

Orchidaceae (Orchid Family) Key
Key to species in Newfoundland and Labrador
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- 1a. Plants lacking green leaves, deriving nutrition solely through mycorrhizal relationships with a host plant; basal sheathing bracts that lack chlorophyll are usually present (*Corallorhiza*). **2**
- 1b. Plants with green leaves, deriving nutrition through photosynthesis and mycorrhizal relationships with a host plant. **5**
 - 2a. Perianth parts yellow to reddish, striped with reddish-brown veins; lip yellow to reddish with distinctly upturned edges, forming an elliptic boat-like structure.
 ***Corallorhiza striata*** (striped coralroot)
 - 2b. Perianth parts yellow to greenish or brown, not striped with red; sepals 1–3-veined; lip solid white, or white spotted with purple, edges not upturned. **3**
- 3a. Perianth parts yellow or green, sepals 1-veined, lip solid white.
 ***Corallorhiza trifida*** (early coralroot)
- 3b. Perianth parts yellowish-brown, brown, or reddish, sepals 3-veined, lip white, spotted with purple. **4**
 - 4a. Perianth parts yellowish-brown to deep red-violet; the larger central lobe of the lip is oblong, 1.5–4.5 mm wide, with only the apex ruffled; floral bracts are up to 1 mm long. ***Corallorhiza maculata* var. *maculata*** (spotted coralroot)
 - 4b. Perianth parts yellowish-brown, reddish brown, to deep red; the larger central lobe of the lip is obovate, 3–6 mm wide with a ruffled margin that turns under near the sides and apex; the lanceolate floral bracts are up to 3 mm long and often split at the tips into 2 narrowly triangular lobes.
 ***Corallorhiza maculata* var. *occidentalis*** (western spotted coralroot)
- 5a. Plants scapose, with 1 to several basal leaves, or plants with 1 cauline leaf attached part way up the stem. **6**
- 5b. Plants with 2 or more cauline leaves, either alternate or opposite. **24**
 - 6a. Plants with 1 basal leaf. **7**
 - 6b. Plants with 2 or more basal leaves. **15**
- 7a. Flower solitary (rarely 2 flowers terminating each scape); leaf solitary. **8**
- 7b. Flowers 2–many in a spike or raceme; leaves 1–7. **10**

- 8a. Leaf ovate, plicate, and evergreen; flowers with 5 pink to purple tepals and a white slipper-shaped lip marked with brownish-purple, bearded, and bearing 2 small horn-like projects on the lower surface of the lip, near the apex.
..... ***Calypso bulbosa*** (fairy-slipper)
- 8b. Leaf linear-lanceolate to elliptic, flat, and deciduous; flowers pale purple, pink, or magenta, with an arching or flat bearded lip. 9
- 9a. Leaf basal, linear-lanceolate; flowers with tepals arching upward, lip ascending at the base, then curving downward. ***Arethusa bulbosa*** (dragon's mouth)
- 9b. Leaf attached midway up the stem, blade elliptic, ovate, or oblanceolate; flowers with spreading sepals, petals bent forward over the column, and the spatulate lip crested with 3 rows of fleshy slender projections. ***Pogonia ophioglossoides*** (rose pogonia)
- 10a. Leaves solitary (rarely 2), the blade linear-lanceolate; flowers not resupinate - the lip situated at the top of the flower; flowers 2 to several in a spike, tepals magenta; plants of peatland habitats. ***Calopogon tuberosus*** (grass pink)
- 10b. Leaves solitary (rarely 2), the blade elliptic, oblanceolate, ovate, or nearly orbicular; flowers resupinate - the lip situated at the bottom of the flower; flowers 2 to many in a spike or raceme; tepals white, green, or reddish-purple; plants of various habitats. 11
- 11a. Leaf basal, broadly elliptic to orbicular; flowers 2–9 in a spike; sepals white, petals reddish-purple (roseate), lip white with purple spots.
..... ***Galearis rotundifolia*** (small roundleaf orchid)
- 11b. Leaf basal or near the middle of the stem; flowers few to many in racemes or spikes, tepals whitish-green, pale yellowish-green, or green; lip not spotted. 12
- 12a. Leaves elliptic, ovate, to obovate, 1.5–10 cm long, sheathing the stem, the single blade situated near or below the middle of the stem; flowers arranged in racemes; the lip less than 2.5 mm long, lobed or appearing entire the, lateral lobes auricled at the base. 13
- 12b. Leaves elliptic to oblanceolate, 3–19 cm long, either basal or situated below the middle; flowers arranged in spikes; lip 3–6 mm long, unlobed and tapering to the apex or shallowly 3-lobed at the apex. 14
- 13a. Leaf situated near the middle of the stem; leaf blade ovate; raceme initially rounded at anthesis, elongating in fruit; the lip 3-lobed, lateral lobes triangular, the central lobe very small and tooth-like; pedicels spreading, 5–10 mm long.
..... ***Malaxis unifolia*** (green adder's-mouth)

