



CYPRIPEDIUM HIRSUTUM (Showy Lady's Slipper)

BY PERMISSION OF EDWIN HALE LINCOLN

NOTES ON NATIVE NEW ENGLAND ORCHIDS

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Orchids are found all over the world except in the polar and desert regions, but principally in the tropics and sub-tropics. Although the most numerous and widely distributed of all families in the vegetable kingdom, they seldom grow in quantity in any one place. In the orchid family there are over 400 genera containing probably about 15,000 species.

Orchids are perennial, highly specialized in structure and particularly in the character of the flowers. They are divided into two classes, *epiphytic* and *terrestrial*. Epiphytic orchids have the most varied forms but are confined to the hot climates, where they live upon branches of trees, dead trunks and often bare rocks, getting their sustenance from the air, rain, and slight amount of mineral and organic matter which falls upon them and obtaining no food from the trees or branches upon which they rest. Terrestrial orchids live in the earth, from which they derive their food. In the temperate regions, such as the United States, north of Florida, only terrestrial orchids are found.

The orchids which grow in New England are thus wholly terrestrial and are confined to 14 genera and 48 species, which flower during the six months of the year from the latter part of April to the middle of October, the time for each variety varying with the latitude and elevation. Some are large and showy, others small and inconspicuous; some are highly colored, others have little color; some grow in swamps and bogs, some in dry uplands, some in shaded places, others in open sunny spots.

The following is a list of the orchids native to New England, with the accepted botanical name, the common name, and the name of the person by whom described; also a brief description of the plant and flower and the usual time of flowering.

APLECTRUM (Greek, *with no spur*). Medium-sized orchid, of rich woods, with corm-like roots producing an annual bulb, and dull-colored flowers on a raceme. 1 species:

A. hyemale, Nuttall. PUTTY-ROOT. ADAM-AND-EVE. Stem about 1 ft. high; 1 leaf, basal, oval, pointed, 2-6 in. long, lasting throughout the winter; flowers medium-sized, greenish-brown or yellowish tinged with purple, sweetly fragrant, on raceme; bulbs unpleasant. Flowers from about May 22nd.

ARETHUSA (the nymph *Arethusa*). Small handsome bulbous bogland orchid with leafless or single-leaved stem. 1 species:

A. bulbosa, Linnaeus. BEAUTIFUL ARETHUSA. Stem erect, 4-10 in. high, apparently naked but with 1 leaf, linear, nerved, 4-6 in. long, hidden in sheath of scales; flowers solitary, rarely 2, magenta-pink or purple, lip recurved and bearded. Flowers from about May 17th.

CALOPOGON (Greek, *beautiful beard*). Also called *Limodorum*. Grassy bog or wet meadow orchid with bulbous roots; 1 species:

C. pulchellus, Brown. GRASS-PINK. MEADOW GIFT. Stem 6-16 in. high with single grass-like leaf at base; flowers pink-purple, lip bearded, with white, yellow and purple club-shaped hairs; 2-12 flowers in raceme. Flowers during July.

CALYPSO (the Greek goddess *Calypso*, signifying concealment). A delicate and rare orchid of the northern wooded bogs, with bulbous roots. 1 species:

C. bulbosa, Oakes. BEAUTIFUL CALYPSO. NORTHERN CALYPSO. Stem 3-7 in. high, from small bulb; leaf 1, basal, appearing in autumn, roundish, 1 in. wide; flower single, terminal, magenta-pink, with large lip marked with brown, purple and yellow, hairy within. Flowers from about May 20th.

CORALLORRHIZA (Greek, *coral-root*). Low orchids growing in woods, living on decayed vegetable matter, destitute of green foliage, plant inconspicuous, brownish or yellowish, flowers small, in terminal raceme. 3 species:

C. trifida, Chatelain. EARLY CORAL-ROOT. Stem 2-7 in. high, flowers dull-purple about $\frac{3}{8}$ in. long, 3-12 on raceme, sepals and petals narrow. Flowers from about May 11th.

C. odontorhiza, Nuttall. SMALL-FLOWERED CORAL-ROOT. DRAGON CLAW. LATE CORAL-ROOT. CRAWLEY-ROOT. Stem slender, 6-7 in. high; flowers 6-20, light brown or purple; leaves reduced to sheathing scales. Flowers in August and September.

