

A RAILWAY FLORA OF RUTLAND

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GENERAL DESCRIPTION

The railways of Rutland were built by three major and two minor Railway Companies. The system is based on three principal routes. The first to be opened was the Syston and Peterborough branch of the Midland Railway, opened to traffic in 1848. This was followed in 1851 by the Rugby, Market Harborough and Stamford branch of the London and North Western, which made a junction with the Midland at Luffenham. Thirdly came the northward extension of the Great Northern main line from Peterborough. The dates of subsequent additions to the system are given in Table 1, together with dates of closures. In the map (Fig. 1) the various sections are numbered for convenience in dealing with their flora, and these numbers are given in Table 1.

TABLE 1

<i>Section</i>	<i>Opened</i>	<i>From</i>	<i>To</i>	<i>Owners</i>	<i>Mileage</i>	<i>Closed</i>
1	1848	Whissendine	Manton	A	9	—
2	1882	Ashwell	Cottesmore	A	2½	—
3	1880	Manton	†Welland Viaduct	A	4½	—
4	1848	Manton	Tinwell (Stamford)	A	8	—
5	1851	Caldecott	Seaton	B	4	1966
	1879	Seaton	Barrowden	B	2½	1966
6	1851	Seaton	Luffenham	B	3¾	1966
7	1895	Seaton	Uppingham	B	3	1964*
8	1852	Through Essendine		C	2	—
9	1860	Essendine	(Bourne)	D	1	1951*
10	1856	Essendine	Stamford	E	2¼	1959*

†Often called Harringworth Viaduct after the nearby Northants. village.

NOTES

- Ownership: A—Midland Railway to 1923; L.M.S.R. to 1947.
 B—L.N.W.R. to 1923; L.M.S.R. to 1947.
 C—Great Northern Railway to 1923; L.N.E.R. to 1947.
 D—Great Northern Railway to 1923; L.N.E.R. to 1947; the early history of this line is inextricably tangled with that of the forerunners of the Midland and Great Northern joint lines, notably the Eastern and Midland Company, but by 1872 it was indubitably a part of the G.N. system.
 E—Stamford and Essendine to 1872; G.N.R. to 1923; L.N.E.R. to 1947; The line was worked by the G.N.R. until 1864, and then privately by the Marquess of Exeter until 1872.

The L.M.S.R. became the London Midland Region of British Rail (B.R.) in 1947, and the L.N.E.R. became the Eastern Region. In a subsequent readjustment of boundaries, all lines in Rutland to the east of Seaton and Luffenham were transferred to the Eastern Region.

MILEAGE: Figures in this column of Table 1 are of mileages in Rutland. The figure for the Ashwell Mineral branch is the length owned by B.R.

CLOSURES *—Dates so marked in Table 1 are lines which have been dismantled since closure.

MINERAL LINES: Apart from the Ashwell branch, serving ironstone quarries at Cottesmore, Burley and Exton, there are shorter private mineral branches at Pilton, Ketton and Market Overton (See Fig. 1).

MAJOR ENGINEERING WORKS: Tunnels—Manton, Wing, Glaston (1,850 yards (1.7 km.)), Seaton, Morcott; Welland Viaduct (about a quarter of this is in Rutland); Embankments and cuttings are numerous, the most important being one a mile long at Whissendine over marshy ground; Goods yards—Ashwell, Manton, Seaton, Uppingham, Morcott, Luffenham, all dismantled; Oakham station yard is still used but the former provender mill sidings are not. Oakham station is the only one open for passengers.

If the county is divided into roughly equal eastern and western halves, the eastern half consists, geologically, of Oolitic rocks, mainly limestone, covered with clay, while in the west there is a mixture of Lias clays and Marls, in some places overlaid with Northampton sand. In the West the land rises to just over 600 feet (182.9 m.), but is split by several deep valleys running east and west. In the east the elevation becomes lower and the valleys shallower as the diminutive rivers in them approach the Welland. In the north-west corner of the county, drainage is towards the Trent rather than the Welland, though the watershed is hardly noticeable. The dividing line between Oolitic and non-Oolitic country lies a little to the east of Manton and Seaton, and is an important factor in the floristic pattern of the county. A general account of the topography and geology of the county is given in Horwood & Gainsborough, 1933.

BOTANICAL DESCRIPTION

Railway property embraces a considerable diversity of plant habitats, which can be grouped into three principal categories. These are, firstly, the mainly grassy slopes which flank the line on embankments and cuttings; secondly, the ballasted road bed; and thirdly, railway buildings, including stations, bridges and tunnel portals, retaining walls, and various other structures. Much of the interest of railway flora derives from a combination of circumstances in which on the one hand plant communities are protected from the destructive influences of modern agricultural practice, while on the other they are subjected to a whole range of controlling influences deriving from railway practice. The extent to which these do control the flora can readily be seen when a line is closed and dismantled. The artificial equilibrium is lost and the flora very soon loses its distinctive character.

EMBANKMENTS AND CUTTINGS

By far the largest proportion of railway property in Rutland consists of lineside grassland and scrub. It is maintained in a fairly stable ecological balance by



FIGURE 1. Railways of Rutland

periodical burning, and from time to time the scrub is cleared by hand cutting. No doubt the periodicity has been established by trial and error over the years, and one object of the practice was to discourage such rank growth as would constitute a serious fire risk in the days of steam traction. The result has been to discourage the excessive growth of coarse grasses and nettles, and to encourage the more delicate species. So, in some respects, railway grassland resembles old pasture controlled by cutting and grazing, or moorland which is regularly burnt.

One important difference, however, is that the railway communities have developed in a comparatively short time on the exposed surface of what was essentially subsoil. Any cutting exposes the subsoil *in situ*; any embankment is partly built from subsoil derived from nearby cuttings, but considerable volumes of material are also brought in from a distance. There are often quite startling variations in the floral cover in quite short stretches of apparently uniform embankment. Similar variations in cuttings may be due to local geological variation, but they are sometimes evidence that the sloping surfaces were initially unstable and had at some stage to be consolidated with imported material. This may be the explanation of the anomalous *Deschampsia flexuosa* communities near the mouths of two tunnels in the county (see p. 329).

Slope and surface drainage constitute a third factor influencing the flora. So far as I am aware, no one has used railway embankments for performing classic profile and belt transect exercises, but there are many places in Rutland which could be used for this kind of teaching, if only they were a little more accessible. It has been stated too that the north and south facing slopes of an embankment or cutting running east and west show clearly the effects of differing degrees of insolation. This may be so, but I suspect that some of these apparent effects are at least partly the result of exposure to, or shelter from, the prevailing wind. There are several places where the engineers clearly had difficulty with the drainage of cuttings, and had to provide drainage channels on the slopes and ditches, conduits and culverts. This accounts for the presence in the flora of aquatic and marsh plants.

A study of the changes which occur when a line is closed and dismantled shows that even on the steepest slopes scrub soon invades the grassland, as it does in disused quarries. There is evidence on abandoned lines in east Leicestershire that this is fairly soon transformed into Ash woodland, but none of the Rutland lines has progressed this far. The end product is dull and depressing, but the process has interest and the tenacity of some of the declining species is remarkable.

