

Paronychia argyrocoma

Status

Federal status: G4 N4, Not listed

NH state status: S3, Threatened

ME state status: S1, Threatened

The local population of this taxon was once considered a varietal of this species, but is now considered a disjunct population of the species as a whole. The species now is divided into two metapopulations. The northern population (ME, NH, MA, and possibly VT) is rare and vulnerable, while the southern population is larger and more secure. Several sources indicate that the northern population may be declining for unknown reasons.

The current outcome for *Paronychia argyrocoma* is B-C across the range and within the WMNF. The projected 20-year outcome is more towards C across the range and within the WMNF. ATV traffic is a concern along river populations. Hiking is having a negative impact in subalpine areas. Succession is also likely to eliminate some populations in the future.

The outcome for the non-calcareous open rocks habitat used by this species is B-C. Habitats on trails with decent views and along rivers are closer to C. The outcome in 20 years for non-calcareous open rocks is C. Habitats will not improve, and depending on their location, will either remain stable or get worse.

Distribution

This species has a small northern population in ME, NH, MA, and possibly VT. There is a larger southern population that extends from Maryland to Georgia and west to Tennessee and Kentucky.

In New Hampshire, there are 7 historic and 18 extant known occurrences in Grafton, Carroll, and Coos counties. Of these, eight extant and four historic occurrences are in the WMNF. The extant occurrences are located in Albany, Chatham, Hadley's Purchase, Bean's Purchase, Livermore/Lincoln, and Lincoln/Bethlehem. In Maine there are nine extant occurrences in Franklin and Oxford Counties. One of these, in Mason Township, is on the WMNF.

Habitat

Paronychia argyrocoma prefers open, non-calcareous habitat at subalpine elevations but can also grow along low elevation riverbanks. It typically occurs in small patches and rock crevices. It grows well in gravel and rocky areas, with little or no organic matter or soil. This species grows on granite, rhyolite, granitic and charnockitic gneisses, sandstone, and sands or gravels derived from those bedrocks, so its habitat is usually acidic and nutrient-poor. It can grow with other vegetation provided that the habitat remains open, so it can tolerate growing with lichens and short herbaceous plants, but does not grow in forested habitats. This plant can grow with some shade at riverine sites where it only receives full sun for part of the day.

Natural disturbance, such as wind, fire, flooding, and downslope movement, can create new open habitat or eliminate existing habitat and populations. Its habitats all experience dramatic changes in moisture levels, which may help limit competition. Alpine and subalpine habitats can become very dry in summer after heavy snowmelt and fog, while riverine habitats flood seasonally. This species is a stress tolerator rather than a good competitor.

Limiting Factors

Succession is the primary natural threat to this species because it cannot tolerate a closed canopy.

Many colonies suffer from trampling from hikers. This threat is likely to increase as populations are further reduced.

Collection has been cited as a possible factor causing the reduction of many existing populations of this species.

Viability concern

The WMNF manages nearly half of the New Hampshire populations. The New England population of this species is considered rare and thought to be declining, but the extent and reason for that decline are unknown. The primary threats, succession and trampling, can be affected by Forest management.

Management activities that might affect populations or viability

Management that would maintain open habitat conditions near occurrences, such as timber harvest and prescribed fire, might benefit the species if direct impacts are avoided.

Activities that would alter the hydrology or gravel conditions along a suitable stretch of stream habitat could impact habitat suitability.

Management that would reduce the density of trails in the alpine zone or riparian areas or help keep hikers on designated trails would reduce the potential for trampling.

References

Maine Department of Conservation. 2002. Maine Natural Areas Program, Natural Areas Division. Rare plants fact sheets. Available:

<http://www.state.me.us/doc/nrimc/mnap/home.htm>.

NatureServe Explorer: An online encyclopedia of life [web application]. 2001. Version 1.6 . Arlington, Virginia, USA: NatureServe. Available: <http://www.natureserve.org/explorer>. (Accessed: January 7, 2002).

Schori, A. 2001. *Paronychia argyrocoma* (Michx.) Nutt. Silverling. New England Plant Conservation and Research Plan. New England Wildflower Society.

SVE panel. 2002. GMNF/WMNF species viability evaluation expert panel notes on plants of open rocks/cliffs/fields. Panel held: June 3-4, 2002, Rutland, Vermont.