLOPENDRIUM, Newm. 1856, Bogg. -2, 5, 6, 7, 9, 14, 16, 17, 18.

PILULARIA GLOBULIFERA, L. 1910, Reobuck. +2.

PIMPINELLA MAJOR, Huds. 1780, Sibthorp. -4, 9, 17, 18.

PIMPINELLA SAXIFRAGA, L. 1851, Watson. -12, 17, 18.

PLANTAGO ARENARIA, W. & K. 1897, Sneath. +4, 6, 13.

PLANTAGO MARITIMA, L, 1780, Sibthorp. +2, 4, 9, 11, 12, 17, 18.

POA SUBCÆRULEA, Sm. 1896, L.N.U. +5, 9.

POLEMONIUM CÆRULEUM, L. 1780, Sibthorp. +2, 8, 9, 11, 15.

POLYGALA CALCARIA, F. Schultz. 1908, Mason. +2.

POLYGONATUM MULTIFLORUM, All. 1856, Bogg. +7, 14.

POLYGONUM AVICULARE, L. v. RURIVAGUM, Jord. 1895, Stow. +2, 3, 10, 11, 13, 14, 15.

POLYGONUM HYDROPIPER, L. 1851, Watson. -4, 9, 12, 16, 17, 18.

POLYGONUM LAPATHIFOLIUM, L. 1851, Watson. -1, 6, 18.

POLYGONUM MINUS, Huds. 1911, Druce. +18.

POLYGONUM MITE, Schrank. 1911, Druce. +18.

POLYSTICHUM ACULEATUM, Roth. v. LOBATUM, Presl. +1, 4, 8, 11.

POPULUS ALBA, L. 1841, Stark. -1, 4, 8, 9, 12, 14, 17, 18.

POPULUS DELTOIDES, Marsh. v. SEROTINA, Hartig. 1911, Druce. +18.

POPULUS MARILANDICA, Moench. 1911, Druce. +16.

POPULUS TREMULA, L. 1851, Watson. -1, 4, 6, 9, 14, 15, 17.

POTAMOGETON ALPINUS, Balb. 1804, Brit. Mus. Herb. +4, 7, 8, 9, 13, 14.

POTAMOGETON COLORATUS, Hornem. 1804, Banks. +2, 3, 12, 16.

POTAMOGETON CRISPUS, L. v. SERRATUS, Huds. 1780, Sibthorp. +15.?

POTAMOGETON FRIESII, Rupr. 1780, Sibthorp. +4, 8, 9, 12, 14, 18.

POTAMOGETON HETEROPHYLLUS, 1780, Sibthorp. +1, 3, 12, 13, 14, 16.

POTAMOGETON NATANS, L. 1780, Sibthorp. -6, 10, 17.

POTAMOGETON OBTUSIFOLIUS, Mert. & Koch. 1849, Carrington. +4, 5, 9, 13, 18.

POTAMOGETON PUSILLUS, L. 1780, Sibthorp. -2, 5, 6, 13, 17, 18.

POTENTILLA STERILIS, Garcke. 1855, Bogg. -3, 6, 9, 12, 17, 18.

PRIMULA ACAULIS, L. = P. VULGARIS, Huds.

[PRIMULA ELATIOR, Jacq. 1906. A mistake.]

PRIMULA VERIS × VULGARIS, 1868, W.-P. +2, 15.

PRIMULA VULGARIS × VERIS. 1836, Dodsworth. -3, 4, 6, 9, 12, 17, 18.

PRUNUS INSITITIA, L. 1836, Dodsworth. -1, 4, 9, 10, 17, 18.

PRUNUS SPINOSA, L. 1820, Thompson. -18.

PYRUS ARIA, Ehrh. 1856, Bogg. +3, 8, 10, 15.

PYRUS AUCUPARIA, Ehrh. 1836, Dodsworth. -8, 9, 14, 17, 18.

PYRUS TORMINALIS, Ehrh. 1836, Dodsworth. +2, 7, 15, 16.

QUERCUS PEDUNCULATA × SESSILIFLORA. 1910, W.-P. +3, 7.

QUERCUS CERRIS, L. 1836, J. Nicholson. +6.

QUERCUS SESSILIFLORA, Salisb. 1877, Lees. +2, 3, 7.

RADICULA NASTURTIUM-AQUATICUM, Rendle & Brit. v. SIIFOLIA, Druce. 1877, Lees. +7, 8, 10. v. MICROPHYLLA, Druce. 1910, Mason. +9.

RANUNCULAS AURICOMUS, L. 1836, Dodsworth. -9, 12, 17, 18.

RANUNCULUS BULBOSUS, L. 1836, J. Nicholson. +all.

RANUNCULUS CIRCINATUS, Sibth. 1851, Watson. -5, 7, 12, 18.

RANUNCULUS HETEROPHYLLUS, Weber. 1856, Bogg. +7, 8, 10, 11, 12, 13, 16, 17.

RANUNCULUS PARVIFLORUS, L. 1780, Sibthorp. +1,7,8, 12, 14, 15, 16.

RAPHANUS MARITIMUS, Sm. 1908, Grierson. +9.

RESEDA LUTEA, L. 1726, Bacon. -1, 9, 18.

RHAMNUS CATHARTICUS, L. 1780, Sibthorp. -1, 4, 8, 9, 16, 17, 18.

RIBES GROSSULARIA, L. 1836, Dodsworth. -14, 15, 17.

RIBES NIGRUM, L. 1878, Fowler. +2, 3, 8, 10, 11, 12, 13.

RUMEX ACETOSELLA, L. 1836, Dodsworth. -4, 17.

