

## SOME NATIVE ORCHIDS OF NORTHEASTERN USA

Leon Glicenstein  
c/o Hoosier Orchid Company  
8440 West 82<sup>nd</sup> Street  
Indianapolis, IN 46278-1062

Botanically, in the strictest sense, the Northeast of the United States is composed of the states of New England, New Jersey, New York, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia. However, most of the plants shown may also be found outside this range. Of the nearly 58 genera and 200 orchid taxa found in the United States, approximately 75 species distributed among 23 genera occur in this region. Many of these states, or parts of these states, are rapidly being developed to the detriment of the plants and animals living there. Areas once known to contain numerous orchid species now have none due to development and the so-called man-made improvements to the natural environment. It is becoming harder to encounter many orchids in the wild and when they are found, they should be protected. Habitat protection is one of the most important methods of maintaining our native orchid populations.

Of the twelve species of *Cypripedium* found in the United States, seven may be found in the Northeast. In early spring, many an open rocky hardwood or dry pine wood is allowed with the pink lantern of *Cypripedium acaule* (Plate 202), the Pink Lady's-slipper. The lip, unlike our other lady's-slippers, has the opening as a fissure in the front of the pouch and not at the top. The Yellow Lady's-slipper, *Cypripedium parviflorum* var. *pubescens* is among the easier of the lady's-slippers to cultivate; consequently, too many of these plants are dug up from the wild to satisfy the garden trade. This is not necessary since we are now able to grow these plants from seed. If you do obtain one, make sure that it is seed-propagated! The other lady's-slippers shown are: Ram's Head Lady's-slipper (*Cypripedium arietinum*), *Cypripedium kentuckiense* (Plate 203), Small White Lady's-slipper (*Cypripedium candidum*), and the Queen Lady's-slipper (*Cypripedium reginae*).

This region's only alien orchid is *Epipactis latifolius* (Plate 204), the Broad Leaved Helleborine, native to Eurasia.

Plants of the genus *Listera* are usually very small and often difficult to see. They are known as Twayblades because of the two, nearly opposite, leaves

at the top of the plant. The inflorescence arises from between the leaves, giving the appearance that the leaves are on the middle of the stem. Of the five species found in our area, only three will be shown. There are lots of mosquitos where these plants grow, more than willing to make you pay in blood for the privilege of seeing them. For the record, while female mosquitos need blood to complete their reproductive live-cycle, the male mosquitos are pollen eaters and are known to pollinate a number of small orchid species. To eradicate all of the mosquitos is to doom some orchid species, as well as other taxa, to extinction. The three are: the Broad-leaved Twayblade (*Listera convallarioides*), the Kidney-leaved or Small's Twayblade (*Listera smallii*), and the Heart-leaved Twayblade (*Listera cordata*).

Although approximately eleven species of *Spiranthes* may be found in the Northeast, only three will be shown. The derivation of the common name of Ladies'-tresses is uncertain. Is it because the white, spiraled stems reminded men of the braids that women wore, or, in a more risqué tone, because they reminded them of the lace traces that were once at the top of women's bodices? The three species shown are: the Nodding Ladies'-tresses (*Spiranthes cernua*), the Green Pearl Twist or Slender Ladies'-tresses (*Spiranthes lacera* var. *lacera*), and the Wide-leaved Ladies'-tresses (*Spiranthes lucida*).

The genus *Goodyera* has a world-wide distribution: four species may be found in the northeast region. They have an evergreen basal rosette of leaves from which arises the inflorescence of flowers, usually in pink or white, depending on the species. The four species shown, *Goodyera pubescens*, *Goodyera oblongifolia*, *Goodyera tesellata* and *Goodyera repens* var. *ophioides*, are all known as Rattlesnake Plantains.

*Ponthieva racemosa*, with the strange common name of Shadow-witch, grows, in southern Virginia in shady, moist woods in the thin rich soils formed over limestone or shell marl.

The fragrant Showy Orchid, *Galearis spectabilis* (Plate 205), is found in bloom in May or June. The plants usually grow singly or in small groupings in moist eastern deciduous woods.

