



BSBI Atlas 2020



First atlas of the British and Irish flora published in 1964, pioneered the use of maps aligned to the Ordnance Survey grid reference system, and was first published in *New Journal of Botany*.

The first atlas was published in 2002 based on fieldwork carried out from 1987-1999.

We are now producing a third atlas, Atlas 2020, which will be published after fieldwork is completed in 2019.

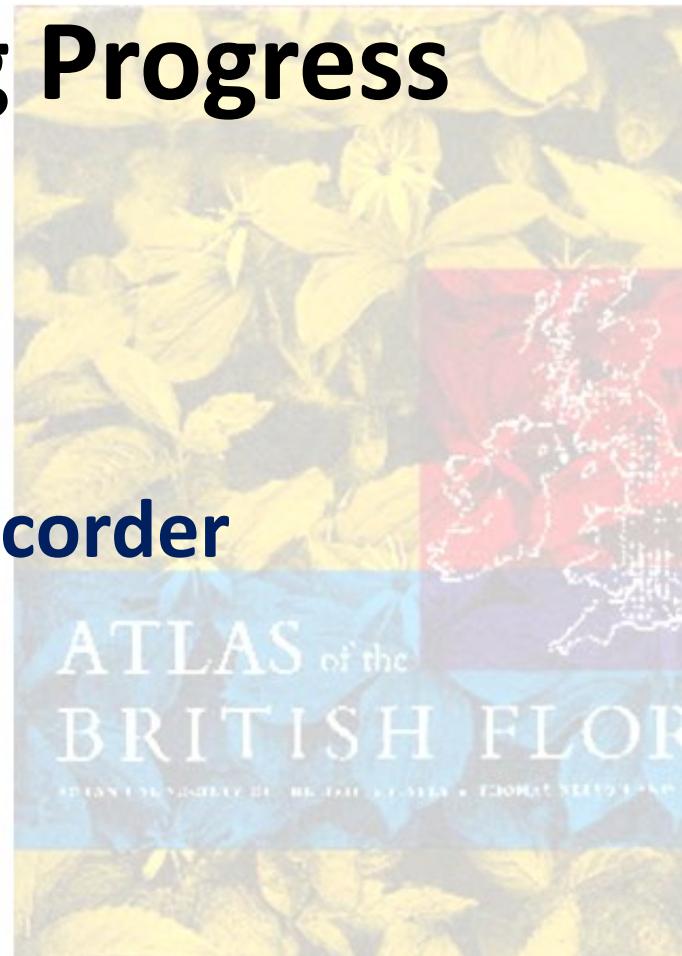
Geoffrey Hall
BSBI Vascular Plant Recorder

Maps for both native and introduced taxa

Interactive maps able to display frequency and distribution at a variety of scales

Analyses of changes, summarising the state of the British and Irish flora in 2020.

Get involved



Atlas 2020

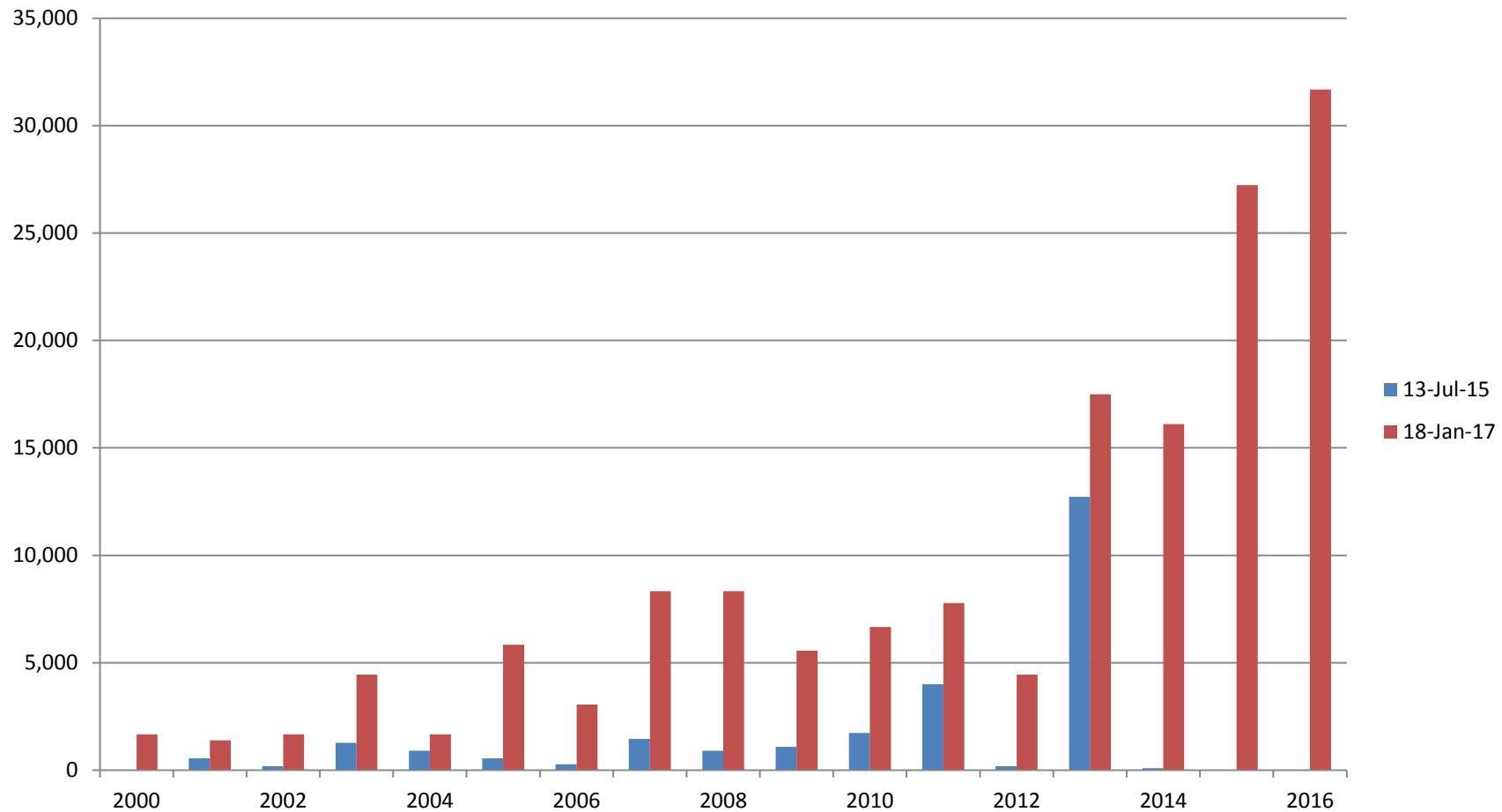
- **Publication** after fieldwork has been completed in 2019
- **Maps** for both native and introduced taxa
- **Interactive maps** able to display frequency and distribution at a variety of scales, available on-line or on a CD-ROM
- **Outputs: analyses of changes**, summarising the state of the British and Irish flora in 2020

BSBI Distribution Database (DDb)

- 35 million records (April 2016)
- **Has 181,215 records for vc55 since 2000**
- 152,188 added since Jan 2015
 - 43,462 from Steve Woodward & Helen Ikin
 - 55,436 from L&R Environment Record Centre
 - 53,290 from volunteer recorders, NatureSpot users, local botany group, recent surveys.

Number of Records

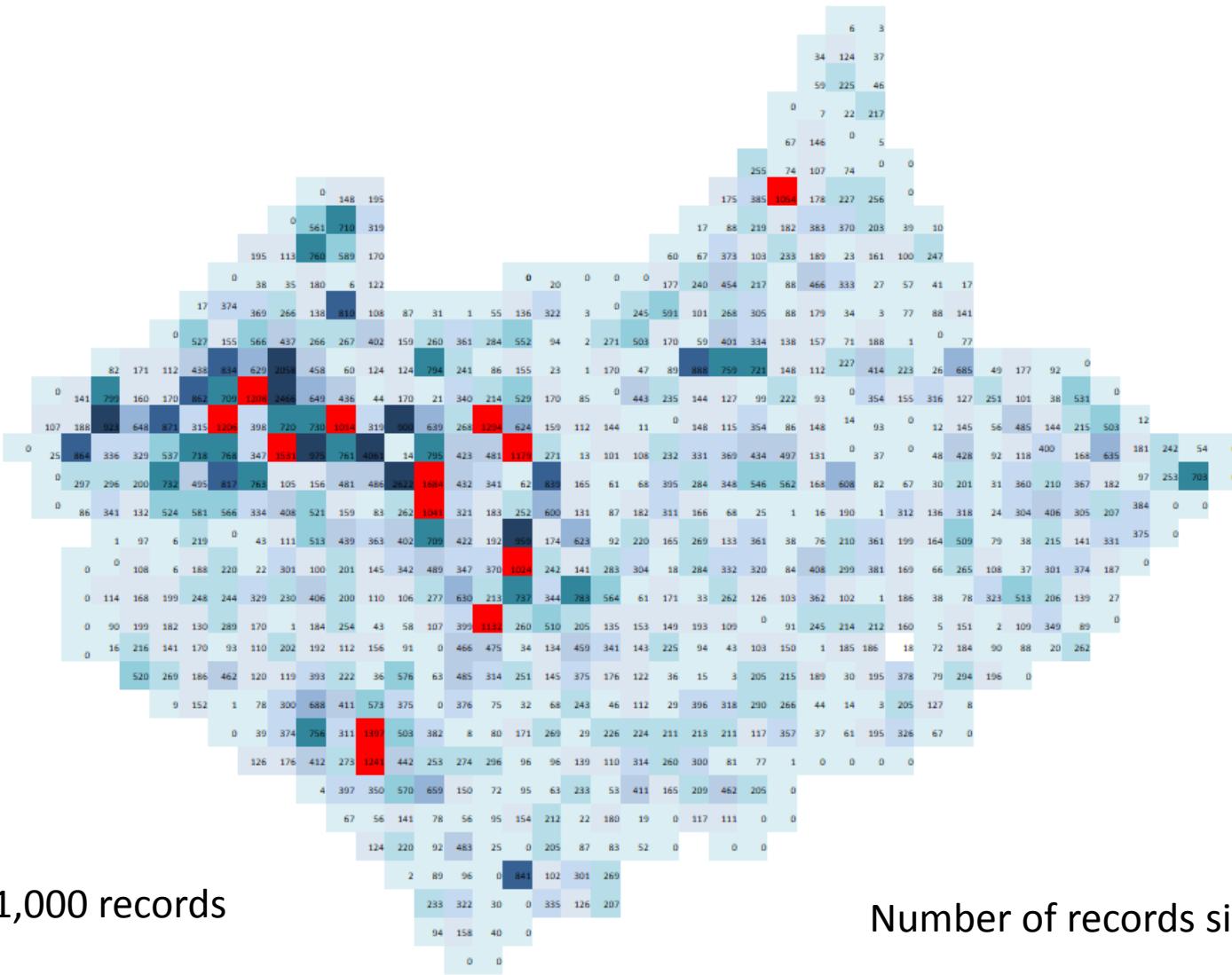
No. of Records Added to DDb



Distribution of Records

| Records per Tetrad | Jan 2015 | Jan 2017 |
|--------------------|----------|----------|
| 0 | 279 | 60 |
| 1-50 | 269 | 100 |
| 51-100 | 99 | 89 |
| 101-200 | 51 | 163 |
| 201-300 | 6 | 102 |
| 301-400 | 2 | 80 |
| >400 | 18 | 130 |

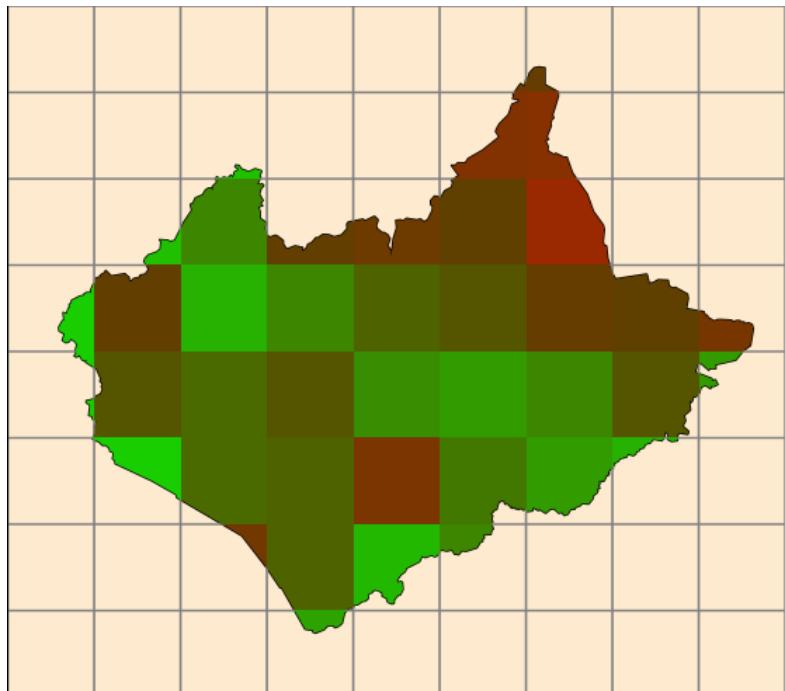
'Recording Effort'