RUMEX LIMOSUS, Thuill. 1780, Sibthorp. +2, 3, 12, 13, 14, 16, 17, 18.

RUMEX MARITIMUS, L. 1670, Ray. -1, 4, 8, 9, 15, 18. [This form and the one above it, I believe, are but varieties of one species, grown under different conditions of moisture.]

RUMEX NEMOROSUS, Schrad. 1851, Watson. -5, 6, 9.

SAGINA PROCUMBENS, L. 1836, Dodsworth. - 17.

SALIX PURPUREA, L. 1856, Bogg. +1, 4, 6, 8, 13, 14, 16, 17.

SALVIA VERBENACA, L. 1820, Ward. -1, 2, 9, 17, 18.

SALVIA VERTICILLATA, 1895, Mason. +12, 15.

SAMBUCUS NIGRA, L. 1696, C. Merrett, jun. +all.

SAMOLUS VALERANDI, L. 1836, Dodsworth. +all.

SANICULA EUROPÆA, L. 1780, Sibthorp. -1, 3, 6, 9, 12, 14, 17, 18.

SAPONARIA OFFICINALIS, L. 1820, Ward. -5, 6, 13, 14, 15, 17, 18.

SAXIFRAGA GRANULATA, L. 1834, Bayley. -9, 14, 16, 17, 18.

SCABIOSA ARVENSIS, L. 1836, Dodsworth. +all.

SCABIOSA COLUMBARIA, L. 1834, Bayley. -1, 7, 9, 17, 18.

SCILLA FESTALIS, Salisb. = S. NON-SCRIPTA, Hoffm & Link.

SCIRPUS MARITIMUS, L. 1780, Sibthorp. -7, 13, 14, 15, 16.

SCIRPUS TABERNÆMONTANI, Gmel. 1851, Watson. +1, 4, 6, 9, 12.

SCLERANTHUS ANNUUS, L. 1848, Forster. -9, 12, 14, 15, 16, 17, 18.

SCROPHULARIA AOUATICA v. OBLONGFOLIA, Loisel. 1898, L.N.U. +15.

SECALE DALMATICA, . 1911, Reynolds. +12.

SEDUM TELEPHIUM, L. 1838, Dodsworth. +2, 8, 16, 17.

SEMPERVIVUM TECTORUM, L. 1661, Ray. -1, 5, 6, 13.

SENECIO ERUCIFOLIUS, L. 1851, Watson. -5, 6, 9.

SENECIO INTEGRIFOLIUS, Clairv. 1780, Sibthorp. +4, 14, 15.

SENECIO SYLVATICUS, L. v. AURICULATUS, Meyer. 1855, Cole. +2, 3, 7, 12, 13, 15.

SILENE ANGLICA, L. 1785, Banks. +4, 5, 10, 13, 14, 15.

SILENE CONICA, L. 1897, Grierson. +4, 12, 13.

SISYMBRIUM ALLIARIA, Scop. 1820, Ward. -9, 18.

SISYMBRIUM ALTISSIMUM, L. 1895, W.-P. +4, 5, 12, 13.

SISYMBRIUM SOPHIA, L. 1851, Watson. -8, 16, 17.

SIUM LATIFOLIUM, L. 1780, Sibthorp. -2, 7.

**SOLIDAGO VIRGAUREA, L.** 1820, Ward. +2, 3, 4, 5, 7, 10, 13, 16.

STACHYS ARVENSIS, L. 1726, Bacon. -1, 2, 4, 5, 6, 9, 12, 17, 18.

STACHYS PALUSTRIS, L. 1825, Sinclair. -17.

STATICE ARMERIA, L. = S. MARITIMA, Mill.

 $\mbox{\bf STATICE LIMONIUM, L.} \quad = \mbox{\bf L.} \quad \mbox{\bf VULGARE, Mill.}$ 

STELLARIA HOLOSTEA, L. 1836, Dodsworth. -12, 17, 18.

STELLARIA ULIGINOSA, Murr. 1840, Miller. -1, 9, 12, 14, 16, 17, 18.

**STRATIOTES ALOIDES, L.** 1633, Johnson. -1, 3, 4, 8, 13, 18.

SUÆDA FRUTICOSA, Forsk. 1836, Dodsworth. +18.

SYMPHYTUM OFFICINALE, L. 1724, Stukeley. - 1.

TARAXACUM ERYTHROSPERMUM, Andrz. 1876, W.-P. +2, 3, 5, 8, 13.

**TEUCRIUM SCORDIUM, L.** 1636, Hexham. +12, 13, 18.

THLASPI ARVENSE, L. 1780, Sibthorp. -4, 8, 14, 16, 17, 18.

TILIA PLATYPHYLLOS, Scop. 1865, Cole. +2, 7, 13, 14.

TILIA VULGARIS, Hayne. 1799, Young. -1, 4, 9, 12, 14, 16, 17, 18.

TRIFOLIUM AGRARIUM, L. 1877, Lees. +2, 7, 8, 10, 11.

TRIPOLIUM HYBRIDUM, L. v. ELEGANS, Savi. 1865, Britten. +all.

TRIFOLIUM SATIVUM, L. v. SYLVESTRE, Boreau. 1868, W.-P. +2, 3, 4, 13, 15.

TUSSILAGO FARFARA, L. 1724, Stukeley. +all.

TYPHA ANGUSTIFOLIA, L. 1780, Sibthorp. -2, 3, 4, 5, 6, 17.

URTICA DIOICA, L. v. ANGUSTIFOLIA, Wimm. & Grab. 1900, Mason. +2, 5, 7, 10.

UTRICULARIA VULGARIS, L. 1831, Drury. -7, 8, 15, 17, 18.

