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*Cypripedium x columbianum* with two flowers.

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Photographed in Alberta, Canada.

Image: R. A. Coleman

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Photo taken in Japan by C. Sheviak.

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**The Native Orchid Conference, Inc.**

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**Web Sites**

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Mark Rose [rmarkrose\\_2000@yahoo.com](mailto:rmarkrose_2000@yahoo.com)

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Paul M. Catling, Ph.D.

**Editor**

Robert J. Ferry, Ph.D.

[noceditor@gmail.com](mailto:noceditor@gmail.com)

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## The Genus *Cypripedium* of the United States and Canada, Part 2

Ronald A. Coleman

[ronorchid@cox.net](mailto:ronorchid@cox.net)

(All mages are by the author unless otherwise noted)

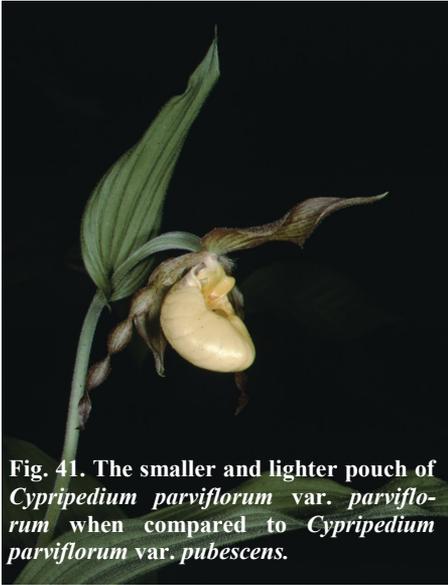


Fig. 41. The smaller and lighter pouch of *Cypripedium parviflorum* var. *parviflorum* when compared to *Cypripedium parviflorum* var. *pubescens*.

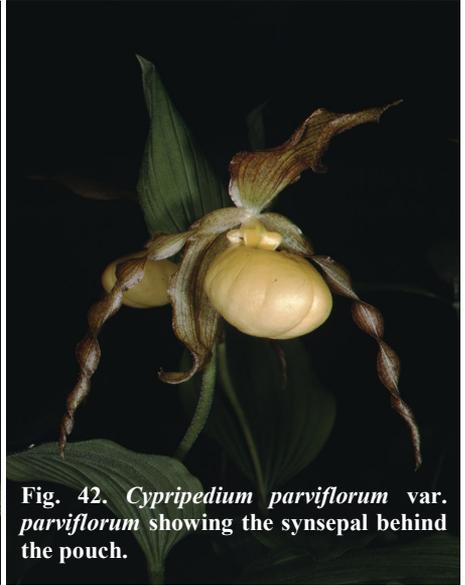


Fig. 42. *Cypripedium parviflorum* var. *parviflorum* showing the synsepal behind the pouch.

### Key to the Varieties of *Cypripedium parviflorum*

- 1a Upper-most entirely tubular bract glabrous or with very few hairs
- 2a flowers small; pouch 15–29 mm; sepals and petals usually suffused with dark reddish brown or madder, or spotted and blotched; scent intense, sweet. var. *makasin*
- 2b flowers small; pouch 16–26 mm; sepals and petals dull green tan with small clusters of rust colored spots; scent intense, sweet. var. *exiliens*
- 1b Upper-most entirely tubular bract densely to conspicuously silvery-pubescent
- 3a flowers large to small, pouch 20–54 mm; sepals unmarked to commonly spotted, striped, and reticulately marked with reddish brown or madder, rarely extensively blotched; scent moderate to faint, rose or musty. var. *pubescens*
- 3b Flowers small, pouch 22–34 mm; sepals and petals densely and minutely spotted with dark reddish brown or madder and appearing uniformly dark (rarely coarsely spotted and blotched); scent moderate to faint, rose or musty. var. *parviflorum*

*Cypripedium parviflorum* Salisbury var. *parviflorum* Trans. Linn. Soc. London 1: 77 (1791).

Synonymy:

*Cypripedium luteum* Aiton ex Raf., Med. Fl. 1: 140 (1828).

*Cypripedium bifidum* Raf., Atlantic J. 1: 178 (1833).

*Cypripedium parviflorum* f. *albolabium*  
Magrath &  
J.L.Norman, Sida 13:  
372 (1989).

