
M34

Carex demissa-*Koenigia islandica* flush

Synonymy

Koenigia islandica-*Carex demissa* nodum Birks 1973.

Constant species

Carex demissa, *Deschampsia cespitosa*, *Juncus triglumis*, *Koenigia islandica*, *Saxifraga stellaris*, *Blindia acuta*, *Scapania undulata*.

Rare species

Juncus biglumis, *Koenigia islandica*, *Sedum villosum*.

Physiognomy

Since it was first found in Britain in 1934 and finally accurately determined in 1950 (Burt 1950, Raven & Walters 1956), *Koenigia islandica* has been observed on and around The Storr in Skye, where it was first collected, on other parts of the Trotternish ridge there (Birks 1973) and on Mull (Birse 1984), in a variety of vegetation types. In certain cases it is best seen as an occasional, sometimes of quite high local cover, in communities which occur widely elsewhere: some stands, for example, can be placed in the *Philonoto-Saxifragetum*, while others are very similar to the *Festuca-Agrostis-Alchemilla* or *Carex-Polytrichum* grass-heaths. Others, however, are more peculiar and it is these which are gathered into this *Carex demissa*-*Koenigia islandica* community.

It is an open vegetation type, with a bryophyte-dominated carpet broken by areas of wet, silty and stony ground. *Scapania undulata*, *Calliergon sarmentosum* and *Blindia acuta* are all common and each can be abundant, with occasional patches of *Dicranella palustris*, *Philonotis fontana*, *Drepanocladus revolvens*, *Marsipella aquatica* and *Sphagnum auriculatum*. Scattered through this mat and over the rills themselves are plants of *Carex demissa*, *Koenigia*, *Deschampsia cespitosa*, *Saxifraga stellaris*, *Juncus triglumis*, *J. bulbosus* and the rare *J. biglumis* and *Sagina saginoides*. All of these are generally of low cover, though many can show a measure of abundance and *Koenigia* itself, though its individual

plants are little more than a few centimetres across, can cover quite an area of ground.

Habitat

In common with many of the other situations in which *Koenigia* is found, both in this country and elsewhere, the *Carex-Koenigia* community occurs on ground which is kept periodically moist by circumneutral and oligotrophic waters. Typically, it is found in open silty or stony flushes fed by vigorous seepage from springs issuing at moderately high altitudes, over 500 m, from the basalt of the Trotternish ridge. In their base-status, with pH values around 6.0, and their low cation content, the waters are of similar character to those which feed the *Philonoto-Saxifragetum*, which community indeed often occupies the spring-heads above the flushes. And the occurrence in the *Carex-Koenigia* flushes of Arctic-Alpines such as *Saxifraga stellaris*, *Juncus biglumis*, *J. triglumis* and *Sagina saginoides* testifies to the similarly harsh montane conditions that both vegetation types favour. But, at least as far as *Koenigia* is concerned, the climate, and vigorous flushing, probably have their major effect through helping to maintain the open nature of the habitat: *Koenigia* is found throughout the Arctic-Subarctic zone but only in situations where there is freedom from the competition that easily overwhelms its diminutive growth.

Zonation and succession

Most often, the *Carex-Koenigia* community forms a flush zone over the open rills that spread out below a *Philonoto-Saxifragetum* spring-head, the whole complex grading around to *Carex-Polytrichum* or *Carex-Racomitrium* heaths.

Distribution

The community is confined to Skye, where it occurs scattered along the Trotternish ridge extending several kilometres north of The Storr.

Affinities

This vegetation, the description of which is based entirely on the account of Birks (1973), is very similar in its general character to the *Philonoto-Saxifragetum*. More so than there, the presence of species such as *Carex demissa*, *Juncus triglumis* and *Blindia acuta* suggests some affinity with montane Caricion davallianae mires but, by and large, this community belongs among our Montion springs and flushes where plants like *Saxifraga stellaris*, *Calliargon sarmentosum*, *Scapania undulata* and *Deschampsia cespitosa* are characteristic. Rather similar vegetation types occur in Scandinavia, from

where a *Carex rufina*-*Koenigia-Acrocladium sarmentosum* Association has been described by Gjaerevøll (1956) and Lid (1959), and in Iceland (Sörensen 1942, Steindórsson 1963, Hadač 1971). In Iceland, the distinctive conjunction of *Koenigia* with *Saxifraga stellaris*, *Juncus triglumis* and *Deschampsia cespitosa* ssp. *alpina*, led Sörensen (1942) to suggest the erection of a Koenigio-Microjuncion alliance. The *Sagina nodosa*-*Koenigia islandica* Association which Birse (1984) described from Mull, may also belong to the Montio-Cardaminetea, but it is rather different from this *Carex*-*Koenigia* flush and needs further sampling.

Floristic table M34

<i>Carex demissa</i>	4 (3–4)
<i>Koenigia islandica</i>	4 (3–6)
<i>Deschampsia cespitosa</i>	4 (3–5)
<i>Saxifraga stellaris</i>	4 (1–6)
<i>Scapania undulata</i>	4 (2–8)
<i>Blindia acuta</i>	4 (5–8)
<i>Juncus triglumis</i>	4 (3–4)
<i>Juncus biglumis</i>	3 (2–5)
<i>Calliargon sarmentosum</i>	3 (4–5)
<i>Sagina saginoides</i>	2 (2–3)
<i>Juncus bulbosus</i>	2 (3)
<i>Juncus squarrosus</i>	1 (2)
<i>Carex nigra</i>	1 (4)
<i>Cochlearia officinalis</i>	1 (1)
<i>Euphrasia frigida</i>	1 (3)
<i>Pinguicula vulgaris</i>	1 (1)
<i>Ranunculus acris</i>	1 (3)
<i>Dicranella palustris</i>	1 (3)
<i>Drepanocladus revolvens</i>	1 (3)
<i>Philonotis fontana</i>	1 (4)
<i>Sphagnum auriculatum</i>	1 (3)
<i>Marsipella emarginata</i>	1 (4)
<i>Carex dioica</i>	1 (1)
<i>Luzula spicata</i>	1 (3)
<i>Racomitrium heterostichum</i>	1 (3)
Number of samples	4
Number of species/sample	13 (10–15)
Vegetation cover (%)	47 (30–60)
Altitude (m)	625 (510–675)
Slope (°)	4 (0–8)