



Common name: Goosefoot corn salad

Legal status: State Endangered

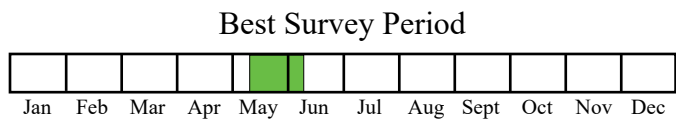
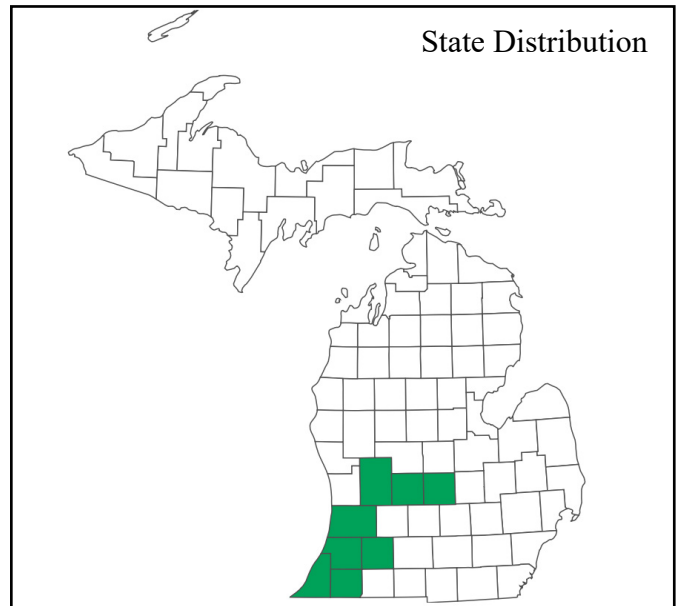
Global and state rank: G4 (Apparently Secure Globally) / S1 (State Critically Imperiled)

Other common name(s): Members of *Valerianella* are also known as lamb's lettuce

Family: Valerianaceae (valerian family)

Synonyms: *Fedia chenopodiifolia* Pursh, *Valeriana chenopodiifolia* (Pursh) Christenh. & Byng; frequently misspelled as *Valerianella chenopodifolia*

Taxonomy: Goosefoot corn salad (*Valerianella chenopodiifolia*) is in the order Dipsacales. It was long considered part of the family Valerianaceae. However, most systematists now group Valerianaceae, Dipsacaceae, Diervillaceae, and Linnaeaceae within a broadly construed Caprifoliaceae (honeysuckle family; Wang et al. 2021, Native Plant Trust 2026, POWO 2026, Stevens 2026). Nevertheless, some authors still recognize Valerianaceae (Wilhelm and Rericha 2017, Xiang et al. 2019, Reznicek et al. 2026). The generic placement of this species is also not fully resolved. Hidalgo et al. (2010) used chloroplast DNA to construct a phylogeny of the Valerianaceae and found that *Valeriana* as previously circumscribed was polyphyletic (containing species from separate evolutionary



lineages) and *Valerianella* paraphyletic (containing some but not all species from an evolutionary lineage). This can be solved by including *Valerianella* within *Valeriana* or by expanding *Valerianella* to include some species previously placed in *Valeriana*. Therefore, some authors place this species in a broadly circumscribed *Valeriana* (POWO 2026), while others retain *Valerianella* (Weberling and Bittrich 2016, Wilhelm and Rericha 2017, Reznicek et al. 2026).

Total range: Goosefoot corn salad occurs from Wisconsin east to New York, south to Virginia, and northwest to Illinois (iNaturalist 2026, Kartesz 2026, NatureServe 2026). This region includes a small portion of southern Ontario in Canada where it is ranked as nationally critically imperiled (N1). In the United States, it has no national conservation rank (NatureServe 2026). The core range of this species is in Pennsylvania, Ohio, West Virginia, and Virginia. It is rare to extirpated in the nine other states and provinces in its range, including Maryland, New Jersey, New York, Ontario, Michigan, Wisconsin, Illinois, Indiana, and Kentucky (Consortium of Midwest Herbaria 2026, iNaturalist 2026, Kartesz 2026, NatureServe 2026, Weakley



and Southeastern Flora Team 2026). Reports of occurrences in Mississippi (Lowe 1921, NatureServe 2026) do not seem to be backed by extant specimens (SERNEC 2026).

