

Platanthera peramoena

Purple Fringeless Orchid

Orchidaceae



Platanthera peramoena courtesy Alan Cressler, Lady Bird Johnson Wildflower Center

Platanthera peramoena Rare Plant Profile

New Jersey Department of Environmental Protection
State Parks, Forests & Historic Sites
Forests & Natural Lands
Office of Natural Lands Management
New Jersey Natural Heritage Program

501 E. State St.
PO Box 420
Trenton, NJ 08625-0420

Prepared by:
Jill S. Dodds
jsdodds@biostarassociates.com

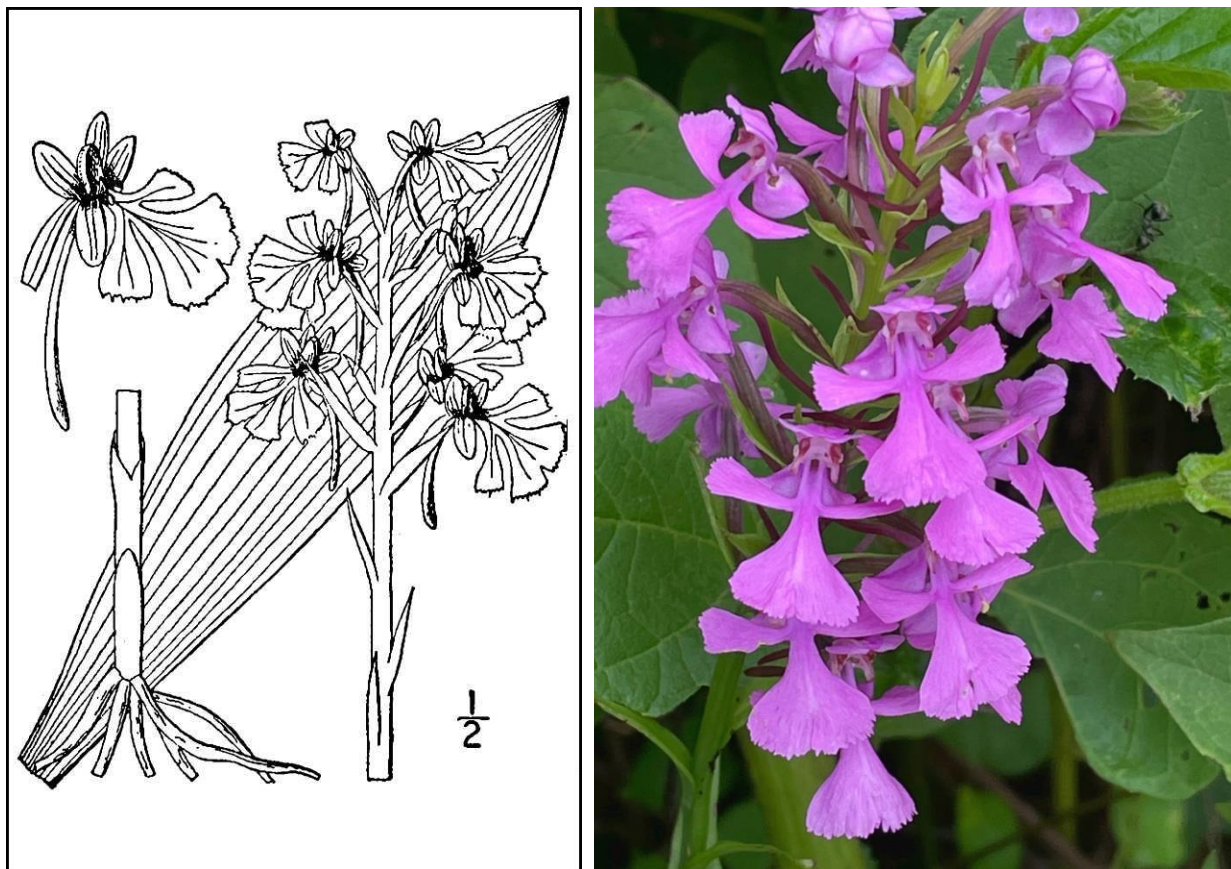
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For:
New Jersey Department of Environmental Protection
Office of Natural Lands Management
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natlands@dep.nj.gov

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Life History

Platanthera peramoena (Purple Fringeless Orchid) is one of our most brightly colored native orchids (Homoya 1993). Henry et al. (1975) noted that the name *peramoena* meant "very beautiful" and that the orchid was indeed a very beautiful plant. The typical flower color varies from light pinkish-purple to deep magenta (Hapeman 1997), although there is a white-flowered variation that has been described as *P. peramoena* forma *doddsiae* (Brown 2005). Purple Fringeless Orchid only blooms sporadically and nonflowering plants are easily overlooked so it can take multiple years of searching to find a population (Henry et al. 1975, Hough 1983, Snyder 2000, Hilty 2020). When it does bloom the flowering period is brief, lasting for only about two weeks (Spooner and Shelly 1983). Dates recorded for an Illinois population indicated that flowering began on July 18, peaked on July 31, and ended on August 1 (Edgin and Ebinger 2000). In the south *P. peramoena* blooms earlier, between late June and mid-July (Morris 2013). Mid-July to mid-August was reported for New Jersey (Stone 1911). The fruits may be present from August through October (Sheviak 2020, Weakley et al. 2024). *Platanthera* foliage dies back in autumn and the plants winter as tubers, re-emerging in the spring (Rasmussen 1995).