- 13b. Leaf situated below the middle of the stem; leaf blade elliptic-ovate; raceme narrow and elongate; the lip inconspicuously 3-lobed, broadly triangular, acute at the tip; pedicels ascending to erect, 2–4.5 mm long.
..... ***Malaxis monophyllos* var. *brachypoda*** (white adder's-mouth)
- 14a. Leaf basal or on lower half of stem; leaf blade elliptic, oblong, or oblanceolate; smaller leaf-like bracts may be present above the basal leaf; flowers 3–15, oriented ± horizontal or on an angle to the flowering axis; all 5 tepals connivent above the column; lip oblong, projecting forward (porrect), 3–7 mm long by 3–4 mm wide, shallowly 3-lobed at the truncate apex; spur 7–13 mm long, clavate at the tip.
..... ***Platanthera clavellata*** (clubspur orchid)
- 14b. Leaf basal, elliptic, oblanceolate, to obovate, 3.5–15 cm long; flowers 10–15, oriented vertical to the flowering axis; lateral sepals reflexed, upper sepal and lateral petals connivent above the column; lip linear, descending to recurved, 2.5–8 mm long by 1–1.5 mm wide; spur 3–10 mm long, narrowed at the tip.
..... ***Platanthera obtusata*** (bluntleaf orchid)
- 15a. Leaves 2, pubescent; flowers solitary, large and showy, with a pink (rarely white) inflated pouch-like lip, 4–6 cm long; tepals reddish-brown.
..... ***Cypripedium acaule*** (pink ladyslipper, pink moccasin flower)
- 15b. Leaves 2 to several, glabrous; flowers few to several in a raceme or spike; lip smaller, not inflated or pouch-like. **16**
- 16a. Leaves 2–5, leaves, stems, and flowers glabrous; perianth yellow or yellowish-green, the lip lacking a spur, or perianth yellowish-green, greenish-white, to white, the lip with a spur, often very long. **17**
- 16b. Leaves 3–7, glabrous; scape and outer surface of flowers pubescent; perianth white, the lip lacking a spur. **21**
- 17a. Leaves 2, oblong to obovate, ascending, 4–18 cm long; flowers lacking a spur, lateral petals filiform, spreading; lip oblong, arching upward, then recurved.
..... ***Liparis loeselii*** (Loesel's twayblade)
- 17b. Leaves 2, broadly elliptic to orbicular, usually prostrate, or 2–5, oblanceolate and initially ascending, soon prostrate or withering; flowers with a spur, lateral petals lanceolate to ovate, curved upward (falcate) in some species; lip deflexed (*Platanthera*). **18**
- 18a. Leaves 2–5, blades narrowly elliptic to oblanceolate, 5–16 cm long by up to 3.5 cm long, usually ephemeral before anthesis; inflorescence a very narrow raceme, 3–44 cm tall; lateral petals linear-lanceolate to ovate; lip elliptic to ovate, 2–5 mm long, deflexed; spur 2–5.5 mm long. ***Platanthera unalascensis*** (Alaskan rein orchid)

- 18b. Leaves 2, ± opposite; blades broadly elliptic, obovate, to orbicular, 5–24 cm long by 4–22 cm wide; inflorescence a spike, to 50 cm tall; lateral petals lanceolate-falcate; lip oblong to linear-lanceolate or narrowly triangular, 7–23 mm long, deflexed or descending then curving forward; spur 11–46 mm long. **19**
- 19a. Leaves to 17 cm long by up to 13 cm wide, lying flat against the ground or ascending; tepals green to yellow-green; lip narrowly triangular, descending, then curving forward, the flower forming a 'C' in profile; spur 1.1–2.7 cm long
..... ***Platanthera hookeri*** (Hooker's orchid)
- 19b. Leaves to 24 cm long by up to 22 cm wide, lying flat against the ground; tepals greenish-white to white; lip oblong to linear-lanceolate, 0.7–2.3 cm long, descending to deflexed, spur 1.4–4.6 cm long. **20**
- 20a. Leaves 7–24 cm long by 5–19 cm wide; lip 10–23 mm long; spur 28–46 mm long, usually crossing the rachis of the inflorescence.
..... ***Platanthera macrophylla*** (greater roundleaf orchid)
- 20b. Leaves 5–21 cm long by 3–22 cm wide; lip 7–17 mm long; spur 14–27 mm long, not crossing to barely crossing the inflorescence rachis.
..... ***Platanthera orbiculata*** (lesser roundleaf orchid)
- 21a. Leaves erect to spreading, blades linear-lanceolate, unmarked, with smaller leafy bracts extending up the flowering axis; flowers spirally arranged (usually tightly so) in 3 rows; sepals and upper petals connivent and forming a hood over the lip.
.....***Spiranthes romanzoffiana*** (hooded ladies-tresses)
- 21b. Leaves in a basal rosette, petiolate, blades elliptic to ovate, marked with white or pale green reticulations or with a paler central line; scape and outer surface of perianth pubescent; only upper petals connivent and forming a hood over the lip (*Goodyera*). **22**
- 22a. Plant robust, flowering stems 20–45 cm tall; leaves 2.5–10 cm long, dark green to bluish-green, marked with an irregular white line along the midrib.
..... ***Goodyera oblongifolia*** (Menzies' rattlesnake plantain)
- 22b. Plants shorter, flowering stems 10–36 tall; leaves 1–5.5 cm long, pale green to dark green, upper surface marked with silvery-white or pale green reticulations. **23**
- 23a. Leaves elliptic-lanceolate to broadly ovate, 1–3.2 cm long, dark green; upper leaf blade marked with silvery-white reticulations along the 2 lateral veins and interconnecting cross-veins; the centre of the blade not marked; flowering stems 10–30 cm tall, spikes with 7–36 flowers. ***Goodyera repens*** (dwarf rattlesnake plantain)
- 23b. Leaves elliptic-lanceolate to broadly ovate, 1.4–5.5 cm long; pale green to bluish green, upper leaf blade marked with pale green reticulations along all veins; flowering stems 6–36 cm tall, spikes with 5–72 flowers. ***Goodyera tessellata*** (checkered rattlesnake plantain)