VERBASCUM THAPSUS, L. 1820, Ward. -4, 6, 17, 18.

VICIA TETRASPERMA, Moench. 1836, Dodsworth. -1, 3, 4, 5, 6.

VIOLA ARVENSIS, Murr. 1851, Watson. +all.

VIOLA REICHENBACHIANA, Boreau. = V. SYLVESTRIS, Kit.

## HOUSE FLIES TRYING TO DRINK.

On the 23rd of Sept., 1911, a shower of rain passed over Cadney. A number of flies, CYRTONEURA STABULANS, Fln., flew to the window panes and attempted to drink the raindrops running down the other side of the glass. Mr. J. E. Collin, of Newmarket, kindly named the species for me.

E. Adrian Woodruffe-Peacock.

## Lincolnshire Crustacea.

## By ARTHUR SMITH, F.L.S., F.E.S.

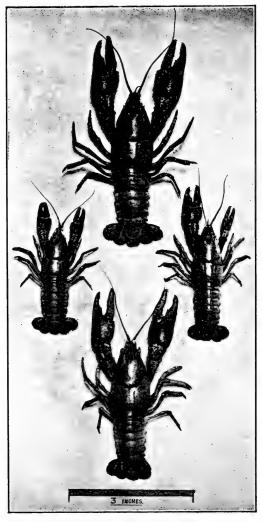
Curator of the County Museum Lincoln.

With a view to recording specimens of this order which occur in our County, the help of all our members is desired. There are many orders which have received little attention, and it is hoped that this one may be brought into line with some of our better worked groups. It is the larger forms that claim the attention of the observer, and for present purposes Lobsters, Crabs, Prawns, Shrimps and such like creatures will be dealt with. Some interesting species are in the County Museum, and the writer will be pleased to receive specimens from all parts of Lincolnshire, to be preserved and mounted for the County collections.

All along the coast representatives of this order may be found, some species common, and on account of their size conspicuous, whilst the smaller forms need much search among the tangle of sea weeds, zoophytes, &c., deposited on the shore after a rough sea; longshore fishermen may assist if asked, and their help is valuable. Shrimpers may be persuaded to render their quota, for from the "rubbish," there are many forms to be had that do not come within their wants, but are of deep interest to the naturalist.

The creeks and pools of our coast, left by the receding tide are places for examination, in fact any spot where opportunity permits may augment our knowledge of the subject. Our members have been noted for their co-operation in taking up research work, and whilst not collecting a certain order themselves, have kept a look out and handed specimens on to those interested. This same spirit continues, and I hope will be applied to the Crustacea.

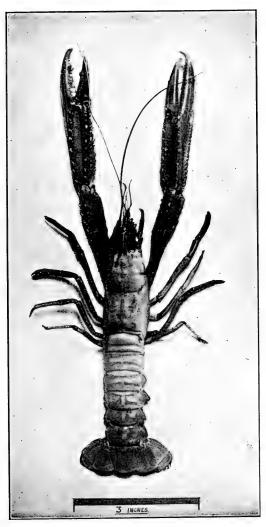
Any specimens will be gratefully received by the writer, and it is intended that little space shall be taken up for description, as good books on the subject are already published, but it is hoped to illustrate our County species as they come to hand, with such data as will record their authenticity as Lincolnshire specimens. Specimens should be sent to the Museum, Lincoln, quickly after capture so that they can be received quite fresh, and in as perfect a condition as possible. I am indebted to the Reverend T. R. R. Stebbing for examining and naming many of the specimens.



POTAMOBIUS PALLIPES.

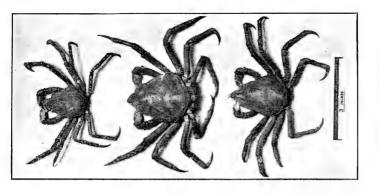
From Photographs by the Author.

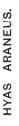
BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY

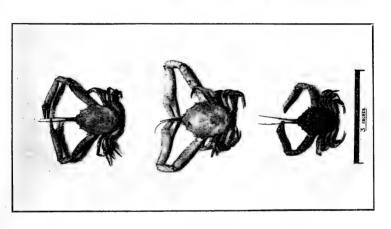


NEPHROPS NORVEGICUS.

BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.

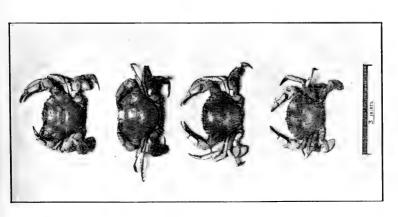




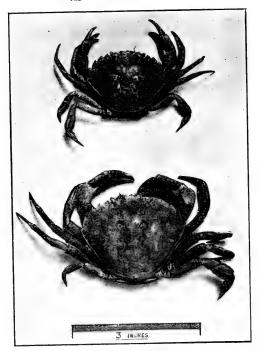


CORYSTES CASSIVELAUNUS.

PORTUNUS DEPURATOR.



BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.



CARCINUS MÆNAS.

### EBALIA TUMEFACTA.



EBALIA TUBEROSA

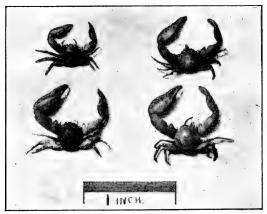


HYAS COARCTATUS.

BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.



PILUMNUS HIRTELLUS.



PORCELLANA LONGICORNIS.



MUNIDA RUGOSA.

BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.





EUPAGURUS BERNHARDUS.

BRITISH MUSEUM 5 DEC 21 NATURAL HISTORY.