Left: Britton and Brown 1913, courtesy USDA NRCS 2024a. Right: C. Kazyak, 2021.

Platanthera peramoena is a perennial herb with a thick, fleshy rootstock. The plants have 2–5 alternate, narrow, smooth-margined leaves that get smaller toward the top of the stem. The spikes are 35–105 cm tall and they may be loosely or densely flowered. A small leaf-like bract is present at the base of each flower. The dorsal sepal and lateral petals are 6–7 mm long and 2–

4 mm wide while the lateral sepals are 7–8 mm long and 5–7 mm wide. The lower petal (lip) is prominent—it is 11–20 mm long and 12–23 mm wide and divided into three distinct wedge-shaped lobes that are ragged or somewhat toothed along the edges but not deeply fringed. A 13–23 mm long nectar spur extends downward from the base of the lip, and Hapeman and Inoue (1997) observed that the spurs of *P. peramoena* are often slightly sinuous. The fruit is an erect capsule up to 15 mm in length. (See Britton and Brown 1913, Fernald 1950, Gleason and Cronquist 1991, Homoya 1993, Fowler 2005, Morris 2013, Sheviak 2020, NAOCC 2024).

Platanthera species with cauline leaves and deeply three-lobed lips are grouped together in Subgenus *Fimbriella* (Weakley 2024). Stoutamire (1974) thought that *Platanthera peramoena* and four other species (*P. grandiflora*, *P. lacera*, *P. leucophaea*, and *P. psycodes*) formed a natural group based on their floral structure, although he noted that the similarities might be indicative of either a close relationship or parallel development to accommodate specialist pollinators. A molecular study by Hapeman and Inoue (1997) supported the grouping, adding *P. praeclara* which had recently been described by Sheviak and Bowles (1986). The subsequent publication of *P. shriveri* by Brown et al. (2008) resulted a seventh member. *P. peramoena*, *P. grandiflora*, and *P. praeclara* were included in a phylogenetic reappraisal of the *Platanthera* clade by Bateman et al (2009), confirming a close relationship between the three species.

Four of the species in Subgenus *Fimbriella* have purple or pink flowers and three are white-flowered. All of the species in the group have lips with deeply fringed lobes except for *Platanthera peramoena*, which makes it readily identifiable. At a glance, *Platanthera peramoena* could be mistaken for a *Phlox* (*P. maculata*, *P. paniculata*, or *P. glaberrima*) because they often occur in the same habitat and are similar in color, size, and inflorescence shape (Henry et al. 1975, Spooner and Shelly 1983, Homoya 1993). However the phloxes have five equal-sized petals and opposite leaves.

Pollinator Dynamics

The majority of *Platanthera* species are fertilized by insects, typically moths or butterflies, but a broad range of pollination syndromes can be found in the genus and they are primarily determined by floral structure (Dressler 1981). All of the species in Section *Fimbriella* are pollinated by Lepidoptera (Hapeman and Inoue 1997). Stoutamire (1974) thought it likely that the white-flowered species were pollinated by nocturnal moths and the more colorful species by day-flying moths or butterflies.

In *Platanthera* flowers, each mass of pollen grains (pollinium) is attached to a flexible stalk (caudicle) that has a sticky disc (viscidium) on the other end. The paired pollinia are situated perfectly to come into contact with insects as they access the nectar at the bottom of the spurs. The outward-facing discs adhere to the visitor as it leaves and then drying of the caudicles causes them to rotate downward and inward, positioning them to deposit the pollen clusters on the next flower visited (Gray 1879, Brackley 1985). Self-fertilization may be inhibited by the amount of time required for the stalks to bend (Catling and Catling 1991). The effectiveness of potential *Platanthera* pollinators is dependent on a close morphological match between the insect and the floral parts. The pollinator must have a proboscis that is long enough to reach the nectar but short enough to ensure contact with the viscidia, while the shape and position of the viscidia

determine whether the pollinia will become attached to the insect's eyes or proboscis (Stoutamire 1974, Sheviak and Bowles 1986).

The pollination of *Platanthera peramoena* was studied by Hapeman (1997). Although multiple insects visited the blooms the Hummingbird Clearwing Moth (*Hemaris thysbe*) was the most frequent visitor, and measurements of moths' proboscis lengths and distances between their eyes corresponded closely with floral spur lengths and distances between viscidia in *P. peramoena* flowers. Hapeman noted that the proboscis of *Hemaris thysbe* was slightly shorter than the orchid's spur, assuring that the insect must get in close enough to remove and deposit the pollinia. *Hyles lineata*, the White-lined Sphinx, was also observed nectaring on *P. peramoena* but that moth was characterized as a nectar thief because its longer proboscis allowed it to obtain nectar without performing any pollination services.



Hemaris thysbe nectaring on *Monarda fistulosa*, J. S. Dodds, 2018.