THE PERMANENT WAY

The road bed on which the track of a working railway is laid, is normally kept free of plant cover by the frequent use of herbicides. The top layer, supporting the track, consists of coarse chippings, often of porous slaggy material. Below this is a thick layer of cinder ballast, usually on a clay base. When a line is dismantled the top layer is usually removed and the cinder ballast left exposed. As soon as a line goes out of use plants begin to invade the ballast, but comparatively few species succeed in establishing themselves until the top cover is removed. It is on the exposed cinder ballast that many of the railway 'rarities' are to be found, many of them ruderals or wall denizens elsewhere. A general account of some of these is given by Salisbury, 1961. The places with the richest variety of such species are the disused goods yards at several of the stations. At Oakham there is a large area formerly covered by the sidings serving a provender mill for railway cart-horses. Although part of this is gradually becoming overgrown, it still has a rich and varied flora.

Away from goods yards the dismantling of a line is followed by a rapid development of many of the goods yard species and a slower invasion by species from the flanking grassland. A sort of stability will result if the ballast continues in use as a footpath, but if the boundary fences are removed and grazing animals are allowed on to the roadbed the characteristics of the railway flora are soon lost. It will be interesting to see how far County Naturalists' Trusts succeed in their efforts to conserve interesting stretches of disused line, but I suspect they may find the physical labour needed to keep the plant life more or less stable greater than they expected.

BUILDINGS AND BRICKWORK

Practically all railway building in Rutland was carried out in brick, and masonry is uncommon though not wholly absent. A good deal of the brick was locally produced, and there are traces of former brick yards beside the

line at Pilton and Ketton. Most of the overbridges have brick arches, though steel girders are used generally in underbridges. The Welland Viaduct is the longest brick viaduct in the country, though less than a third of it is in Rutland. Eight of the county's nineteen species of ferns grow on railway brickwork, and there is a range of other species there as well, though the wall flora is not as rich as that on the limestone walls in the county.

Station gardens and lineside allotments account for many of the common garden weeds occurring in the list of species (see p. 334). In addition, some cultivated species originating in station gardens have become established by the line nearby. However, it is not easy to account for the regular appearance of *Antirrhinum majus* on the brickwork of Glaston south tunnel portal, deep in farming country, and remote even from the nearest house.

NOTES ON INDIVIDUAL SECTIONS OF THE LINE

1. WHISSENDINE TO MANTON. The northern part of this section has little special interest, except in the disused yards at Ashwell and Oakham. The flora resembles that of nearby roadsides. There is, however, an interesting assemblage of aquatics in the broad drainage channels on either side of the long embankment at Whissendine, which owe their existence to the diversion of the river when the embankment was built but they are outside the boundary fence. South of Oakham the lineside flora becomes richer, and just north of Manton tunnel there is an interesting example of how the flora can change within a few yards. Here, on a steep east facing slope, the embankment is covered for about thirty yards (27m.) with a vigorous growth of *Phragmites australis*, stretching from the top nearly to the bottom, and within a few yards the ground is dry and gravelly enough to carry a community containing *Pilosella officinarum* subsp. *officinarum*, *Verbascum thapsus*, *Arenaria* spp., *Arabidopsis thaliana*, *Lotus corniculatus*, etc. Other contrasts occur between Manton tunnel and the station. *Calluna vulgaris* grows above the tunnel portal, and *Anthyllis vulneraria* a hundred yards (91 m.) away on the slopes of the cutting.

2. ASHWELL MINERAL BRANCH. Only the first two and a half miles (4.0 km.) of this line were included in this survey, i.e. as far as the sidings where British Rail hand over operation of the branch to the quarrying company. The flora of the branch is very much like that of the main line except that the encroaching scrub is rarely, if ever, cleared. In the first half mile there are the only fully naturalised colonies of *Saponaria officinalis* and *Campanula rapunculoides* in the county.

3. MANTON TO WELLAND VIADUCT. This stretch consists of a series of alternating tunnels, cuttings and embankments. The area around each tunnel mouth has its own special character. All appear somewhat acid, those of Glaston north and Seaton north being distinguished by large areas dominated by *Deschampsia flexuosa*. Apart from a small patch on the Uppingham branch this species grows nowhere else in Rutland. Wing tunnel south has *Ulex europaeus* and *Digitalis purpurea* and close to the south portal of Glaston tunnel there is an area where the engineers evidently had trouble with drainage. The problem was solved by making the cutting exceptionally wide, and leaving an expanse of marshy ground beside the line. *Phragmites* and several *Salix* species grow

here together with various other marsh plants. A short section of the embankment just north of the Welland Viaduct collapsed in the thaw following the cold winter of 1962-1963. During the rebuilding, the basal width was increased, to give a more gently sloping surface. Recolonisation of the new slope has followed much the same course as colonisation of newly exposed ballast, with the rapid establishment of species such as *Epilobium angustifolium*, *Pilosella officinarum*, *Chrysanthemum leucanthemum* and *Arrhenatherum elatius*, and a slower spread of *Rubus* and *Festuca* spp.

4. MANTON to TINWELL. In many respects this is the most interesting stretch of the line, showing as it does a gradual transition from neutral to limestone grassland flora in the first two miles. *Filipendula vulgaris* and *Poterium sanguisorba* begin to appear near Pilton; east of Luffenham there are large patches of *Clinopodium vulgare*, *Origanum vulgare* and *Campanula glomerata*, and other calcicoles can be found. Then, as the line approaches the Welland at Ketton, the strongly calcicolous character is lost, and the flora comes to resemble that of the next section approaching Barrowden. The Pilton mineral branch is distinguished by having the only colony of *Lathyrus nissolia* in the county, and at its junction with the main line, there is a large area of wet ground dominated by *Calamagrostis epigejos*. The Ketton Cement Works branch has its verges heavily sprayed with herbicides, and there is nothing of interest.

5. CALDECOTT to BARROWDEN. This is a level stretch of line with low embankments and shallow cuttings, running close to the Welland throughout its length. The most notable features of its flora are extensive colonies of *Lactuca* spp., *Equisetum telmateia*, *Fragaria* × *ananassa*, *Carex hirta*, *C. flacca* and *C. spicata*. Most of these occur on other sections, but nowhere more luxuriantly than here. *Arabidopsis thaliana* seems commoner on the ballast of this line and its branches than it is on the Midland. Ferns thrive on the brickwork, particularly of bridges, to a greater extent here than anywhere else except Manton station.

6. SEATON to LUFFENHAM. This short stretch of single track shows an interesting transition from the Welland valley flora at Seaton to the limestone flora at Luffenham. The first sign of this change is to be found near Morcott with the appearance of *Brachypodium pinnatum*. The engineers had drainage problems in the deep rock cuttings at Morcott tunnel and through South Luffenham village. South Luffenham and Belmesthorpe (Section 9) are the two places where the lineside flora is most strongly influenced by the proximity of houses and gardens. At Luffenham, seedlings of Barberry (*Berberis vulgaris*), Gooseberry (*Ribes uva-crispa*), Raspberry (*Rubus idaeus*) and Redcurrant (*Ribes rubrum*) had appeared in the ballast within a few weeks of closure of the line.