#### POTAMOBIUS PALLIPES. Lereboullet. THE RIVER CRAYFISH.

Is an interesting species, being the only large crustacean that inhabits fresh water. The specimens illustrated were sent to the County Museum by Mr. H. Preston, F.G.S., taken from Cringle Brook, a tributary of the Witham at Great Ponton, where they are commonly found under stones.

It is perhaps better known as Astacus fluviatilis, but by this name is confused with another European species.

#### NEPHROPS NORVEGICUS, Leach. NORWAY LOBSTER.

Is sparingly distributed on our shores, though said to be numerous on the Irish Coast, and is very common on the Norwegian coast, and is brought into our fish markets and sold as "Norwegian Prawns" in large quantities.

The specimen figured was caught off the Lincolnshire coast and brought alive to the writer by a longshore fisherman. It is one of the very few specimens that can be said certainly to have occurred on the Lincolnshire coast.

#### PURTUNUS DEPURATOR, Leach. SWIMMING CRAB.

Taken by the writer whilst dredging at the mouth of the Humber. Sometimes they may be found washed ashore by a rough sea, and found sparingly among the debris deposited at high water mark.

#### PORTUNUS PUSILLUS, Leach. DWARF SWIMMING CRAB.

One damaged specimen dredged off Boston, October, 1906, by Mr. H. Donnison.

#### CORYSTES CASSIVELAUNUS, Leach. MASKED CRAB.

The two upper specimens were taken whilst dredging at the mouth of the Humber, by the writer.

The lower one was dredged off Boston by Mr. H. Donnison, and sent to the County Museum, October, 1906.

All the specimens are males. The anterior legs of the female are much shorter.

#### HYAS ARANEUS, Linn. SPIDER CRAB.

This is a common species along the East Coast, and when in its element has a most untidy appearance, generally being covered with zoophytes, and a host of marine objects. The specimens figured were dredged off Boston and presented by Mr. Donnison, October, 1906.

#### HYAS COARCTATUS, Leach. SPIDER CRAB.

Is a small species. The only records are figured, the smaller one was taken at Mablethorpe by Mr. F. Tye, October, 1910, and presented to the County Museum. The larger one found among washed up debris at Clee by the writer, 1905.

#### MACROPODIA ROSTRATA, Linn. Long-legged Spider Crab.

Is often seen entangled with bunches of sea-weed, zoophytes, &c., washed ashore. Two of the figured specimens were so found at Clee by the writer. The other two dredged off Boston by Mr. Donnison. The lower specimen is a female.

Syn. Stenorynchus Phalangium.

#### CARCINUS MÆNAS, Leach. SHORE CRAB.

Abundant all along the coast.

#### PORCELLANA LONGICORNIS, Linn. PORCELAIN CRAB.

Dredged from the Humber, by the writer, who has also seen many specimens which have been washed ashore fastened in the crevices of pieces of serpula.

#### PILUMNUS HIRTELLUS, Leach.

Two specimens dredged off Boston by Mr. H. Donnison.

#### EBALIA TUBEROSA, Pennant.

One specimen dredged from the Humber. A. Smith.

#### EBALIA TUMEFACTA, Montagu.

One specimen dredged from the Humber. A. Smith.

#### MUNIDA RUGOSA, Fabr. Long-Armed Munida.

One specimen found among shrimps taken near Boston. J. F. Musham.

#### EUPAGURUS BERNHARDUS, Linn. HERMIT CRAB.

Common along the coast. Dredged in numbers, and after rough seas found in quantities along the shore.

It seems to take almost any form of univalve shell as a protection, size only being a consideration. The large whelk (Fusus), common whelk (Buccinum), Trochus, Murex, Purpura, Trophon, Natica, Littorina, &c., have all been found on the coast as a home for this species, some quite tiny, varying in size to those which have the large arm measuring three and a half inches long.

## GENERAL SECRETARY'S REPORT.

The Seventy-third Field Meeting of the Union was held on Whit-Monday, June 5th, 1911. The area of investigation was LYNWODE WARREN and WOODS, a favourable spot to Lincolnshire Naturalists. There was a large attendance of Members who worked most industriously notwithstanding the great heat of the day.

After tea a meeting was held at the Gordon Arms, when the Rev. E. A. Woodruffe-Peacock described the geological features and the effect on the vegetation, etc. The Rev. Canon W. Fowler spoke of the Botany, referring to many rare species now becoming still more scarce on an area that he had known many years, and while there were no fresh records it was pleasant to renew acquaintance with old favourites. The members present welcomed the Canon back to Lincolnshire on his well-deserved retirement, little thinking it was the last time he would meet so many of the members of our Union.

## Mr. G. W. Mason reports:-

The Lepidopterists had a good day on the whole, more than 50 species being observed by the different members. It was somewhat disappointing not to be able to find Carterocephalus palæmon, which at one time occurred abundantly; but the two Fritillaries, Argynnis selene, and euphrosyne, were seen, the latter very freely. Among the Macro-Lepidoptera, the most noteworthy were Nisoniades tages, Syrichthus malvæ, Macroglossa fuciformis, Nola confusalis, Spilosoma mendica (1 female), Erastria fasciana, Heliaca tenebrata, Euclidia mi, Phytometra viridaria, Zonosoma pendularia, Bapta temerata, Numeria pulveraria (2 females), Enpithecia nanata, Lobophora halterata, Hypsipetes trifasciata (one), Melanthia albicillata and Melanippe hastata (several); the Micros observed were Scoparia ambigualis, Crambus pratellus, Tortrix ministrana, Sericoris urticana, Bactra lanceolana, Ephippiphora pflugiana and brunnichiana, Glyphipteryx fuscoviridella, and two or three species not yet determined. Some larvae were also seen, but only of very common species which have been frequently recorded for that district.