C. maculata. SPOTTED LARGE CORAL-ROOT. Stem 16 in. or less high, purplish; flowers brownish-purple, 10-30 in spiked raceme, lip deeply 3-lobed. Flowers in July.

CYPRIPEDIUM (Greek, *Venus' Slipper*). LADY'S SLIPPER or MOCCASIN FLOWER. Woodland and bogland orchids with fleshy-fibrous roots, stems 6 in. to 3 ft. high bearing 2 or more leaves commonly many-nerved; flowers terminal, 1-3. 4 species:

C. acaule, Aiton. PINK LADY'S SLIPPER. MOCCASIN-FLOWER. STEMLESS LADY'S SLIPPER. Stem short with 2 ovate or oblong-oval leaves at base, 6-8 in. long, hairy; flowers large, solitary, pink, veined, sepals and petals brownish. Flowers from about May 19th.

C. arietinum, Brown. RAM'S HEAD LADY'S SLIPPER. Stem 6-12 in. high, slender; leaves lanceolate, 3-4, dark green, smooth; flowers small, resembling a ram's head, single, mottled dull purple and white, veined, with white woolly hairs. *One of the rarest native orchids.* Flowers from about May 9th.

C. hirsutum, Miller. SHOWY LADY'S SLIPPER. Plant stout, 1-3 ft. high; leaves 5-7, oval, alternating to top of stem, 3-7 in. long; flowers 1-4, terminal, large, white, tinged with deep pink. *The largest native orchid.* Flowers from about June 15th.

C. parviflorum, Salisbury. SMALL YELLOW LADY'S SLIPPER. Stem 1-2 ft. high; leaves ovate; flowers small, yellow, solitary. Flowers from about May 19th.

C. parviflorum, var. pubescens. LARGE YELLOW LADY'S SLIPPER. Stem leafy, 9-28 in. high; leaves, usually 5, oval, 4-8 in. long; flowers yellow, 1-3, shoe-shaped, petals twisted. Flowers from about May 19th.

GOODYERA (after John Goodyer, botanist). Small woodland orchids with fleshy-fibrous roots, several leaves mottled with green and white or cream-white. 4 species:

G. repens, Brown. (var. *ophioides*, Fernald). NET-LEAF RATTLESNAKE PLANTAIN. Stem 4-10 in. high; leaves ovate; flowers white, on a one-sided spike. Flowers from about July 19th.

G. pubescens, Brown. DOWNY RATTLESNAKE PLANTAIN. Stem stout, 6-16 in. high; leaves ovate, deep green, veins netted and

white; flowers greenish-white in dense spike all around the stem. Flowers from about July 4th.

G. tessellata, Loddiges. Stem slender; leaves broadly ovate; flowers white, in loose spike; $\frac{3}{16}$ in. long; flowers in July and August.

G. decipiens, Hooker. MENZIES' RATTLESNAKE PLANTAIN. Stem 14-18 in. high; leaves ovate-lanceolate, dark-green with netted veins; flowers greenish-white in dense spike. Flowers in July and August. The largest of this group and confined to the northern woods.

HABENARIA (Greek, *a rein or strap*). Plants leafy, flowers of varied colors in terminal raceme or spike, fragrant in several species; roots thick and fibrous, 15 species:

H. bracteata, Brown. LONG BRACTED ORCHIS. Slender damp woodland orchid; stem $\frac{1}{2}$ to 2 ft. high; leaves oval; flowers small, greenish, in loose spike. Flowers from about May 8th.

H. blephariglottis, Torrey. WHITE FRINGED ORCHIS. Stem slender 1-2 ft. high; flowers white, fringed, in loose many-flowered raceme, with undivided lip; very similar to *H. ciliaris*. Flowers from about July 23rd.

H. ciliaris, Brown. YELLOW-FRINGED ORCHIS. Stem slender, 16-24 in. high; leaves 4-8 in. long, lanceolate; flowers orange colored, fringed, medium sized, in many-flowered raceme. *The handsomest native orchid*. Flowers from about July 25th.

H. clavellata, Sprengel. SMALL WOOD-ORCHIS. Stem 8-16 in. high; 1 leaf near middle; flowers small, greenish-yellow, in loose spike, with lip 3-toothed. Flowers about July 15th.