Some other moths and butterflies regularly visit the flowers of *Platanthera peramoena*, including *Hemaris diffinis* (Snowberry Clearwing), *Amphion floridensis* (Nessus Sphinx), *Epargyreus clarus* (Silver-Spotted Skipper), *Papilio troilus* (Spicebush Swallowtail), *Papilio glaucus* (Tiger Swallowtail), *Danaus plexippus* (Monarch), and *Speyeria cybele* (Great Spangled Fritillary) (Argue 2012, Hilty 2020). Some of those insects probably serve as secondary pollinators

although differences in size are likely to make them less effective. Measurements of proboscis length and eye gap width recorded by Hapeman (1997) indicated that, in comparison to *Hemaris thysbe*, *Hemaris diffinis* was slightly smaller and *Papilio troilus* was slightly larger. Nevertheless, *Papilio* species have occasionally been observed carrying *P. peramoena* pollinia (Hapeman 1997, Argue 2012).

A study in Belgium found that *Platanthera chlorantha*, which also attaches pollinia to its visitors' eyes, can be pollinated by several kinds of noctuid moths and some of the moths were observed carrying the pollinia of more than one *Platanthera* species on different parts of their faces. The researchers (Esposito et al. 2017) suggested that the sharing of pollinators was a possible mechanism for hybridization in *Platanthera*. In North America, two butterflies that may occasionally pollinate *Platanthera peramoena* (*Papilio troilus* and *Papilio glaucus*) are also known to visit or pollinate the flowers of other species in the genus including *P. blephariglottis*, *P. ciliaris*, *P. grandiflora*, and *P. integrilabia* (Janes et al. 2024).

Seed Dispersal and Establishment

Most orchids produce numerous tiny propagules known as dust seeds which lack endosperm and consist mainly of an embryo surrounded by a loose, papery coating (Dressler 1981). Wind is the primary means of dispersal for the seeds, shaking them free from the capsules and then transporting them to new locations (Stoutamire 1964, Dressler 1981). Orchid seeds have relatively large internal air spaces that could permit them to float in the air for long periods. Arditti and Ghani (2000) found that roughly 80% of the internal volume of typical *Platanthera* seeds is free air space. Although their structure suggests a high potential for long-distance dispersal, the majority of orchid seeds travel for relatively short distances. Experiments conducted by Brzosko et al. (2017) determined that the seeds of *Platanthera bifolia* traveled a maximum distance of six meters and 96–99% landed within two meters of the parent plants: Comparable results were obtained for other orchid species tested. Inflorescence height and physical barriers in the community can influence the efficacy of wind dispersal (Brzosko et al. 2017). *Platanthera peramoena* is often surrounded by taller vegetation (Hough 1983, Spooner and Shelly 1983), which probably restricts seed distribution distances.

Platanthera seeds may occasionally be dispersed by other means. For example, many orchid seeds have a water-resistant outer surface that—together with the internal air space—permits flotation, allowing some movement of seeds via surface water after a rain. The seeds of several other *Platanthera* species in Subgenus *Fimbriella* are able to float on water, at least for short periods (Arditti and Ghani 2000). Arditti and Ghani also noted that the general characteristics of orchid seeds suggest the possibility of transport by adherence to land animals or birds.

Dormancy in orchid seeds varies between species, ranging from 0–7 years (Eriksson and Kainulainen 2011). Dressler (1981) noted that the seeds of orchids may survive for long periods if they are cool and dry. When orchid seeds become hydrated limited metabolic activity is initiated but establishment requires appropriate physical conditions and, in nature, the right kind of fungi (Dressler 1981, Arditti and Ghani 2000, Eriksson and Kainulainen 2011). Germination in *Platanthera* species is usually inhibited by light (Rasmussen 1995). A relatively high

proportion of orchid seeds initiate germination but fail to develop further (Rasmussen and Whigham 1993, Jersáková and Malinová 2007). Sharma et al. (2003) indicated that 0–3% of *Platanthera* seeds are likely to reach the leaf-bearing seedling stage.

Platanthera peramoena is difficult to cultivate or transplant (Homoya 2013, Hilty 2020), probably because of its fungal partnership requirements. *Platanthera* seeds are able to germinate in the absence of fungi, producing long epidermal hairs that could become sites for fungal contact, but formation of protocorms does not occur without symbionts. There is some evidence that *Platanthera* plants can form relationships with more than one fungus simultaneously. However, the seedlings sometimes associate with different fungi than mature plants and some orchids may have a narrower host range during their establishment phase (Zelmer et al. 1996, Rasmussen and Rasmussen 2009).