The Seventy-fourth Field Meeting was arranged in connection with the Yorkshire Naturalists' Union at BARTON-on-HUMBER, on Saturday, July 1st, 1911.

But few of the Lincolnshire members turned up, the day being most inconvenient to our members, as also was the geographical position of the area in question.

The Seventy-fifth Field Meeting, was held at GIBRALTAR POINT, on August 17th, 1911. A fair number of members were present, though the uncertainty of railway communication at the time prevented others, who had intended to be present, from arriving.

Though the tropical weather had dried things up there was much to interest the naturalist. The Marine Botany was interesting and opportunity was taken to make records in an area so difficult of access. Mr. A. Smith worked the marine conchology finding 43 species, three of which were new to the County list,

At Skegness the Natterjack Toad was seen in numbers.

The Seventy-sixth Field Meeting was held at CONINGSBY, on September 14th, 1911, driving from Tattershall to Tumby and working along the banks of the Bain back to Coningsby.

Over 200 plants were noted, and a large number of records made in other branches, which, as with the results of other meetings, will eventually find their way into the lists printed in the Union's Transactions.

The Annual Meeting was held in LINCOLN, on Thursday, December 7th, 1911. The President, Dr. W. Wallace, in the chair.

The Secretaries' Report was read and adopted, as was also that of the Treasurer.

Dr. Wallace was elected for the second year as President, and the rest of the Officers and Sectional Officers were re-elected.

The President then delivered his address, which is given in another part of this issue.

## SECTIONAL OFFICERS' REPORTS.

GEOLOGICAL:-H. PRESTON, F.G.S.

#### CHALKY BOULDER-CLAY AT SAPPERTON.

During the early part of 1909, a well was sunk through 23 feet of chalky-boulder-clay at Sapperton, which was found to be resting on Great Oolite Limestone.

The top surface of the Limestone is very much grooved and striated, which may have been caused by the creep of the frozen clay during the Glacial period. The clay is full of chalk pebbles, all of which are more or less scratched and striated, some of the larger ones, up to 2 or 3 inches in size, being very well marked.

The clay is light-grey in colour, and is very limy in character; this limy condition of the clay may have been partly caused by the chalk fragments having been ground into pebbles whilst being embedded in the moving clay.

There were only a few flints seen, but of these some were slabs from 7 or 8 inches square and 6 inches thick.

A few blocks of concretionary ironstone were also present, 5 or 6 inches thick. These were probably obtained from the base of the Great Oolite Limestone.

Since the well was sunk a boring has been made into the Lincolnshire Limestone beneath, and a supply of water obtained.

A similar section of chalky-boulder-clay has been recently exposed (Jan., 1912) at Great Ponton. A hole was dug on the East side of the High Dyke about half way between Great Ponton and Wood Nook, to carry away water draining from a field, a large number of chalk pebbles were thrown out, together with slabs of flint and other varieties of rock.

#### LIMESTONE CONCRETIONS AT SALTERSFORD.

During the years 1908-9 the Grantham Waterworks Company constructed a large Reservoir in the Witham Valley at Little Ponton. The excavations went through a bed of alluvium about 14 feet thick, at the bottom of which was the old river valley in the upper Lias Clay.

This bed of Lias Clay forms the bottom of the Reservoir.

After the alluvium had been removed, heavy rains scoured the surface of the clay and it was noticed that the floor of the Reservoir was covered in a certain part with a course "gravel." This "gravel" turned out to be limestone concretions, some of the individual specimens measuring 2 inches or more in diameter.

When cut in section, many of them showed a concentric structure of limestone and clay surrounding a hardened nucleus of clay.

In seeking to explain the origin of these concretions it is necessary to explain that the excavation through the alluvium reached to a depth of 10 feet below the present bed of the river and showed that formerly a small lake had existed here, and that the present river bed is excavated in the alluvium which filled up this lake.

Also, on the opposite, or West side of the river, there is a spring, (now taken into the mains of the Waterworks Co.), which is thrown out by limestone resting on Lias Clay. The spring water contains Carbonate of Lime in solution. Formerly, when the spring ran directly into the lake, some of its dissolved limestone would be released on the escape of carbonic acid gas, and this being deposited in the gently moving water of the lake would accumulate around any small moving body as a nucleus, and form a limestone ball.

The alternating bands of limestone and clay seem to indicate that some sort of crystallizing force has been acting since the balls were formed, thus causing the limestone and clay to assume separate and distinct layers surrounding the nucleus.

Other examples of limestone concretions may be found in the Lias Clay, but these, although more completely zoned than those from the Witham Valley, never exceed about one-eighth of an inch in diameter. A narrow band of ferruginous limestone, opened out in Rudd's brickyard in the upper Lias just South of Grantham, yielded a considerable number of such pisolitic concretions, which, when sectioned, make a very interesting slide for the microscope.

## CALCITE SAND AT BELTON, GRANTHAM.

At the East end of Belton Park, on the North side of the brook supplying the villa pond, there is a small spring issuing from the base of the Marlstone-Rock Bed, (Middle Lias Ironstone). This spring-water has been collected into a catch pit and conveyed by gravitation through a lead pipe to a cistern a little over a mile away.

Within the tank into which the water flows, there accumulates from time to time, a deposit of Calcite in the form of perfect rhombohedral crystals varying in size up to the one-hundredth of an inch side.