*Cypripedium parviflorum* var. *parviflorum* is called the Small Yellow Lady's Slipper because it is smaller than *Cypripedium parviflorum* var. *pubescens*. These are medium sized plants, usually between 10 cm and 50 cm with three to five leaves. On *C. parviflorum* var. *parviflorum* the uppermost entirely tubular bract is densely to conspicuously silvery-pubescent. The sepals and twisted petals have a light green base color, but often appear light brown to dark brown due to being mostly covered with closely spaced brown dots. The spacing between dots increases



Fig. 43. The habitat and plant structure of *Cypripedium parviflorum* var. *pubescens* in New Mexico.

near the base of the sepals and petals, clearly revealing individual dots. The yellow pouch is usually between 20 and 35 mm. The flowers have a sweet rose-like fragrance. Summers (1996) reports an albino form of *C. parviflorum* var. *parviflorum* with a white pouch from Missouri.

Prior to Sheviak's work, distributions for *C. parviflorum* var. *parviflorum* encountered in the literature showed a far greater range than we now ascribe to it. Based on our current understanding *Cypripedium parviflorum* var. *parviflorum* is concentrated in the Mid-Atlantic States. It is not known from Canada. It grows from New York south to Georgia, and westward to Nebraska, Oklahoma, and Kansas. *Cypripedium parviflorum* var. *parviflorum* grows in mesic to dry deciduous forests and blooms from April to June.

***Cypripedium parviflorum* Salisbury var. *pubescens* (Willdenow) Knight, *Rhodor* 8: 93 (1906). (Figs. 43 to 50)**

Synonymy:

Basionym: *Cypripedium pubescens* Willdenow, Hortus Berolinensis 1: pl. 13 (1804).

*Cypripedium flavescens* A. P. de Candolle, Les Liliacees I: pl. 20 (1802).

*Cypripedium hirsutum* Miller, Mem. Torrey Club 5:121 (1894).

*Cypripedium veganum* Cockerell & Barker, Proceedings of the Biological Society of Washington. 4:178 (1901).

*Cypripedium parviflorum* var. *planipetalum* Fernald, Rhodora 28:168 (1926).

*Cypripedium calceolus* Linnaeus var. *pubescens* (Willdenow) Correll, Botanical Museum Leaflets 7:14 (1938).

*Cypripedium calceolus* Linnaeus var. *planipetalum* (Fernald) Victorin & J. Rousseau, Contributions de l'institu Botanique de l'université de Montreal 36: 68 (1940).

Common names for *C. parviflorum* var. *pubescens* include Yellow Lady's Slipper, Large Yellow Lady's Slipper, and Whippoorwill-Shoe. *Cypripedium parviflorum* var. *pubescens* is the largest of our yellow varieties, with some plants reaching over 80 cm tall with four to six ovate-lanceolate, plicate leaves. As with *C. parviflorum* var. *parviflorum*, the upper-most entirely tubular bract of *C. parviflorum* var. *pubescens* is densely to conspicuously silvery-pubescent. Other than that character the plant is highly variable throughout its range, with the pouch var-



Fig. 44. The relatively larger yellow pouch of *Cypripedium parviflorum* var. *pubescens*.

Fig. 45. *Cypripedium parviflorum* var. *pubescens* often has dark brown sepals and petals similar to *Cypripedium parviflorum* var. *makasin* but the flower is much larger.





Fig. 46. *Cypripedium parviflorum* var. *pubescens* with nearly completely green sepals and petals.

ying greatly in size, and in color from light to dark yellow. In robust specimens the pouch exceeds 50 mm, but can be much smaller depending on growing conditions. The pouch is generally considered a darker, brighter yellow than the pouch of *C. parviflorum* var. *parviflorum*, although great variety in intensity and color abound. The inside of the pouch has lines of reddish dots on the bottom back, and around the opening. Some pouches have reddish dots on the forward exterior. The sepals

and petals vary from dark brown to reddish brown to greenish. The dark color in the sepals and petals is due to brown to reddish stripes over the yellowish green base color that turn to dots near the pouch. On some plants the petals may be totally untwisted with wavy margins while others will have multiple complete turns. The staminode is yellow with red dots. Summers (1996) also reports an albino form of *C. parviflorum* var. *pubescens* with a white pouch from Missouri, but in a different county than the albino form of *C. parviflorum* var. *parviflorum*.