Thixton et al. (2020) isolated two strains of *Ceratobasidium* and one of *Tulsanella* from the roots of mature *Platanthera peramoena* plants. An assortment of fungal strains assignable to the same two genera have been isolated from other *Platanthera* species, including the closely related *P. praeclara* (Zelmer et al. 1996, Thixton et al. 2020). Although no information was found about the establishment phase of *Platanthera peramoena*, germination has been studied in *P. praeclara*. When cultured in the field, *P. praeclara* germinated in 45 days and formed epidermal hairs in 108 days, and a fungal endophyte isolated from a developing protocorm was identified as a *Tulsanella* species (Zelmer et al. 1996). Sharma et al. (2003) successfully cultured *P. praeclara* seedlings using both *Ceratobasidium* and *Tulsanella* but the seedlings appeared to utilize different strains of the fungi than the mature plants. They found that *P. praeclara* germinated best when the seeds were stratified for 4–6 months, and that development of the young plants was erratic and included lengthy pauses. Their results suggested that *P. praeclara* may require exposure to multiple winters, initially to trigger germination and later to stimulate further development. Similar growth patterns have been reported in other *Platanthera* species (Rasmussen 1995).

Habitat

Morris (2013) remarked that it was hard to pinpoint the habitat requirements of *Platanthera peramoena* because it often occurred in 'nondescript' sites. The orchid can grow at elevations of 0–800 meters above sea level (Sheviak 2020). Weakley et al. (2024) gave *P. peramoena* a heliophily ranking of 6 on a scale from 1 (shade obligate) to 9 (sun obligate), indicating that the plants can thrive in a broad range of conditions but fare slightly better in open places. It is most often found in full sun or partial shade but when it does grow in deep shade the plants are usually smaller and less vigorous and the flowers are pale. The soils may be rather acidic and many of the sites experience seasonal fluctuations in moisture content, typically being wet in the spring but dry later in the season (Spooner and Shelly 1983, Spooner et al. 1982, Homoya 1993, Hilty 2020).

Populations of *Platanthera peramoena* are often situated in floodplains and bottomlands. Natural habitats include open meadows, prairies, marshes, bogs, stream banks, seepage slopes, shrublands, thickets, wet woods, and swamps (Henry et al. 1975, Hough 1983, Spooner and

Shelly 1983, Spooner et al 1983, Morris 1988, Grubbs and Fuller 1991, Clancy 1993, Heus 2003, Sather et al. 2004, Homoya 2006, Rhoads and Block 2007, Morris and MacDonald 2012, Morris 2013, PANHP 2019, Chafin 2020, Hilty 2020, Sheviak 2020, NAOCC 2024, Weakley et al. 2024). Most of New Jersey's former occurrences were located in marshes or meadows and two extant populations are situated in young forests or along forest edges where they are partially shaded (NJNHP 2024). One unusual occurrence was documented at the edge of a salt marsh where the orchid was growing side by side with maritime plants (Stone 1908).

Knapp et al. (2011) described the habitat of one *Platanthera peramoena* population in Delaware as "an isolated, forested wetland of high ecological quality." However, the orchid has also been found growing in highly disturbed habitats at many locations throughout its range. It is often associated with roadsides and ditches, including one described by Henry et al. (1975) as "a sluggish, not too clean drainage ditch." It has also been found in old fields and pastures, abandoned roads and quarries, timber plantations or harvest sites, and utility right-of-ways (Spooners et al 1983, Yatskivych and Yatskivych 1987, Homoya 1993, Pounds et al. 1993, Ayl et al. 1996, Sather et al. 2004, Fowler 2005, Rhoads and Block 2007, Karns et al. 2012, Morris 2013, PANHP 2019, Hilty 2020, Sheviak 2020). Spooner and Shelly (1983) noted that many populations of *P. peramoena* were associated with weedy habitats and one plant was found in an area that had been extensively grazed and trampled by cattle.

Platanthera peramoena has become established in post-disturbance communities that developed following agriculture (Edgin and Ebinger 2000), logging (Spooners and Shelly 1983, Fletcher 2002), or beaver activity (Philly 2019). There is some evidence that the species also benefits from certain types of repeated disturbances that maintain an open canopy or reduce competition (Hilty 2020, NAOCC 2024). *P. peramoena* has been found in habitats that were maintained by fire, mowing, or grazing (Chester et al. 1997, Heus 2003, Philly 2019), and Spooners and Shelly (1983) observed that populations of the orchid were more vigorous in places that had been mowed periodically or lightly grazed.

Wetland Indicator Status

Platanthera peramoena is a facultative wetland species, meaning that it usually occurs in wetlands but may occur in nonwetlands (U. S. Army Corps of Engineers 2020).

USDA Plants Code (USDA, NRCS 2024b)

PLPE

Coefficient of Conservancy (Walz et al. 2020)

CoC = 10. Criteria for a value of 9 to 10: Native with a narrow range of ecological tolerances, high fidelity to particular habitat conditions, and sensitive to anthropogenic disturbance (Faber-Langendoen 2018).

Distribution and Range

The global range of *Platanthera peramoena* is restricted to the east-central United States (POWO 2024). The map in Figure 1 depicts the extent of the orchid in North America.