7. SEATON to UPPINGHAM. This three mile branch was closed in 1964 and dismantled a year before this survey was started. So far as is known, burning and scrub clearance were rarely done during its seventy years of operation, and a number of species occur here which are absent elsewhere. Examples are *Sarothamnus scoparius* and *Sorbus aria* in the scrub, and *Saxifraga granulata* in the grassland. *Populus tremula* is found where the line passes under the

Midland near Seaton, and this species is also common on the Midland embankment along this stretch. Close to Uppingham are the remains of a short mineral branch which can be traced through the fields to a disused ironstone cutting south of the town. Its flora has long lost any distinctive features.

8. ESSENDINE. The most interesting part of this section is in the immediate vicinity of the former station. Here there used to be a goods yard, now rather overgrown, serving the Bourne and Stamford branches. Immediately north of the station is a short steep-sided cutting in which there are exposures of limestone. The flora resembles that found near Luffenham on the Midland. *Salvia horminioides* grows in the goods yard, and there are large patches of *Medicago sativa* among the usual calcicoles in the cutting. Scrub is kept firmly in check in this section.

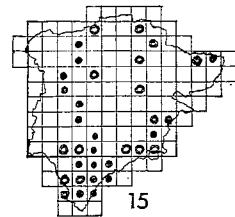
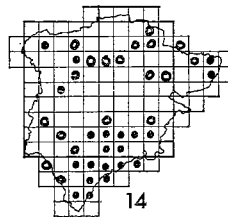
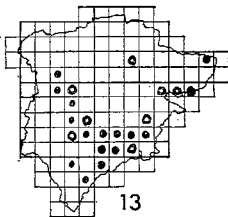
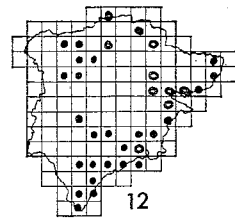
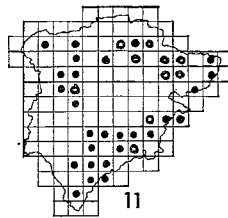
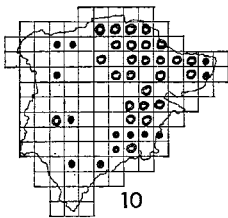
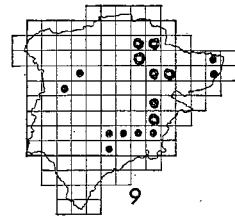
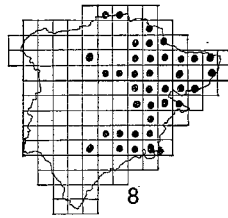
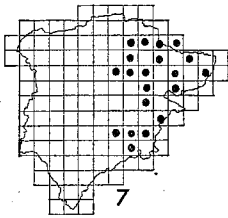
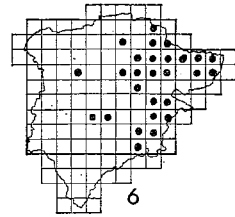
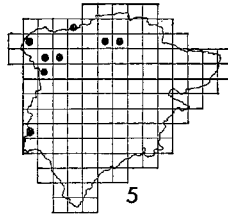
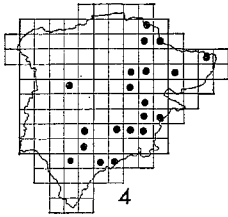
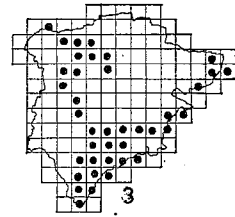
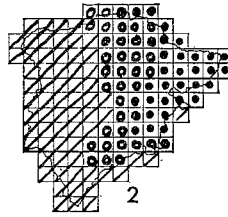
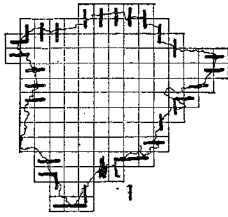
9. BOURNE BRANCH. This was the first of the Rutland lines to be dismantled and sold. The first 200 yards as far as the viaduct over the river Glen has remained fenced off, and shows an interesting late stage in the development of limestone grassland over the former road bed. Beyond the viaduct for half a mile the fences have been removed and grazing animals have had access. Here there is little to distinguish the road-bed except for occasional little stony patches where *Chaenorhinum minus* still reappears each year. Then, there is a short rather wet stretch to the county boundary where the road bed is used as a farm track and is covered with *Juncus bufonius* but here scrub is encroaching rapidly.

10. STAMFORD BRANCH. Closed in 1959, this section shows very well the early stages in the transition of the flora in a limestone area, and direct comparisons with the Uppingham branch are interesting. The flora is richest at Belmesthorpe and to the south of Ryhall station, though the latter section has recently been used to give heavy machinery access to a section of the river Gwash which the River Board has been dredging and 'improving'. The line leaves Rutland a few hundred yards south of this point.

STATISTICAL COMPARISONS

It would be very laborious to measure accurately the area of railway property in the county, but if the average distance between boundary fences is taken as 50 metres and the length of line as 78 kilometres, the area covered is approximately 4 sq. km. The general survey of the Flora of Rutland, carried out in the last ten years, has been based on a grid of 4 sq. km. (tetrads). A comparison of the number of species found on the railways with the numbers found in the tetrads of the general survey may be of interest.

Number of species found on railway property	372
Average number in each tetrad of the general survey	260
Number in the richest tetrad	391
Number in the poorest tetrad	174
Number of tetrads with more than 300 species	20
Number of tetrads with fewer than 200 species	8
Total number of tetrads	100



It can be seen from these figures that the railways can be considered to be one of the richest botanical areas in the county. Of the twenty tetrads with more than three hundred species, only six are in the western half of the county, and all but one of these contain railway property. Of the fourteen in the east those containing railway property average about fifty species more than those which do not.

This paper is an extended version of an earlier paper published in the *Report of the Uppingham School Field Club* (Messenger, 1967).

LIST OF SPECIES

In the following species list all species which have so far been found growing on railway property in Rutland are recorded, with the exception of garden species known to have been deliberately planted. Experience gathered during the general survey of the flora of Rutland suggests that further field work is

FIGURE 2. DISTRIBUTION MAPS

The maps are divided by national grid lines at 2 km. intervals, into 131 4 sq. km. (tetrads). For purposes of statistical recording during the general survey of Rutland, marginal tetrads were linked in such a way that there were 100 recording units averaging 3.94 sq. km., of which 66 correspond precisely to tetrads containing exactly 4 sq. km. of the county, while the rest contained either more (max. 5.54) or less (min. 2.60) than this figure.