H. dilatata, Gray. TALL WHITE NORTHERN ORCHIS. Tall bogland orchid with lanceolate leaves; flowers white in dense spike, small, with simple lip, fragrant, very similar to *H. hyperborea*. Flowers from about June 1st.

H. hyperborea, Brown. TALL GREEN NORTHERN ORCHIS. Stem tall, leafy and stout; leaves many, lanceolate; flowers small, greenish. Cold bogland or damp woodland orchid; flowers from about June 1st.

H. fimbriata, Brown. LARGE PURPLE-FRINGED ORCHIS. LONG PURPLES. DEAD MEN'S FINGERS. DEAD MEN'S THUMBS. Tall bog or damp woodland orchid; leaves numerous, oblong; flowers in densely-flowered raceme, lilac, rarely white, fragrant, lip 3-parted. Flowers late May to early August.

H. flava, Gray. TUBERCLED ORCHIS. Stem stout, leafy, 10-22 in. high; leaves elliptic; flowers dull greenish-yellow, small, in spiked raceme. Damp meadow or sphagnum woodland orchid. Flowers from about June 5th.

H. lacera, Brown. RAGGED FRINGED GREEN ORCHIS. Bog or wet woodland orchid; stem 1-2 ft. high; leaves lanceolate; flowers greenish-yellow, very ragged fringed, in loose spike. Flowers July-August.

H. orbiculata, Torrey. LARGE ROUND-LEAVED ORCHIS. Stem 1-2 ft. high; leaves orbicular, lying on the ground; flowers numerous in loose raceme, greenish-white, with lip simple. Tall woodland orchid. Flowers from about June 17th.

H. macrophylla, Goldie. Similar to preceding but larger in all its parts. Moist coniferous woods. Flowers June-August.

H. Hookeri, Gray. SMALL ROUND-LEAVED ORCHIS. Stem 8-18 in. high; leaves oval, obovate or orbicular; flowers greenish-yellow with simple lip, numerous. Damp hilly woodland orchid; flowers from about June 10th.

H. obtusata, Richardson. SUB-ALPINE GREENISH BOG-ORCHIS. Stem 4-10 in. high, slender; leaf 1, basal, obovate; flowers in loose spike, greenish-yellow, with simple lip. Bogland orchid; flowers July-August.

H. psycodes, Swartz. SMALL PURPLE-FRINGED ORCHIS. Stem 1-2 ft. high; flowers lilac, rarely white, fragrant, numerous. Flowers from about July 15th.

H. leucophaea, Nuttall. Stem 2-4 ft. high; leaves oblong-lanceolate; raceme commonly elongated, loose; flowers large, fragrant, greenish-white. Wet meadows; flowers June-July.

LIPARIS (Greek, *fat, shining*, from the lustrous leaves). Also called *Leptorchis*. Small, erect plants with bulbous roots and numerous flowers in terminal raceme; leaves basal, broad, shining. 2 species:

L. liliifolia, Richard. LARGE LILY-LEAVED TWAYBLADE. Plants 4-7 in. high; leaves oval or ovate, 5 in. long; flowers purplish, in raceme many-flowered and showy. Moist rocky woodland orchid; flowers from about June 15.

L. Loeselii, Richard. LOESEL'S GREEN TWAYBLADE. Plant 3-9 in. high; leaves elliptic-lanceolate, 2-6 in. long; raceme with few greenish flowers. One of the least conspicuous native orchids; flowers June-July.

LISTERA (after Martin Lister). Small, slender, erect plants with fibrous, sometimes fleshy, roots; 2 opposite green leaves, near middle of stem; flowers small in terminal raceme. 3 species:

L. convallarioides, Torrey. BROAD-LIPPED TWAYBLADE. Stem 4-10 in. high; leaves, 2, smooth, round-oval, obtuse; flowers 2-12, greenish-yellow. Small woodland orchid; flowers June-August.

L. cordata, Brown. HEART-LEAVED TWAYBLADE. Stem slender, 3-10 in. high; leaves, 2, heart-shaped; flowers minute, 4-20, brownish-purple. Moist woodland orchid; flowers June-July. *The smallest native orchid.*

L. auriculata, Wiegand. AURICLED TWAYBLADE. Stem slender, 4-7 in. high; leaves large, oval; flowers numerous in slender raceme. Flowers in July.