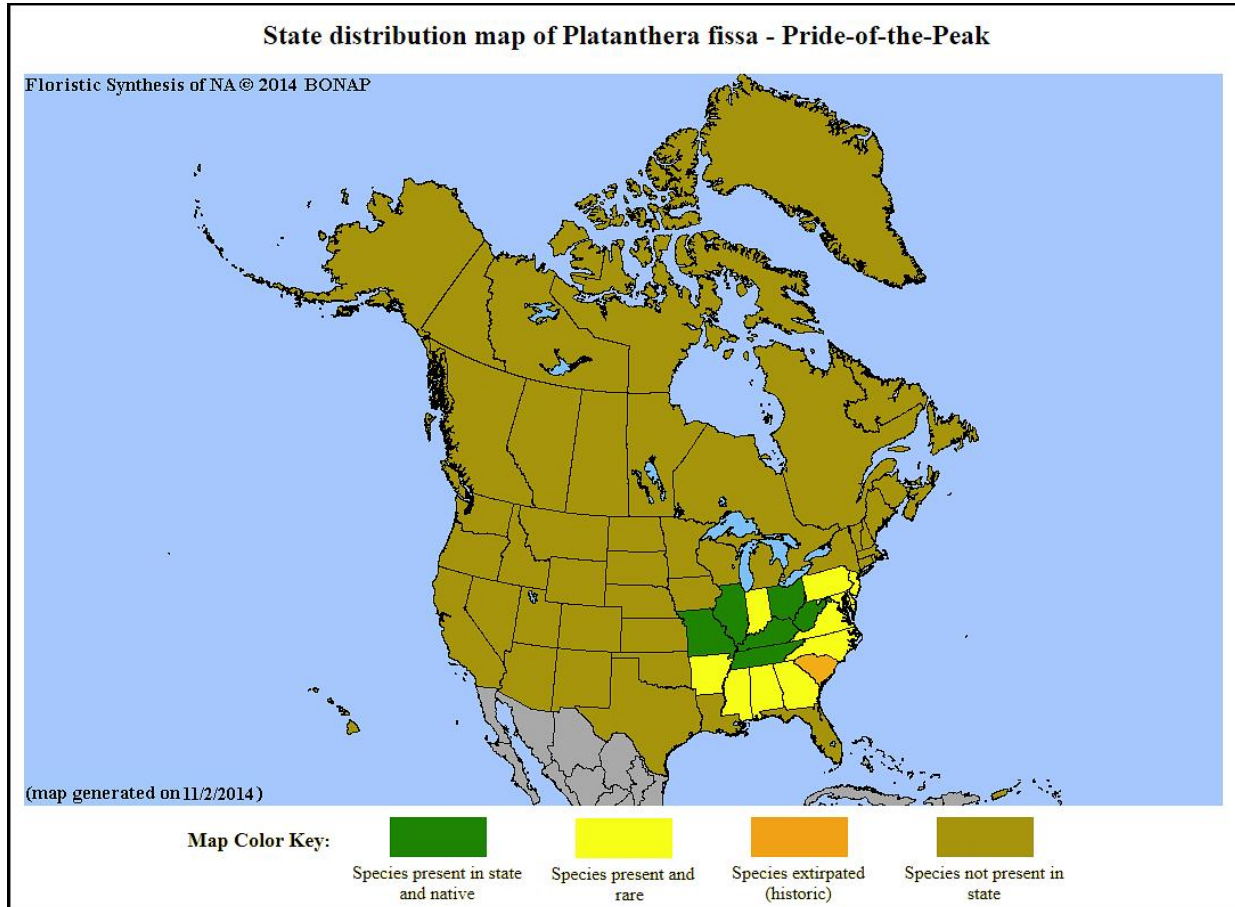


Figure 1. Distribution of *P. peramoena* in North America, adapted from BONAP (Kartesz 2015).

The USDA PLANTS Database (2024b) shows records of *Platanthera peramoena* in five New Jersey counties: Camden, Cape May, Mercer, Middlesex, and Monmouth (Figure 2 below). The orchid has also been documented in Cumberland County (NJNHP 2024). The data include historic observations and do not reflect the current distribution of the species.