The precipitation of Carbonate of Lime from water collected in the Limestone and Ferruginous Limestone Rocks is not unusual, but it occurs generally in the amorphous or sub-crystalline condition of stalactite, stalagmite, or tufa. The perfect condition of the crystals precipitated from the Belton water is therefore unusual and of peculiar interest.

During the summer of 1911 the spring was yielding only about 500 gallons per day, but the deposit of "sand" when the cistern had its annual cleaning, would quite fill a two gallons measure, so that the deposit is not small, and it is evident that some definite cause is at work producing the crystals. Also, similar deposits have been known to accumulate in this cistern for at least 30 years, or more, past.

In seeking an explanation of this phenomenon it should be remarked that no trace whatever of a deposit of calcite, in any form, can be found in the catch-pit which first receives the spring water, and it is only after having travelled through a length of pipe for nearly 14 miles that the crystals appear.

The usual explanation for lime deposits is that they are due to the escape of Carbonic Acid gas just when the water issues from the rocks. This at once tends to release some of the lime as an insoluble carbonate which had previously been dissolved in the water as a soluble bi-carbonate.

The same explanation answers in the present case, but some delicate and unusual conditions are necessary for the growth of the crystals.

The explanation seems to be this:—The water from the Marlstone rock contains carbonate of lime in solution; carbonic acid gas escapes as soon as the water enters the catch-pit, and this at once tends to release some of the lime from solution. This release is not completed before the water enters the pipe conveying it to the tank, and, the lime being in what may be termed its nascent condition as it travels gently through the full pipe, takes the opportunity to precipitate on to any minute nuclei in the water, and builds up its crystalline form of rhombic crystals in preference to the amorphous, or sub-crystalline condition which would otherwise be the case if the water had remained quiescent or open to the atmosphere; or even if the rate of travel through the pipe had been greater.

The water contains a small quantity of iron in solution which begins to oxidise as soon as it reaches the air; these minute and almost imperceptible particles of iron oxide may form the nuclei upon which the calcite crystals grow; or it may be that the calcite itself is so used, but whatever it is there is no lack of points from which the crystals can build.

It has been my privilege to examine a great number of springs and the deposits which they yield under varying conditions, but this is the only occasion when perfect rhombs of calcite have been noticed.

# A NEW BORING IN LINCOLNSHIRE LIMESTONE.

The Boring, of which particulars are given below, was made for the Earl of Ancaster, at Grimsthorpe Castle, and finished in April, 1912. It is on the 6" Ordnance Sheet, No. 132, S.W. (Lincolnshire), and the Ordnance Datum level in 206 feet.

Strata.	Rocks.	Thickne	Total.		
(	Soil and Stone	2	0	2	0
Soil and Drift	Clay and Stone	3	0	5	0
14' 0''	Stone	5	0	10	0
	Clay and Stone		. 0	14	0
	Clay	26	0	40	0
Oxford Clay and	Rock	2	0	42	0
Kellaway Rock	Green-Sand and Pebbles	14	6	56	6
51' 6"	Grey Sand	5	6	62	
, (	Clay	3	6	65	6
Cornbrash 10' o''	Rock	10	0	75	6
	Clay	3	0	78	
	Dark Clay	5	I	83	7
Great Oolite	Yellow Sandy Clay	6	0	89	7
Clay 18' 4''	Stone	1	2	90	9
	Dark Blue Clay	3	I	93	10
Great Oolite Lime- stone 11' o"	Rock	11	0	104	10
Stone II o	Green Sandy Clay	10	9	115	7
****	Rock	I	3	116	10
Upper Estuarine   Series 30' 9"	Green Clay and Stone	4	8	121	6
	Clay and Stone	3	6	125	0
	Brown Marl	10	7	135	7
Lincolnshire Oolite	Limestone	111	7	247	2
Upper Lias Clay	Dark tough Clay	1	0	248	2

Note:—Taking an outcrop of the junction beds of Lincolnshire Limestone and Upper Estuarine Series 2½ miles N.W. of this Boring, it gives the dip of strata as 74 feet per mile in a S.E. direction. The thickness and character of the beds are about normal; and the yield of water is excellent, being probably influenced beneficially by the Auticlinal Fold a little distance to the S.E. The Boring was made by Mr. Noble of Thurlby.

### BOTANY.

#### Rev. E. A. WOODRUFFE-PEACOCK, L.Th., F.L.S., F.G.S.

Though so dry, from the point of view of the flora, the late year has been a most successful one. Mr. G. C. Druce visited the county during the season, and as usual has left his sign manual with us in the shape of new records. These are proved by the specimens in the hands of the Botanical Secretary for the Museum. A start has been made in systematically collecting insects in the act of cross fertilising flowers by visits for many purposes.

These may be summarised so far as is at present recognised as follows:—(1) for honey; (2) for pollen; (3) for daylight sunning or resting; (4) for night-time resting or sleep; (5) for shelter from wet; (6) for victims; (7) for love-making; (8) pollination is also brought about by insects flying through the so called anemophelous vegetation and shaking out the pollen.

The list of new species will be found in the additions and corrections to the *Check List* printed elsewhere.

## CONCHOLOGY.

## W. DENISON ROEBUCK, F.L.S. AND JOHN F. MUSHAM, F.E.S.

The officers of the Conchological Section have to report that—although climatological conditions have been against their investigations, the weather being too fine and dry for terrestrial species and the extreme drought emptying nearly all the smaller drains which yield fresh water species, good work has been done during 1911. Two species, Vallonia excentrica taken at Cleethorpes in 1904 by Mr. Fred Taylor, and at Mablethorpe in 1906 by Mr. Musham, and Pisidium cinereum in the River Ancholme at Bishop Bridge, district 5 East, have been added to the fauna of the whole County, which now amounts to 120 species, the highest number authenticated for any county in the British Isles.

