Woolly Lip-fern

Cheilanthes lanosa line drawing

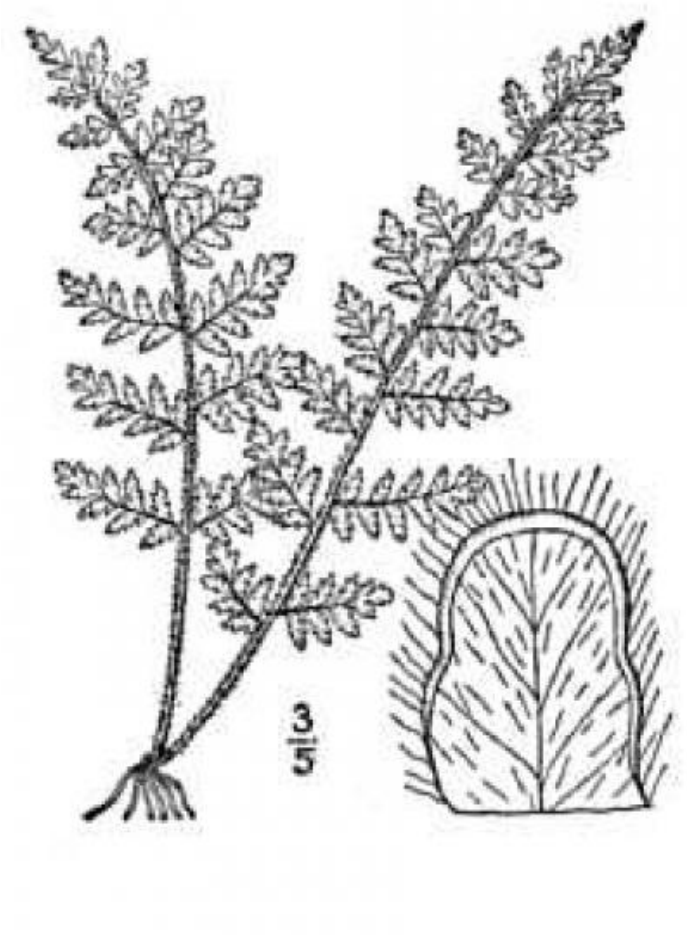


Photo credits: *Britton, N.L., and A. Brown (1913); downloaded from USDA-Plants Database.*

Scientific Name *Cheilanthes lanosa* (Michx.) D.C. Eat.

Family Name Pteridaceae Maidenhair-fern Family

Did you know?
This fern was last seen in New York on Iona Island in the Hudson River in 1954. There are other historical records from the 1800s from Highlands, NY and the northern tip of Manhattan. The genus name refers to the marginal sori (cheilos=marginal and anthos=flower) and the specific name refers to the woolly leaf stalks.

Summary

Protection Endangered in New York State, not listed federally.

This level of state protection means: listed species are those with: 1) 5 or fewer extant sites, or 2) fewer than 1,000 individuals, or 3) restricted to fewer than 4 U.S.G.S. 7 ? minute topographical maps, or 4) species listed as endangered by U.S. Department of Interior.

Rarity G5, SH

A global rarity rank of G5 means: This species is demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
A state rarity rank of SH means: This plant is only historically known from New York State, typically with the last plant observed over 20 years ago. Many SH plants have not been seen in 50-100 years.

Conservation Status in New York

All of the historical locations were surveyed, yet no plants were found. There does seem to be potential habitat at a few of the historical locations and in adjacent areas. This provides hope that this plant is indeed persisting somewhere within the state. More survey work is needed to determine if this plant might be located somewhere within the state.

Long-term Trends

Four of the six historical records have been extirpated and no current records have been found.

Conservation and Management

Research Needs

Habitat modeling could be done on the preferred rock outcrops of this fern so more potential sites could be surveyed. A visit to known populations located in adjacent states may help narrow down the potential habitat.