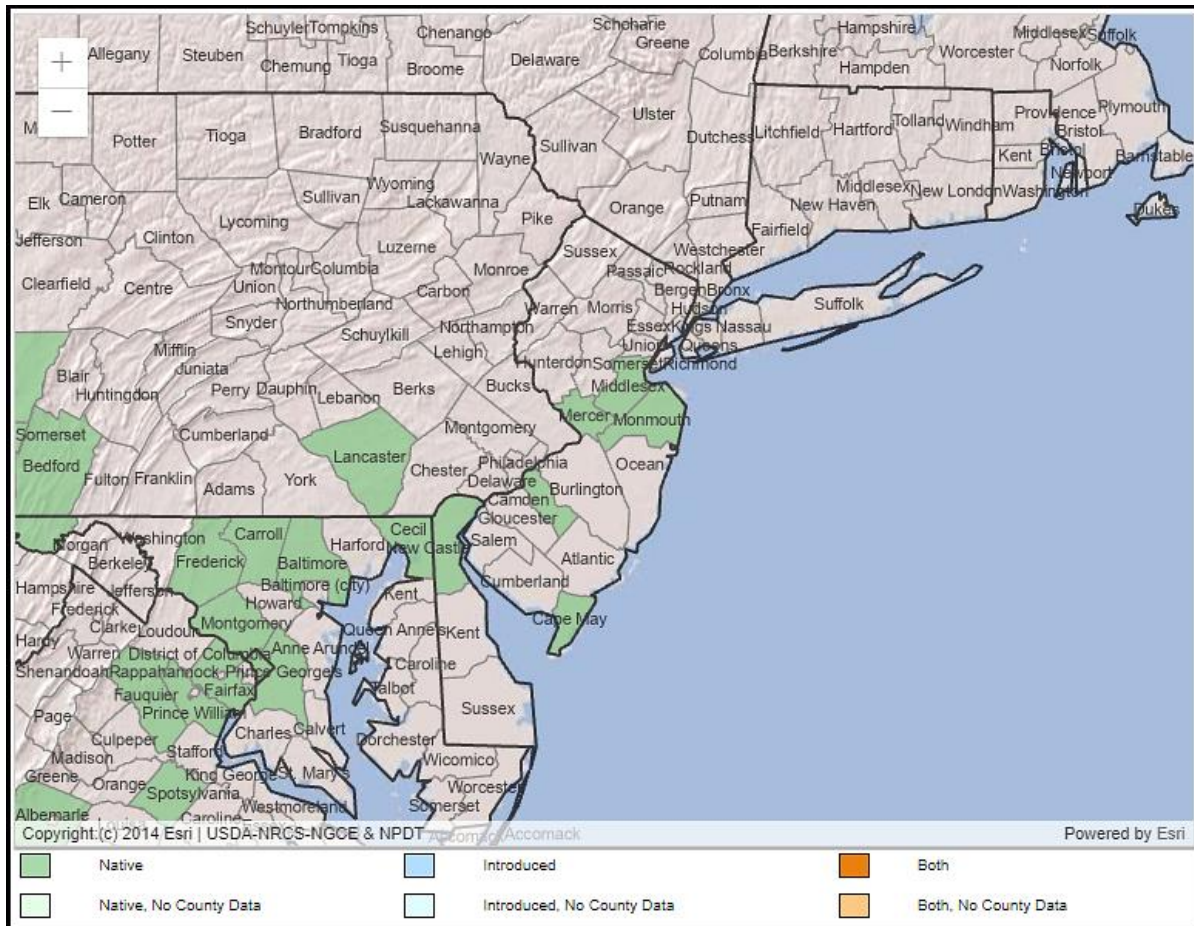


Figure 2. County records of *P. peramoena* in New Jersey and vicinity (USDA NRCS 2024b).

Conservation Status

Platanthera peramoena is considered globally secure. The G5 rank means the species has a very low risk of extinction or collapse due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats. However the need for an updated status review was noted (NatureServe 2024). The map below (Figure 3) illustrates the conservation status of *P. peramoena* throughout its range. Purple Fringeless Orchid is ranked as vulnerable (moderate risk of extinction) in four states, imperiled (high risk of extinction) in five states, critically imperiled (very high risk of extinction) in six states, and presumed extirpated in South Carolina and the District of Columbia. It is apparently secure in Illinois and unranked in Ohio.

Platanthera peramoena has been identified as a plant species of highest conservation priority for the North Atlantic region, which includes four Canadian provinces and twelve U. S. states. The species was assigned a rank of R1 (critically imperiled), signifying a high risk of regional extinction (Frances 2017). *P. peramoena* is not currently listed at the federal level (USFWS 2024). Although it was previously reviewed, it was removed from the list of candidate species in

1980 either because it was more abundant than initially supposed or because no particular threat had been identified (USFWS 1980).