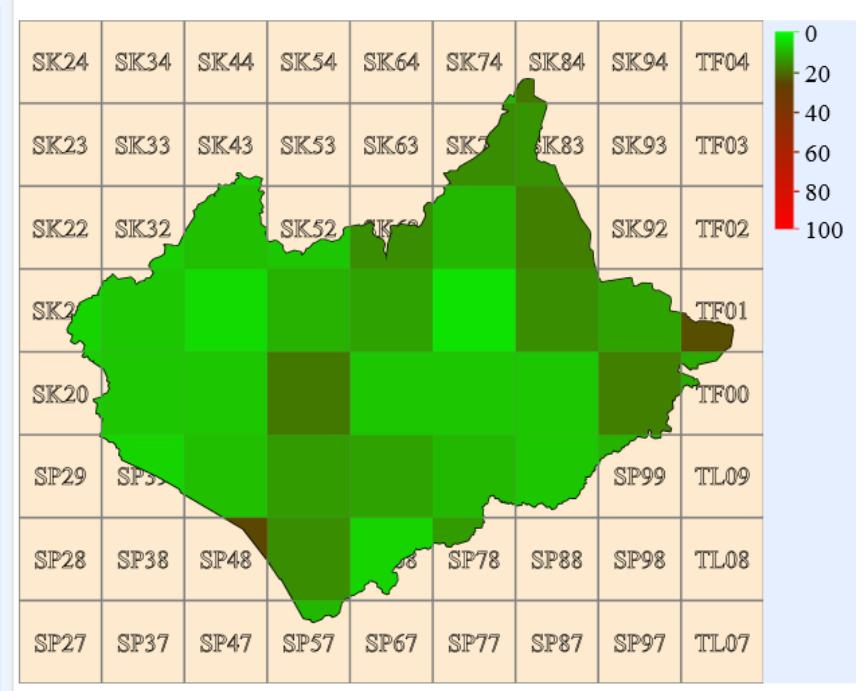
Number of Species

Species not re-found since 2000

Hectad Scale



16 February 2016

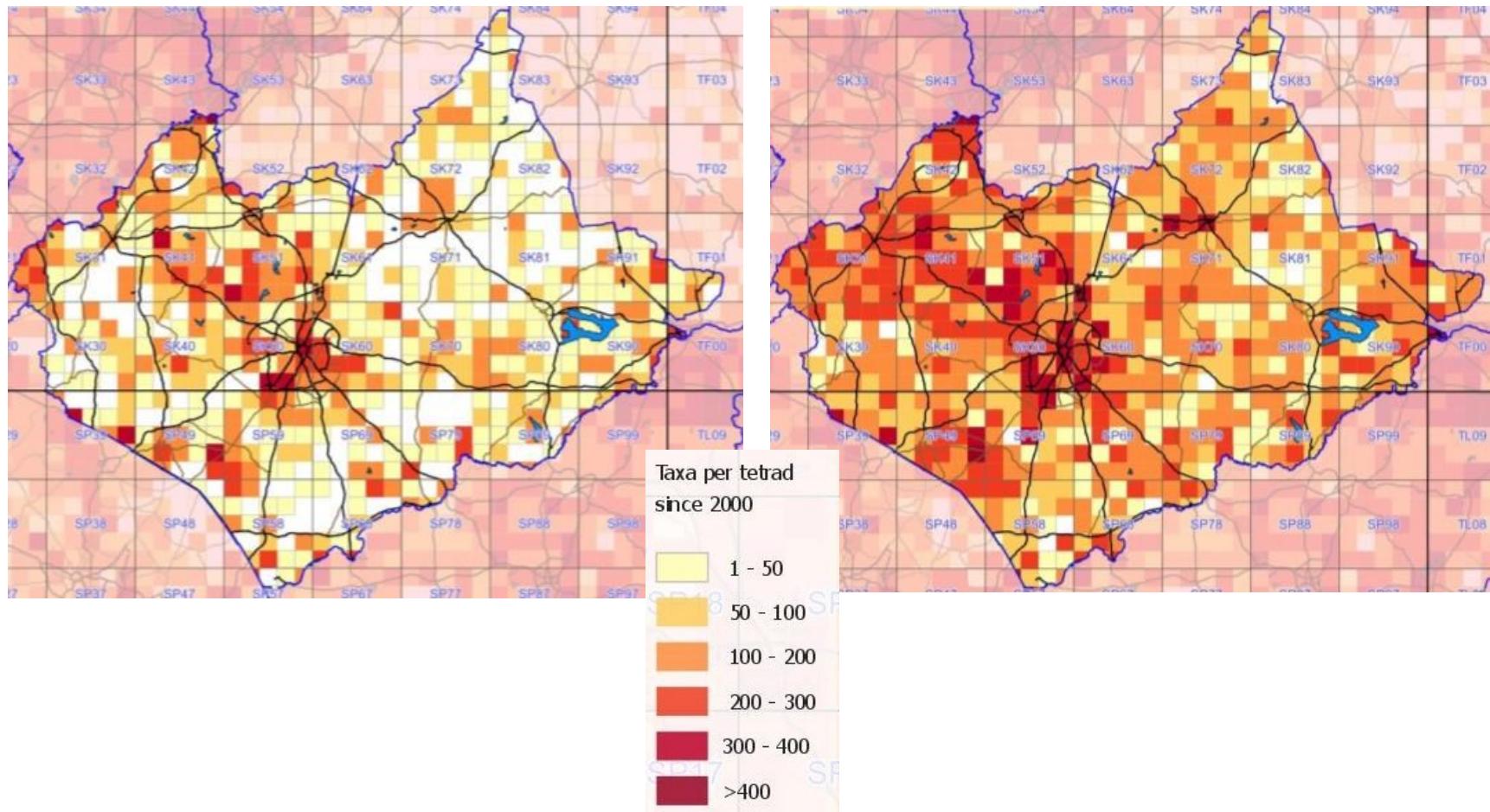


18 January 2017

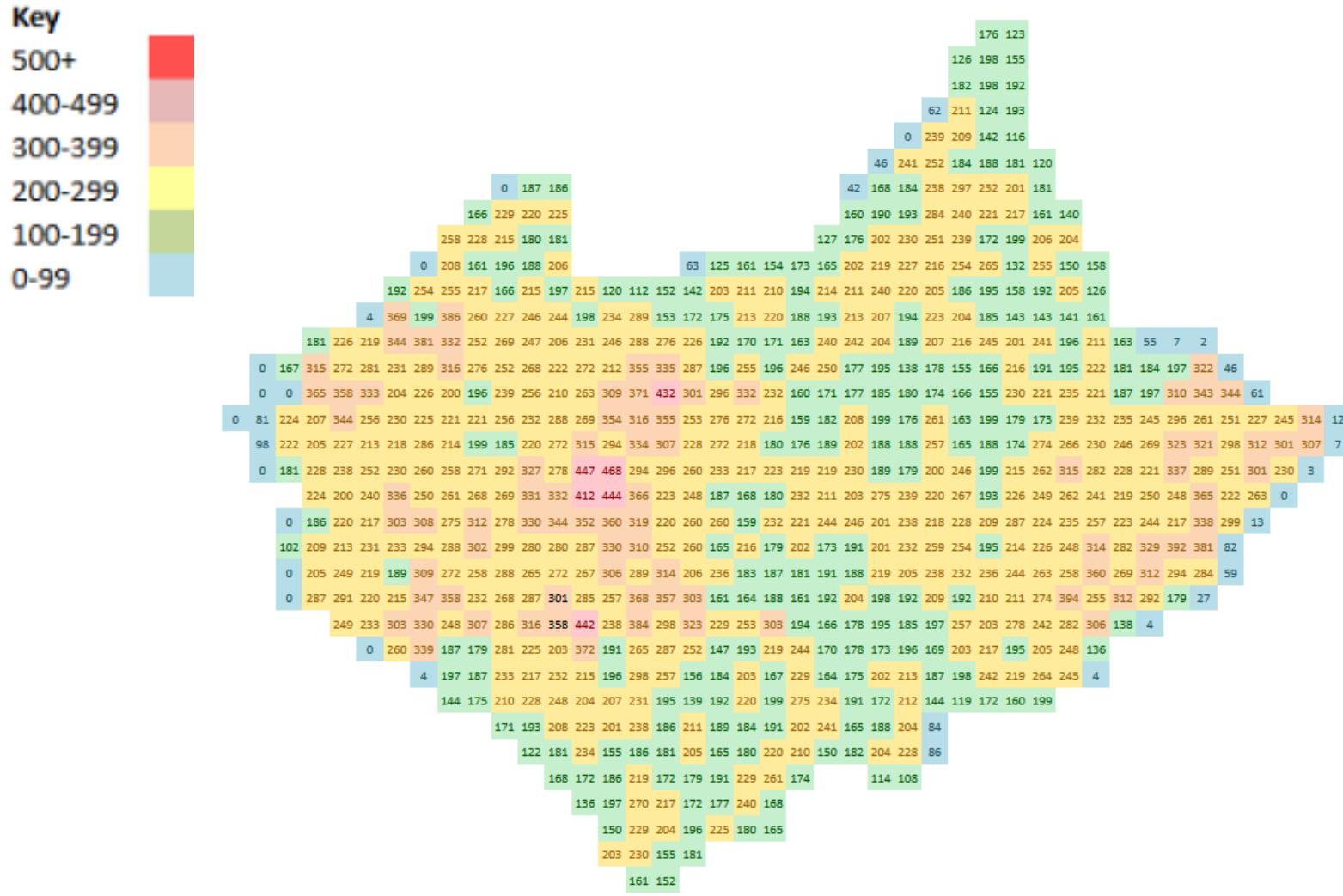
Species per Tetrad

February 2016

January 2017



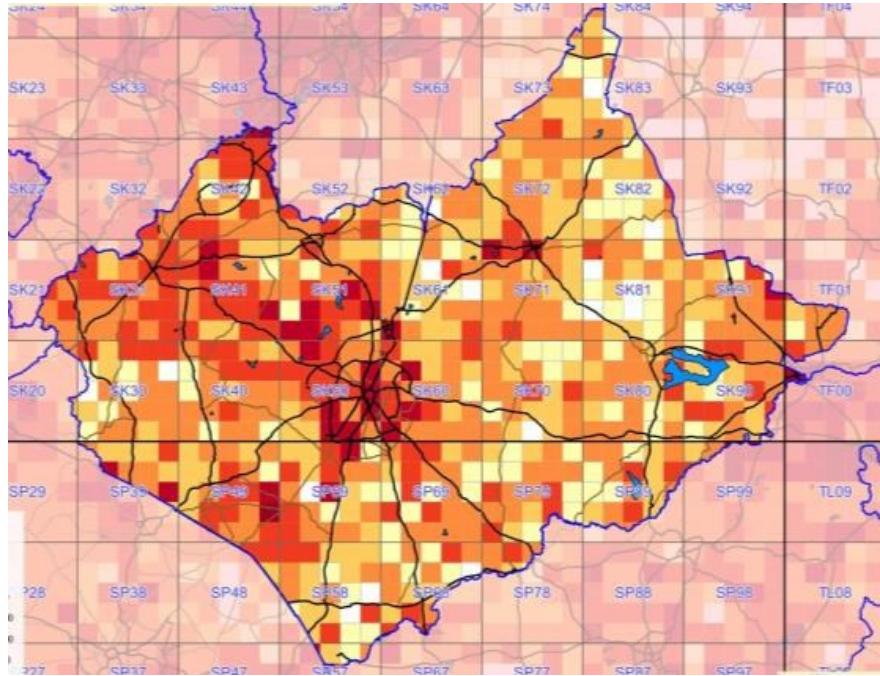
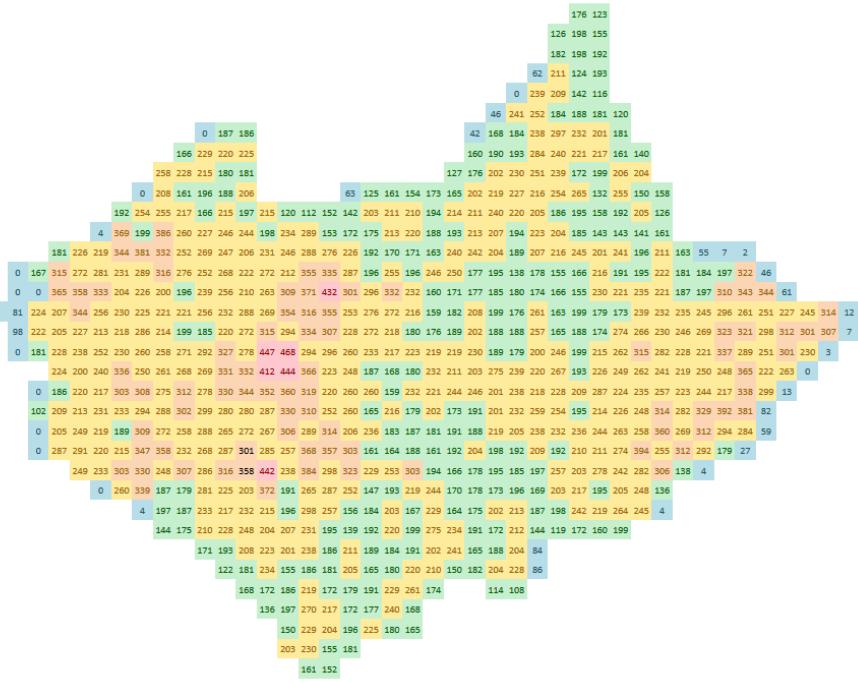
Species per Tetrad: Floras 1971, 1988



