Other Plant Families

Allium cernuum Roth var. *cernuum*

nodding onion **Family: Lilaceae**

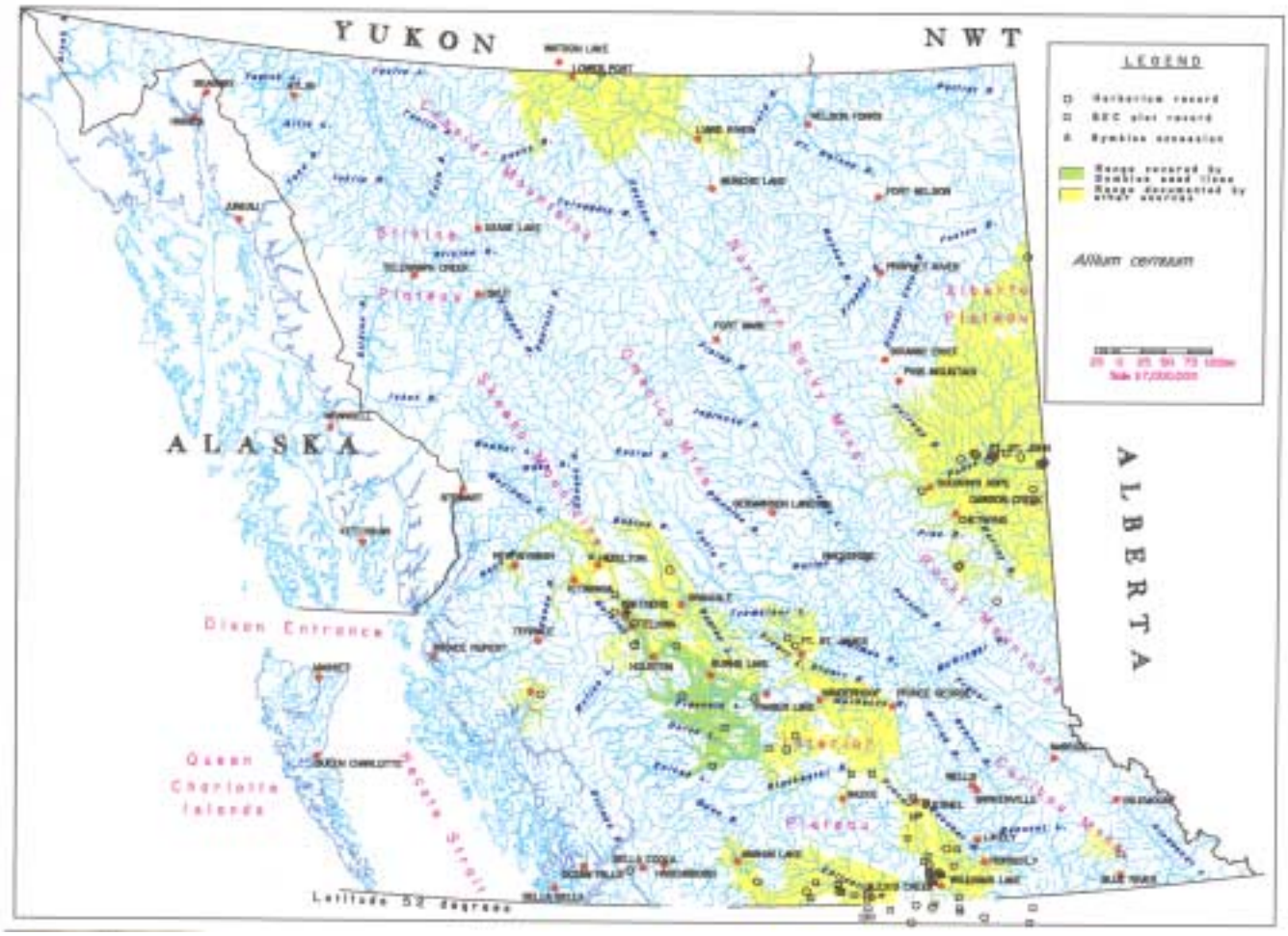

Figure 94. Documented range of *Allium cernuum* in northern British Columbia.

Figure 95. Growth habit and flowers of *Allium cernuum* in cultivation.