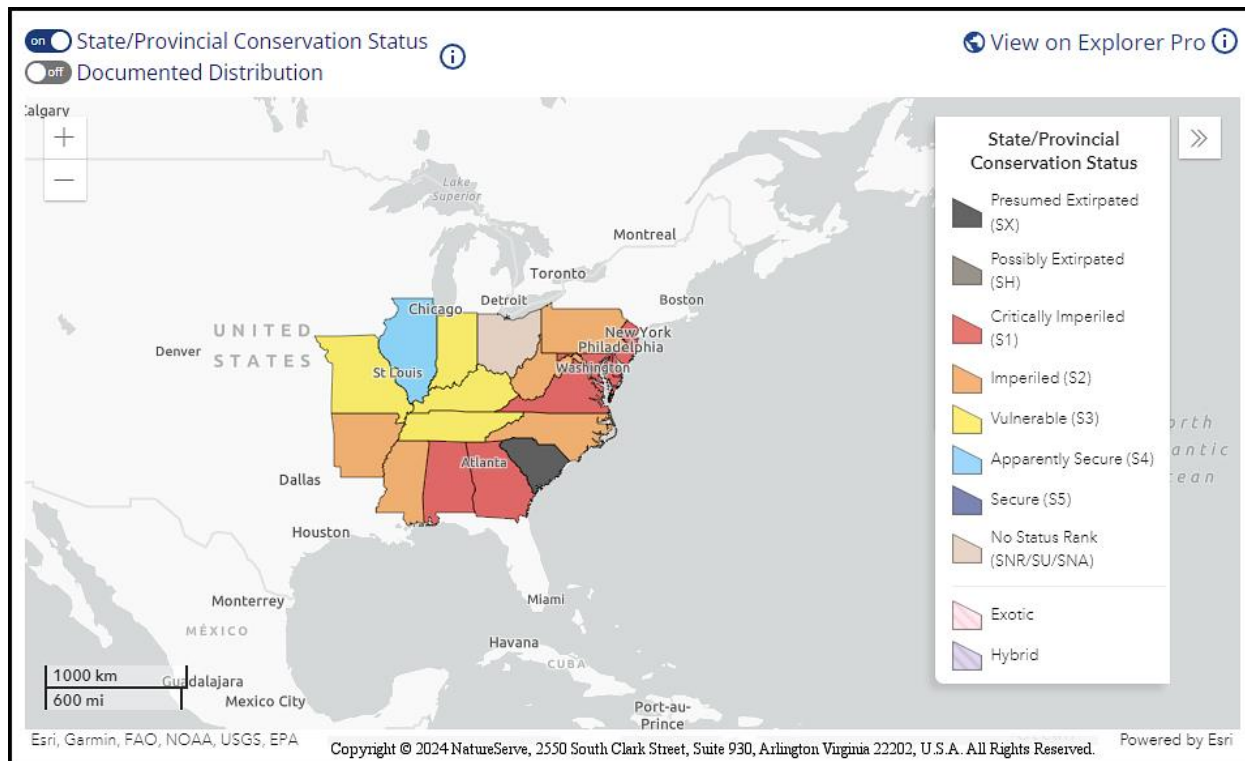


Figure 3. Conservation status of *P. peramoena* in North America (NatureServe 2024).

Platanthera peramoena is critically imperiled (S1) in New Jersey (NJNHP 2024). The rank signifies five or fewer occurrences in the state. A species with an S1 rank is typically either restricted to specialized habitats, geographically limited to a small area of the state, or significantly reduced in number from its previous status. *P. peramoena* is also listed as an endangered species (E) in New Jersey, meaning that without intervention it has a high likelihood of extinction in the state. Although the presence of endangered flora may restrict development in certain communities such as wetlands or coastal habitats, being listed does not currently provide broad statewide protection for the plants. Additional regional status codes assigned to the orchid signify that the species is eligible for protection under the jurisdictions of the Highlands Preservation Area (HL) and the New Jersey Pinelands (LP) (NJNHP 2010).

The first report of *Platanthera peramoena* in New Jersey was from Monmouth County (Willis 1874) and soon after that it was collected in Camden County (Martindale 1879). By the turn of the century the orchid had also been found in Mercer County and a second location had been discovered in Monmouth (Britton 1889, Keller and Brown 1905). In 1907 a vigorous population of *P. peramoena* was found in Cape May County during a Philadelphia Botanical Club field trip (Stone 1908) and numerous collections were made at the site over the next few years (Mid-Atlantic Herbaria 2024). However, the orchid continued to be known from just a handful of locations (Stone 1911, Taylor 1915) and Fables (1956) remarked that the species had appeared to be on the verge of extinction in the state prior to the observation of about 30 plants at the site of a declining occurrence. The status of *P. peramoena* was initially designated as "undetermined" by

Fairbrothers and Hough (1973) because at the time it was still present in some of the places where it had originally been found and there seemed to be a chance that new sites would be discovered. However the orchid continued to be scarce: The Middlesex County population was destroyed (Snyder 1984a) and although there were sporadic sightings in Monmouth County during the latter part of the 1900s the plants were present in very low numbers (Snyder 1984b, 2000). All but one of the known occurrences were ranked as historical by 2012 and the remaining one appeared to be in poor condition during recent monitoring visits. A new population of Purple Fringeless Orchid was recently documented in Cumberland County, and although small it is the largest occurrence now known in the state (NJNHP 2024).

Threats

Habitat loss or destruction is the most frequently cited threat to *Platanthera peramoena* throughout its range. Problematic activities include the conversion of habitat for development, agriculture, or forestry purposes and the alteration of wetlands by ditching, draining or filling (Fairbrothers and Hough 1973, Reveal and Broome 1981, Awl et al. 1996, PANHP 2019, Chafin 2020, NatureServe 2024). Fables (1956) observed that a formerly extensive New Jersey population had been reduced to a token occurrence by industrial expansion, and even that remnant was eventually destroyed (NJNHP 2024). Roadside or right-of-way maintenance practices such as mowing during the growing season or the indiscriminate use of herbicides have been noted as threats to some *P. peramoena* occurrences in other states, as has the use of off-road vehicles in wetland habitats (Awl et al. 1996, Fowler 2005, Chafin 2020). One of New Jersey's populations was noted to be vulnerable to collection, which continues to be a concern throughout the orchid's range despite the fact that *P. peramoena* requires particular fungal partners and transplants poorly (Reveal and Broome 1981, Awl et al. 1996, Fowler 2005, Chafin 2020, NJNHP 2024).