The Small Round-leaved Orchid, *Amerorchis rotundifolia*, is found only at the extreme northern edges of the region.

Although the genus *Platanthera* was first described in 1818, until relatively recently, all of the following orchids were placed in the genus *Habenaria*. Then in 1972, the genus we were calling *Habenaria* was divided into the genera *Habenaria*, *Platanthera*, *Coeloglossum* and *Piperia*. At present, only *Platanthera* and *Coeloglossum* may be encountered in these northeastern states. There is a chance that *Piperia* may be found here in the future. Eighteen species of *Platanthera* are presently known in our region, only twelve will be illustrated. They are: the Little Club-spur or Wood Orchid (*Platanthera clavellata*), Hooker's Orchid (*Platanthera hookeri*), Round-leaved Orchid (*Platanthera orbiculata*), Northern Green Orchid (*Platanthera hyperborea*), White Bog-candle (*Platanthera dilatata*), Yellow-fringed Orchid (*Platanthera ciliaris*), White-fringed Orchid (*Platanthera blephariglottis*), Small Purple-fringed Orchid (*Platanthera psycodes*), Large Purple-fringed Orchid (*Platanthera grandiflora*), Purple-fringeless Orchid (*Platanthera peramoena*) and Prairie-fringed Orchid (*Platanthera leucophaea*).

At least two *Platanthera* species reach their northernmost limit in our region. They are *Platanthera integra* and *Platanthera nivea*. One area where *Platanthera nivea* grew had been carefully set aside as a preserve. It had previously been a hay-field, the hay harvested after the orchids set seed. But since it was not maintained after becoming a preserve, the grass thatch became too dense and the orchids began dying out. When maintenance began and the thatch removed, the orchids began to flourish again – only to be dug out by collectors. We have to be vigilant in the protection of our orchids from people.

New orchid species may be described even today. In 1992, it was suggested that an orchid that had been known for years as a natural hybrid was really a new species. Because of the pale colour of the flower it was named *Platanthera pallida* (Plates 206 & 207).

*Coeloglossum viride* var. *virescens* (Plate 208), more commonly known as the Long Bracted or Frog Orchid, is a very antisocial plant: only one or two plants are usually found in a large area.

The Rose Pogonia, *Pogonia ophioglossoides* (Plate 209), flowers in many of the bright, wet meadows, bogs and fens in our region. It is very intolerant of

drying out and is among the first orchids to die if an area is drained. The flowers smell of crushed red raspberries.

Two species of *Cleistes* are known from our corner of the United States. The coastal plain of southern New Jersey is the northernmost location for the Spreading Pogonia, *Cleistes divaricata* (Plate 210), while the mountains of western West Virginia are home to *Cleistes bifaria* (Plate 211).

While some orchids have been placed on individual state endangered species lists, only the Small Whorled Pogonia, *Isotria medeoloides* (Plate 212), is on the U.S. National Endangered Species list. It made it onto the list one year after one of the largest and most studied colonies in our region fell victim to the bulldozer to create a very “valuable” parking lot. There are only two known species of *Isotria*, and both of them may be found in the northeast. The second species is *Isotria verticillata*, the Large Whorled Pogonia. Unlike the Small Whorled Pogonia, which is usually found singly or in small groupings on the forest floor, this species spreads by underground runners, so that what may appear to be an extensive colony may actually be only one plant.

The Three-birds Orchid, *Triphora trianthophora*, is one of our fall-blooming orchids. To insure cross-pollination, almost all of the plants in a given area flower on the same day.

A common resident of bogs, as well as moist meadows, is the Grass Pink, *Calopogon tuberosus* (Plate 213). It has developed an ingenious method to manipulate the insect pollinator so that cross-pollinated seed is produced.

The alert, bright pink flower of *Arethusa bulbosa*, the Dragon Mouth, on its six-inch stem, is a treat not easily forgotten even for the most jaded orchid hunter.