Species Coverage

Floras of 1971, 1988

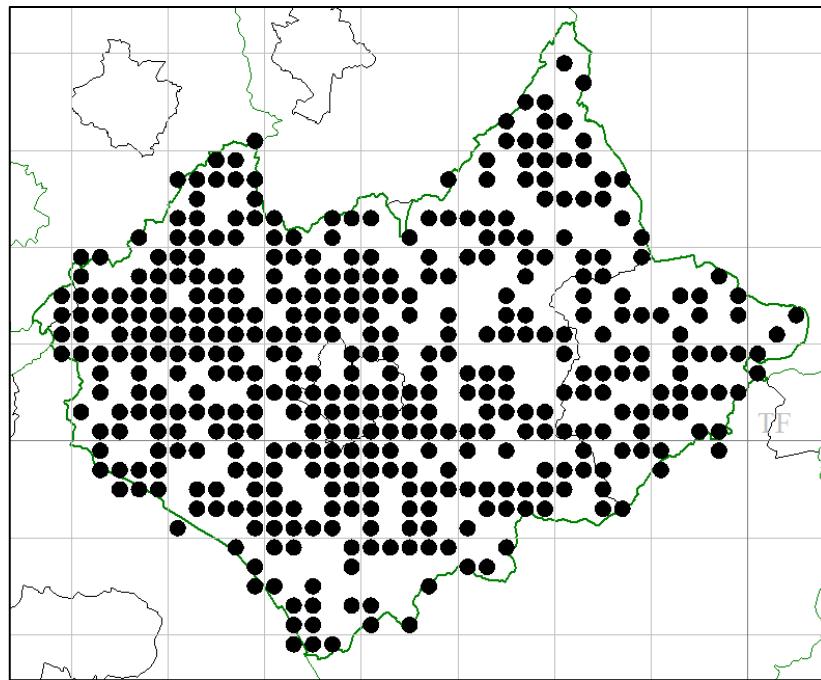
Atlas 2020 to Jan 2017



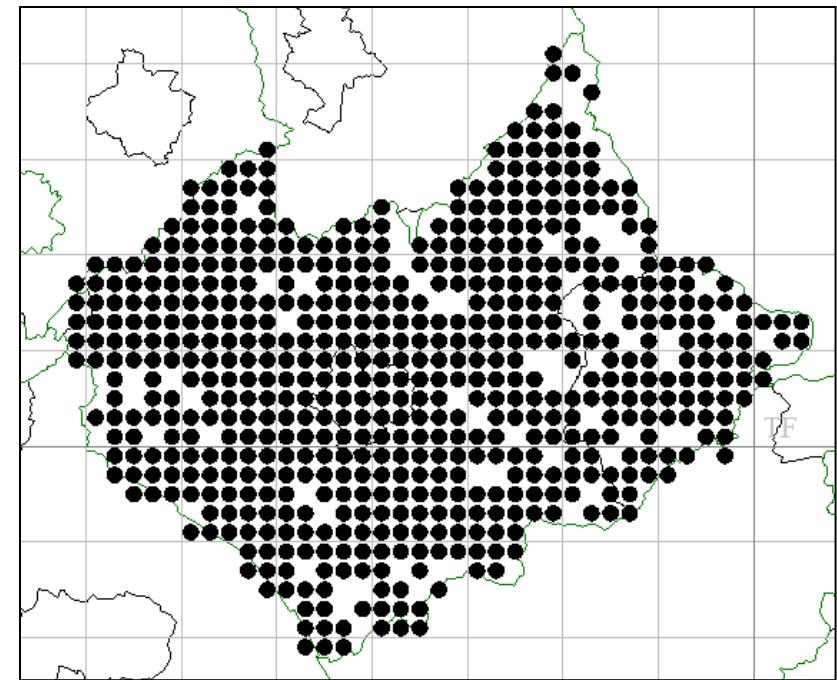
Thoroughness

Quick Assessment

Common Nettle, *Urtica dioica*



21 February 2016



18 January 2017

Recording for Atlas 2020

- Hectads and tetrads should be well recorded.
- Hectads
 - at least five **well recorded** tetrads per hectad.
- Tetrads
 - 100 species recorded and
 - 75% of species recorded before 2000.

Land Area Threshold

Low: At least 1km² of land and freshwater

High: Land area does not matter

Thoroughness of Tetrad Recording

| Date of Analysis | | 2015 | 2016 | 2017 |
|--|-------------|------|------|------|
| Well recorded tetrads | | 5 | 22 | 73 |
| Well recorded hectads | No edges | 5 | 6 | 16 |
| | All tetrads | 3 | 5 | 14 |
| The number of tetrads to achieve 'well recorded' status in all hectads | No edges | 132 | 116 | 76 |
| | All tetrads | 140 | 123 | 83 |

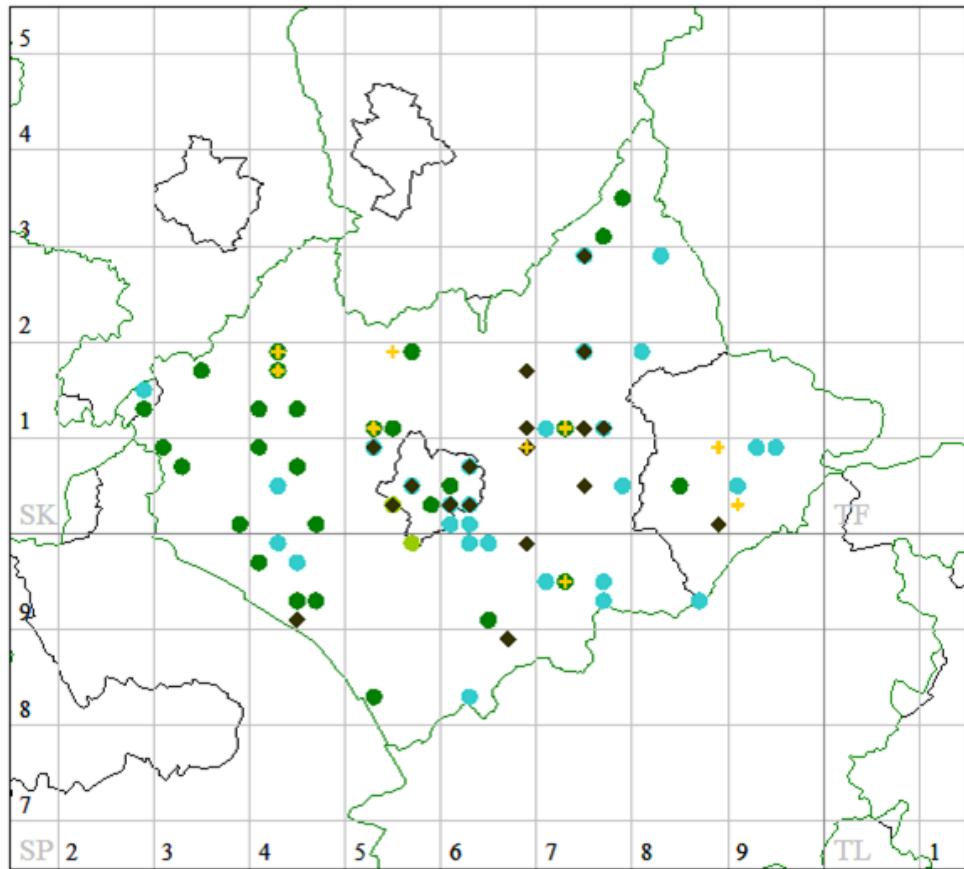
Uses of Records

- Widespread plants
- Aliens
- Coincidence mapping

Top 20 Most Widespread Species

| | | |
|------------------------------|----------------------------|------------|
| <i>Cirsium arvense</i> | Creeping Thistle | 41 hectads |
| <i>Crataegus monogyna</i> | Hawthorn | |
| <i>Fraxinus excelsior</i> | Ash | |
| <i>Galium aparine</i> | Cleavers | |
| <i>Heracleum sphondylium</i> | Hogweed | |
| <i>Lathyrus pratensis</i> | Meadow Vetchling | |
| <i>Agrostis stolonifera</i> | Creeping Bent | 40 hectads |
| <i>Anisantha sterilis</i> | Barren Brome | |
| <i>Anthriscus sylvestris</i> | Cow Parsley | |
| <i>Arrhenatherum elatius</i> | False Oat-Grass | |
| <i>Bellis perennis</i> | Daisy | |
| <i>Centaurea nigra</i> | Common Knapweed | |
| <i>Cirsium vulgare</i> | Spear Thistle | |
| <i>Dactylis glomerata</i> | Cock's-foot | |
| <i>Holcus lanatus</i> | Yorkshire-fog | |
| <i>Lamium album</i> | White Dead-nettle | |
| <i>Lolium perenne</i> | Perennial Rye-grass | |
| <i>Lotus corniculatus</i> | Common Bird's-foot-trefoil | |
| <i>Rubus fruticosus agg.</i> | Bramble | |
| <i>Sambucus nigra</i> | Elder | |
| <i>Trifolium pratense</i> | Red Clover | |
| <i>Urtica dioica</i> | Common Nettle | |

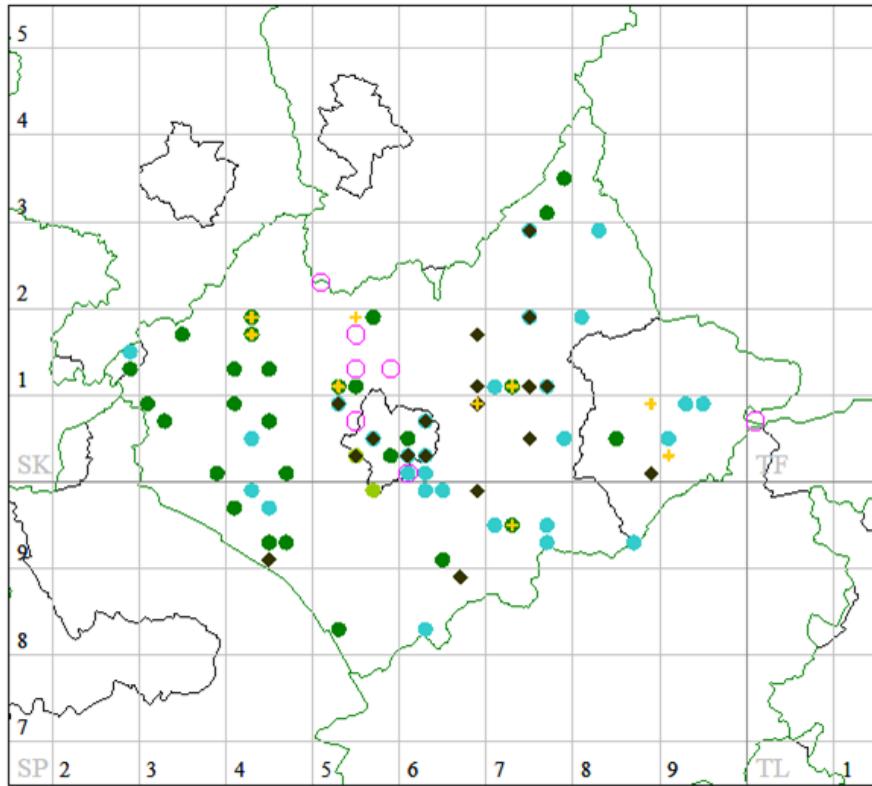
Cedar Records in vc55



- Cedrus atlantica [2km]
- ✚ Cedrus libani [2km]
- ◆ Cedrus deodara [2km]
- Cedrus atlantica f. glaucissima [2km]
- Cedrus atlantica f. atlantica [2km]