This is perhaps the most widely distributed and most common *Cypripedium* in North America. Cribb (1997) shows its distribution as extending from Newfoundland to Alaska and south to Oregon in the West. In the East along the Atlantic Coast *C. parviflorum* var. *pubescens* is in every state except Florida, and extends west to Louisiana and eastern Texas. The extreme southwestern limit of its range is in Arizona. *Cypripedium parviflorum* var. *pubescens* grows in moderate shade to nearly full sun in prairies, meadows, barrens, deciduous forests, boreal forests,

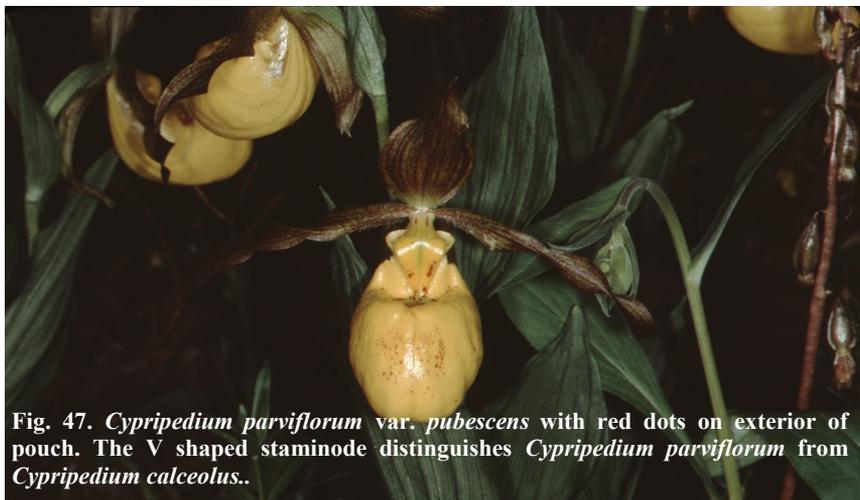


Fig. 47. *Cypripedium parviflorum* var. *pubescens* with red dots on exterior of pouch. The V shaped staminode distinguishes *Cypripedium parviflorum* from *Cypripedium calceolus*..

**Fig. 48.** Potential pollinator within pouch of *Cypripedium parviflorum* var. *pubescens*. This view shows the red dots at the entrance to the pouch, and the red dot pattern on the back inside of the pouch.



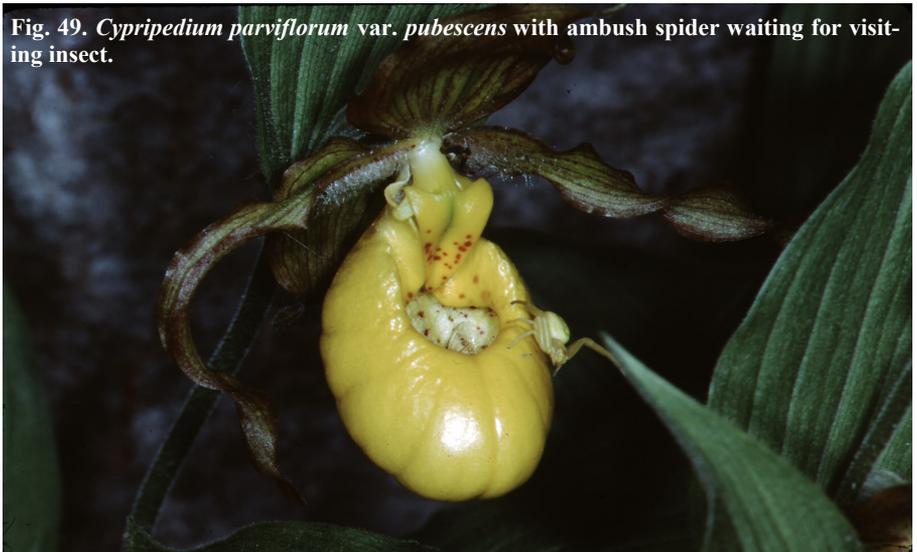
and other coniferous forest. It favors calcareous soils. Flowering starts as early as the last week in May, and is usually over by the first week of July.

***Cypripedium parviflorum* var. *makasin* (Farw.) Sheviak, Amer. Orchid Soc. Bull. 62: 403 (1993). (Figs. 51, 52, 53)**

Synonymy:

*Cypripedium pubescens* var. *makasin* Farw., Rep. (Annual) Michigan Acad. Sci. 18: 198 (1918).

**Fig. 49.** *Cypripedium parviflorum* var. *pubescens* with ambush spider waiting for visiting insect.



*Cypripedium parviflorum* var. *parviflorum* auct, non Salisb.