State distribution: Goosefoot corn salad is a species of southern Michigan, almost entirely limited to the southwest where it has been documented at five occurrences in Allegan County, two in both Berrien and Kalamazoo Counties, and one each in Cass, Clinton, Ionia, Kent, and Van Buren Counties. There is also a disjunct historic occurrence in the southeast within Genesee County (MNFI 2026; B. Ruhfel, University of Michigan Herbarium, personal communication).

Recognition: Goosefoot corn salad is an erect dichotomously branching herb 1.5–6 dm tall with opposite two-ranked leaves and a five-lobed white corolla. The leaves are sessile, entire (except sometimes toothed basally in upper leaves), and glabrous except sometimes for tufts of hairs on each side of the base near the nodes. Likewise, the stem is glabrous except sometimes bearing tufts of hairs at the nodes. The inflorescence is cymose with eciliate bracts and with the lowermost flower ripening into mature fruit while the other flowers are still at anthesis. Flowers are perfect (bisexual). The corolla is no more than 4 mm long and nearly symmetrical radially. Each flower has three stamens. The petals are fused basally to form a tube but are separate apically at the limb. The fruit is an achene bluntly triangular in cross section and nearly always more than 2.5 mm long. While there are three locules in the fruit, two of the three seeds abort. Though several *Valerianella* species display marked fruit polymorphism, this has not been demonstrated in goosefoot corn salad (Dyal 1938, Ware 1983, Cooperrider 1995, Wilhelm and Rericha 2017, Reznicek et al. 2026).

Goosefoot corn salad is most likely to be confused with other members of the Valerianaceae. While *Valeriana* species have deeply lobed to compound cauline leaves and calyces with 5–15 bristle-like lobes, *Valerianella* species have entire to slightly



toothed cauline leaves and calyces with lobes absent or reduced to short teeth. Two other species of *Valerianella* have been documented in Michigan.

The non-native European corn salad (*V. locusta*) has inflorescence bracts at least partly ciliate and pale blue corolla lobes, while goosefoot corn salad has eciliate bracts and white corolla lobes. Kankakee corn salad (*V. umbilicata*, State Endangered) has fruits 1.5–2 mm long, stems pubescent on the angles, and leaf margins ciliate to glabrate, while goosefoot corn salad has longer fruit, a glabrous stem, and glabrous leaf margins (Cooperrider 1995, Mohlenbrock 2002, Wilhelm and Rericha 2017, Reznicek et al. 2026).

Best survey time/phenology: The ideal survey window is from the second week of May through the first week of June, when the species is most likely to be in flower or fruit. In Michigan, this plant has been documented in flower 11 times, between April 28 and June 18 (mean = May 20 $\pm$ 1 SD of 15 days) between 1897 and 2026. It has been documented in fruit 7 times, between May 11 and Jun 18 (mean = May 27 $\pm$ 1 SD of 14 days) between 1897 and 2026 (MNFI 2026).

Habitat: Goosefoot corn salad is a species of moist ground on forested levees and terraces of stream and river floodplains (MNFI 2026, Reznicek et al. 2026). Associated species have been documented at seven occurrences. The most consistently docu-



mented associates are silver maple (*Acer saccharinum*), hackberry (*Celtis occidentalis*), wild chervil (*Chaerophyllum procumbens*), false mermaidweed (*Floerkea proserpinacoides*), cleavers (*Galium aparine*), black walnut (*Juglans nigra*), spicebush (*Lindera benzoin*), wild blue phlox (*Phlox divaricata*), small-flowered buttercup (*Ranunculus abortivus*), bladdernut (*Staphylea trifolia*), and American elm (*Ulmus americana*) (MNFI 2026). Though normally considered a plant of high-quality natural communities, it has occasionally been documented in ruderal forests and along old roads (Reznicek et al. 2026; B. Ruhfel, University of Michigan Herbarium, personal communication).