Cedar Cup Fungus

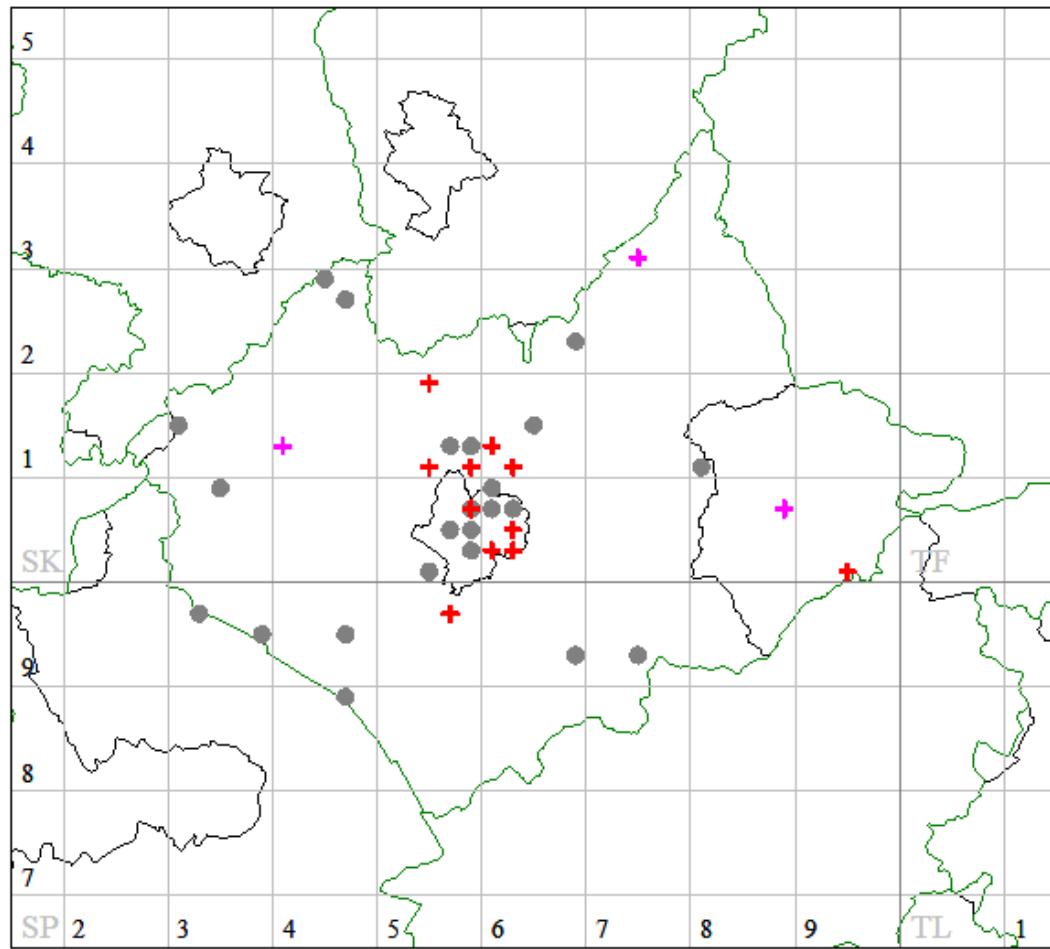


- Geopora sumneriana [2km]
- Cedrus atlantica [2km]
- + Cedrus libani [2km]
- ◆ Cedrus deodara [2km]
- Cedrus atlantica f. glaucissima [2km]
- Cedrus atlantica f. atlantica [2km]



7 sites, 6 with no record of a Cedar!

Wormwood Moths



- *Cucullia absinthii* [2km]
- *Euzophera cinerosella* [2km]
- *Artemisia absinthium* [2km]



Issues

- Access
- Recorder experience
- ‘Difficult plants’
 - Grasses
 - Rushes
 - Trees
 - Aquatics

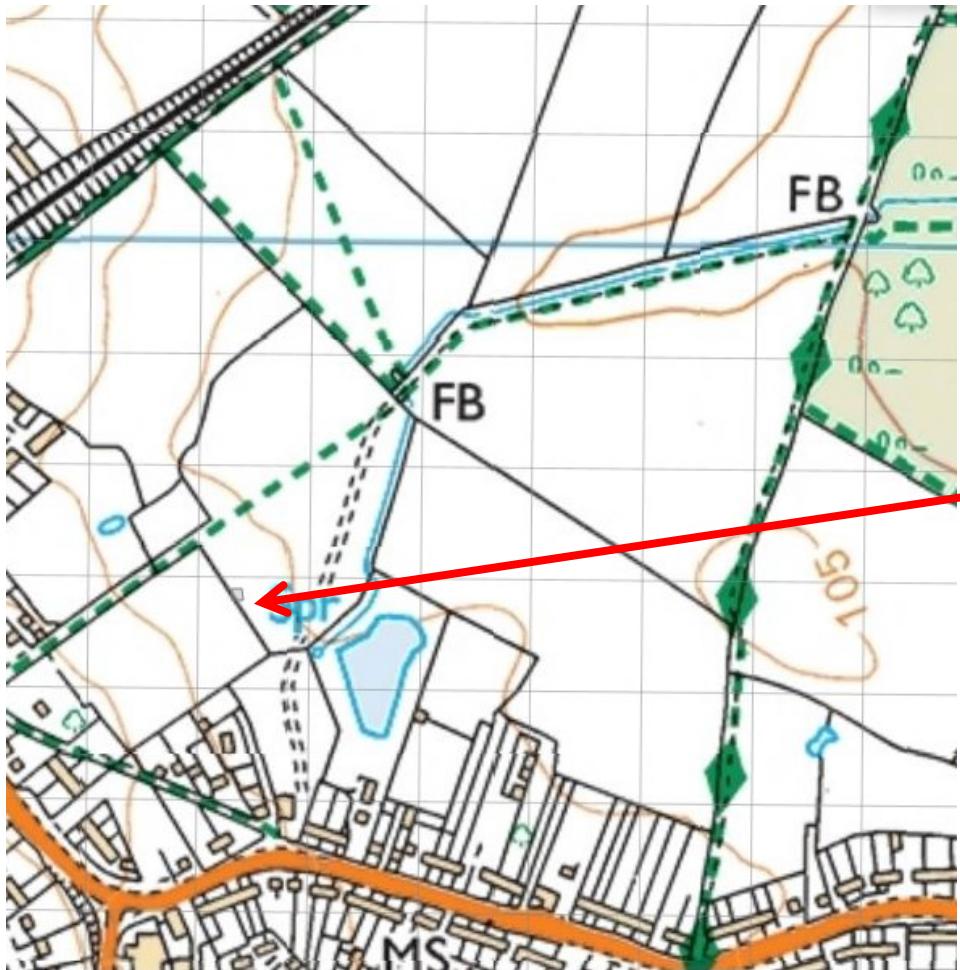
Re-finds

White Ramping-fumitory, *Fumaria capreolata* ssp. *babingtonii*



Photo by Graham Calow

Bladderwort, *Utriculararia* agg.



Also at Nature Alive, Coalville by Brian Laney

First County Records

Yellow Figwort, *Scrophularia vernalis*



At Mount St. Bernard's Abbey, Whitwick

Reversed Clover, *Trifolium resupinatum*



Photo: Karen Headley



Leicester Road, Countesthorpe

A Club-rush, *Bolboschoenus laticarpus*



Photo: Steve Mathers

Melton Country Park

London Bur-Marigold, *Bidens connata*

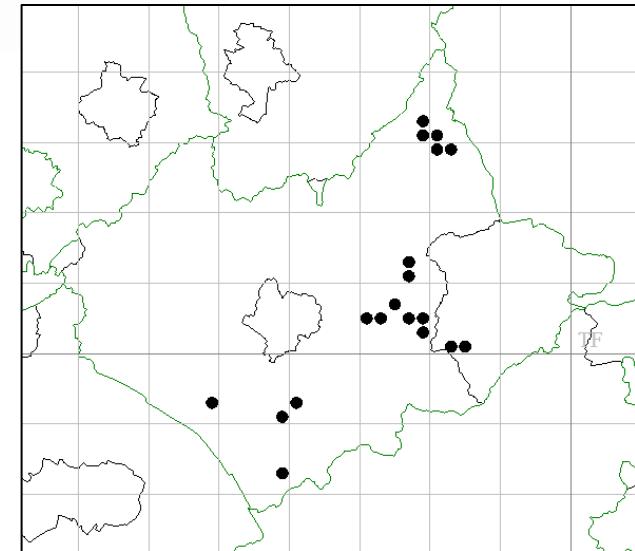
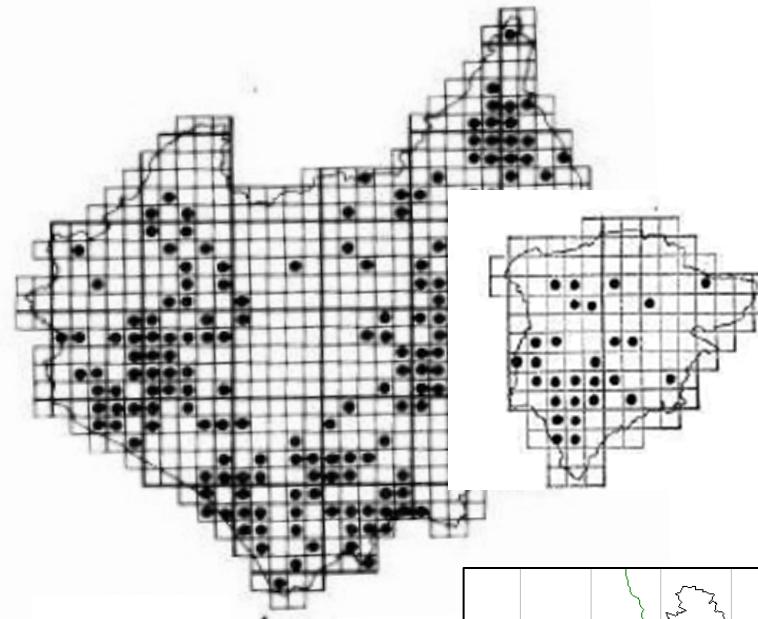