Mr. W. Denison Roebuck and Mr. John F. Musham have continued their systematic investigation of the least worked areas, having visited districts 5 E., 16 S. W., and 18 E.

In district 5 East, worked from Kirton Lindsey, search was made—and with success—for *Pyramidula rupestris* at Norton Place, where it was discovered by Mr. John Beaulah more than thirty years ago—and more than 20 species were also added to the list for that area.

In district 16 S.W. about the same number were also added to the list, including *Hyalinia helvetica*, which is by no means so widely distributed as its allies.

In district 18 E. circumstances were so unfavourable that mollusca were only found with difficulty on the right bank of the mouth of the River Nene at Wingland, which was the main object of research, that no additions were made, and this division, along with the neighbouring areas of 18 Mid, and 18 West, are the least productive in Lincolnshire, none of them having on record so far, a molluscan fauna of more than 27 species, as against the average for the whole county of 52 species per area, and totals of 83 each for districts 8 South and 13 West, which, however, have had the advantage of being investigated by competent resident workers.

Nothing much has been done at the Excursions, owing to the extremely dry weather and the limited time available.

Of other work we learn that Azeca tridens has been turned up in a new locality, near Market Rasen.

For the future, the officers of the Section would be glad of any assistance from members, particularly in securing examples of the large bivalves which can be more readily secured when the waters are low, as they have been of late. Photographs of characteristic localities etc., are desired for the little volume on Lincolnshire land and fresh water mollusca which is in course of preparation.

As to Marine mollusca, Mr. Arthur Smith reports that the excursion to Gibraltar Point yielded some 40 to 50 species, 3 of which were new to the County records.

### ENTOMOLOGY.

#### G. W. MASON.

The summer of 1911, though exceptionally hot and dry. has not been altogether favourable for Lepidoptera. My first excursion for the season was to Linwood on Easter Monday, April 17th, with Dr. F. P. Birtwhistle, and Mr. F. W. Sowerby. It was a warm day with a strong breeze, and several Brephos parthenias and notha were seen, and a few of each species captured. It is pleasing to confirm the occurrence of notha, which was flying vigorously among the aspens, as some doubt has been cast on the single previous record for the County. A successful Meeting of the Union was held at the same place on Whit Monday, June 5th, which was a broiling day. Lepidoptera were abundant, one of the most interesting species being the beautiful Melanippe hastata, which was evidently just out and occurred sparingly all over the wood. The only new record that day and for the whole year was beaten out of Pinus sylvestris by the Rev. E. A. W. Peacock, which has been identified by Mr. E. A. Atmore as Oecophora panzerella. In May I bred several examples of that beautiful variety of Zonosoma pendularia i.e. subroslata from ova laid by a typical female taken the previous year in Skellingthorpe Wood. Larvæ of the commoner sorts were plentiful in June at Pelham's Pillar Wood, and several larvæ and pupæ of Sesia asiliformis, an oak wood feeder, were taken by Mr. John Porter, of Hull, from beech stumps. Abraxas sylvata was abundant, and Nemeophila plantaginis was very common but difficult as usual to take. The weather at the Meeting at Barton was cold and unfavourable, and nothing of importance was noted. Argynnis aglaia is reported as having been commoner than usual in July at Pelham's Pillar Woods, and the Pierids throughout the summer were exceptionally abundant. From July onwards to the end of the season the Lepidoptera, with the exception of a few species, appeared to be generally scarce. Sugaring was an absolute failure all the year. In many parts of the country it has been a great year for Sphinx convolvuli, and I have two records of its occurrence, one at Louth on Sept. 6th, brought to Mr. C. S. Carter, and one from Miss S. C. Stow, taken at Grantham, in

October. Miss Stow reports that insect life has been very scarce at Grantham, and Mr. F. M. Burton remarks on the great numbers of Polyommatus phlaas. Macroglossa stellatarum turned up in his garden after several years' absence, and Vanessa atalanta The Rev. F. S. Alston came across was in small numbers. Thecla quercus in Haltham Wood. In reviewing the year's work, the season, after a promising opening, turned out rather a disappointing one, but the great heat was not conducive to much exertion on the part of Members. Some good work is being done by Mr. J. C. Shepherd, at Scunthorpe, who has turned up several good species in that district. May I appeal to the Members of the Union to collect and send Hymenoptera to Mr. W. D. Roebuck, who is about to publish a List for the County. Even the commonest are required to show the distribution in the County.

## VERTEBRATE SECTION.

REV. F. L. BLATHWAYT, M.B.O.U.

The following report contains the chief features of the bird news of the County which has come to my notice for the year 1911. I should be much obliged if members of the L.N.U. interested in birds would send me from time to time reports from their districts. If this is done it will be possible to draw up a more complete report at the end of the present year.

The Little Owl, A. noctua, seems to be getting established in the County. Four nests, each containing four eggs, were found in the Grantham district early in May this year. The species bred near Grantham and Bourne quite five years ago, and has been known for two or three years at Haverholme Park, Sleaford, where this year they certainly bred. All these are probably the descendants of the colony established by the late Lord Lilford in Northamptonshire in 1888.

On June 23rd I found about 12 pairs of Lesser Terns., S. minuta, breeding in a certain locality on the Lincolnshire coast. I have visited other colonies, which I believe still exist along the coast, but it is not safe to name the exact localities.

This year a pair or two of Common Terns, S. fluviatilis, were among the smaller ones, and were probably breeding. Some years ago I noticed this species in the same locality, evidently feeding their young, although I have no absolute proof that they bred there.