Biology: This is an annual species. It has showy white flowers and a nectary (Judd et al. 2016) and therefore is probably animal-pollinated. Flowers of another *Valerianella* species of eastern North America, beaked corn salad (*V. radiata*), are known to be visited by a variety of bees, wasps, flies, and butterflies (Robertson 1928). Because achenes are indehiscent, the fruit is the dispersal unit (Ware 1983). Fruit dispersal is likely brought about by gravity and by mammals who incidentally eat fruit while consuming foliage, as hypothesized about the related beaked corn salad (Dodds 2002). Mycorrhizal associations have not been observed in this species, but European corn salad is known to form mycorrhizal relationships (Fester et al. 2002). Little is known about the specific life history of goosefoot corn salad (e.g., pollinators, fruit dispersers, mycorrhizal relationships, diseases, breeding system, and seedbank longevity).

Conservation/management: Goosefoot corn salad is known from a total of 12 element occurrences (EOs) in Michigan (MNFI 2026) plus two additional historical records (B. Ruhfel, personal communication). Of 12 EOs, 5 are ranked H (historical), 1 F (failed to find), 2 A (excellent estimated viability), 1 AB (excellent to good), 1 B (good), and 2 C (fair). Most EOs occur on protected land. Excluding the 5 historical EOs, 4 EOs occur on state game areas, 2 on lands of non-profit conservation organizations, and 1 on private lands. Few threats have



been formally documented. The most likely threats include deer herbivory, competition from invasive plant species, habitat fragmentation, hydrological alteration including disruptions to natural flood regimes of major streams, canopy alteration from non-native pests and pathogens, and unmanaged recreational use. Potential preventive measures or mitigations for these threats include reducing deer overabundance, monitoring and managing invasive plants within and near EOs, managing large tracts of floodplain forest and adjacent stands toward old-growth conditions, removing obsolete dams, curtailing the importation of firewood and live plants, and providing the public with invasive species education and boot brushes at trailheads (Tepley 2004).

Comments: The common name “corn salad” comes from the tendency of European *Valerianella* species to occur spontaneously in grain fields where they were harvested as salad greens (Merriam-Webster 2026).



Research needs: Basic research is needed on all aspects of this species' life history and ecology. A status survey is needed in Michigan to better document this species' current range, phenology, and habitat. Elucidating the relationship between this species and disturbances associated with flooding and silt deposition in floodplains may inform management and indicate sites for future surveys.

Related abstracts: floodplain forest, blue-eyed Mary

Selected references:

- Consortium of Midwest Herbaria. 2026. <<https://midwestherbaria.org/portal/index.php>>. Accessed 20 April 2026.
- Cooperrider, T. S. 1995. The Dicotyledenae of Ohio Part 2, Linaceae through Campanulaceae. The Ohio State University Press, Columbus, OH.
- Dodds, J. S. 2022. *Valerianella radiata* Rare Plant Profile. New Jersey Department of Environmental Protection, State Parks, Forests & Historic Sites, State Forest Fire Service & Forestry, Office of Natural Lands Management, New Jersey Natural Heritage Program, Trenton, NJ.
- Dyal, S. C. 1938. *Valerianella* in North America. *Rhodora* 40: 185-211.
- Fester, T., B. Hause, D. Schmidt, K. Halfmann, J. Schmidt, V Wray, G. Hause, and D. Strack. 2002. Occurrence and localization of apocarotenoids in arbuscular mycorrhizal plant roots. *Plant Cell Physiology* 43: 256-265.
- Hidalgo, O., J. Mathez, S. Garcia, T. Garnatje, J. Pellicer, and J. Valles. 2010. Genome size study in the Valerianaceae: First results and new hypotheses. *Journal of Botany*. 797246.
- iNaturalist community. 2026. Observations of *Valerianella chenopodiifolia* from North America. Exported from <<https://www.inaturalist.org>> 20 April 2026.
- Judd, W. S., C. S. Campbell, E. A. Kellogg, P. F. Stevens, and M. J. Donoghue. 2016. *Plant Systematics: A Phylogenetic Approach*. 4th Edition. Sinauer Associates, Inc. Sunderland, Massachusetts.
- Kartesz, J. T. 2025. The Biota of North America Program: North American Vascular Flora. <<http://www.bonap.org/>>. Accessed 15 April 2026.
- Lowe, E. N. 1921. *Plants of Mississippi*. Mississippi State Geological Survey Bulletin No. 17.
- Merriam-Webster. 2026. Merriam-Webster.com Dictionary. <<https://www.merriam-webster.com/dictionary/>>. Accessed 17 September 2026.
- Mohlenbrock, R. H. 2002. *Vascular Flora of Illinois*. Southern Illinois University Press, Carbondale and Edwardsville, IL.
- Native Plant Trust. 2026. Go Botany. <<https://gobotany.nativeplanttrust.org/>>. Accessed 15 April 2026.
- POWO [Plants of the World Online]. 2026. Facilitated by the Royal Botanic Gardens, Kew, United Kingdom. <<https://powo.science.kew.org/>>. Accessed 15 April 2026.