Photograph: Jean Emeny

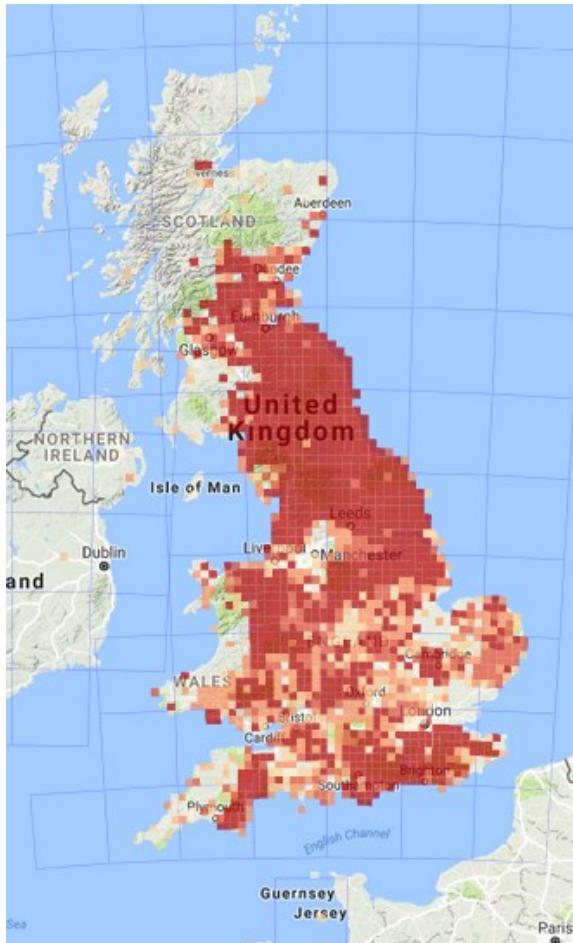
Grand Union Canal,
Foxton

Losses

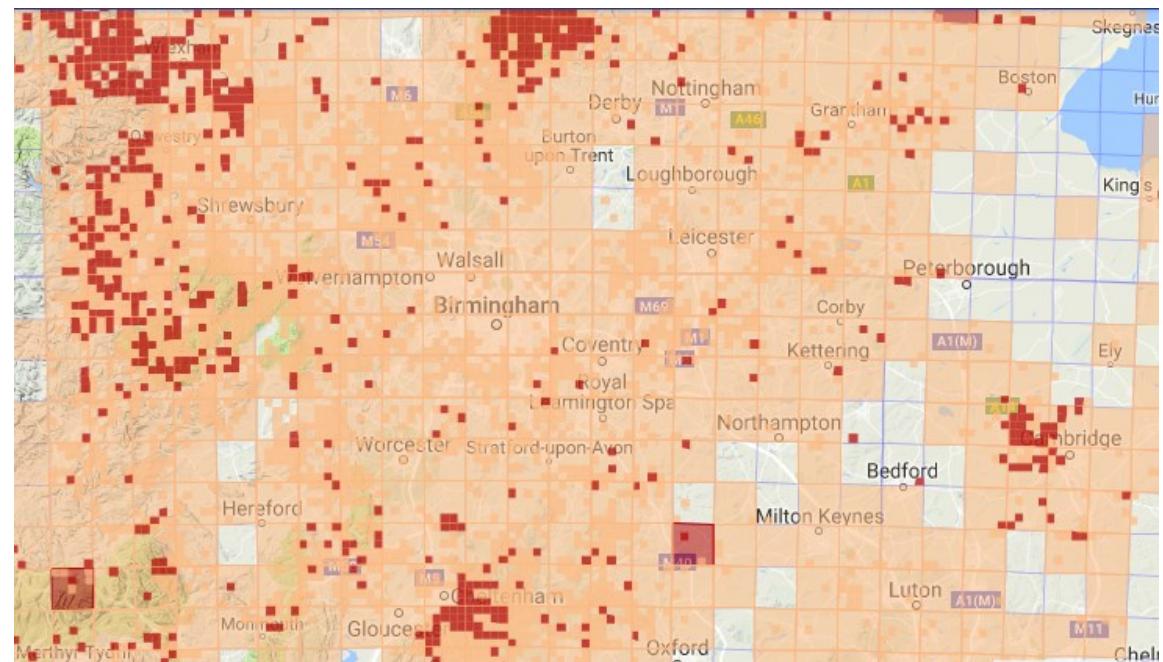
Crosswort, *Cruciata laevis*



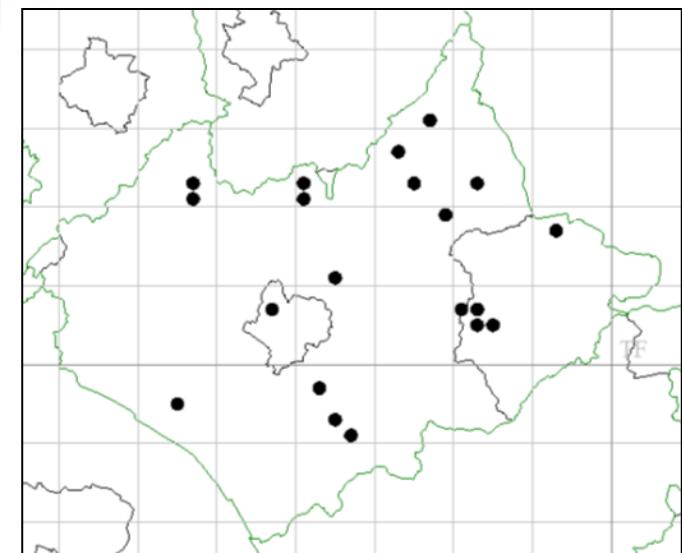
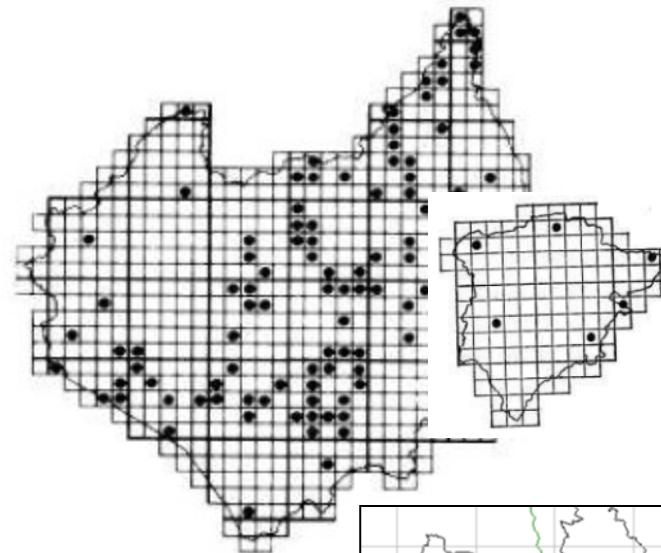
Crosswort, *Cruciata laevipes*



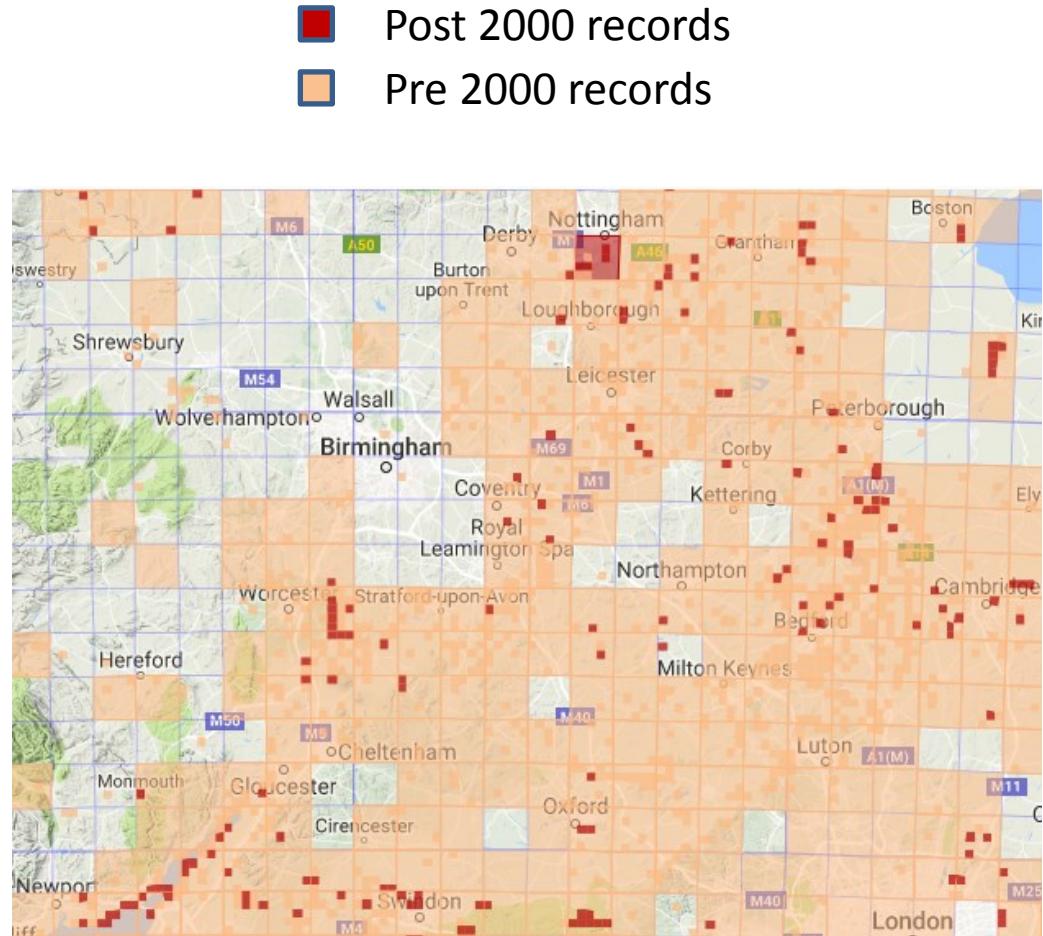
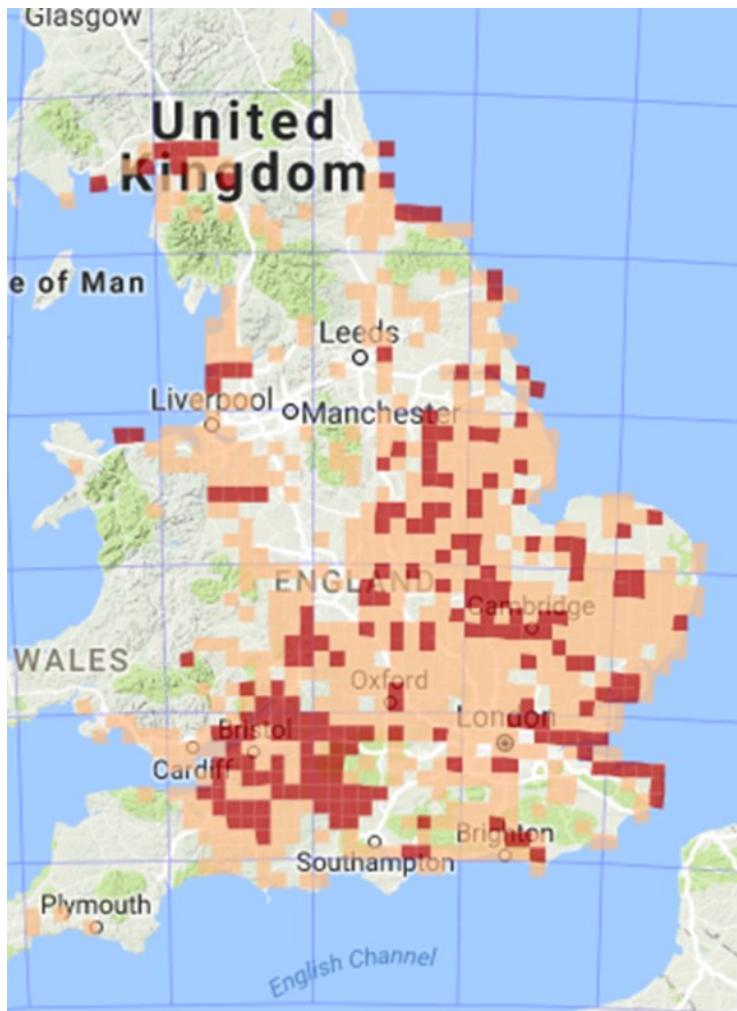
- Post 2000 records
- Pre 2000 records