On June 23rd Ringed Plovers had freshly laid eggs and 8 or 9 pairs of Sheldrakes were about the sand-dunes, also a single Oyster Catcher.

On April 29th I saw an adult Black Tern on Fillingham Lake, 9 miles north of Lincoln. Great Crested Grebes, P. cristatus, nested and brought off young in several localities which need not be mentioned. I know of 4 or 5 breeding haunts of this species in the County, and it is certainly increasing.

Quails are reported to have nested a few miles N. of Lincoln.

As regards the Autumn Migration on the N. E. Lincolnshire Coast, Mr. Caton Haigh reports the following from N. Cotes:—

"September 11th. Six Pied Flycatchers, two Redstarts, one Lesser Whitethroat.

September 12th. One Redstart, one Pied Flycatcher, one Garden Warbler, one Lesser Whitethroat.

On September 15th and 16th the wind changed to N.W. and N., and the migration of small birds entirely ceased, only two or three Wheatears seen and a few Arctic Skuas about. During a N. gale on September 15th four or five large dark Shearwaters came near to land, which were probably examples of *P. griseus*.

On September 23rd lots of Pied Flycatchers came in.

During the second week of October fair numbers of Grey Crows, Gold Crests, Robins, Rock Pipits, Twites, Greenfinches, and Grey Geese came in. Many Ducks and Scoters about. Two Grey Phalaropes were obtained. No rare birds seen or heard of.

There seems to have been no large immigration of Woodpigeons on the N.E. Lincolnshire coast this winter."

A Barred Warbler, S. nisoria, is reported as captured at Cleethorpes on September 2nd during a light east wind.

On November 13th an immature Spoonbill, P. leucorodia, was shot at the mouth of the River Welland. It may here be mentioned that a stuffed example of this species has just been presented to the Lincoln Museum by Canon Bell. This was set up by Clayton, of Louth, in 1860, and was shot at N. Somercotes. It is probably the example mentioned in Cordeaux's "Birds of the Humber District," p. 107.

A Black-headed Gull, L. ridibundus, marked as a nestling at the Scawby gullery on May 29th, 1910, was recovered at Denbigh, N. Wales, on December 2nd, 1911.

The following are some of the most important of my own notes from my district (Doddington):—

January 25th, 1911. Thousands of Woodpigeons.

January 27th. More than 100 Gulls, L. canus, on ploughed land.

February 12th and 15th. Kingfishers seen on brooks and ponds.

Early in April some Woodcocks were flushed in the woods but no nests were found.

About 20 pairs of Herons were nesting in the Skellingthorpe Big Wood.

A pair or two of Greater Spotted Woodpeckers, Nightjars and Long-eared Owls breed in the large woods and a few pairs of Wood Wrens, *P. sibilatrix*, but this latter species is scarce in the district.

Goldfinches increasing, Garden Warblers decidedly more numérous than Blackcaps, Hawfinches a nuisance among gréen peas.

The Chiff-chaff first heard April 12th, Swallow first seen April 18th, Nightingale April 23rd (more pairs than usual this year), and Cuckoo April 26th.

The Redwing had arrived in the district by October 19th, the Hooded Crow by October 20th.

It may here be mentioned that a remarkable irruption of the Little Auk, M. alle, visited the County (both coast and inland) during January and February, 1912, but this will be dealt with more fully in the next report.

An immature example of the Iceland Falcon, F. Islandus, shot at Saxilby in December, 1900, has just been presented to the Lincoln Museum.

#### CANON W. FOWLER.

On Thursday, the 7th of March, the fourth President of the Union, and our oldest and most indefatigable Lincolnshire botanist, passed to his rest in his native village of Winterton. Canon Fowler was one of the sons of the late Joseph Fowler, grandson of the antiquary. He had just entered on his 78th year. He was for 47 years vicar of Liversedge, and a canon of Wakefield Cathedral. His late parishioners were then erecting a beautiful chancel screen in the parish church as a token of their united respect and esteem, and as a small recognition of his devoted services. The finest material monument of his life's work is the new church in Liversedge; but his truest memorials are the memories in the hearts of the generations he ministered to. Kindly, genial and ever sympathetic, interested in a wide range of subjects, and in science generally, botany especially, where shall we find another master and teacher like the Canon? Yet when all is said, mankind were his special study and delight, and in the sorrow of his wide circle of friends and acquaintances his true merit as a man appears.

E. A. W-P.

## OBITUARY.

Though this part of the Transactions is devoted to the work of the Union prior to 1912, we cannot fail to express our sense of the great loss caused by the deaths of three Ex-Presidents. All our members, we feel sure, will desire to express their sincere sympathy with the bereaved families.

A notice of the death of the Rev. Canon WILLIAM FOWLER is to be found on another page.

Mr. F. M. BURTON, F.L.S., F.C.S., died on May 16th, 1912, aged 83. Most of our members are well acquainted with the great interest he took in the work of the Union. On more than one occasion he conducted us over ground which was well known to him, and where he had made research long before some of us were born. To the last he kept up his work in the science he loved. His last days were spent in a revise for the "County History" which we are glad to know was completed and is ready for publication. In our Transactions Vol. I., p. 73, there is a brief outline of his life. His collections and part of his library are to find a home in the County Museum.

Dr. G. M. LOWE died May 24th, 1912. He was particularly well known in Lincoln and took a large part in advocating a Museum for the County. For several years he has lived in the Isle of Wight, but was a most energetic worker for the Union whilst in Lincoln. In Vol. II. page 73, will be found an account of his interesting work.



## Lincolnshire Paturalists' Anion.

## TRANSACTIONS, 1909-1911.

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