Habitat

A fern of cliffs and rock outcrops, often in areas where traces of lime are found within the rock (New York Natural Heritage Program 2004). Rocky slopes and ledges, on a variety of substrates including limestone and graninte (Flora of North America 1993). Cliffs and shale outcrops, mostly in subacid soil (Gleason and Cronquist 1991). Dry rocky ledges (Cobb 1984). Cliffs and rocky slopes or gravelly banks (Fernald 1970).

Associated Ecological Communities

Other Probable Associated Communities

Calcareous cliff community
Cliff community
Roadcut cliff/slope
Shale cliff and talus community

Identification Comments

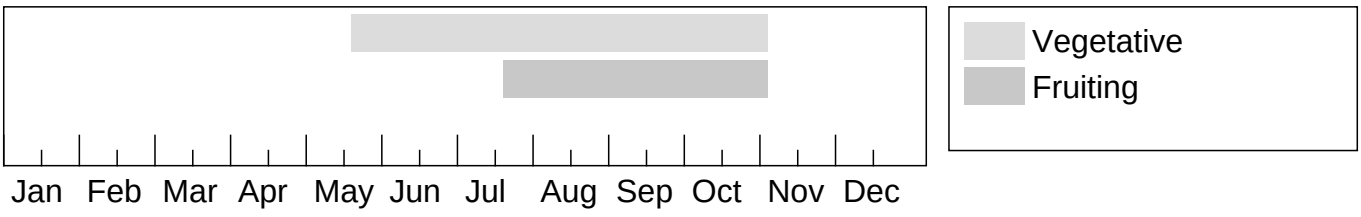
This is a small greenish-gray fern that grows out of the cracks in cliffs. The narrow leaves are not very dense and grow up to 30 cm long with 12-20 pairs of lance-shaped leaflets that decrease in size and spacing especially toward the tip. The leaflets are divided once into smaller leaflets with shallow lobes. They are densely hairy underneath with mats of shiny white to brownish hairs. The spore packets (sporangia) are arranged around the edge of the underside of the leaf and partially covered by the inrolled edge of the leaf. The leaf stalks are wiry, brittle, hairy, and very dark brown or purple. When the weather is dry the plants curl up into a mass of dry rusty leaves that are soon resurrected by the rain.

Best Life Stage for Identifying This Species

Since this fern is currently not known in New York, a single frond with sori should be collected to voucher its presence. Once a population is known though, only photopgraphs will be needed to verify its identification. These photos should include the top and underside of the leaf frong with close-up images showing the sori.

The Best Time to See

Spores may be present on this fern from summer through fall. Surveys should occur during this sporing period.



The time of year you would expect to find Woolly Lip-fern in New York.

Similar Species

No other *Cheilanthes* species are present in New York, but it may be confused with a vegetative Woodsia species. To positively identify, all effort should be made to observe and photograph a frond with spores.

Taxonomy

Kingdom Plantae
└ **Phylum** Filicinophyta
└ **Class** Ferns (Filicopsida)
└ **Order** Filicales
└ **Family** Pteridaceae (Maidenhair-fern Family)

Additional Common Names

Hairy Lip-fern

Synonyms

Cheilanthes tomentosa (Link)
Cheilanthes vestita ((Spreng.) Sw.)
Nephrodium lanosum (Michx.)

Additional Resources

Links

New York Flora Atlas
http://www.newyork.plantatlas.usf.edu/Plant.aspx?id=2547

USDA Plants Database
http://plants.usda.gov/java/nameSearch?mode=sciname&keywordquery=CHEILANTHES+LANOSA

Flora of North America
http://efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500357

NatureServe Explorer
http://natureserve.org/explorer/servlet/NatureServe?searchName=CHEILANTHES+LANOSA

Google Images
http://images.google.com/images?q=CHEILANTHES+LANOSA

Best Identification Reference

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http://www.fccdr.usf.edu/. University of South Florida http://www.usf.edu/

New York Natural Heritage Program
625 Broadway, 5th Floor,
Albany, NY 12233-4757
Phone: (518) 402-8935
acris@nynhp.org

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