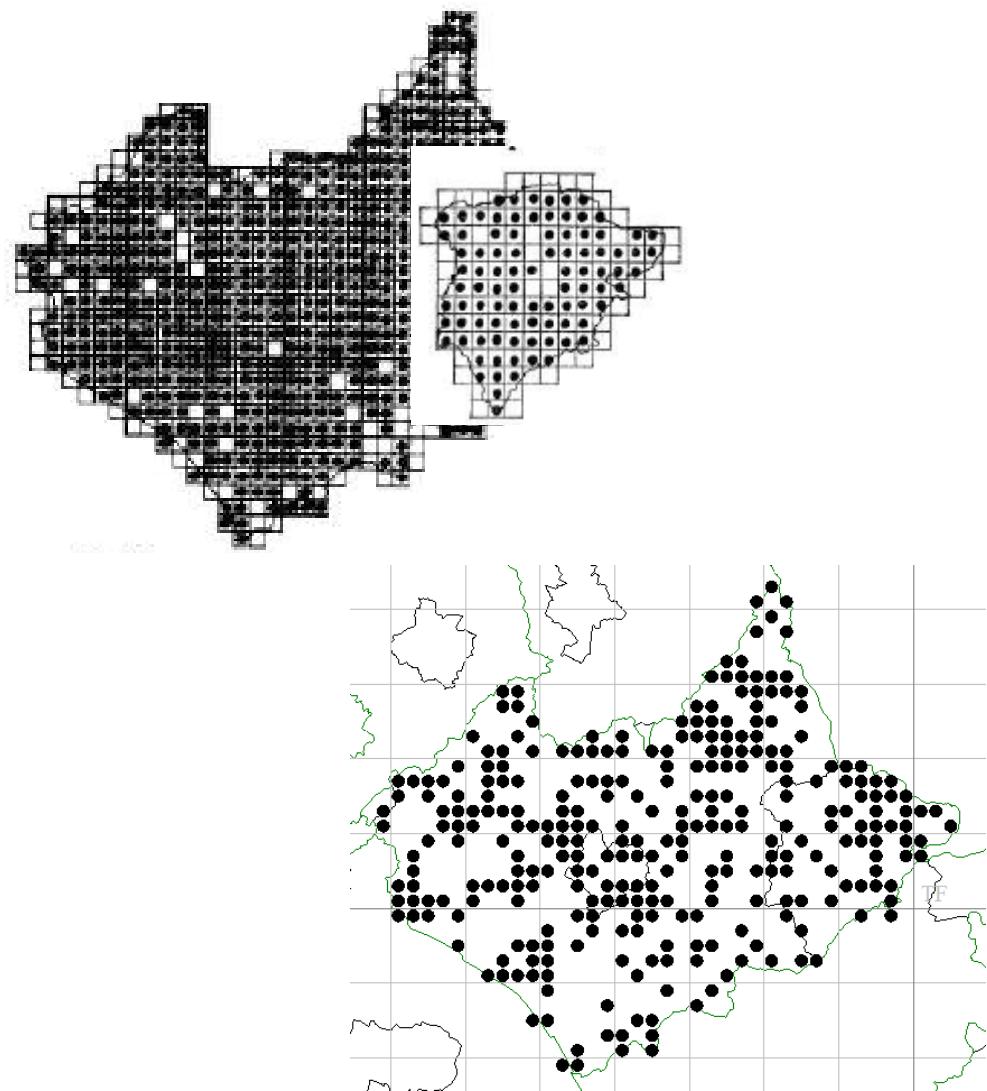
Spiny Restharow, *Ononis spinosa*



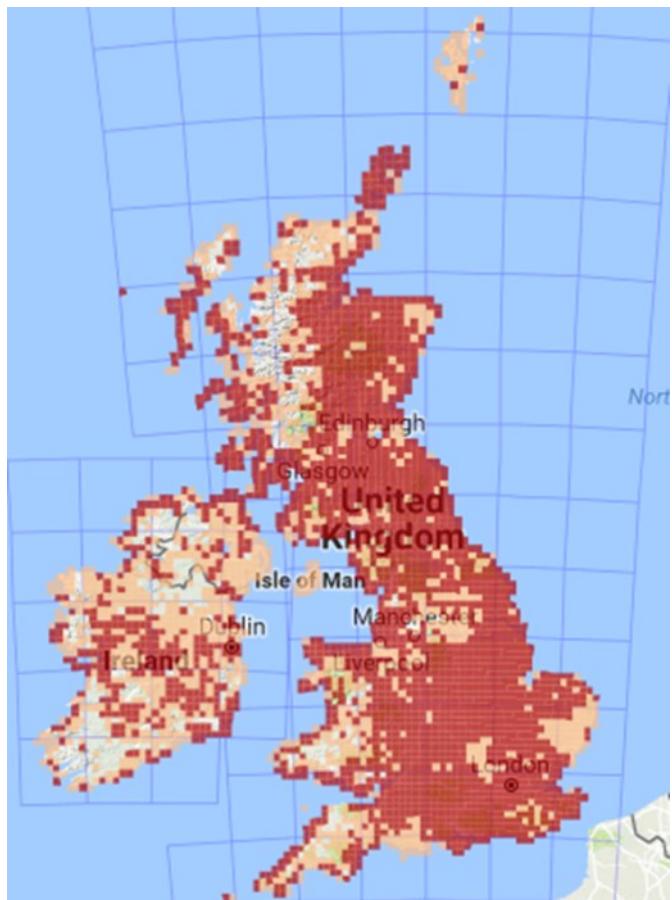
Spiny Restharrow, *Ononis spinosa*



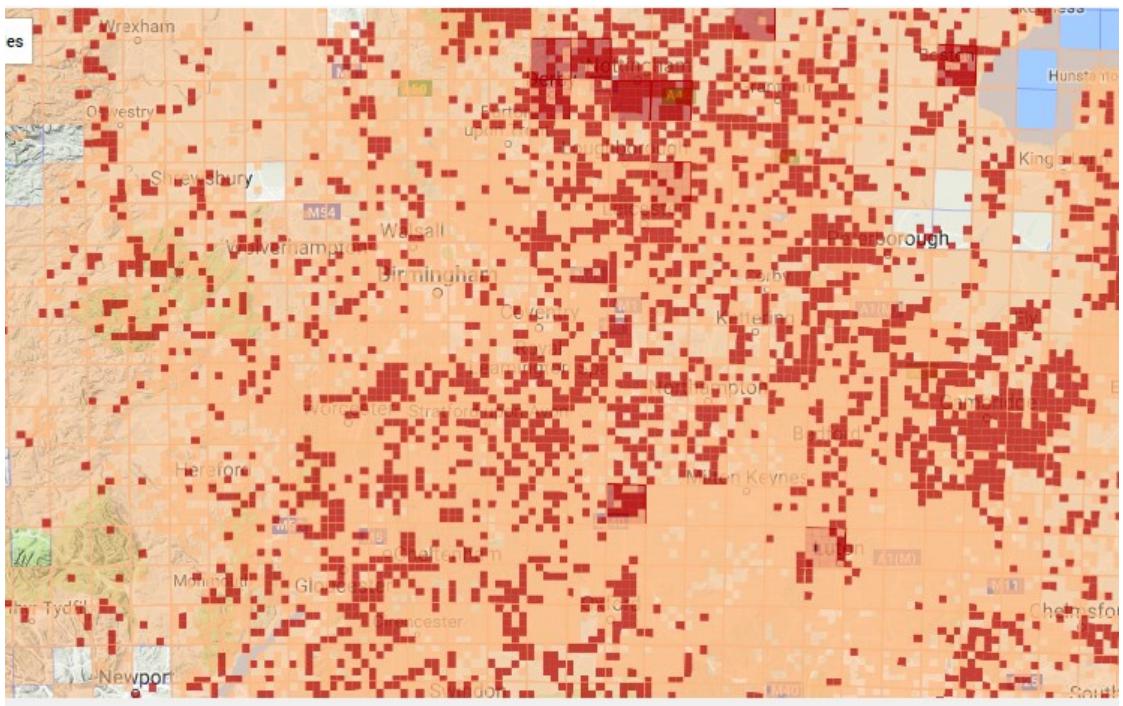
Lady's Bedstraw, *Galium verum*



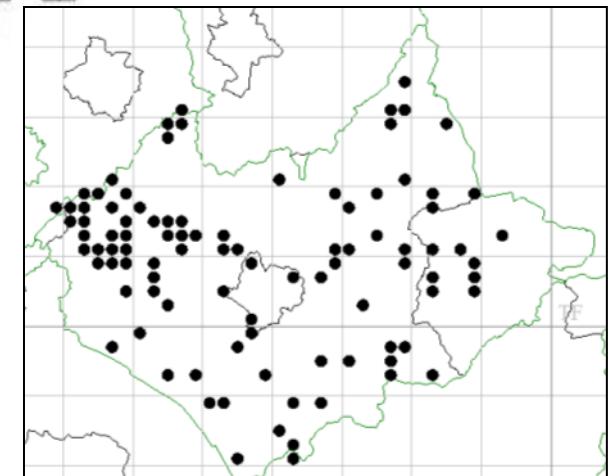
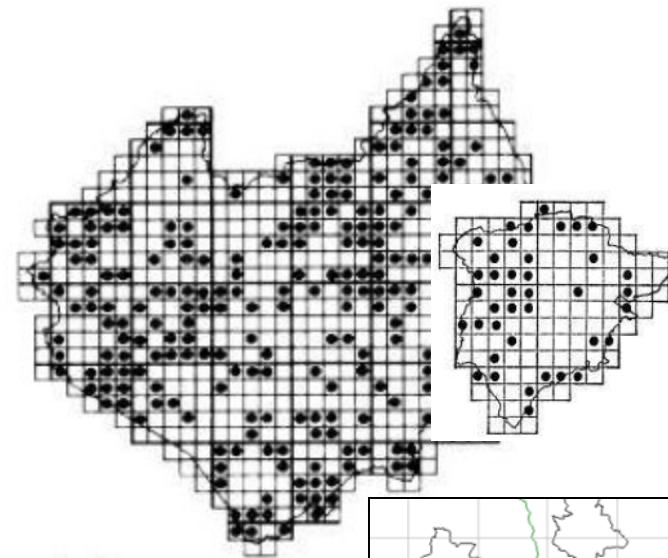
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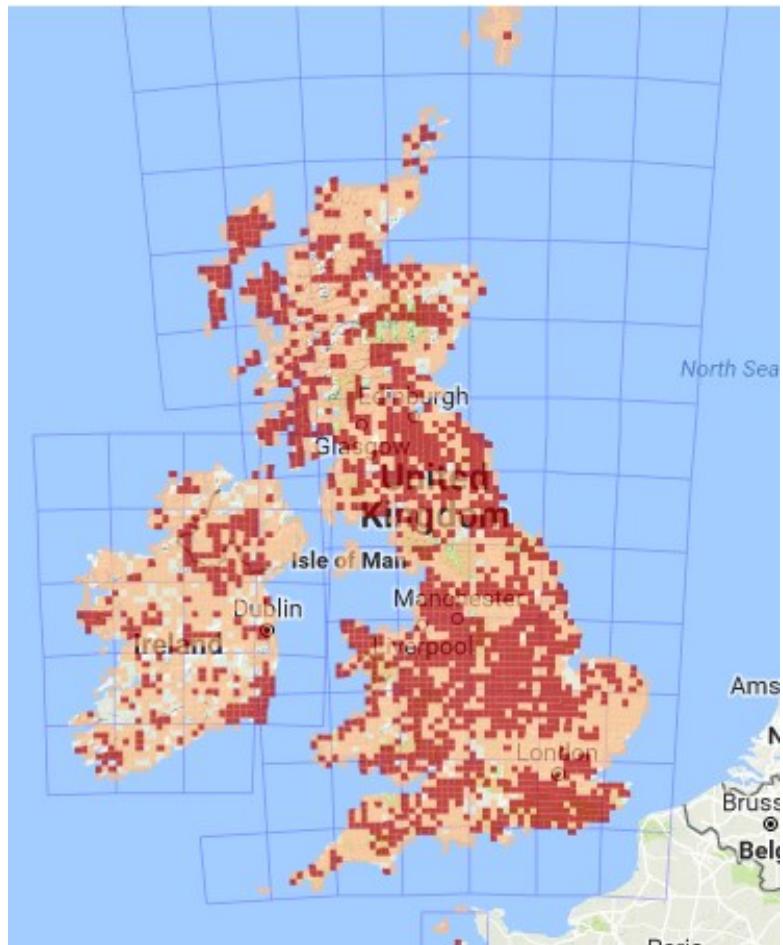
■ Post 2000 records
■ Pre 2000 records



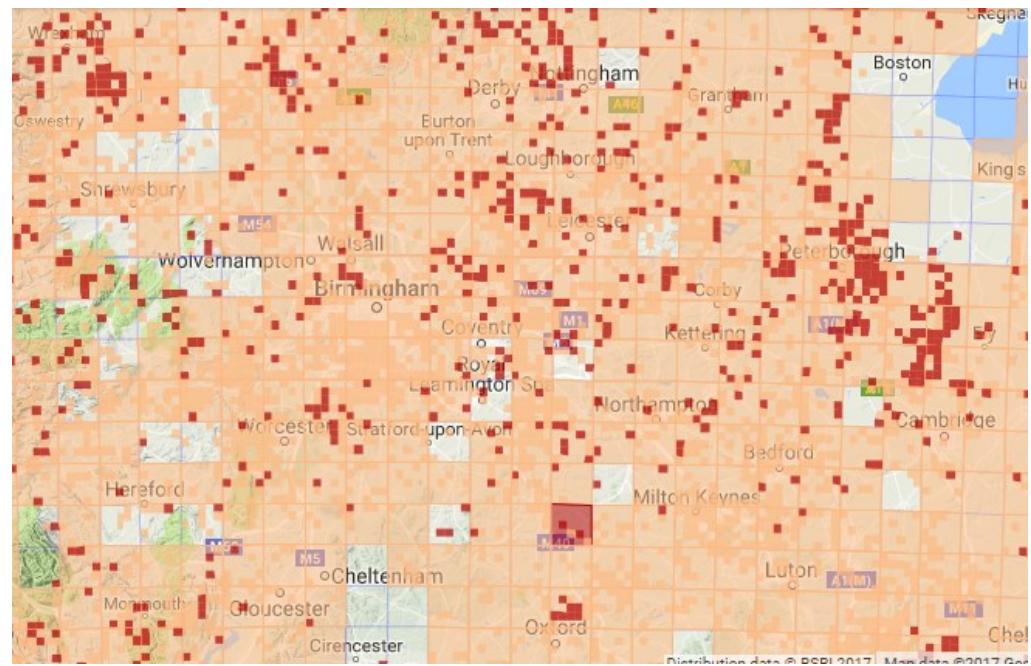
Broad-leaved Pondweed, *Potamogeton natans*



