

A systematic pavement flora of Sheffield

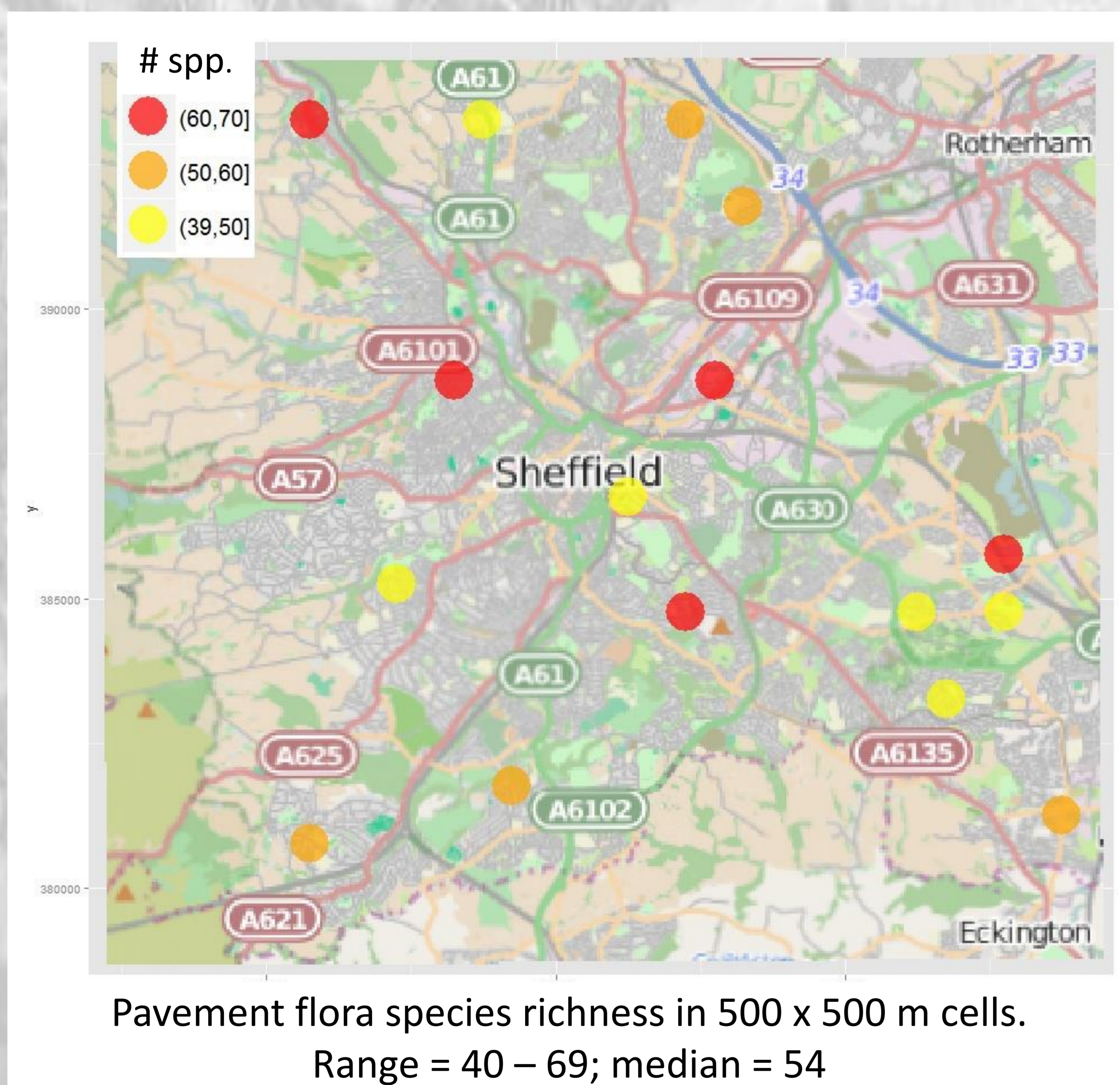
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Several street floras exist, and numerous county floras cover large conurbations, but little systematic data exist allowing the quantification of the relative frequencies of pavement weeds in a large urban area. The pavement flora of this northern city should make an interesting contrast to street floras already published e.g. Aberystwyth, Cambridge (Chater *et al.* 2000, *Nature in Cambs.*)

Approach

- Random sample of 16 monads with at least 75% urban cover
- Random 500 x 500 m cells within monads sampled for pavement flora only
- Effort in each square ~1.5 hours of surveying

Commonest species	# occ.	Selection of 'rare' spp.	# occ.
<i>Epilobium ciliatum</i>	16	<i>Aethusa cynapium</i>	1
<i>Epilobium montanum</i>	16	<i>Ajuga reptans</i> c. 'Bronze B.'	1
<i>Epilobium parviflorum</i>	16	<i>Alchemilla mollis</i>	1
<i>Euphorbia peplus</i>	16	<i>Catapodium rigidum</i>	1
<i>Scorzoneroides autumnalis</i>	16	<i>Cotoneaster horizontalis</i>	1
<i>Matricaria discoidea</i>	16	<i>Daucus carota</i>	1
<i>Poa annua</i>	16	<i>Fallopia japonica</i>	1
<i>Polygonum aviculare</i> s.l.	16	<i>Festuca ovina</i>	1
<i>Sonchus oleraceus</i>	16	<i>Galium odoratum</i>	1
<i>Taraxacum officinale</i> agg.	16	<i>Juncus effusus</i>	1
<i>Stellaria media</i>	15	<i>Kerria japonica</i>	1
<i>Capsella bursa-pastoris</i>	14	<i>Lamium maculatum</i>	1
<i>Centranthus ruber</i>	14	<i>Parietaria judaica</i>	1
<i>Geum urbanum</i>	14	<i>Phalaris minor</i>	1
<i>Sagina procumbens</i>	14	<i>Phleum pratense</i>	1
<i>Senecio vulgaris</i>	14	<i>Thuja plicata</i>	1
<i>Hordeum murinum</i>	13	<i>Vicia hirsuta</i>	1



Some initial results

- 184 species identified from 863 records
- Rare species at vice-county level were rare aliens or garden escapes e.g. *Phalaris minor*, *Sedum stoloniferum*
- Majority of species relatively rare: 69.6% in < 6 cells
- No spatial pattern (Mantel's $r = 0.09$; $P = 0.22$) detected in 500 x 500 m cell plant community data
- Even very common species can be slightly patchy in their distributions (e.g. *Senecio vulgaris*)

Future work

- Redo in 30-40 years time!
- Intensive survey of Sheffield's core urban area for comparison with broader suburbia sampled here
- Further ecological and spatial analysis

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