1. Linked marginal tetrads.
2. Distribution of limestone in Rutland.
 - Mainly limestone
 - Partly limestone
 - / Clays, marls, sands and alluvium, but no limestone.
3. Tetrads containing railways.
4. Tetrads, with over 300 species in general survey.
5. Tetrads with under 200 species in general survey. Maps 4 and 5 should be read in relation to Map 2. The limestone areas have a richer flora than those without limestone.
- 6, 7 and 8. Distribution of three species common on limestone.
 6. *Cirsium acaule*
 7. *Helianthemum nummularium*.
 8. *Clinopodium vulgare*.
- 9, 10, 11 and 12. Distribution of four species common on limestone and found mainly or solely on railways outside the limestone area.
 9. *Erigeron acer*.
 10. *Brachypodium pinnatum*.
 11. *Chaenorhinum minus*.
 12. *Senecio erucifolius*.
- 13, 14 and 15. Species common on the railways, and infrequent elsewhere. Two of these are introduced species whose history in Britain is well documented (e.g. Kent, 1956, 1959, and 1964). It is suggested that the railways are one of the principal routes along which their dispersal took place.
 13. *Melilotus altissima*
 14. *Epilobium adenocaulon*
 15. *Senecio squalidus*

In maps 9 to 15, the symbol ○ indicates a railway record, and the symbol ● a non railway record.

unlikely to increase the list by more than about 15%. The number of species in the list is 372.

Symbols used:—

* Species recorded only on railway property.

† Species recorded mainly on railways and rarely elsewhere.

Where no comment is made on a species it may be assumed to be common on the railway in appropriate habitats.

- 4/9. EUISETUM ARVENSE L.
 4/10. E. TELMATEIA Ehrh. Ashwell; Glaston; Seaton.
 8/1. PTERIDIUM AQUILINUM (L.) Kuhn. Pilton; Essendine.
 †14/1. PHYLLITIS SCOLOPENDRIUM (L.) Newm. Brickwork, occasional.
 15/1. ASPLENIUM ADIANTUM-NIGRUM L. Brickwork, frequent.
 †15/5. A. TRICHOMANES L. Brickwork, occasional.
 15/7. A. RUTA-MURARIA L. Brickwork, common.
 18/1. ATHYRIUM FILIX-FEMINA (L.) Roth. Single plants on brickwork, Ashwell, Manton, Thorpe-by-Water.
 21/1. DRYOPTERIS FILIX-MAS (L.) Schott *sensu stricto*. Common.
 21/7. D. DILATATA (Hoffm.) A. Gray. Seaton.
 * 24/4. GYMNOCARPIUM DRYOPTERIS (L.) Newm. (*Thelypteris dryopteris* (L.) Slosson). Three plants on brickwork, Manton.
 25/1. POLYPODIUM VULGARE L. subsp. PRIONODES Rothm. (*Polypodium interjectum* Shivas). Brickwork, occasional.
 31/1. PICEA ABIES (L.) Karst. Luffenham, planted.
 32/1. LARIX DECIDUA Mill. Occasionally planted.
 33/1. PINUS SYLVESTRIS L. Occasionally planted.
 46/1. RANUNCULUS ACRIIS L.
 46/2. R. REPENS L.
 46/10. R. AURICOMUS L. Morcott; Luffenham.
 46/24. R. FICARIA L.
 53/1. BERBERIS VULGARIS L. South Luffenham, single seedling.
 54/1. MAHONIA AQUIFOLIUM (Pursh) Nutt. Ketton.
 58/1. PAPAVER RHOEAS L.
 58/2. P. DUBIUM L.
 †58/3. P. LECOQII Lamotte. Oakham; Eggleton.
 †58/5. P. ARGEMONE L. On ballast, Oakham, Seaton, Luffenham.
 58/6. P. SOMNIFERUM L. Oakham; Eggleton.
 66/8. FUMARIA OFFICINALIS L. Frequent.
 70/1. SINAPIS ARVENSIS L.
 70/2. S. ALBA L. Oakham.
 * 72/1. DIPLLOTAXIS MURALIS (L.) DC. Locally common on ballast and brickwork.
 74/1. RAPHANUS RAPHANISTRUM L. Frequent.
 81/1. CARDARIA DRABA (L.) Desv. Luffenham; Oakham; Essendine.
 84/1. THLASPI ARVENSE L. Occasional.

- * 84/3. *T. PERFOLIATUM* L. Small persistent colony on embankment at Luffenham.
- 86/1. *CAPELLA BURSA-PASTORIS* (L.) Medic.
- 95/1-3. *EROPHILA VERNA* agg. Common on ballast. *E. verna* (L.) Chevall has been identified from one gathering.
- 96/1. *ARMORACIA RUSTICANA* Gaertn., Mey. & Scherb. Frequent.
- 97/1. *CARDAMINE PRATENSIS* L. Occasional on embankments where drainage is poor.
- 97/5. *C. HIRSUTA* L. Occasional on ballast.
- 98/1. *BARBAREA VULGARIS* R.Br. Occasional in ditches and conduits.
- 100/3. *ARABIS CAUCASICA* Willd. Brickwork, Manton.
- 102/1. *NASTURTIUM OFFICINALE* R.Br. (*Rorippa nasturtium-aquaticum* (L.) Hayek). Occasional in ditches.
- 102/1 × 2. *N. × STERILE* (Airy Shaw) Oefelein (*Rorippa × sterilis* Airy Shaw). Ditch, South Luffenham.
- †102/3. *RORIPPA SYLVESTRIS* (L.) Bess. Oakham; Ashwell.
- 105/1. *ERYSIMUM CHEIRANTHOIDES* L. Oakham.
- 107/1. *ALLIARIA PETIOLATA* (Bieb.) Cavara & Grande.
- 108/1. *SISYMBRIUM OFFICINALE* (L.) Scop.
- 108/4. *S. ORIENTALE* L. Luffenham.
- †109/1. *ARABIDOPSIS THALIANA* (L.) Heynh. Common on ballast.
- 112/1. *RESEDA LUTEOLA* L. Seaton.
- 112/2. *R. LUTEA* L. Frequent.
- 113/1. *VIOLA ODORATA* L. Frequent.
- 113/4. *V. RIVINIANA* Reichb. Pilton.
- 114/1. *POLYGALA VULGARIS* L. Ryhall.
- 115/5. *HYPERICUM PERFORATUM* L.
- 115/8. *H. TETRAPTERUM* Fr. Ditch at South Luffenham.
- * 115/13. *H. MONTANUM* L. South Luffenham, few plants.
- 118/1. *HELIANTHEMUM NUMMULARIUM* (L.) Mill. (*H. chamaecistus* Mill.). Essendine; Luffenham.
- 123/1. *SILENE VULGARIS* (Moench) Garcke.
- 123/13. *S. DIOICA* (L.) Clairv., and *S. alba × dioica* hybrids. Occasional in shade.
- 123/14. *S. ALBA* (Mill.) E. H. L. Krause.
- * 129/1. *SAPONARIA OFFICINALIS* L. Ashwell.
- 131/7. *CERASTIUM FONTANUM* Baumg. subsp. *TRIVIALE* (Link) Jalas (*C. holosteoides* Fr.).
- 131/8. *C. GLOMERATUM* Thuill.
- * 131/10. *C. DIFFUSUM* Pers. (*C. atrovirens* Bab.). Manton, rare.
- †131/12. *C. SEMIDECANDRUM* L. Ryhall; Belmesthorpe.
- 133/2. *STELLARIA MEDIA* (L.) Vill.
- 133/3. *S. PALLIDA* (Dum.) Piré. Thorpe-by-Water, on masonry.
- 133/5. *S. HOLOSTEA* L. Frequent.
- 133/7. *S. GRAMINEA* L.