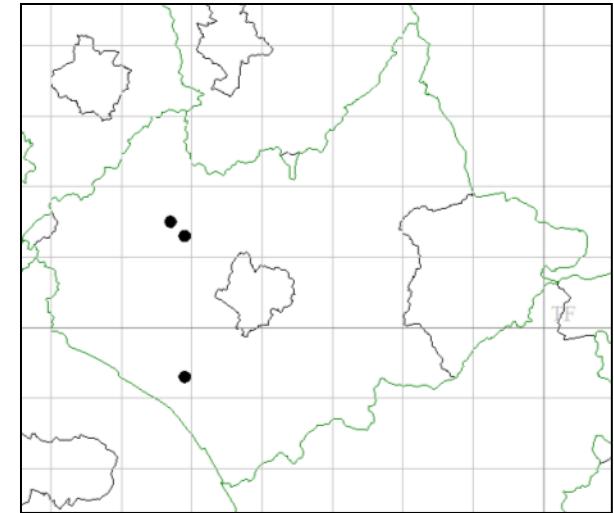
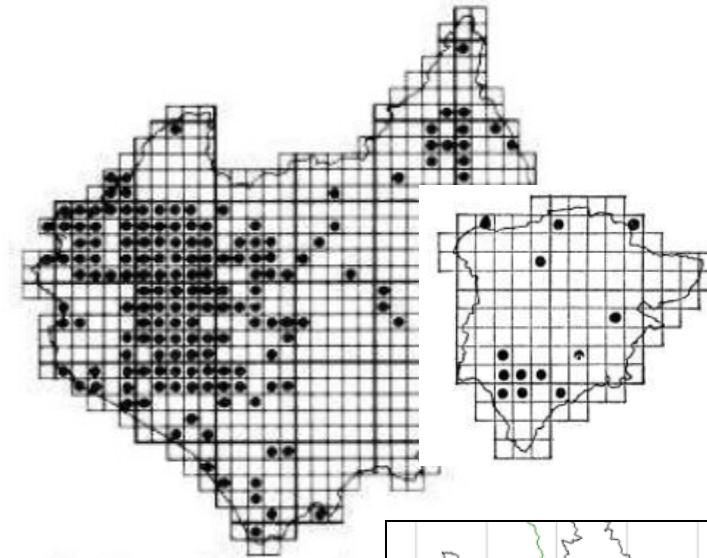
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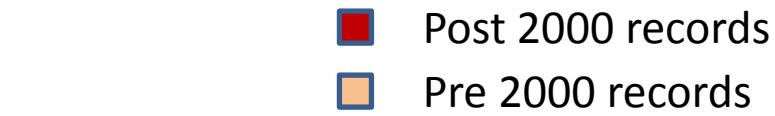
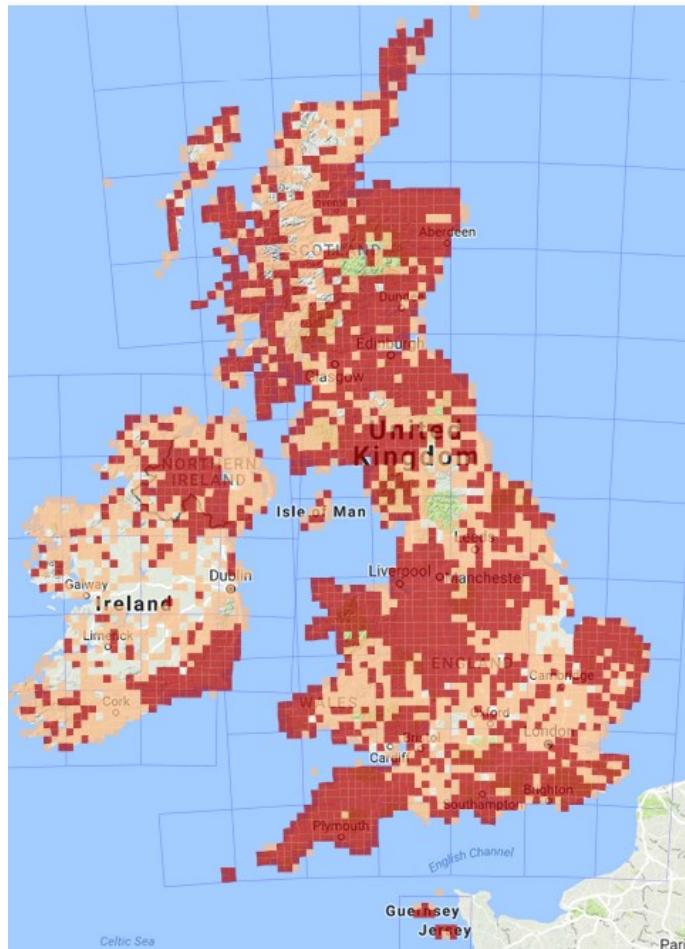
- Post 2000 records
- Pre 2000 records



Corn Spurrey, *Spergula arvensis*

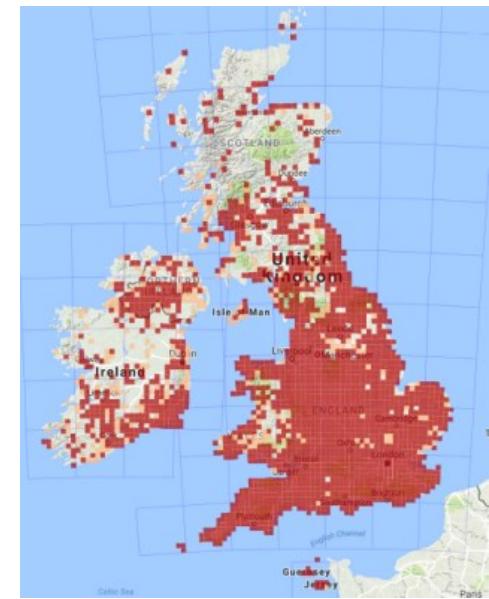
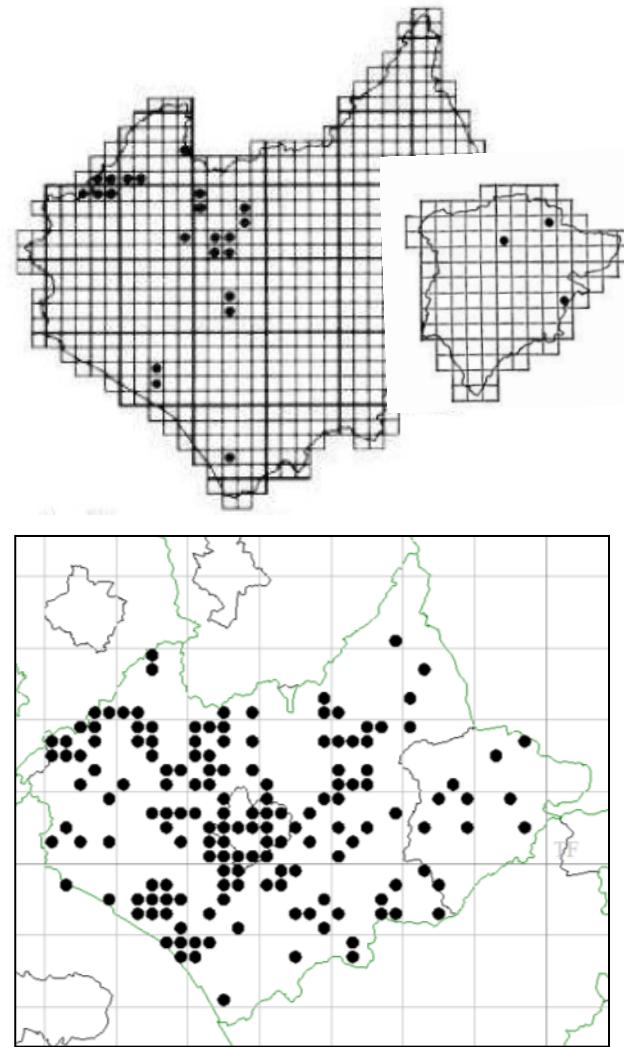


Corn Spurrey, *Spergula arvensis*

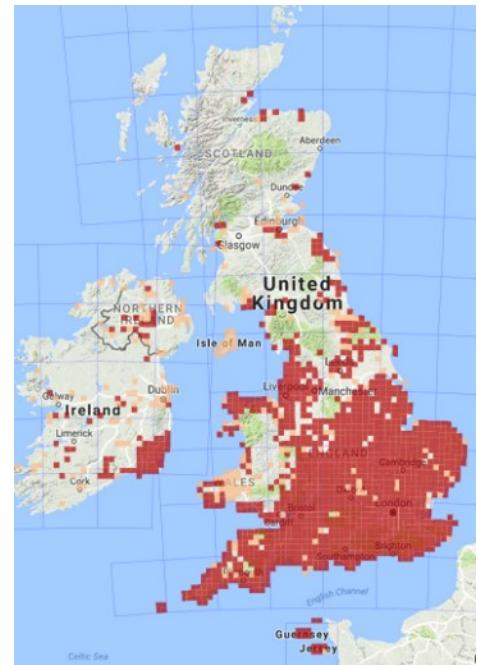
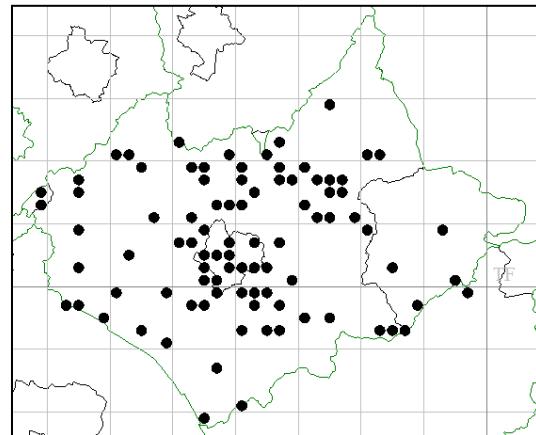
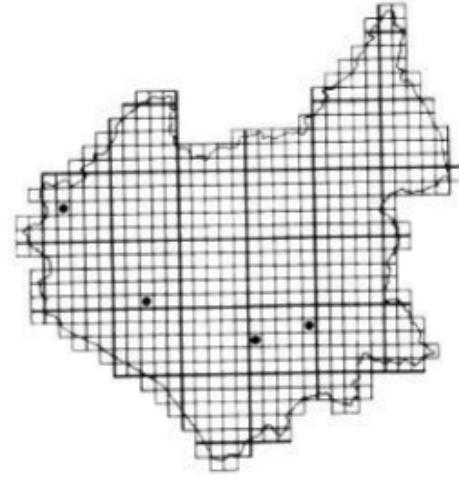


Gains

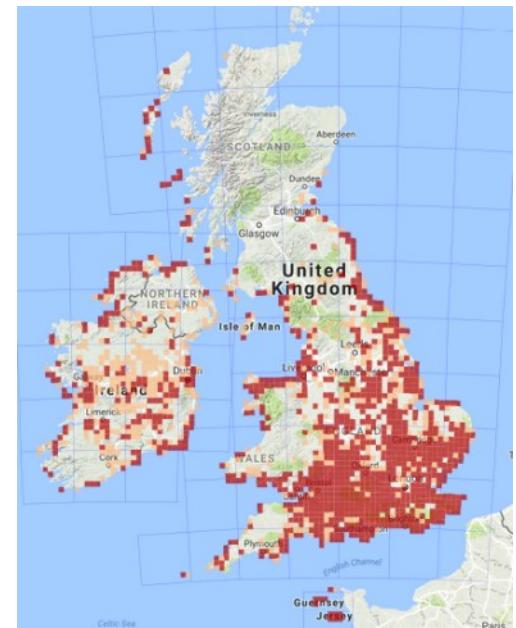
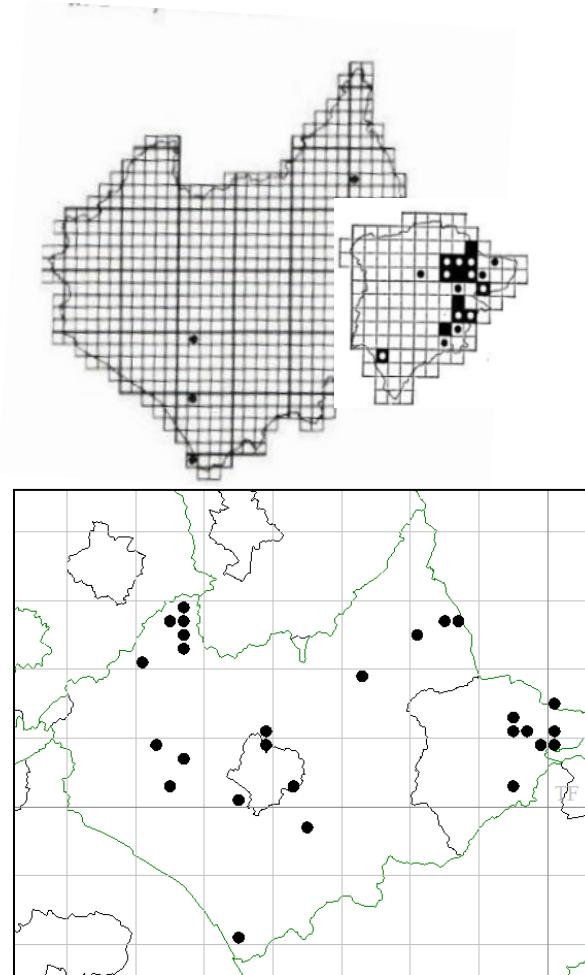
Pendulous Sedge, *Carex pendula*



