

### **Family: Juncaceae**



Figure 60. Documented range of Luzula parviflora in northern British Columbia.



Figure 61. Growth habit of Luzula parviflora in cultivation.

# *Luzula parviflora* (Ehrh.) Desv. (continued)

### small-flowered wood-rush

#### **Background Information**

*Luzula parviflora* is a circumpolar species found north to Alaska, the Yukon and the Northwest Territories, east to Newfoundland, south to New York, Michigan, Wyoming and California, and is also found in Eurasia and Greenland. In British Columiba, it is found on wet to mesic soils in moist open forests and marshy areas in boreal and subalpine forests and above treeline (Gerling et al. 1996, Douglas et al. 2001a).

<u>Growth Form</u>: Rhizomatous on solitary stems, reddish at base; large yellowish green basal leaves, 12-17 cm long, 5-10 mm wide (Hämet-Ahti 1971); single or paired flowers with open nodding panicle; mature plant size 20-80 cm high (MacKinnon et al. 1992, Douglas et al. 1994).

<u>Site Preferences</u>: Fairly nutrient rich, mesic to moist alluvial forests, thickets, and meadows at low to high elevations (Hämet-Ahti, 1971, MacKinnon et al. 1992, Douglas et al. 1994). In coastal B.C. reported to be shade tolerant/intolerant, occurring on fresh to very moist nitrogen-medium soils. Less abundant on water-shedding and water-receiving sites, and is characteristic of friable mor and acidic modor humus forms (Klinka et al. 1989). *Luzula parviflora* is reported by Gerling et al. (1996) to grow in cool valley bottoms on mesic to sub-hygric sites in Alberta's upper foothills, where temperatures are cool and average annual precipitation is near 540 mm (340 mm of which falls in the summer).

#### **Seed Information**

Figure 62. Seeds of Luzula parviflora.

Rule divisions are 1.0 mm.

#### **Considerations for Growing**

#### Techniques for Seed Production

*Seed treatment*: Stratification for two months at  $5^{\circ}$ C appears to have reduced germination capacity, at least when tested at  $25^{\circ}/15^{\circ}$ C, so no pre-germination treatment is recommended.

*Soil considerations*: Establish on loamy, well prepared, soils with a firm seedbed; germinates best in cool soils.

*Stand establishment*: Site should be free of all weeds. Our *Luzula parviflora* plot was sprayed with the selective broadleaf herbicide Banvel<sup>TM</sup> (active ingredient dicamba) to control weeds with no apparent damage to plant growth. Little is known about stand establishment from seed.

# *Luzula parviflora* (Ehrh.) Desv. (continued)

### small-flowered wood-rush

#### (Techniques for Seed Production, Stand establishment continued)

Our seed production plots were successfully established by propagating seedlings from seed in containers in a greenhouse, with plugs then transplanted to the field.

*Row spacing*: Unknown; suggest 75 to 120 cm under dryland conditions, 30 to 90 cm with good irrigation.

*Seeding density*: Unknown at present; suggest 60-100 PLS seeds per linear metre (Smith and Smith 2000).

Seeding depth: Shallow.

*Stand maintenance*: Regularly cultivate rows and spot spray with herbicide to keep plot weed free; annual fertilization with low N formulations may extend the life of the plot.

#### Harvesting and Seed Processing

*Date of first harvesting* in the Bulkley Valley of northwestern B.C. has been as early as July 17<sup>th</sup>. This species shatters moderately easily.

*Hand clipping*: Use sharp hand clippers. Hold the seed heads over bins placed alongside the plants being clipped or place a bag over the seed heads before clipping to minimize seed loss.

Vacuum: Suitability unknown (not likely).

*Seed stripper*: It is unknown how well mechanical harvesting methods will work, but since the seed heads do not easily shatter and the seeds are hard, this species may be a good candidate for such methods.

Combine/thresher settings: Run at 1548 rpm with 4 mm gap.

*Seed cleaning*: Put through fanning mill with the following screen sizes: prescreen 1.2 mm x 7.1 mm slot; top screen 1.2 mm x 1.5 mm slot; bottom blank. Then do a final cleaning using a 0.6 mm hand sieve.

Storage requirements: Cool dry conditions.

#### **Considerations for Use in Revegetation**

- In Alberta, *Luzula parviflora* is reported to grow on medium to coarse wet to mesic soils (Gerling et al. 1996).
- Economical basal leaves, and ability to grow on poor soils, make this species a useful contribution to revegetation mixes at all elevations.
- Luzula parviflora provides excellent forage value (Gerling et al. 1996).

#### Other considerations

• *Luzula parviflora* is an attractive little plant with possible value as an ornamental.

Luzula	parviflora	(Ehrh.)	Desv.
(contin	ued)		

small-flowered wood-rush

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