Like many orchids, *Platanthera peramoena* is highly susceptible to browsing. The foliage and flowers are consumed by native herbivores like rabbits and deer and sometimes by livestock (Hilty 2020). The loss of floral spikes thwarts reproductive efforts, and since *P. peramoena* blooms so infrequently herbivory is likely to contribute to population declines. Deer browse was suspected to have eliminated the only known occurrence of *Platanthera peramoena* from a site in the Great Smoky Mountains National Park (Webster 2005). One of New Jersey's extant populations has been protected from large herbivores with fencing but deer browse damage has repeatedly been observed at the other site, along with associated trampling (NJNHP 2024). Trampling or digging by feral hogs can threaten some southeastern populations (Chafin 2020).

An additional threat one New Jersey *Platanthera peramoena* occurrence is the proliferation of invasive species: Stiltgrass (*Microstegium vimineum*) was noted as a particular concern (NJNHP 2024). Stiltgrass can spread rapidly in disturbed sites and become locally dominant, shading out less competitive species and inhibiting seedling establishment, while the decomposing stems and leaves can alter soil chemistry (Kaufman and Kaufman 2007). Invasive plants have been also identified as a threat to *P. peramoena* in Georgia (Chafin 2020) and Virginia (McMurchie and Weeks 2020); at the latter site it was noted that removal of the invasive species (*Acorus calamus*) might also threaten the orchids.

Climate Change Vulnerability

Information from the references cited in this profile was used to evaluate the vulnerability of New Jersey's *Platanthera peramoena* populations to climate change. The species was assigned a rank from NatureServe's Climate Change Vulnerability Index using the associated tool (Version 3.02) to estimate its exposure, sensitivity, and adaptive capacity to changing climactic conditions in accordance with the guidelines described by Young et al. (2016) and the state climactic computations by Ring et al. (2013). Based on available data *P. peramoena* was assessed as Moderately Vulnerable, meaning that it is likely to show some decrease in abundance or range extent in New Jersey by 2050. According to Frances (2017), a similar conclusion was reached following an assessment in Pennsylvania.

As the climate continues to warm, plant communities in New Jersey are increasingly exposed to higher temperatures while changing precipitation patterns in the region are resulting in more frequent floods and longer droughts (Hill et al. 2020). As a species that reaches the northern end of its range in the state, *Platanthera peramoena* is unlikely to be harmed by warmer temperatures or a longer growing season. However, there are a number of other factors that might contribute to the orchid's vulnerability. Prolonged flooding or lengthy periods of drought could result in the loss of mature plants or reproductive opportunities. The apparently heavy reliance of *P. peramoena* on a single species for effective pollination was also identified as a potential risk factor for the orchid, although there is presently no indication that climate change is having a detrimental impact on *Hemaris thysbe* populations (Young et al. 2017). Other considerations included the low probability of successful dispersal to suitable habitats in New Jersey and a growing threat from invasive plant species as a result of climate change (Bellard et al. 2013, Salva and Bradley 2023).

Management Summary and Recommendations

One of New Jersey's two extant *Platanthera peramoena* populations is situated on preserved land and fences are protecting the plants from deer browse. The second occurrence is susceptible to periodic flooding, frequent deer browse, and competition with invasive plants (NJNHP 2024). At the latter site, the feasibility of management activities to deter herbivores and control the spread of Stiltgrass should be evaluated.

Surveys of historic sites or potential habitat might turn up additional populations of Purple Fringed Orchid in New Jersey. There are three historical locations that could still harbor the species, and each of the sites was noted to have additional suitable habitat for the species nearby. Although two of the sites were visited once during the 1990s, searches may need to be repeated for several consecutive years because the plant's episodic blooming habit and short flowering period can make it easy to miss. *Platanthera peramoena* has been known to grow in "blackberry thickets and other places difficult to traverse" (Fairbrothers and Hough 1973) and "swampy, weedy habitats that are not particularly pleasant to explore" (Spooner and Shelly 1983) so some undiscovered populations might be present in sites that are not frequently visited by botanists.

Synonyms

The accepted botanical name of the species is *Platanthera peramoena* (A. Gray) A. Gray. Orthographic variants, synonyms, and common names are listed below (ITIS 2024, POWO 2024, USDA NRCS 2024b). Lindley's name (*Platanthera fissa*) was utilized by Kartesz (2015) and the U. S. Army Corps of Engineers (2020). The epithet was apparently rejected by Gray (1840, 1867) because the name *Orchis fissa* had been applied to two different plants—by Willdenow in the 4th edition of *Species Plantarum* (1805) and by Pursh in his *Flora Americæ Septentrionalis* (1814)—and Lindley (1835) included both as synonyms. *Habenaria fissa* Brown as published by Beck (1833) was cited as another synonym by Lindley, but that had also listed Willdenow's *O. fissa* as a synonym. Although Gray (1840) indicated that Pursh's name could legitimately be applied to *Platanthera peramoena*, Willdenow's name is now viewed as a synonym of *Platanthera psycodes* (POWO 2024, Weakley et al. 2024).

Botanical Synonyms

Blephariglottis peramoena (A. Gray) Rydb.
Habenaria peramoena A. Gray
Platanthera fissa (R. Br.) Lindl.
Platanthera fissa (Muhl. ex Willd.) Lindl.

Common Names

Purple Fringeless Orchid
Pride-of-the-peak

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