The Northeast is host to a number of mycophytic orchids. These are the “leafless” orchids which have an active symbiotic relationship with certain fungi. The fungi supply the plant with food, usually in the form of sugars and other nutrients. Often these orchids have little to no chlorophyll and so are not usually green plants. The Crested Coral Root, *Hexalectris spicata*, reaches as far north as southern Virginia.

Three or four species of *Malaxis* call the Northeast their home. *Malaxis unifolia* has a most extensive range: from Newfoundland and eastern Canada, down the eastern half of the United States, south to Nicaragua and

the Caribbean Islands. The tiny green flowers are best appreciated with a hand lens.

The Purple Escutcheon, *Liparis liliifolia*, is among the first orchids to colonize pine plantations.

The coral-roots are another group of mycophytic orchids. Six of the ten presently known species can be found in the United States, and five of them in our region. The leaves of these plants have been reduced to scales on the stem. The roots are very coralloid in shape, hence the common name. The plants are often brightly coloured. The species illustrated are: the Spotted Coral-root, (*Corallorhiza maculata*), Autumn Coral-root, (*Corallorhiza odontorhiza*), Early Coral-root (*Corallorhiza trifida* var. *verna*), Wister's Coral-root (*Corallorhiza wisteriana*) and Striped Coral-root (*Corallorhiza striata*).

Three of our native orchids have what are called hibernial leaves. The leaf is produced in autumn and is present throughout the winter, taking advantage of the increased light reaching the forest floor; it then dies in the spring. The three genera are *Aplectrum*, *Tipularia*, and *Calypso*. *Aplectrum* and *Calypso* flower in the spring while the leaf is senescing, whereas the leaf of *Tipularia* dies and disappears completely in the spring and the naked flower scape is produced later in the year. *Aplectrum hyemale*, Puttyroot, may be most easily found during the winter. Its dark green leaves, with thin white veins, are unmistakable. *Tipularia discolor*, the Crippled Crane-fly Orchid, gets its common name from the fact that the flowers are not zygomorphic, as is the case with most orchids, but have a more than slightlylopsided flower. *Calypso bulbosa* is a monotypic, circumboreal genus with five recognized varieties. Two are found in the United States. The northeastern type is variety *americana*. Unlike the western form which may be locally known as the Devil's Walking Stick, the northeastern variety is known as Calypso, or Fairy Slipper.

This program has shown you some of the orchids which may be found in the Northeastern region of the United States. As is the case with all species on our planet, their future is uncertain. Unless we enforce strong conservation regulations and encourage the conservation ethic in ourselves, in our friends and families, and in our governments now, their future may be extinction. We can't just conserve orchids. We must conserve whole habitats and every organism within them, from the "lowest" fungi to the "highest" animal. To this end, every conservationist knows that population control is one of the

most important steps that we must work for. Trying to conserve habitats will never succeed if human population outside that habitat continues to grow so that it eventually and forcibly, or politically, takes it over.

What can we do? We must protect, and maintain, large breeding areas and habitats. Encourage people who are successfully cultivating native orchids, and some of them can be very successfully grown, to propagate their plants and release divisions to others who would like to try growing them, rather than taking plants from the wild. But you must be sure that if you buy divisions that they are truly divisions of long-time cultivated plants and not plants that have been collected in the wild, placed into cultivation for a few months, then declared to be cultivated plants. If you can not obtain verifiably cultivated clones, do not buy native orchids which are not certifiably seed grown. If you are going to get some seed-grown, or divisions of native terrestrial orchids, do your homework first! Learn all that you can about the habitat and cultural requirements of the plant before you obtain it. You and/or your organization should contribute or organizations such as the American Orchid Society's Conservation or Research Committees, who are supporting habitat protection as well as research into techniques of growing native terrestrial orchid species from seed. Please do not leave here believing that if we can learn how to grow these species from seed, we no longer have to be concerned with habitat protection – both are vitally needed.

I do hope that you will be able to visit with many of the orchids of the Northeast in their native haunts. If you do, please treat them with respect. Wouldn't it be wonderful if future generations could appreciate them in the wild too? To achieve this end, we must all be active conservations and walk softly upon the earth.