- 136/2. *SAGINA APETALA* Ard. subsp. *APETALA* (*S. ciliata* Fr.). Luffenham.
 136/4. *S. PROCUMBENS* L. Common on brickwork and ballast.
 * 137/4. *MINUARTIA HYBRIDA* (Vill.) Schischk. Occasional on brickwork and ballast.
 140/1. *MOEHRINGIA TRINERVIA* (L.) Clairv. Frequent.
 141/1. *ARENARIA SERPYLLIFOLIA* L. } Equally common on ballast and brick-
 141/2. *A. LEPTOCLADOS* (Reichb.) Guss. } work.
 156/2. *ATRIPLEX PATULA* L. Garden weed at stations.
 162/2. × 1. *TILIA × VULGARIS* Hayne (*T. europaea* auct.). Pilton, planted.
 163/1. *MALVA MOSCHATA* L. Frequent.
 163/2. *M. SYLVESTRIS* L. Common near stations.
 163/4. *M. NEGLECTA* Wallr. South Luffenham, small colony.
 166/4. *LINUM CATHARTICUM* L.
 168/1. *GERANIUM PRATENSE* L.
 168/10. *G. COLUMBINUM* L. Essendine; Belmesthorpe.
 168/11. *G. DISSECTUM* L.
 168/13. *G. MOLLE* L.
 168/16. *G. ROBERTIANUM* L.
 169/3. *ERODIUM CICUTARIUM* (L.) L'Hérit. Oakham, rare.
 173/1. *ACER PSEUDOPLATANUS* L. Frequent, particularly as seedlings.
 173/3. *A. CAMPESTRE* L.
 179/1. *RHAMNUS CATHARTICUS* L. Frequent.
 187/1. *ULEX EUROPAEUS* L. Occasional.
 188/1. *SAROTHAMNUS SCOPARIUS* (L.) Wimm. ex Kock. Occasional on the Uppingham branch, spreading from specimens originally planted.
 189/1. *ONONIS REPENS* L. Pilton to Ketton, common; Essendine.
 189/2. *O. SPINOSA* L. Essendine.
 190/2. *MEDICAGO SATIVA* L. Essendine.
 190/3. *M. LUPULINA* L.
 †191/1. *MELILOTUS ALTISSIMA* Thuill. Frequent.
 †191/2. *M. OFFICINALIS* (L.) Pall. Occasional.
 †191/3. *M. ALBA* Medic. Frequent.
 * 191/4. *M. INDICA* (L.) All. Oakham, rare,
 192/2. *TRIFOLIUM PRATENSE* L.
 192/4. *T. MEDIUM* L. Frequent.
 192/17. *T. HYBRIDUM* L. Oakham; Seaton; Ryhall.
 192/18. *T. REPENS* L.
 192/21. *T. CAMPESTRE* Schreb. Frequent.
 192/23. *T. DUBIUM* Sibth.
 193/1. *ANTHYLLIS VULNERARIA* L. Manton; Luffenham; Essendine.
 195/1. *LOTUS CORNICULATUS* L.
 195/2. *L. TENUIS* Waldst. & Kit. ex Willd. Ryhall.
 195/3. *L. ULIGINOSUS* Schkuhr. Local, where drainage is poor.

- 200/3. *ASTRAGALUS GLYCYPHYLLOS* L. Belmesthorpe.
 205/1. *ONOBRYCHIS VICIFOLIA* Scop. Ryhall, rare.
 206/1. *VICIA HIRSUTA* (L.) Gray.
 †206/2. *V. TETRASPERMA* (L.) Schreb. Frequent.
 206/4. *V. CRACCA* L.
 206/11. *V. SEPIUM* L.
 206/15. *V. SATIVA* L. Both subsp. *SATIVA* and subsp. *ANGUSTIFOLIA* (L.) Gaud. are frequent.
- * 207/2. *LATHYRUS NISSOLIA* L. Mineral line, Pilton.
 207/4. *L. PRATENSIS* L.
 207/5. *L. TUBEROSUS* L. Ryhall, one colony.
 †207/8. *L. LATIFOLIUS* L. Established in a number of places, but never far from stations.
- 210/1. *FILIPENDULA VULGARIS* Moench. Pilton to Luffenham; Essendine.
 210/2. *F. ULMARIA* (L.) Maxim. Common in ditches and where drainage is poor.
 211/6. *RUBUS IDAEUS* L. South Luffenham, seedlings on ballast.
 211/9. *R. CAESIUS* L. Oakham; Glaston; Essendine.
 211/11. *R. FRUTICOSUS* Lagg. Brambles of Sect. *Triviales* P. J. Muell. and *R. ulmifolius* Schott are common in hedgerows; the only other segregate so far identified is *R. echinatus* Lindl., from a single locality.
 212/3. *POTENTILLA STERILIS* (L.) Garcke. Common.
 212/5. *P. ANSERINA* L. Common.
- * 212/6. *P. ARGENTEA* L. Oakham, one small colony.
 212/13. *P. ERECTA* (L.) Rausch. Well established in a few places.
 †212/14. *P. ANGLICA* Laichard. Glaston, a well established colony. All material examined critically has proved to be a hybrid, probably *P. anglica* × *erecta*.
 212/15. *P. REPTANS* L. Common.
- 215/1. *FRAGARIA VESCA* L. Locally common, but in some places replaced by *F.* × *ananassa*.
 †215/3. *F.* × *ANANASSA* Duchesne. Caldecott to Seaton; Uppingham branch; Manton; Oakham; Pilton; Ketton; numerous well established colonies.
- 216/1. *GEUM URBANUM* L. Common.
 218/1. *AGRIMONIA EUPATORIA* L. Frequent.
 221/1. *APHANES ARVENSIS* L. *sensu stricto*. Occasional.
 222/1. *SANGUISORBA OFFICINALIS* L. Frequent.
 223/1. *POTERIUM SANGUISORBA* L. Frequent, east of Seaton.
 225/1. *ROSA ARVENSIS* Huds. Frequent.
 225/8-10. *R. CANINA* agg. Common; no work has been done on the segregates to be found on railways, but *R. dumetorum* Thuill. var. *gabrielis* (F. Gér.) R. Kell. is reported from Belmesthorpe.
 226/1. *PRUNUS SPINOSA* L. Common.
 226/3. *P. CERASIFERA* Ehrh. Ketton, planted hedge.
 226/4. *P. AVIUM* (L.) L. Pilton, single sapling.
 227/4. *COTONEASTER MICROPHYLLUS* Wall. ex Lindl. Belmesthorpe, several plants on ballast.