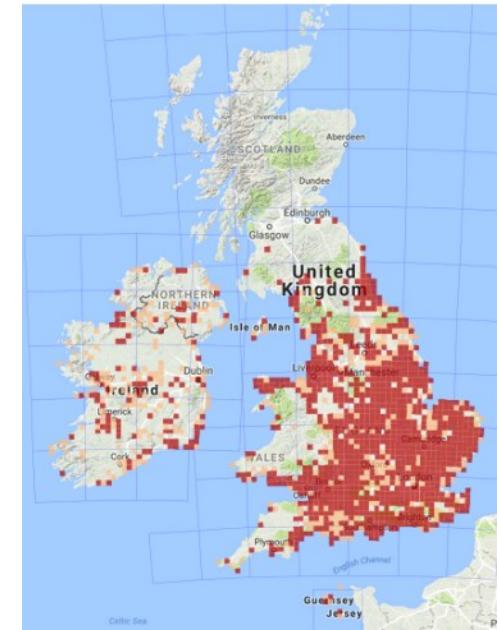
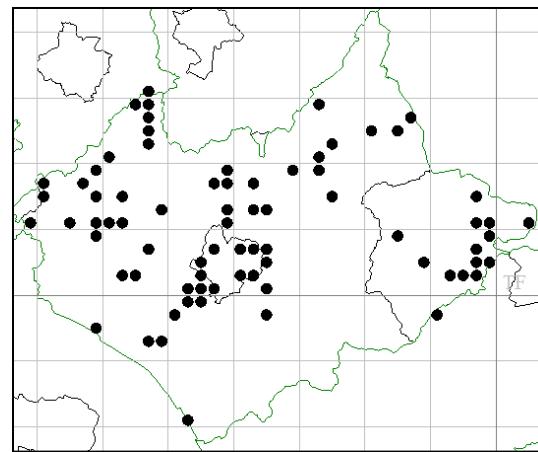
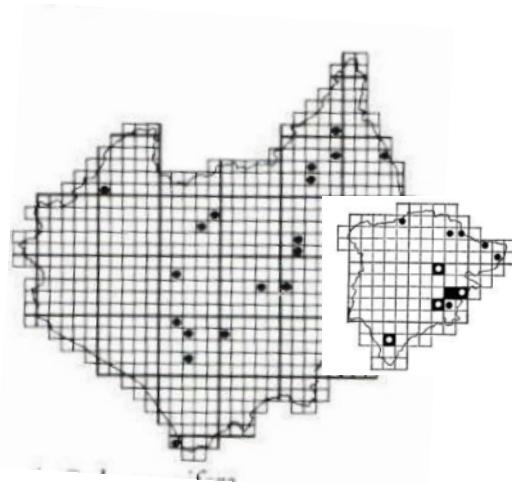
Stinking Iris, *Iris foetidissima*



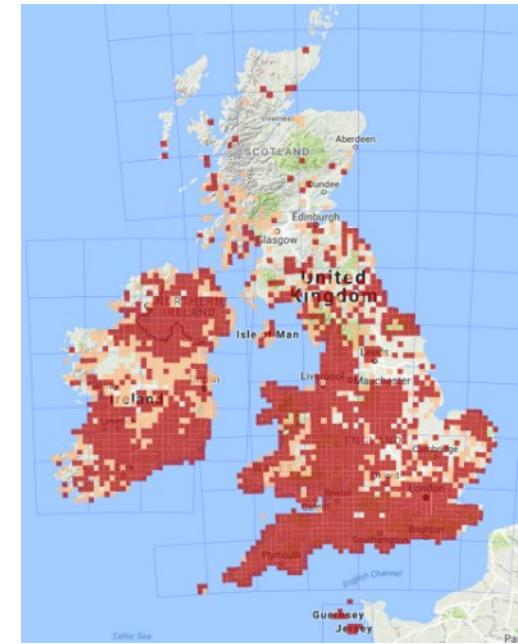
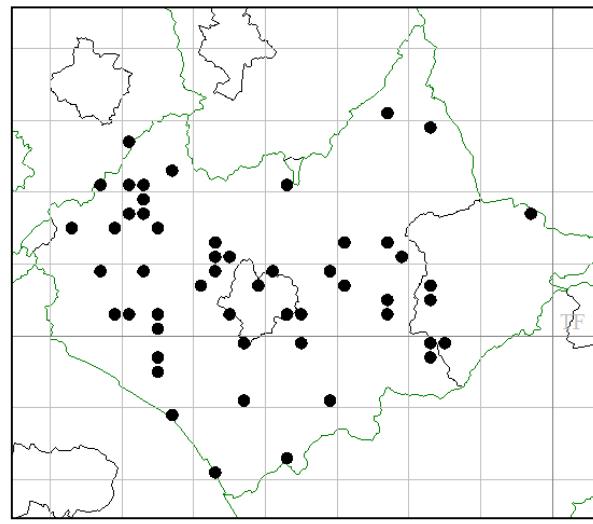
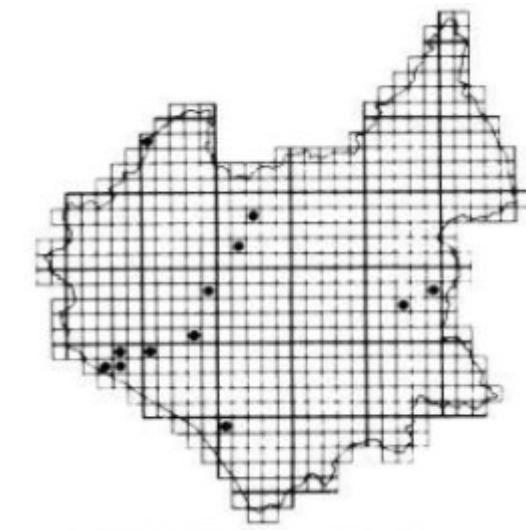
Pyramidal Orchid, *Anacamptis pyramidalis*



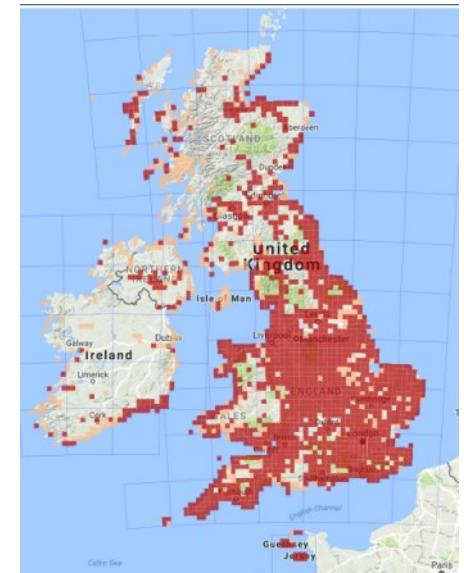
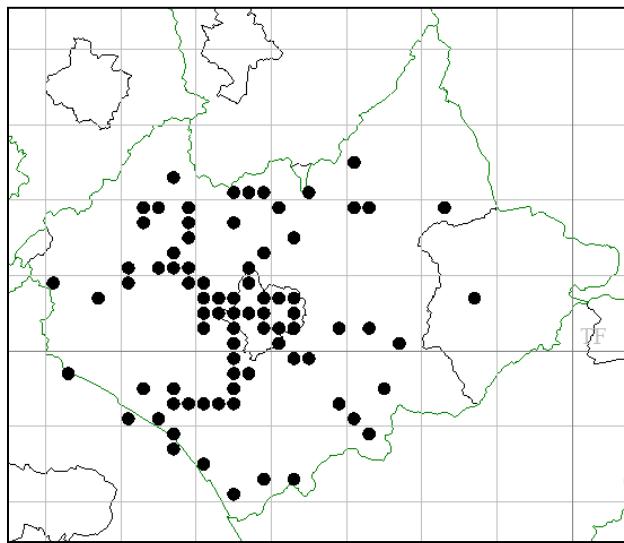
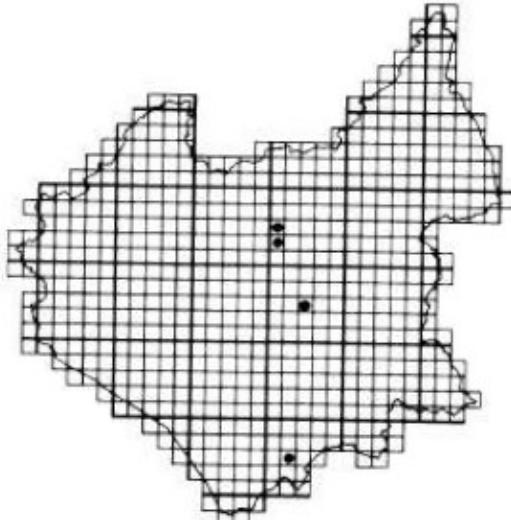
Bee Orchid, *Ophrys apifera*



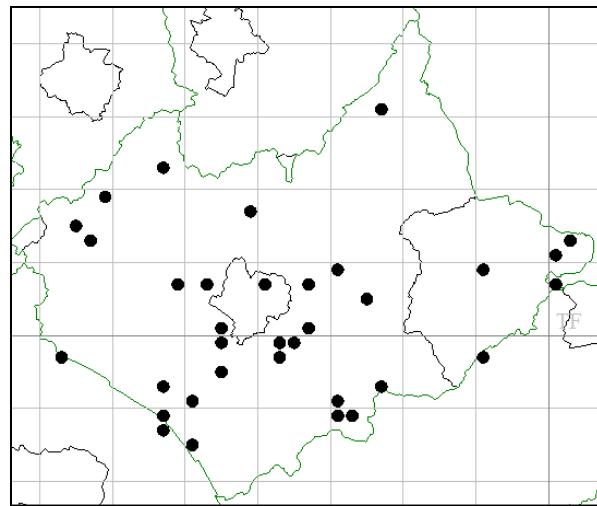
Soft Shield-fern, *Polystichum setiferum*



Danish Scurvygrass, *Cochlearia danica*



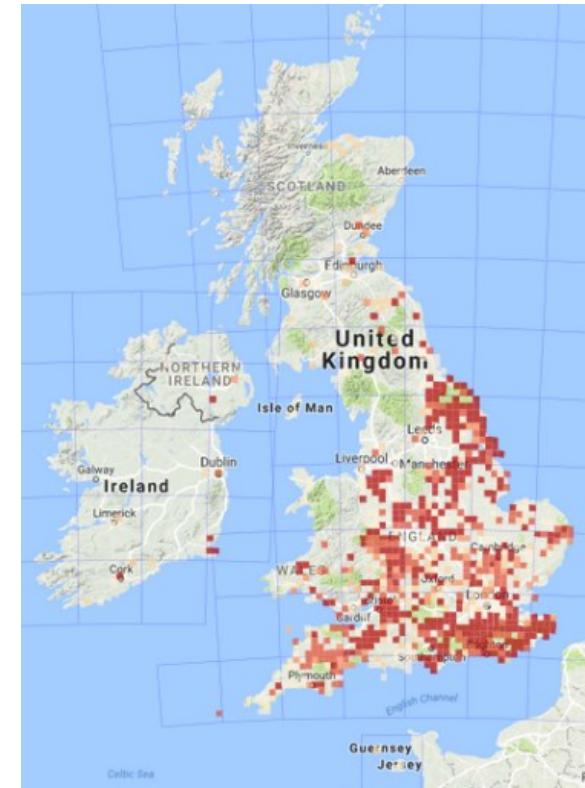
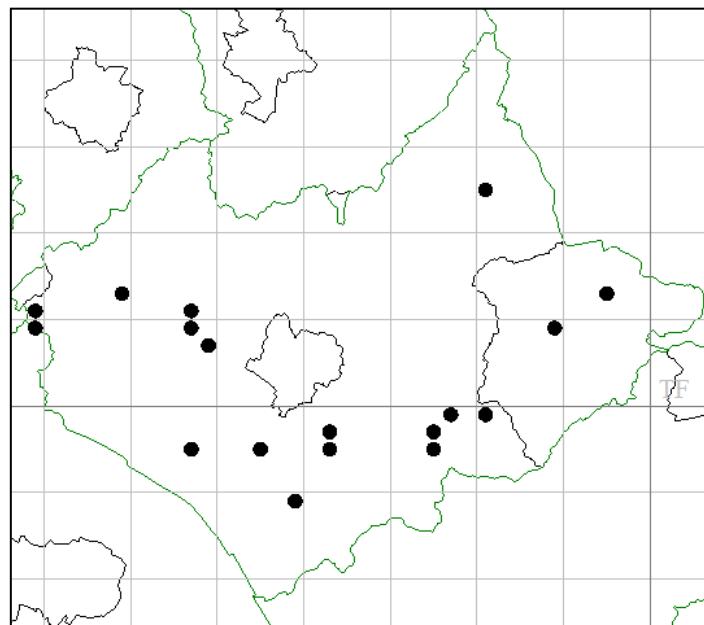
Lesser Sea-spurrey, *Spergularia marina*



Rye Brome, *Bromus secalinus*



Leicestershire: 1 record, 1973
Rutland: 1 record, 1914



Causes

- Agricultural intensification
- Land drainage
- Pond infilling
- Loss of grassland
- Verge management
- Road salting
- Environmental disturbance