- 24a. Plants with one pair of ovate to cordate opposite leaves at base of the inflorescence (*Neottia*, formerly *Listera*). **25**
- 24b. Plants with several leaves along the length of the stem. **28**
- 25a. Leaves ovate-cordate to deltoid, about 1–2 cm long by 0.7–2 cm wide, leaf apices mucronate; flowers yellow-green, greenish-brown, or reddish-brown, tepals spreading, the lip deeply divided into 2 linear-lanceolate lobes.
..... ***Neottia cordata*** (heartleaf twayblade)
- 25b. Leaves elliptic, ovate, or suborbicular, 1.3–7 cm long by 1.3–5.8 cm wide, leaf apices blunt; flowers translucent yellowish-green, pale green, or blue-green; tepals reflexed, the lip oblong to obovate, shallowly notched at the apex into 2 short rounded lobes. **26**
- 26a. Lip cuneate, shallowly notched at the apex, basal auricles absent, but 2 low triangular teeth are located near the base of the lip.
..... ***Neottia convallarioides*** (broadlip twayblade)
- 26b. Lip oblong to obovate, shallowly lobed up to 1/3 the length of the lip, forming 2 rounded lobes at the apex; basal auricles present. **27**
- 27a. Flowers pale green, pedicels glabrous; lip oblong to obovate, with a thickened darker green stripe along the centre of the lip; basal auricles curved backward around the base of the column. ***Neottia auriculata*** (auricled twayblade)
- 27b. Flowers pale green, yellowish-green, or bluish-green; pedicels glandular-pubescent; lip oblong, with a bluish-green thickened stripe along the centre of the lip; basal auricles spreading, not surrounding the column base. ***Neottia borealis*** (northern twayblade)
- 28a. Stems and leaves pubescent; flowers with a pouch-like or cup-like lip. **29**
- 28b. Stems and leaves glabrous; inflorescence a many-flowered spike or raceme; lip flat, not pouch-like or cup-like. **32**
- 29a. Flowers 15–50, in a raceme; each flower subtended by a linear to lanceolate bract longer than the flowers; lip white to pinkish, constricted in the middle into 2 sections, the basal concave section glossy purplish-brown inside, the apical section flat and broadly triangular; tepals distinct, green, pink, or purplish-brown.
..... ***Epipactis helleborine*** (broadleaf helleborine)
- 29a. Flowers 1–3, terminal on a scape; lip pink or yellow, large and pouch-like; lateral petals oblong to elliptic or linear-lanceolate; lateral sepals connate, forming a synsepal that subtends the lip. **30**
- 30a. Flowers with white tepals and a pink lip. ***Cypripedium reginae*** (showy ladyslipper)
- 30b. Flowers with yellowish-green to deep reddish-brown tepals and a yellow lip. **31**

- 31a. Lip 1.5–2.9 cm long; tepals dark reddish-brown or purplish-brown, the lateral sepals twisted. ***Cypripedium parviflorum* var. *makasin*** (northern yellow ladyslipper)
- 31b. Lip 2–5.4 cm long; tepals yellowish-green to purplish-brown, the lateral sepals flat to twisted. ***Cypripedium parviflorum* var. *pubescens*** (large yellow ladyslipper)
- 32a. Lip unlobed and narrow, 3-toothed at the apex, or 3-lobed; perianth margins entire, not fringed nor deeply dissected into narrow segments. **33**
- 32b. Lip unlobed and fringed along the margin, or deeply divided into 3 parts with each segment fringed or finely dissected..... **40**
- 33a. Lip 3-lobed, divided either into 3 short lanceolate lobes of equal size or with 3 lobes or teeth of unequal size at the tip; flowers pale yellowish-white, green, mauve, or purple (rarely pure white)..... **34**
- 33b. Lip lanceolate, tapering to a narrow blunt apex; flowers whitish-green to yellowish-green (*Platanthera*, in part)..... **37**
- 34a. Flowers pale yellowish-white to straw coloured, or green with reddish-purple markings only at the lip base; lip 5–7 mm long; native plants growing in peaty barrens in Nfld. and southeast Labrador. **35**
- 34b. Flowers of various shades of mauve, lavender, magenta, or purple (rarely white); lip obovate, 7–11 mm long by 9.5–14 mm wide, shallowly 3-lobed, the lateral lobes broad and rounded at the apex, the central lobe short and triangular; the lip and lateral petals with red-violet markings; introduced plants of disturbed sites in St. John’s, Tilt Cove, or Pasadena. **36**
- 35a. Flowers pale yellowish-white to straw-coloured, lip divided about half its length into 3 short divergent lanceolate lobes, to 3 mm long; growing in peaty depression in limestone barrens on the Northern Peninsula, nwNfld.
..... ***Pseudorchis straminea*** (Newfoundland orchid)
- 35b. Flowers green to purplish, lip oblong, divided only at the tip into 3 short teeth, with the outer 2 teeth larger than the central tooth. ***Coeloglossum viride*** (frog orchid)
- 36a. Leaves dark green, marked on the upper surface with purplish spots or annular rings; flowers light purple, lavender, or mauve, the lip marked with red-violet loops, lines, or spots; introduced plants restricted to seepage fens and wet meadows in Tilt Cove, neNfld. ***Dactylorhiza majalis* var. *junialis*** (leopard marsh orchid)
- 36b. Leaves solid green, unmarked; flowers light purple, lavender, or mauve, the lip irregularly lined or spotted; introduced plants, originally discovered in a disturbed meadow in St. Johns, eNfld., but now becoming naturalized in a few locations in Pasadena, wNfld., following artificial dispersal of seed.
..... ***Dactylorhiza majalis* var. *praetermissa*** (Tilt Cove orchid)