- 229/1. CRATAEGUS LAEVIGATA (Poir.) DC. (*C. oxycanthoides* Thuill.). Thorpe-by-Water; Glaston; Wing.
- 229/2. C. MONOZYNA Jacq., and hybrids with *C. laevigata*. Common.
- 232/1. SORBUS AUCUPARIA L. Planted at stations, occasionally seeding.
- 232/5. S. ARIA (L.) Crantz. Bisbrooke, one plant.
- 234/1. MALUS SYLVESTRIS Mill. Frequent.
- 235/8. SEDUM ACRE L. Frequent on brickwork; occasional on ballast.
- 239/9. SAXIFRAGA GRANULATA L. Uppingham; Bisbrooke; Morcott; Pilton.
- 246/1. RIBES SYLVESTRE (Lam.) Mert. & Koch. Occasional.
- 246/6. R. UVA-CRISPA L. South Luffenham, seedlings on ballast.
- 254/1. EPILOBIUM HIRSUTUM L.
- 254/2. E. PARVIFLORUM Schreb. Occasional.
- 254/3. E. MONTANUM L. Frequent.
- †254/6. E. ADENOCaulon Hausskn. Common on ballast.
- 254/7. E. TETRAGONUM L. (*E. Adnatum* Griseb.). Oakham; Manton.
- 255/1. E. ANGUSTIFOLIUM L. (*Chamaenerion angustifolium* (L.) Scop.).
- 256/1. OENOTHERA BIENNIS L. Ketton, ballast of dismantled siding.
- 265/1. SWIDA SANGUINEA (L.) Opiz (*Thelycrania sanguinea* (L.) Fourr.) Frequent.
- 268/1. HEDERA HELIX L.
- 273/1. CHAEROPHYLLUM TEMULENTUM L. Frequent.
- 274/2. ANTHRISCUS SYLVESTRIS (L.) Hoffm.
- 277/1. TORILIS JAPONICA (Houtt.) DC.
- 285/2. APIUM NODIFLORUM (L.) Lag. Occasional in ditches.
- 293/1. CONOPODIUM MAJUS (Gouan.) Loret. Frequent.
- 294/1. PIMPINELLA SAXIFRAGA L. Frequent east of Manton and Seaton.
- 301/1. AETHUSA CYNAPIUM L. Occasional.
- 303/1. SILAUM SILAUS (L.) Schinz & Thell. Occasional east of Manton.
- 310/1. PASTINACA SATIVA L.
- 311/1. HERACLEUM SPHONDYLIIUM L.
- 314/1. DAUCUS CAROTA L.
- 315/1. BRYONIA DIOICA Jacq.
- 318/1. MERCURIALIS PERENNIS L. Occasional.
- 319/2. EUPHORBIA LATHYRUS L. Thorpe-by-Water, garden escape.
- 319/10. E. PEPLUS L. Occasional on disturbed ground after drainage works.
- 320/9. POLYGONUM PERSICARIA L. Occasional on disturbed ground.
- 320/10. P. LAPATHIFOLIUM L. Ketton.
- 320/19. P. CUSPIDATUM Sieb. & Zucc. Morcott, garden escape.
- 320/R. RHEUM sp. Oakham; Essendine; persisting for years after abandonment of lineside gardens.
- 325/1. RUMEX ACETOSELLA L. *sensu lato*. Frequent on ballast, and on embankments after burning. *R. acetosella s.s.* confirmed in three instances.
- 325/2. R. ACETOSA L.
- 325/11. R. CRISPUS L.

- 325/12. *R. OBTUSIFOLIUS* L.
 325/14. *R. SANGUINEUS* L. var. *VRIDIS* Sibth.
 328/2. *URTICA DIOICA* L.
 330. *ULMUS* spp. In many lineside hedges, and in scrub at tunnel mouths. No critical work has yet been done.
 335/1. *BETULA PENDULA* Roth. Occasional in scrub on embankments and at tunnel mouths.
 335/2. *B. PUBESCENS* Ehrh. Wing tunnel mouth, in scrub.
 341/3. *QUERCUS ROBUR* L.
 342/3. *POPULUS TREMULA* L. Frequent, Seaton to Manton and Manton to Luffenham.
 343/2. *SALIX ALBA* L. Occasional.
 343/4. *S. FRAGILIS* L. Occasional.
 343/9. *S. VIMINALIS* L. and hybrids. Glaston.
 343/11. *S. CAPREA* L. Frequent.
 343/12. *S. CINEREA* L. subsp. *OLEIFOLIA* Macreight (subsp. *atrocinerea* (Brot.) Silva & Sobrinho).
 356/1. *CALLUNA VULGARIS* (L.) Hull. Manton, small colony.
 367/3. *PRIMULA VERIS* L.
 367/5. *P. VULGARIS* Huds. Occasional in shade.
 * 374/1. *SAMOLUS VALERANDI* L. Belmesthorpe, ditch.
 376/1. *FRAXINUS EXCELSIOR* L.
 377/1. *SYRINGA VULGARIS* L. Wing; Pilton.
 378/1. *LIGUSTRUM VULGARE* L.
 382/4. *CENTAURIUM ERYTHRAEA* Rafn. Luffenham, rare.
 392/2 × 1. *SYMPHYTUM* × *UPLANDICUM* Nyman. Occasional, Oakham to Egleton.
 400/8. *MYOSOTIS ARVENSIS* (L.) Hill.
 400/10. *M. RAMOSISSIMA* Rochel.
 403/1. *ECHIMUM VULGARE* L. Ketton.
 405/1. *CONVOLVULUS ARVENSIS* L.
 406/1. *CALYSTEGIA SEPIUM* (L.) R.Br.
 406/3. *C. SILVATICA* (Kit.) Griseb. South Luffenham.
 409/1. *LYCIUM HALIMIFOLIUM* Mill. Manton, in scrub.
 413/1. *SOLANUM DULCAMARA* L.
 413/t. *S. TUBEROSUM* L. Occasionally persisting after dumping.
 416/1. *VERBASCUM THAPSUS* L. Frequent.
 418/1. *ANTIRRHINUM MAJUS* L. Brickwork, Manton station and Glaston tunnel south portal.
 420/4. *LINARIA VULGARIS* Mill.
 †421/1. *CHAENORHINUM MINUS* (L.) Lange. Common on ballast.
 429/1. *DIGITALIS PURPUREA* L. Wing, rare.
 430/7. *VERONICA CHAMAEDRYS* L.
 430/15. *V. ARVENSIS* L. Common on ballast, occasional on brickwork and embankments.