Allium cernuum Roth var. *cernuum* nodding onion (continued)

Background Information

Allium cernuum is found south of 56°N in British Columbia, ranging from the Pacific Coast to the dry Interior, the Kootenays and the Cariboo (Turner 1997). In the rest of North America it ranges east to Ontario, south to Georgia, Texas, and northwest to Wyoming, Utah, Idaho and Oregon (Douglas et al. 2001a). Only the one variety, *A.c.* var. *cernuum*, is described for B.C. (Douglas et al. 2001a).

Growth Form: Grows from usually clustered faint pink bulbs; slender stems; several grass-like flat or channeled leaves; numerous pink to rose-purple bell-shaped flowers in a nodding umbrella-shaped cluster; smells like onion; mature plant size is up to 50 cm tall (MacKinnon et al. 1992, Douglas et al. 1994).

Site Preferences: Found in the southern half of the northern Interior of B.C. to 55 ° N in dry open woods, exposed grassy plains, rocky crevices and sandy soils at low elevations (MacKinnon et al. 1992, Douglas et al. 2001a). Reported to be shade-intolerant (Klinka et al. 1989, Beaudry et al. 1999). In northern B.C. this species is found on medium to very rich xeric and subxeric sites in the SBS and very poor to very rich xeric and sub-xeric sites in the SBPSmk, on very poor to medium xeric sites in the SBPSmc, and medium to rich xeric and sub-xeric sites in the SBPSx or SBPSd subzones (Banner et al. 1993, Beaudry et al. 1999).

Seed Information

Seed Size: Length: 2.60 mm (2.05 - 3.03 mm).
Width: 1.72 mm (1.36 - 2.04 mm).

Seeds per gram: 348 (range: 313 - 381).

Volume to Weight Conversion: Unknown.

Germination Capacity: At 30°/20° C untreated: 42.8% (12 – 74%).
At 25°/15° C untreated: 19.8%.
stratified: 26.0%.

Germination Speed: To first germination: 14.5 days.
To 50% potential: 48.6 days.

Seed Longevity: In our research, seeds retained their viability for two years after storage under cool dry conditions.

Figure 96. Seeds of *Allium cernuum*. Rule divisions are 1.0 mm.

Considerations for Growing

Techniques for Seed Production

Seed treatment: Untreated seeds germinate best in warmer soils; in cooler soils cold-moist stratification may be beneficial (Young and Young 1990). Gerling et al. (1996) say that scarification may be beneficial.

Soil considerations: Establish on a loamy, moist well-prepared firm seedbed.

Stand establishment: Site should be free of all weeds, especially rhizomatous grasses because selective herbicides cannot be used once plants are growing. Can be established from seed or bulbs.

Allium cernuum Roth var. *cernuum* nodding onion (continued)

(Techniques for Seed Production, continued)

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 with light dusting of peat moss to hold seed in place.
Stand maintenance: Regularly cultivate rows and spot spray with herbicide to keep plot weed free; stand life 2–3 years (Pahl and Smreciu 1999); annual fertilization with low N formulations may extend the life of the plot.

Harvesting and Seed Processing
Dates of selective harvesting in the Bulkley Valley of northwestern B.C. have ranged from September 18th to September 26th. Seeds shatter 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. Do not allow seed capsules to become over-ripe or they will dehisce before harvest and you will lose many seeds. Plastic between rows is recommended so dehisced seeds can be salvaged.
Vacuum: Not recommended.
Seed stripper: Unknown suitability at present.
Combine/thresher settings: 885 rpm with 4 mm gap. Most seeds fall from seed heads while drying.
Seed cleaning: Put through vacuum separator with speed set high and suction set to low to remove dust and <5% of seeds.
Storage requirements: Cool dry conditions.

Considerations for use in revegetation

- Gerling et al. (1996) report that *Allium cernuum* has fair forage value for livestock.
- Reported to grow on wet to mesic soils in Alberta (Gerling et al. 1996).

Other considerations

- May have potential as a specialty health food (Marles et al. 2000).
- Can be used as a fresh or dry flavouring for food. First Peoples of British Columbia have historically used *Allium* spp. (Turner 1997).
- *Allium cernuum* and other wild onion bulbs may be confused with *Zigadenus venenosus* (death camas), so care should be taken when harvesting them. The best distinction is the characteristic onion odour present in the *Allium* species (Turner 1997).

Allium cernuum* Roth var. *cernuum **nodding onion (continued)**

Notes