

URBAN AND RURAL FLORA IN EASTER ROSS

Some studies have suggested that urban sites may be botanically more diverse than rural areas, where there may be large areas of monoculture. However, retrospective investigations may not be reliable and are very dependent on recorder effort.

The present survey was a prospective comparison.

STUDY ONE: Urban and adjacent rural sites.

Fifteen urban 1km squares were selected in towns of more than 1000 population in Easter Ross. These were within the 30mph limit and in built up areas. The 15 adjacent rural 1km squares were assessed in the same way.

In each, vascular plants were recorded by the same observer (BB), in the first place with convenient access and strictly 40 minutes were spent on site, staying within approximately 100metres of the starting point. Planted species were excluded and the visit took place between April and July 2019 and within 2 days of the paired site visit.

196 species were noted in the urban sites and 221 in the rural. Of the total of 306 recorded taxa only 111 were found in both urban and rural sites (36%).

There were more neophytes (aliens) in towns (22% as opposed to 7% in rural squares).

STUDY 2: Urban and remote rural sites.

10 urban sites were selected in a similar way to study one. 10 rural squares with convenient access were selected at least 20km from the urban squares.

Once more recording took place within 40 minutes within approximately 200 m of the starting point and was undertaken in July or August 2019.

182 urban species and 166 rural species were recorded.

Of the total of 272 species in the study only 76 were found in both urban and rural sites (28%). In the urban squares 19% were neophytes as opposed to 2% in rural squares.

Species such as *Asplenium ruta-muraria* (Wall-rue), *Linaria purpurea* (Purple toadflax) and *Veronica filiformis* (Slender Speedwell) were only found in towns. Species only found in rural places included: *Blechnum spicant* (Hard Fern), *Calluna vulgaris* (Heather) and *Nardus stricta* (Mat-grass).

Comment: Taken together these two investigations do not show significant differences between rural and urban species richness. There is a suggestion that rural sites near towns may show a greater species diversity than more distant locations.

The range of taxa recorded differed greatly between the two settings. As may have been expected, neophytes (aliens) were much more frequent in towns.

Drawbacks to these projects included the lack of a fully random site selection. The small Easter Ross towns may not reflect Scottish urban flora in general, although a similar study of Scottish cities did indicate a similar situation there.

The unique nature of the urban flora does indicate a need for its protection. Excessive tidiness should be discouraged, although some management will always be necessary in towns.

It might be interesting to do similar investigations with other species groups.

This study was a part of the Botanical Society of Scotland's urban flora project.

References:

Ballinger B.R. (2019) "Comparison of Urban and Rural Flora in Easter Ross" BSS News 113 34-36

Ballinger B.R. (2020) "Comparison of Urban and Rural Flora in Easter Ross- part 2" BSS News 114 27-28

Ballinger B and Grace J. (2020) "The Botanical Society of Scotland's Urban Flora Project"
BSBI News 145 31-32

	Total species	Urban species	Rural species	Both urban and rural
Urban and adjacent rural	306	196	221	111 (36%)
Urban and remote rural	272	182	166	76 (28%)

Brian Ballinger