MICROSTYLIS (Greek, *small style*). Also called *Achroanthes*. Small deciduous plants with solid bulbs; flowers in terminal raceme, minute. 2 species:

M. unifolia, Michaux. GREEN ADDER'S MOUTH. Stem up to 6 in. high; leaf 1, ovate, near middle of stem; flowers greenish, in club-shaped raceme 1-3 in. long. Damp woodland orchid; flowers July-August.

M. monophyllos, (L.) Lindley. WHITE ADDER'S MOUTH. Stem slender, 4-6 in. high; 1 leaf near base; flowers greenish, minute, in raceme. Small damp woodland orchid; flowers from about June 20th.

ORCHIS (Greek, referring to shape of root). Plants with fleshy-fibrous roots and small, delicate, white and rose-purple flowers. 2 species:

O. spectabilis, Linnaeus. SHOWY ORCHIS. Stem 3-7 in. high; leaves 2, basal; flowers violet-purple mixed with rose-purple and white; fragrant; 3-6 in bracted raceme. Damp woodland orchid; flowers from early May. *The earliest New England orchid.*

O. rotundifolia, Banks. ROUND-LEAVED ORCHIS. Stem slender, 5-10 in. high; leaf single, orbicular or oval, at base; flowers, 2-6 in raceme, rose-purple, lip white, flecked with deeper purple. Woodland or sphagnum bog orchid; flowers from about June 15th.

POGONIA (Greek, *bearded*, alluding to lip). Small bogland or woodland orchid with erect slender stem, fibrous creeping roots, flowers solitary or few, in raceme. 4 species:

P. ophioglossoides. ROSE POGONIA. SNAKE-MOUTH. Stem 4-15 in. high, slender; leaves commonly single, lanceolate or ovate; flowers solitary or in pairs, pale rose, fragrant. Flowers June-July.

P. trianthophora. NODDING POGONIA. Stem 3-8 in. high; leaves, 2-8, very small, alternate, ovate, clasping the stem; flowers 1-7, pale pink. Flowers August-September.

P. verticillata. LARGE WHORLED POGONIA. Stem 8-12 in. high; leaves 5, verticillate, in a whorl, obovate, terminal; flowers solitary, brownish-purple, terminal. Flowers from about May 20th.

P. affinis, Austin. SMALL WHORLED POGONIA. Stem 8-10 in. high; leaves 5, in a whorl; flowers 2 or solitary, greenish-yellow. Flowers in June. *The rarest New England orchid.*

SPIRANTHES (Greek, referring to the twisted spikes). Erect plants with fleshy or tuberous roots; flowers small in rows in terminal twisted raceme. 5 species:

S. cernua, Richard. NODDING LADIES' TRESSES. Stem 6-15 in. high, usually pubescent above; leaves at or near base, 3-14 in. long, linear or linear-oblong; flowers white or yellowish, fragrant, nodding or spreading, in a spike. Small bog or meadow orchid; flowers from about August 25th. *The latest New England orchid.*

S. Romanzoffiana, MacMillan. HOODED LADIES' TRESSES. Stem 3-18 in. high; leaves linear to linear-oblong, 3-8 in. long, at base; flowers white or greenish, 3-rowed in spiked raceme. Inconspicuous bog orchid; flowers from about July 15th.

S. gracilis, Beck. SLENDER LADIES' TRESSES. Stem 8-32 in. high; leaves 3, basal, obovate or ovate-lanceolate, mostly dying before flowering time; flowers white, fragrant, in slender, many-flowered spike. Small sandy woodland or pasture-land orchid with clustered roots; flowers about July 25th.

S. simplex, Gray. LITTLE SIMPLE LADIES' TRESSES. Stem 5-9 in. high, very slender; leaves basal, oblong, disappearing at flowering-time; flowers white, small, in slender many-flowered twisting spike. Sandy-soil orchid with single tuberous root; flowers from about August 15.

S. lucida, (H. H.) Eaton. EARLY BROAD-LEAVED LADIES' TRESSES. Stem 3-8 in. high; leaves 4-5, oblong; flowers yellowish-white in densely-flowered raceme. Small moist woodland orchid; flowers May-July.