

OCCURRENCE OF *PYROLA ELLIPTICA* NUTT. (PYROLACEAE) IN KANKAKEE COUNTY, ILLINOIS**Logan Ullrich* and Noah Reynolds**

Kankakee Sands in Illinois - The Nature Conservancy

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ABSTRACT

Pyrola elliptica Nutt. (Large-leaved Shinleaf), a plant in the wintergreen family (Pyrolaceae), was discovered growing in Kankakee County, Illinois, documenting a new occurrence record for the species and the southernmost extent of the species and genus in Illinois. One specimen was collected to document the occurrence and deposited at the Illinois Natural History Survey herbarium (ILLS).

Botanical nomenclature: Wilhelm and Rericha 2017

NOTEWORTHY RECORD OF OCCURRENCE

On 9 June 2025 a population of *Pyrola elliptica* Nutt. (Large-leaved Shinleaf) was discovered growing in Kankakee County at Pembroke Savanna Nature Preserve, a site owned and actively managed by The Nature Conservancy. Formerly known as Mt. Fraker, Pembroke Savanna Nature Preserve is situated within the Kankakee Sand Area Section of the Grand Prairie Division of Illinois (Schwegman et al. 1973; Phillippe et al. 2003). The topography of the area was formed by aeolian processes following the drainage of glacial Lake Watseka to give rise to

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dunes and swales within the Kankakee River Valley (Phillippe et al. 2003). Pembroke Savanna features prominent dunes ranging from 195 m to 223 m above sea level (Phillippe et al. 2003) and is colloquially known by the local community as Bald Hill. The property was originally acquired in 2001 by The Nature Conservancy followed by additional acquisitions in 2006 and 2010. Majority of the site is high-quality black oak sand savanna which is primarily dry with a relatively open canopy with trees of varying age (Figure 1). In contrast, *P. elliptica* was found in a portion of site that is a dry-mesic sand woodland, with most of the trees at the location being *Quercus alba* (White Oak) of even age (Figure 2). Two years prior to the discovery of the population, the area was degraded, and the understory overrun with invasive shrubs. Routine management performed by the Nature Conservancy land stewards such as brush cutting, herbicide application, and prescribed fire were utilized to open the understory to its current appearance.

Pyrola elliptica (Figure 3) is a rhizomatous spreading perennial in the Wintergreen (Pyrolaceae) family (Wilhelm and Rericha 2017). The leaves of *P. elliptica* (Figure 4) are basally arranged, broadly elliptic, and coriaceous with crenate margins (Wilhelm and Rericha 2017; Freeman 2020). Regarding habitat, *P. elliptica* can be found in rich, dry to mesic to moist forests and woodlands (Wilhelm and Rericha 2017; Freeman 2020; Weakley and Southeastern Flora Team 2025). In North America, *P. elliptica* is endemic and known to occur in Canada and the United States (Freeman 2020). The species is reported from seven Canadian provinces while in the United States, *P. elliptica* occurs in twenty-nine states ranging northwest to Idaho and throughout the upper Midwest, northeast to Maine, southeast to North Carolina, and in the southwest to Arizona and New Mexico (Figure 5) where they are the only two states in the region to have occurrences of *P. elliptica* (Freeman 2020). In Illinois, *P. elliptica* is recorded

from fourteen northern counties (Mohlenbrock and Ladd 1978; Mohlenbrock 2014; Kartesz 2025).

The population of *P. elliptica* at Pembroke Savanna spans a 2.5-meter radius and contains both reproductive and vegetative plants. Following the initial observation, a total of 23 inflorescences were counted at the location on 16 June 2025, while roughly one-hundred basal rosettes were observed. Because of the rhizomatous growth form, it was not possible without destructive methods to assess how many individual plants were at the location. Regarding the flowering period, the plants were beginning to bloom on 9 June 2025 while on 16 June most plants were blooming. On 29 June, fruits were present (Figure 6); however, some plants were still in bloom, and by 2 October 2025 the plants were dispersing seeds (Figure 7). In Illinois, *P. elliptica* is known to bloom from June through August (Mohlenbrock 2014), while in the Chicago region the blooming period is reported to occur from 21 June to 29 July (Wilhelm and Rericha 2017). In contrast, the population at Pembroke Savanna flowered approximately a week earlier than reported in the Flora of the Chicago Region (Wilhelm and Rericha 2017). At the locality, *P. elliptica* associates with *Carex swanii* (Swan's Sedge), *Eleagnus umbellata* (Autumn Olive), *Hackelia virginiana* (Stickseed), *Lonicera* spp. (Honeysuckles), *Parthenocissus quinquefolia* (Virginia Creeper), *Populus tremuloides* (Quaking Aspen), *Quercus alba* (White Oak), *Q. velutina* (Black Oak), *Sassafras albidum* (Sassafras), and *Smilacina stellata* (Starry False Solomon's Seal).