- 37a. Flowers pure white, very fragrant; lip 4–11 mm long, noticeably rounded at the base, tapering ± abruptly to a narrow apex; plants of wet habitats.
..... *Platanthera dilatata* (scentbottle)
- 37b. Flowers green, whitish-green, yellowish-green, or pale yellow; fragrant or not; lip 2.5–12 mm long, lanceolate, tapering gradually to a blunt apex; plants of peaty barrens, bogs, or moist roadsides. **38**
- 38a. Flowers intensely fragrant; tepals whitish-green, lip 5–12 mm long by 2–4 mm wide, lanceolate to lance-acuminate; flowers not autopollinating, with anther sacs oriented nearly vertical, remaining closed and retaining the pollinia.
..... *Platanthera huronensis* (Lake Huron green orchid)
- 38b. Flowers usually not fragrant; tepals green, whitish-green, yellowish-green, or pale yellow; lip 2.5–6 mm long by 1–2.5 mm wide, ovate to lanceolate, blunt; flowers autopollinating, the anther sacs distinctly angled to nearly horizontal, gaping open, the pollinia often falling out onto the stigma or lip. **39**
- 39a. Flowers green with a yellowish-green lip, 2.5–6 mm long by 1–1.5 mm wide; anther sacs with a nearly horizontal orientation, the top of the 2 anther sacs close together; spur 2–5 mm long; plants common. *Platanthera aquilonis* (northern green orchid)
- 39b. Flowers variably green, whitish-green to white, or pale yellow; lip 4–5.5 mm long by 2–2.5 mm wide; anther sacs with a moderately angled orientation; the top of the 2 anther sacs separated by a distinct connective; spur 4–6 mm long; plants very rarely documented from Newfoundland and Labrador.
..... *Platanthera hyperborea* (leafy northern green orchid)
- 40a. Flowers white; lip 6–13 mm long, simple, oblong-oval, margins fringed; spur 15–25 mm long. *Platanthera blephariglottis* (white fringed orchid)
- 40b. Flowers white, whitish-green, or various shades of pink or purple; lip 5–25 mm long, deeply divided into 3 segments, each segment shallowly or deeply fringed; spur 11–35 mm long. **41**
- 41a. Flowers light purple to deep rosy-purple (rarely white). **42**
- 41b. Flowers pale green, whitish, to creamy white, or pale pink to whitish-green and tinged with pink. **43**
- 42a. Lip 5–13 mm long, the 3 lobes separate, not overlapping; spur 12–22 mm long, the opening to the spur dumbbell-shaped; upper petals with denticulate margins.
..... *Platanthera psycodes* (small purple fringed orchid)
- 42b. Lip 10–25 mm long, the 3 lobes overlapping at the edges; spur 15–35 mm long, the opening to the spur circular; upper petals with shallowly fringed margins.
..... *Platanthera grandiflora* (large purple fringed orchid)

- 43a. Flowers pale green, whitish, or creamy-white, lacking any trace of pink; the lip 8–10 mm long, the 3 lobes deeply divided into several slender segments; spur 11–23 mm long.
..... ***Platanthera lacera*** (ragged fringed orchid)
- 43b. Flowers intermediate between the 2 parents (*P. lacera* x *P. psycodes*), pale pink or white, creamy-white, or whitish-green, tinged with various shades of pink; the lip about 7–12 mm long, the 3 lobes less deeply divided and broader (than in *P. lacera*), and shallowly fringed along the margins. ***Platanthera xandrewsii*** (Andrew's fringed orchid)

Orchidaceae Comparison Charts

Orchidaceae Chart 1 (of 5): Forest genera					
Genera:	<i>Corallorhiza</i>	<i>Cypripedium</i>	<i>Goodyera</i>	<i>Neottia</i>	<i>Platanthera</i>
	coralroot orchids	lady slipper orchids	rattlesnake plantain orchids	twayblade orchids	leafy, fringed, roundleaf, or rein orchids
# of Species	3	3	3	4	14
Leaves	lacking	2, basal; or 3–7, cauline, alternate; all pubescent	3–8, in a basal rosette, marked with white lines	2, cauline, opposite	1–4, basal; or 3–12, cauline and alternate
Inflorescence	racemes ; axis glabrous	usually solitary, terminal ; rarely 2–3; stem pubescent	spikes ; axis glandular pubescent	racemes , axis finely pubescent	racemes , axis glabrous
Flowers	green, or reddish-brown; or yellow, striped with dark red; tepals distinct, spreading or ascending	white, yellow-green, to reddish brown; lateral sepals fused, forming a synsepal; a shield-shaped staminode terminates the column	white, lateral petals and upper sepal form a hood over the column ; glandular pubescent on outer surface	green, yellowish-green, or reddish-brown; tepals distinct, spreading to reflexed	white, green, yellowish-green, pink, or purple; tepals distinct, spreading, reflexed, or ascending
Lip	oblongate, white, solid or purple-spotted; or elliptic, yellow, boat-shaped	large, inflated, pouch-like , pink or yellow (rarely white)	saccate at the base ; narrowing to a pointed, down-curved apex	oblong, w/ 2 rounded apical lobes; or cleft into 2 narrow lobes	simple, with margins entire or fringed; or divided into 3 fringed parts
Spur	absent	absent	absent	absent	present