Reznicek, A. A., E. G. Voss, and B. S. Walters. 2026. Michigan Flora Online. University of Michigan <<https://michiganflora.net/>>. Accessed 15 April 2026.

Robertson, C. 1928. Flowers and Insects: Lists of Visitors of Four Hundred and Fifty-Three Flowers. Science Press Printing Company, Lancaster, PA.

Southeast Regional Network of Expertise and Collections (SERNEC) Data Portal. 2026. Appalachian State University <<https://sernecportal.org/>>.

Stevens, P. F. 2026. Angiosperm Phylogeny Website, Version 13. <<https://www.mobot.org/mobot/research/apweb/>>. Accessed 15 April 2026.

Tepley, A. J., J. G. Cohen, and L. Huberty. 2004. Natural community abstract for floodplain forest. Michigan Natural Features Inventory, Lansing, MI.

Weakley, A. S. and Southeastern Flora Team. 2026. Flora of the southeastern United States Web App. University of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill, NC. <<https://fsus.ncbg.unc.edu/>>. Accessed 20 April 2026.

Wang, H.-X., D. F. Morales-Briones, M. J. Moore, J. Wen, and H. F. Wang. 2021. A phylogenomic perspective on gene tree conflict and character evolution in Caprifoliaceae using target enrichment data, with Zabelioideae recognized as a new subfamily. *Journal of Systematics and Evolution* 59: 897-914.

Ware, D. M. E. 1983. Genetic fruit polymorphism in North American *Valerianella* (Valerianaceae) and its taxonomic implications. *Systematic Botany* 8: 33-44.

Weberling, F. and V. Bittrich. 2016. Valerianaceae.



pp. 385-401, in Kadereit, J. W. and V. Bittrich, eds. *The Families and Genera of Vascular Plants, Volume 14: Flowering Plants: Eudicots - Aquifoliales, Boraginales, Bruniales, Dipsacales, Escalloniales, Garryales, Paracryphiales, Solanales (except Convolvulaceae), Icacinaceae, Metteniusaceae, Vahliaceae*. Springer, Berlin, Germany.

Wilhelm, G. and L. Rericha. 2017. *Flora of the Chicago Region: A Floristic and Ecological Synthesis*. Indiana Academy of Science, Indianapolis, IN.

Xiang, C.-L. H.-J. Dong, S. Landrein, F. Zhao, W.-B. Yu, D. E. Soltis, P. S. Soltis, A. Backlund, H.-F. Wang, D.-Z. Li, and H. Peng. 2020. Revisiting the phylogeny of Dipsacales: New insights from phylogenomic analyses of complete plastomic sequences. *Journal of Systematics and Evolution* 58: 103-117.

Abstract citation:

Warner, Scott M. 2026. Species Abstract for *Valerianella chenopodiifolia* (Goosefoot Corn Salad). Michigan Natural Features Inventory, Lansing, Michigan, USA.

Copyright 2026 Michigan State University Board of Trustees.

Funding for abstract provided by the Michigan



Department of Transportation