The discovery of *P. elliptica* at Pembroke Savanna in Kankakee County documents the southernmost extent of both the species and genus currently known in Illinois (Wilhelm and Rericha 2017; Kartesz 2025). Will County was previously the southernmost extent of the species known in the state (Mohlenbrock and Ladd 1978; Mohlenbrock 2014; Kartesz 2025). Aside from

P. elliptica, the only other *Pyrola* species reported to occur in Illinois, *Pyrola americana*, occurred in Ogle County (Mohlenbrock 2014); however, the species is reported as extirpated (Spyreas et al. 2017). One specimen of *P. elliptica* was collected with a small hand tool (L. Ullrich and N. Reynolds s.n., ILLS), pressed on 16 June 2025, and later deposited at the Illinois Natural History Survey herbarium (ILLS) to document the occurrence at Pembroke Savanna Nature Preserve.

Regarding the species status, *P. elliptica* is currently unranked in Illinois, but is considered uncommon (Wilhelm and Rericha 2017) to rare (Mohlenbrock 2014; NatureServe 2025). Prior to the voucher in Kankakee County, the last vouchered specimen was collected in 2011 by Loy R. Phillippe and Jason J. Zylka in Ogle County, Illinois (L.R. Phillippe and J. J. Zylka, 43024, ILLS), while the first vouchered specimen was collected in 1871 by Elizabeth Emerson Atwater (E.E. Atwater, EEA-41, CHAS:Herb) in Lake County, Illinois. Overall, *P. elliptica* has been vouchered sixty-four times in Illinois (Midwest Herbaria Portal 2025). On iNaturalist, there are fifty observations of *P. elliptica* from Illinois with the most recent observations occurring in 2025, while the earliest observations are from 2019 (GBIF.org 2025). Collectively, *P. elliptica* has been vouchered and observed in Illinois at least one-hundred and fourteen times with significant time between the last vouchered specimens and iNaturalist observations (GBIF.org 2025; Midwest Herbaria Portal 2025). Future visits to historic populations where *P. elliptica* was collected or is known from should be conducted to investigate if the populations are still present. Additionally, monitoring should be conducted to evaluate the overall health of the populations to provide critical information to potentially warrant an update to the S-Rank for the species in Illinois.

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Figure 1. Black oak sand savanna at Pembroke Savanna Nature Preserve.



Figure 2. Dry-mesic sandy white oak woodland at Pembroke Savanna Nature Preserve.



Figure 3. *Pyrola elliptica* (Large-Leaved Shinleaf) in bloom.



Figure 4. Basal rosette of *Pyrola elliptica*.

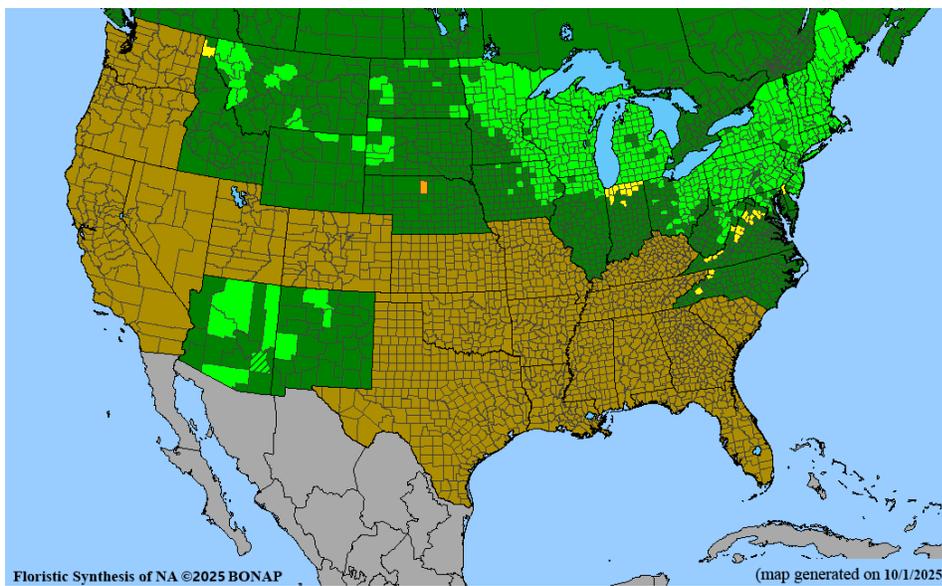


Figure 5. BONAP U.S. distribution map of *Pyrola elliptica* (Kartesz 2025).



Figure 6. Fruits of *Pyrola elliptica*.



Figure 7. Open dehiscent fruits of *Pyrolla elliptica* dispersing seeds.