Orchidaceae Chart 2 (of 5): Barrens genera

Species:	<i>Calypso bulbosa</i>	<i>Galearis rotundifolia</i>	<i>Coeloglossum viride</i>	<i>Pseudorchis straminea</i>
	fairy-slipper	small roundleaf orchid	frog orchid	Newfoundland orchid
Height	0.5–2 dm tall	0.7–3.5 dm tall	0.5–8 dm tall	5–3.5 dm tall
Leaves	1, basal, ovate to cordate, plicate, 1–6.5 cm long; developing after the flower wilts	1, basal, ovate to nearly orbicular, to 10 cm long	2–5, cauline, elliptic to oblanceolate; to 19 cm long	2–5, cauline, elliptic oblong, to lanceolate; to 15 cm long
Flowers	solitary ; scapose, nodding; tepals pale pink to magenta (rarely white); flower not scented	to 15 flowers in a raceme; tepals white to pale pink ; flower not scented	5–35 flowers in a spike; tepals green ; flower not scented	to 50 flowers in a spike, tepals yellow-green to straw-coloured, 3–4 mm long; fragrant, vanilla-scented
Lip	13–23 mm long; slipper-shaped , the concave basal section open, marked with red-violet ; the apical margin enlarged, forming a broad lamina that covers 2 divergent horns	6–8 mm long; 3-lobed, white, spotted with purple ; the lateral lobes oblong, the terminal lobe obovate, expanded and notched at the apex	5–10 mm long; oblong, green, the base yellow-green to reddish-purple ; apex truncate, with 2 lanceolate lobes separated by a short blunt tooth	2–5 mm long; obovate; yellowish-green to straw-coloured, 3-lobed from about the middle of the lip ; lobes lanceolate, divergent
Spur	absent	linear, to 5 mm long	bulbous, to 2 mm long	short and blunt, 2–3 mm long

Orchidaceae Chart 3 (of 5): Wetland genera with pink to purple flowers

Species:	<i>Arethusa bulbosa</i>	<i>Calopogon tuberosus</i>	<i>Pogonia ophioglossoides</i>
	dragon's mouth	grass pink	rose pogonia
Height	0.6–4 dm tall	0.7–10 dm tall	0.5–6 dm tall
Leaf Position	1 basal leaf		1 cauline leaf, situated halfway up the stem
Leaf Shape	linear-lanceolate; 8–20 cm long, developing after the flower wilts	linear-lanceolate; 3–50 cm long	elliptic, ovate, to oblanceolate; 1–15 cm long
Flowers	1 (rarely 2), floral bracts 2, scale-like, 3 mm long; flowers not fragrant	3–15, in a raceme, floral bracts 3–8 mm long; flowers not fragrant	1 (rarely 2), subtended by a leaf-like bract, to 3.7 cm long; flowers fragrant
Tepals	pink, reddish-purple, to magenta (rarely white), tepals arching upward	pink to magenta (rarely white), tepals spreading	pale pink, lavender, or pink (rarely white), tepals initially arching forward, the sepals spreading later
Lip	2–3 cm long, oblong to obovate, pink and white, streaked with dark reddish-purple, beard white and yellow	1–2.3 cm long, situated at the top of the flowers, with the column situated at the bottom; lip spatulate, apex truncate, bearded with slender clavate white hairs	1.5–2 cm long, obovate to spatulate, fringed along the margins and crested on the upper surface with 3 rows of reddish-pink or yellow somewhat fleshy slender projections

Orchidaceae Chart 4 (of 5): Wetland genera with yellow to green flowers

Species:	<i>Liparis loeselii</i>	<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	<i>Malaxis unifolia</i>
	Loesel's twayblade, fen orchid	oneleaf adder's-mouth, white adder's-mouth	green adder's-mouth
Height	to 3 dm tall	to 2.5 dm tall	to 3.5 dm tall
Leaves	2, lanceolate-ovate, yellow-green, to 19 cm long by 6 cm wide, basal	1 (rarely 2-3), elliptic- ovate, to 10 cm long by 5 cm wide, situated in lower half of the stem and sheathing the stem	1 (rarely 2), ovate, to 9 cm long by 6 cm wide, situated about midstem and sheathing the stem
Raceme	to 25 flowers in a cylindrical raceme, flowers yellow to yellowish-green, 5 mm broad, ascending	to 50 flowers in a narrow cylindrical raceme, 5–8 mm wide; flowers whitish- to yellowish-green, 3–5 mm broad, oriented parallel to the stem	to 50 flowers in an oblong raceme, 13–25 cm wide, rounded to flat at the top; flowers green, 4 mm broad, oriented perpendicular to the stem
Pedicels	to 6 mm long	1.5–3 mm long	4–10 mm long
Tepals	sepals lanceolate, oblong-lanceolate, to 5 mm long; petals filiform, curved, to 5 mm long	sepals lanceolate, 2–2.5 mm long; petals filiform, reflexed, to 2 mm long	sepals lanceolate, to 3 mm long; petals linear, reflexed
Lip	to 5 mm long, oblong to slightly obovate, apex blunt; lip base not auricled	to 2 mm long, broadly triangular, tapering abruptly to an elongate acuminate apex; lip base auricled, lobes rounded	to 4 mm long, 3-lobed, with 2 triangular lateral lobes and a very small tooth-like middle lobe; lip base auricled, lobes rounded
Spur	absent	absent	absent