- 433/2. RHINANTHUS MINOR L. Manton; Glaston; Wing; all where drainage is poor.
- 435/13. EUPHRASIA NEMOROSA (Pers.) Wallr. Luffenham, spreading from adjacent quarry.
- 436/1. ODONTITES VERNA (Bellardi) Dumort. Frequent. Subsp. *verna* is the commoner in the county, but the railway colonies have not been studied critically.
- 440/6. OROBANCHE ELATIOR Sutton. Ryhall, on *Centaurea scabiosa*.
- * 440/8. O. MINOR Sm. Oakham, on *Trifolium pratense*.
- 447/1. ORIGANUM VULGARE L. Luffenham to Ketton; Essendine.
- 452/1. ACINOS ARVENSIS (Lam.) Dandy. Essendine.
- 453/1. CLINOPODIUM VULGARE L. Common east of Manton.
- * 455/1. SALVIA VERTICILLATA L. Oakham, two colonies.
- 455/4. S. HORMINOIDES POUIT. Essendine, single colony.
- 457/1. PRUNELLA VULGARIS L.
- 458/1. BETONICA OFFICINALIS L. Pilton, rare.
- 459/7. STACHYS SYLVATICA L.
- 460/1. BALLOTA NIGRA L.
- 462/1. LAMIUM AMPLEXICAULE L. Essendine, only on dismantled trackway after removal of boundary fence.
- 462/4. L. PURPUREUM L. Station gardens.
- 462/5. L. ALBUM L.
- 467/1. GLECHOMA HEDERACEA L.
- 472/1. PLANTAGO MAJOR L.
- 472/2. P. MEDIA L. Frequent east of Manton.
- 472/3. P. LANCEOLATA L.
- †475/3. CAMPANULA RAPUNCULOIDES L. Ashwell, large colony.
- 475/6. C. GLOMERATA L. Pilton to Luffenham, locally common.
- †475/7. C. ROTUNDIFOLIA L. Frequent.
- 476/1. LEGOUSIA HYBRIDA (L.) Delarb. Luffenham, on ballast.
- 481/1. SHERARDIA ARVENSIS L. On ballast, Luffenham and Ryhall.
- 485/3. GALIUM ALBUM Mill. subsp. ALBUM (*G. mollugo* auct., non L.). Common. Oakham and Luffenham.
- 485/4. G. VERUM L.
- 485/5. G. SAXATILE L. Glaston, with *Deschampsia flexuosa*.
- 485/12. G. APARINE L.
- 487/2. SAMBUCUS NIGRA L.
- 491/3. LONICERA PERICLYMENUM L.
- 494/1. VALERIANELLA LOCUSTA (L.) Betcke. Embankments and station yards, frequent.
- 495/1. VALERIANA OFFICINALIS L. Oakham; Belmesthorpe.
- 495/3. V. DIOICA L. Ashwell, marsh below embankment.
- 497/1. DIPSACUS FULLONUM L. Frequent.
- 498/1. KNAUTIA ARVENSIS (L.) Coult.
- 500/1. SUCCISA PRATENSIS Monech. Pilton.

- 506/1. *SENECIO JACOBAEA* L.
 506/2. *S. AQUATICUS* Hill. Manton, in a culvert.
 †506/3. *S. ERUCIFOLIUS* L. Common early invader of ballast after effect of weed killer has declined.
 †506/4. *S. SQUALIDUS* L.
 506/6. *S. SYLVATICUS* L. Wing, in scrub.
 506/7. *S. VISCOSUS* L. Frequent on ballast.
 506/8. *S. VULGARIS* L. Weed in station gardens.
 508/1. *TUSSILAGO FARFARA* L.
 518/2. *SOLIDAGO ALTISSIMA* L. (*S. canadensis* auct., non L.) Oakham, one large clump on site of former siding.
 †521/1. *ERIGERON ACRE* L. Locally common on ballast of disused lines. *E. ANNUUS* was provisionally identified as a casual at Oakham.
 †522/1. *CONYZA CANADENSIS* (L.) Cronq. Oakham, common; also seen at Wing, Essendine, Seaton and Luffenham.
 524/1. *BELLIS PERENNIS* L. Common in station gardens, occasional elsewhere.
 528/1. *ACHILLEA MILLEFOLIUM* L.
 531/1. *TRIPLEUROSPERMUM MARITIMUM* (L.) Koch subsp. *INODORUM* (L.) Hyland. ex Vaarama. Station garden weed, occasional elsewhere.
 532/2. *MATRICARIA MATRICARIOIDES* (Less.) Porter. Stations, common.
 533/2. *CHRYSANTHEMUM LEUCANTHEMUM* L.
 533/3. *C. MAXIMUM* Ramond. Oakham, established garden escape.
 533/4. *C. PARTHENIUM* (L.) Bernh. Stations.
 533/5. *C. VULGARE* (L.) Bernh. Thorpe-by Water; Oakham; Barrowden; lineside banks far from houses.
 535/1. *ARTEMISIA VULGARIS* L. Frequent.
 535/6. *A. ABSINTHIUM* L. Rare in station yards and sidings at Ashwell, Oakham and Seaton; embankment, Glaston.
 538/1. *ARCTIUM LAPPA* L. Luffenham, station yard.
 538/4. *A. MINUS* Bernh. Frequent. *A. nemorosum* Lej. is common in Rutland but there is no railway record.
 539/3. *CARDUS NUTANS* L. Ryhall; Ketton; Luffenham.
 539/4. *C. ACANTHOIDES* L.
 540/1. *CIRSIUM ERIOPHORUM* (L.) Scop. Locally common, Ketton to Luffenham.
 540/2. *C. VULGARE* (Savi) Ten.
 540/3. *C. PALUSTRE* (L.) Scop.
 540/4. *C. ARVENSE* (L.) Scop.
 540/6. *C. ACAULE* Scop. (*C. acaulon* (L.) Scop.). Pilton; Luffenham; Belmes-thorpe; Essendine.
 544/1. *CENTAUREA SCABIOSA* L. Common east of Seaton and Manton.
 544/6. *C. NIGRA* L.
 547/1. *LAPSANA COMMUNIS* L.
 549/1. *HYPOCHOERIS RADICATA* L.
 550/1. *LEONTODON AUTUMNALIS* L.
 550/2. *L. HISPIDUS* L.

