



United States Department of Agriculture

Glacial Lake Albany Germplasm wild lupine

Lupinus perennis L.

A Conservation Plant Release by USDA NRCS Big Flats Plant Materials Center, Corning, New York



Beautiful photograph of Glacial Lake Albany Germplasm wild lupine flowers, in May 2013.

Glacial Lake Albany Germplasm wild lupine is a source-identified release. It was released in 1999 by the USDA Natural Resources Conservation Service (NRCS), Big Flats Plant Materials Center, Albany Pine Bush Preserve Commission, The Nature Conservancy, and the New York State Department of Environmental Conservation for endangered species habitat restoration in the Pine Barrens of Glacial Lake Albany, in Eastern New York.

Description

Glacial Lake Albany Germplasm wild lupine is a native, perennial, cool-season forb in the pea family, with showy purplish-blue flowers, arranged in upright spikes. Each leaf is palmately compound, divided into 8 narrow light green leaflets. It grows to a height of 2 feet, blooming in May and June. Wild lupine is a long-lived legume that fixes nitrogen and has a thick, deep taproot.

Source

Glacial Lake Albany Germplasm wild lupine was originally collected from stands within Glacial Lake Albany, from Albany to Glen Falls, New York, and within the Albany Pine Bush Preserve. The elevation within the Pine Barrens is approximately 300 feet, containing a savannah-like ecosystem with sandy soils, receiving an annual mean precipitation of 36 inches per year.



Close up of wild lupine flowers. Photo was taken at the USDA NRCS Big Flats Plant Materials Center, in August 2013.

Conservation Uses

Glacial Lake Albany Germplasm wild lupine will be used in restoration plantings on the inland pitch pine-scrub oak barrens of Glacial Lake Albany and help provide habitat for 20 rare species, specifically the federally endangered Karner blue butterfly (*Lycaeides melissa samuelis*). The caterpillars of this butterfly, as well as the larvae of persius duskywing and frosted elfin feed exclusively on the stems and leaves of wild lupine.

Glacial Lake Albany Germplasm wild lupine can also be planted in butterfly and pollinator gardens. Wild lupine flowers provide nectar, early in the season, for butterflies and being drought tolerant would be ideal for restoration on drier sites, meadows and roadsides. Honey bees, bumble bees, and eastern carpenter bees are pollinators of wild lupine.

Area of Adaptation and Use

Glacial Lake Albany Germplasm wild lupine is well adapted to dry, well-drained, infertile sandy soils. It prefers open areas where it gets full sun, but it will also grow in part shade. It will grow in an open wooded area but it takes longer for it to get established. The natural range of Glacial Lake Albany Germplasm wild lupine is Eastern, New York. In power line rights-of-it occurred on sites with little bluestem (*Schizachyrium scoparium*), northern dewberry (*Rubus flagellaris*), bear oak (*Quercus ilicifolia*), whorled yellow loosestrife (*Lysimachia quadrifolia*), sedges (Cyperaceae), and goldenrods (*Solidago* spp.). In the Albany Pine Bush area of New York, lupine was growing in soils having an average pH of 5.



Collection area of Glacial Lake Albany Germplasm wild lupine (map courtesy of Wikipedia)

Establishment and Management for Conservation Plantings

Glacial Lake Albany Germplasm wild lupine seeds will germinate in varying conditions and should be seeded in the spring. A good, weed free seedbed needs to be prepared beforehand, for establishment.

Establish plants in full sun in well-drained soil. Wild lupine can be mixed with other species in wildflower plantings and other restoration projects. However, seed will need to be scarified and inoculated before, if sown in the spring. Seeds can be hand broadcasted and it is recommended that the seeds be covered with less than ¼ inch of soil.

Management: Once it is established it does well. Glacial Lake Albany Germplasm wild lupine plants respond well to prescribed burning, mowing, herbicide application, and/or cutting to maintain or create wild lupine habitat.

Ecological Considerations

Glacial Lake Albany Germplasm wild lupine is a collection of naturally occurring plants. It is not invasive in its range, nor does it have any potential to become invasive.

Wild lupine is toxic to some livestock, but is an important food source for a variety of wildlife species.

Seed and Plant Production

Seed propagation: Wild lupine seeds must be soaked in warm water overnight, or 8 hours. Viable seeds will sink and the floaters need to be discarded. The seeds then need to be inoculated with nitrogen-fixing *Rhizobium* bacteria.

Sow 3-4 seeds and cover lightly, into deep pots or cells (9 inches deep by 3 inches wide) so good drainage can be maintained. Using a 50/50 mixture of coarse sand and

commercial potting media will give the best results. Keep pots in the greenhouse at 65-70 F, until planting, and be sure to keep soil moist. Germination should occur within a week. The moisture level can be reduced after germination. Mechanical scarification using coarse sand paper or nicking the seed coat can also be utilized before sowing. The seedlings should not be kept in the pots or containers longer than 5-6 months.

After risk of frost, plant wild lupine in the field, in black plastic or a weed free area, with plants spaced at 6"-8" apart, ensuring soil is moist during establishment. With proper care and good soil moisture in the first year, seedlings started in the greenhouse will establish successfully. Plants will seed in 2-3 years. Weed control may be needed in the first year, but once plants are established, little maintenance is needed.

Availability

For conservation use: Glacial Lake Albany Germplasm wild lupine can be obtained by contacting the New York State Improvement Project. It is also available in some commercial nurseries in the Northeast.

For seed or plant increase: To obtain seed, contact the USDA NRCS Big Flats Plant Materials Center, if interested in growing Glacial Lake Albany wild lupine for production.

For more information, contact:
USDA NRCS Big Flats Plant Materials Center
3266 State Route 352
Corning, New York 14830
607-562-8404 (phone)
1-855-401-1955 (fax)
<http://plant-materials.nrcs.usda.gov/nypmc/>

Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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