Orchidaceae Chart 5 (of 5): Weedy and/or introduced genera

Species:	<i>Epipactis helleborine</i>	<i>Spiranthes romanzoffiana</i>	<i>Dactylorhiza majalis</i> var. <i>junialis</i>	<i>Dactylorhiza majalis</i> var. <i>praetermissa</i>
	broadleaf helleborine	hooded ladies-tresses	leopard marsh orchid, Timmins orchid	Tilt Cove orchid, southern marsh orchid
Height	2.5–8 dm tall	to 5.5 dm tall	2–5.5 dm tall	2–5 dm tall
Leaves	3–10, cauline, elliptic to linear-lanceolate; 4–18 cm long; pubescent	3–4, basal and cauline , linear-lanceolate; 5–20 cm long; glabrous	4–9, cauline, elliptic, lanceolate, to oblong; 6.5–15 cm long; glabrous	
			marked with purplish spots or annular rings	unspotted and unlined
Inflorescence	1-sided raceme , with 15–50 flowers; axis pubescent	spike, usually with 3 spiralling vertical rows of flowers ; axis usually glandular pubescent	raceme, with 20–60 flowers; axis glabrous	
Flowers	tepals green, pink, or purplish-brown ; flowers not fragrant	tepals white to straw-coloured ; flowers fragrant	tepals light purple, lavender, or mauve , 6–10 mm long; flowers not fragrant	
Lip	white to pinkish; constricted in the middle ; 14–17 mm long; basal section concave, purplish-brown inside ; apex broadly triangular	white, pandurate (fiddle-shaped), narrowed at the middle, 4.8–10.2 mm long, the apex expanded, margins reflexed	light purple, obovate , 7–11 mm long, shallowly 3-lobed, the lateral lobes broad and rounded at the apex, the central lobe short and triangular	
			marked with red-violet loops, lines, or spots	irregularly lined or spotted with red-violet
Spur	absent	absent	4.5–7 mm long	

***Corallorhiza* (Orchidaceae) Comparison Chart**

<i>Corallorhiza</i> species:	<i>C. trifida</i>	<i>C. maculata</i> var. <i>maculata</i> var. <i>occidentalis</i>	<i>C. striata</i> var. <i>vreelandii</i>
	early coralroot	spotted coralroot	striped coralroot
Height, # of flowers	to 3.5 dm; 3–18 flowers	to 6.5 dm tall; 6–41 flowers	to 4.4 dm tall; 2–28 flowers
Perianth Colour	yellow or green; not striped	yellowish-brown, brown, or reddish; not striped	yellow, striped with reddish-brown
Sepals	1-veined	3-veined	
Lip	solid white; oblong, broadly triangular and obtuse at tip; margins flat	white, spotted with purple; oblong to obovate, obtuse at tip; margins flat	yellow, with margins curved upward, forming a boat-like lip; acute at the tip
Capsules	4.5–15 mm long	9–24 mm long	11–23 mm long

***Cypripedium* (Orchidaceae) Comparison Chart**

<i>Cypripedium</i> species:	<i>C. acaule</i>	<i>C. parviflorum</i> var. <i>makasin</i> var. <i>pubescens</i>	<i>C. reginae</i>
	pink ladyslipper	yellow ladyslipper	showy ladyslipper
Height	1.5–6 dm tall	to 7 dm tall	2–9 dm tall
Leaves	2, basal, pubescent	3–5, cauline and alternate, pubescent	3–9, cauline and alternate, pubescent
Flowers	1	1–2	1–3
Perianth	usually reddish-brown, lateral petals slightly twisted	greenish, yellow, to reddish-brown, lateral petals flat or twisted	white, lateral petals flat
Lip	usually pink (rarely white)	yellow	pale to deep pink
Habitat	acidic forest habitats	limestone barrens, fens	wet calcareous fens