- 551/1. *PICRIS ECHIOIDES* L. Belmesthorpe.
- †551/2. *P. HIERACIOIDES* L. Pilton to Luffenham; Ryhall.
- 552/1. *TRAGOPOGON PRATENSIS* L.
- †554/1. *LACTUCA SERRIOLA* L. Ashwell; Seaton; Manton; Wing.
- †554/2. *L. VIROSA* L. Frequent.
- 555/1. *MYCELIS MURALIS* (L.) Dumort. Ashwell, on masonry.
- 556/2. *SONCHUS ARVENSIS* L. Occasional.
- 556/3. *S. OLERACEUS* L. Station garden weed.
- 556/4. *S. ASPER* (L.) Hill.
- †558/1. *HIERACIUM MURORUM* L. agg. Common. The following segregates have been determined by P. D. Sell:—
H. DIAPHANUM Fr. Ashwell; Egletton; Glaston.
H. STRUMOSUM (W. R. Linton) A. Ley. Oakham.
H. SALTICOLA (Sudre) Sell & West. Oakham.
H. VAGUM Jord. Oakham.
- 558/2(1). *PILOSELLA OFFICINARUM* C. H. & F. W. Schultz subsp. *OFFICINARUM* (*Hieracium pilosella* L.).
- 559/2. *CREPIS VESICARIA* L. subsp. *TARAXACIFOLIA* (Thuill.) Thell. Frequent.
- 559/6. *C. CAPILLARIS* (L.) Wallr.
- 560/1. *TARAXACUM OFFICINALE* Weber *sensu lato*.
- 560/4. *T. LAEVIGATUM* (Willd.) DC. *sensu lato*. Ballast and brickwork, Manton; Luffenham; Essendine.
- 605/7. *JUNCUS BUFONIUS* L. Essendine, late coloniser of dismantled road bed.
- 605/8. *J. INFLEXUS* L. Frequent.
- 605/9. *J. EFFUSUS* L. Glaston, marshy patch.
- 605/19. *J. ARTICULATUS* L. Ashwell, ditch.
- 607/5. *ALLIUM VINEALE* L. Oakham, spoil heaps in dismantled siding.
- 622/1. *TAMUS COMMUNIS* L.
- 643/1. *DACTYLORHIZA FUCHSII* (Druce) Soó (*Dactylorchis fuchsii* (Druce) Vermeul.). Belmesthorpe; Pilton.
- 663/31. *CAREX FLACCA* Schreb.
- 663/32. *C. HIRTA* L.
- 663/50. *C. NIGRA* (L.) Reichard. Belmesthorpe.
- 663/67. *C. SPICATA* Huds. Thorpe-by-Water; Seaton; Ketton.
- 665/1. *PHRAGMITES AUSTRALIS* (Cav.) Steud. (*P. communis* Trin.). Manton; Glaston.
- 670/1. *FESTUCA PRATENSIS* Huds. Occasional, Seaton to Manton.
- 670/2. *F. ARUNDINACEA* Schreb. Oakham; Seaton.
- 670/6. *F. RUBRA* L.
- 670/8. *F. OVINA* L. Locally common.
- 670/1 × 671/1. × *FESTULOLIUM LOLIACEUM* (Huds.) P. Fourn. Seaton, one plant on ballast.
- 671/1. *LOLIUM PERENNE* L.
- †672/2. *VULPIA BROMOIDES* (L.) Gray. Frequent on ballast.

- †672/3. *V. MYUROS* (L.) C. C. Gmel. Occasional on ballast.
- †674/1. *CATAPODIUM RIGIDUM* (L.) C. E. Hubbard. Frequent on brickwork; occasional on ballast.
- 676/1. *POA ANNUA* L. Stations.
- 676/6. *P. NEMORALIS* L. Oakham, in scrub.
- †676/9. *P. COMPRESSA* L. On ballast and in station yards, Oakham, Manton, Ryhall.
- 676/10. *P. PRATENSIS* L.
- 676/11. *P. ANGUSTIFOLIA* L. On ballast and in station yards, Manton, Seaton, Luffenham.
- 676/13. *P. TRIVIALIS* L.
- 678/1. *DACTYLIS GLOMERATA* L.
- 683/5. *BROMUS STERILIS* L.
- 683/10-12. *B. MOLLIS* Lagg. Common. Most records are of *B. mollis* L. *ss.*, but *B. thominii* Hardouin occurs at Oakham.
- 684/1. *BRACHYPODIUM SYLVATICUM* (Huds.) Beauv. Frequent in scrub.
- 684/2. *B. PINNATUM* (L.) Beauv. Frequent east of Manton.
- 685/3. *AGROPYRON REPENS* (L.) Beauv.
- 687/2. *HORDEUM MURINUM* L. Stations and yards.
- 691/1. *TRisetum FLAVESCENS* (L.) Beauv. Frequent.
- 693/1. *HELICTOTRICHON PRATENSE* (L.) Pilg. Barrowden.
- 693/2. *H. PUBESCENS* (Huds.) Pilg. Oakham; Ryhall.
- 694/1. *ARRHENATHERUM ELATIUS* (L.) Beauv. ex J. & C. Presl.
- 695/1. *HOLCUS LANATUS* L.
- 696/1. *DESCHAMPSIA CESPITOSA* (L.) Beauv.
- * 696/3. *D. FLEXUOSA* (L.) Trin. Cuttings at Glaston, Seaton and Uppingham.
- * 697/1. *AIRA PRAEcox* L. Rare on ballast and embankments, Glaston and Oakham.
- † 697/2. *A. CARYOPHYLLEA* L. Frequent on ballast.
- 700/1. *CALAMAGROSTIS EPIGEJOS* (L.) Roth. Pilton.
- 701/3. *AGROSTIS TENUIS* Sibth. Frequent.
- 701/4. *A. GIGANTEA* Roth. Occasional.
- 701/5. *A. STOLONIFERA* L. Frequent.
- * 702/1. *APERa SPICA-VENTII* (L.) Beauv. Luffenham station, casual.
- 702/2. *A. INTERRUPTA* (L.) Beauv. Luffenham, station.
- 707/1. *PHLEUM BERTOLONII* DC.
- 707/2. *P. PRATENSE* L.
- 708/1. *ALOPECURUS MYOSUROIDES* Huds. Manton station garden.
- 708/2. *A. PRATENSIS* L.
- 712/1. *ANTHOXANTHUM ODORATUM* L. Frequent.

ACKNOWLEDGEMENTS

Thanks are due to the Divisional Manager, British Rail, Nottingham, for permits which enabled the writer to walk over the whole length of the railways of Rutland during the years 1965 to 1967; to the Manager of Bees
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Seeds Ltd., for allowing access to parts of the former Provender Mill sidings at Oakham; to Messrs J. H. Chandler, and J. R. Ironside Wood, for numerous field records and observations; and to Dr J. G. Dony for advice and encouragement.

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ADDENDA

TABLE 1. Dismantling of the closed sections, nos. 5 & 6, was carried out in 1967 and 1968. Manton station buildings and platforms have also been removed.

SECTION 10, STAMFORD BRANCH. During 1967 and 1968 the part of this section from BELMESTHORPE to ESSENDINE junction has developed an interesting intermediate type of limestone grassland flora in which some of the more usual railway plants, e.g. *Melilotus* spp. are gradually giving way to invading grassland plants. In 1968 there was a profuse growth on the former road bed of *Euphrasia nemorosa*, previously unrecorded in the vicinity, and extending for over half a mile (800m.).

List of Species

- 256/1. OENOTHERA BIENNIS L. Add Essendine.
- 435/13. EUPHRASIA NEMOROSA (Pers.) Wallr. Add Belmesthorpe to Essendine.
- 506/4 × 6. SENECIO SQUALIDUS × VISCOSUS. Specimens which are almost certainly of this hybrid have been found with both parents on ballast at Barrowden.