Goodyera (Orchidaceae) Comparison Chart

Goodyera species:	<i>G. oblongifolia</i>	<i>G. tessellata</i>	<i>G. repens</i>
	Menzies' rattlesnake-plantain	checkered rattlesnake-plantain	dwarf rattlesnake-plantain
Flowering Stem	to 45 cm tall, glandular pubescent	12–35 cm tall, glandular pubescent	to 25 cm tall, glandular pubescent
Leaves	3–7, glabrous, oblong-elliptic, with 5–11 veins ; blades 2.5–11 cm long x 2–4 cm wide	3–8, glabrous, elliptic-lanceolate, with 5–9 veins ; blades 1.4–7 cm long x 1–2.5 cm wide	3–7, glabrous, ovate, with 5 veins ; blades 1–3.2 cm long x 0.5–1.8 cm wide
Leaf Marking	bluish green, prominently whitened along midrib, with fine pale reticulations between lateral veins	light bluish green to dark green, with white reticulations between the lateral veins and midrib	dark green, with white reticulations between the lateral veins and margin
Spikes	10–48 flowered, secund (1-sided)	5–72 flowered, ± secund (1-sided)	7–36 flowered, secund (1-sided)
Perianth	outer surface of perianth pubescent		
Lip	4.9–7.9 mm long, base slightly saccate, lip apex short, arching	3–5.5 mm long, base slightly saccate, lip apex short, recurved	1.8–4.8 mm long, base noticeably saccate, lip apex long, recurved
Rostellar Beak	2.3–3.6 mm long	0.6–1.7 mm long	0.2–0.6 mm long

Neottia (Orchidaceae) Comparison Chart

Neottia species:	<i>N. auriculata</i>	<i>N. borealis</i>	<i>N. convallarioides</i>	<i>N. cordata</i>
	auricled twayblade	northern twayblade	broadleaf twayblade	heartleaf twayblade
Height	to 2.5 cm tall		to 3.5 dm tall	0.5–3 dm tall
Leaves	2, opposite, ovate to nearly orbicular ; to 6 mm long x 4 mm wide	2, opposite, lanceolate to narrowly ovate ; to 6 cm long x 3 cm wide	2, opposite, elliptic, ovate to nearly orbicular ; to 7 mm long x 5 mm wide	2, opposite, ovate to shallowly cordate ; 1–3 cm long by up to 2 cm wide
Raceme	5–25 flowered; axis glandular pubescent above the leaves			
Flowers	pale green to pale bluish-green; sepals and lateral petals oblong to oblanceolate , reflexed, 3.5–4.5 mm long	green to bluish-green; sepals and lateral petals linear to lanceolate , reflexed, 4.5–5 mm long	pale green to yellowish-green; sepals and lateral petals elliptic to lanceolate , reflexed, 4–5 mm long	yellow-green, green, to deep reddish-brown ; sepals and lateral petals elliptic to lanceolate-ovate , spreading, 1.5–3 mm long
Lip	oblong, to 11 mm long x 5 mm wide; translucent near the margins , opaque green along the centre; auricled at the base, the auricles curved backwards and ± clasping the column ; lip narrower near the middle, apex with 2 blunt lobes	oblong, to 10 mm long x 6 mm wide; pale green near the margins, dark bluish-green along the centre ; the base with 2 divergent triangular auricles, not clasping the column, lip narrower near the middle, apex with 2 rounded lobes , separated by a very small tooth	obovate , to 10 long by 5 mm wide, clawed at the base ; the base with 2 divergent shallow triangular teeth, expanding to a broad apex with 2 rounded lobes , separated by a small but distinct triangular tooth	linear-oblong, 3–5 mm long, divided for about half its length into 2 narrow divergent lobes ; the base of the lip bears 2 small down-curved mustache-like lobes

Platanthera (Orchidaceae) Comparison Charts

<i>Platanthera</i> Chart 1 (of 5): Species with orbicular basal leaves			
Species:	<i>P. macrophylla</i>	<i>P. orbiculata</i>	<i>P. hookeri</i>
	greater roundleaf orchid	lesser roundleaf orchid	Hooker's orchid
Height	to 6 dm tall	to 5 dm tall	to 4 dm tall
Leaves	2, basal, orbicular, opposite; up to 20 cm long	2, basal, orbicular, opposite; up to 10 cm long	2, basal, orbicular, opposite; 2.5–7 cm long ; smaller in barren habitats
Flowers	about 20 flowers in a spike; floral bracts 1.2 cm long	about 10 flowers in a spike; floral bracts 1.2 cm long	few to 25 flowers in a spike; floral bracts to 1.5 cm long
Tepals	greenish-white; lateral sepals reflexed; remaining tepals spreading	greenish-white; lateral sepals reflexed; remaining tepals spreading	yellowish-green; lateral sepals reflexed ; remaining tepals arching forward
Lip	to 24 mm long , linear-oblong; tapering to a slender blunt apex; curved down and slightly backward	9–18 mm long, linear-oblong; tapering to a slender blunt apex; curved down and slightly backward	6–10 mm long, lanceolate, tapering to a slender acuminate apex ; curved down and forward
Spur	to 4 cm long, slender, curving backward, crossing the stem	to 2 cm long, slender, curving back and upward	0.9–1.3 cm long, slender, extending downward

***Platanthera* Chart 2 (of 5): Species with oblanceolate basal leaves**

Species:	<i>P. unalascensis</i>	<i>P. obtusata</i>	<i>P. clavellata</i>
	Alaskan rein orchid	bluntleaf orchid	clubspur orchid
Height	to 6 dm tall; a calciphile	to 3.5 dm tall	1.5–3.5 dm tall
Leaves	2-3 (rarely 4), basal, oblanceolate , apex obtuse; 12 cm long; membranaceous, withering soon after anthesis	1 (rarely 2), basal, oblanceolate to obovate , obtuse at the apex; to 12 cm long; firm	1 large leaf near base, elliptic, oblong, to oblanceolate , 3–17 cm long; often with 1–2 smaller leaves above ; firm
Flowers	numerous flowers in a narrow spike, 1–1.5 cm across; with an unpleasant odour	to 15 flowers in a spike	3–15 flowers in a spike; flowers often oriented ± horizontal (sideways) to the flowering stem
Tepals	greenish-yellow, 2–4 mm long; sepals lanceolate-ovate, obtuse; petals lanceolate; lateral sepals spreading	whitish-green; lanceolate to ovate, 2–5 mm long; lateral sepals reflexed	pale green to green, ovate to obovate, 4–5 mm long; petals and upper sepal forming a hood over the column; lateral sepals bent forward
Lip	2.5–4 mm long, elliptic-ovate, blunt at the apex	3–7 mm long, lanceolate, tapering to a slender blunt apex, reflexed	6 mm long, oblong, slightly 3-lobed at the truncate apex; projecting forward
Spur	3–4 mm long, tapering to the apex	3–8 mm long, tapering at the apex; reflexed	10 mm long, clavate at the apex; usually crossing the flowering axis

***Platanthera* Chart 3 (of 5): Species with cauline leaves & greenish flowers**

Species:	<i>P. aquilonis</i>	<i>P. hyperborea</i>	<i>P. huronensis</i>
	tall northern green orchid	leafy northern green orchid	Lake Huron green orchid
Height	to 4 dm tall	to 3.5 dm tall	to 1+ m tall
Flowers	autogamous diploid, autopollinating; not fragrant	autogamous tetraploid, autopollinating; usually not fragrant	alogamous tetraploid, not autopollinating; intensely fragrant
Tepals	green to yellowish-green	green, whitish-green, or pale yellow	whitish-green
Lip	2.5–6 mm long x 1–1.5 mm wide, yellowish-green, lanceolate, blunt	4–5.5 mm long x 2–2.5 mm wide, ovate to lanceolate, blunt	5–12 mm long x 2–4 mm wide, lanceolate to lance-acuminate
Anther Sacs	oriented nearly horizontal; close together at the top; pollinia often falling out of gaping anther sacs onto the stigma	oriented on a distinct angle, separated at the top by a connective; pollinia often falling out of anther sacs onto the stigma	oriented on a slight angle to nearly vertical; clearly separated at the top by a distinct connective; pollinia remain in closed anther sacs
Spur Length	short, 2–5 mm long	medium, 4–6 mm long	longer, 4–12 mm long

Platanthera Chart 4 (of 5): Species with cauline leaves & white flowers

Species:	<i>P. dilatata</i>	<i>P. blephariglottis</i>	<i>P. lacera</i>
	scent-bottle	white fringed orchid	ragged fringed orchid
Height	to 10+ dm tall	to 8 dm tall	to 4.5+ dm tall
Leaves	to 12 , cauline, mostly linear-lanceolate , 3.5–32 cm long	2–3 , cauline, elliptic, linear-lanceolate, to lanceolate-ovate , 5–35 cm long	2–4, cauline, elliptic to lanceolate , 7–23 cm long
Spikes	many flowered; flowers very fragrant ; floral bracts about 3 cm long	20–30 flowered; flowers not fragrant ; floral bracts about 1.5 cm long	10–20 flowers in a spike; flowers fragrant ; floral bracts about 1.5 cm long
Tepals	snowy white ; lateral sepals lanceolate, spreading ; upper sepal and petals forming a hood over column	bright white ; lateral sepals ovate, spreading to reflexed ; upper sepal and petals forming a loose hood over column	pale green, creamy-white, or bronzy ; lateral sepals oblanceolate, reflexed ; upper sepal and petals ascending
Lip	5–10 mm long, lanceolate, noticeably wider at the base, narrowing abruptly to a narrow blunt apex, margins entire	6–13 mm long, obovate and unlobed, margins fringed, fringes 3-6 mm long (1/3–2/3 the depth of the lip)	8–10 mm long, obovate, divided into 3 parts, each segment shallowly fringed at the margin (\pm 1/3 the depth of the lip)
Spur	4–12 mm long	15–25 mm long	to 18 mm long

Platanthera Chart 5 (of 5): Species with cauline leaves, pink to purple flowers

Species:	<i>P. grandiflora</i>	<i>P. psycodes</i>	<i>P. xandrewsii</i>
	large purple fringed orchid	small purple fringed orchid	Andrew's fringed orchid
Height	to 12 dm tall	to 9 dm tall	intermediate between <i>P. psycodes</i> and <i>P. lacera</i>
Leaves	2–6, cauline, sheathing	2–5, cauline, sheathing	
Racemes	30–60 flowers, raceme to 25 cm long	30–50 flowers, raceme 8–12 cm long	intermediate between <i>P. psycodes</i> and <i>P. lacera</i>
Tepals	various shades of purple; upper petals with shallowly fringed margins	various shades of purple; upper petals with denticulate margins	greenish-white, tinged with pink, to purple
Lip	18–25 mm long, divided into 3 overlapping parts, margins deeply fringed (>1/3 the depth of the lip)	7–12 mm long, divided into 3 distinct parts, margins shallowly fringed (<1/3 the depth of the lip)	intermediate between <i>P. psycodes</i> and <i>P. lacera</i>
Spur	to 2.5 cm long, with a circular opening to the spur	1.2–1.8 cm long; with a dumbbell-shaped opening to the spur	to 1.8 cm long; with a circular to oblong opening to the spur