*Cypripedium parviflorum* var. *makasin* is one of the small Yellow Lady's Slippers, usually under 40 cm tall with two to five leaves. It can be distinguished by the upper-most entirely tubular bract being glabrous or with very few hairs. It is noticeable because of its bright yellow pouch and dark sepals and twisted petals. The small pouch is between 15 and 30 mm. The staminode is the same bright yellow as the pouch, with reddish dots. The sepals and petals are usually suffused with dark reddish brown or madder, though in western parts of its range may become more spotted. The petals have multiple twists. Its scent is intense and sweet.

*Cypripedium parviflorum* var. *makasin* shares much of its range with *Cypripedium parviflorum* var. *pubescens*. Their



Fig. 50. *Cypripedium parviflorum* var. *pubescens* with the synsepal clearly showing a split apex suggestive of its origin from two lateral sepals. Taken in Manitoba.



Fig. 51. Habitat and plant structure of *Cypripedium parviflorum* var. *makasin* growing on a roadside in Manitoba, Canada.

ranges essentially overlap in Canada. Ames, et al, (2005) refer to introgressions of *C. parviflorum* var. *makasin* with *C. parviflorum* var. *pubescens* which makes identifying to variety difficult in portions of its range. In the United States, its southern limit is in the states of Illinois and Indiana. In the Rocky Mountain States its southern limit is in Utah. It gets as far west as California, but there is only one record of it in California, and attempts to re-find it there have been unsuccessful (Coleman 1995). It has not yet been found in Oregon. *Cypripedium parviflorum* var. *makasin* grows in wetter habitat than *C. parviflorum* var. *pubescens*. It favors moist to wet tall grass and mixed grass prairies, meadows and



Fig. 52. The dark twisted petals, and bright yellow pouch of *Cypripedium parviflorum* var. *makasin*.

fens. Less often it is found in open forest lining the prairies and meadows. In portions of its range it is quite common on road rights-of-way where frequent mowing maintains habitat resembling meadows. *Cypripedium parviflorum* var. *makasin* blooms from May to August.

***Cypripedium parviflorum* var. *exiliens* Sheviak, Native Orchid Conf. J. 7(2): 5 (2010).**

Sheviak (2010) described *Cypripedium parviflorum* var. *exiliens* to recognize small flowered Yellow Lady's Slippers that did not fit within the bounds of *C. parviflorum* var. *makasin* and *C. parviflorum* var. *parviflorum*. The upper-most entirely tubular bract is glabrous or with very few hairs. The flowers are small relative to *C. parviflorum* var. *pubescens*, with the pouch typically between 16 and 26 mm. The sepals and petals are dull green tan with small clusters of

rust colored spots rather than the uniform color or dense patterns of stripes or blotches found on the other varieties. The scent initially is intense and sweet but in older flowers becomes more rose like.

*Cypripedium parviflorum* var. *exiliens* is primarily found in northern Alaska where it is considered rare and imperiled. Its range extends into northwestern Canada. Sheviak (2010) says plants of *C. parviflorum* var. *exiliens*



Fig. 53. Side view of *Cypripedium parviflorum* var. *makasin* showing red dots at entrance to pouch and translucent areas at back of pouch.

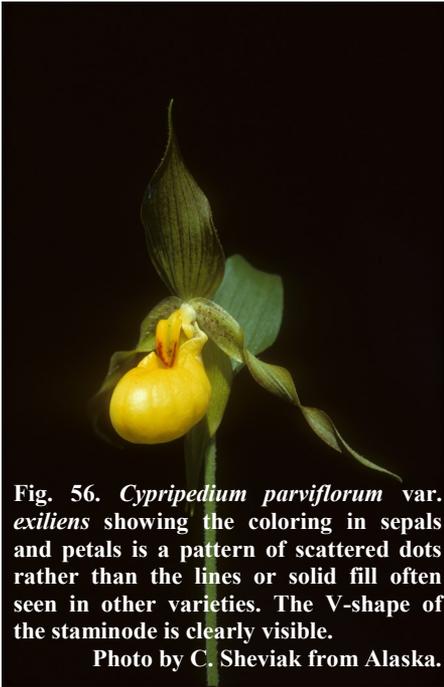
“occur in mesic upland sites, but sometimes are found in wetter conditions in the south of their range.” It blooms from late June to August.



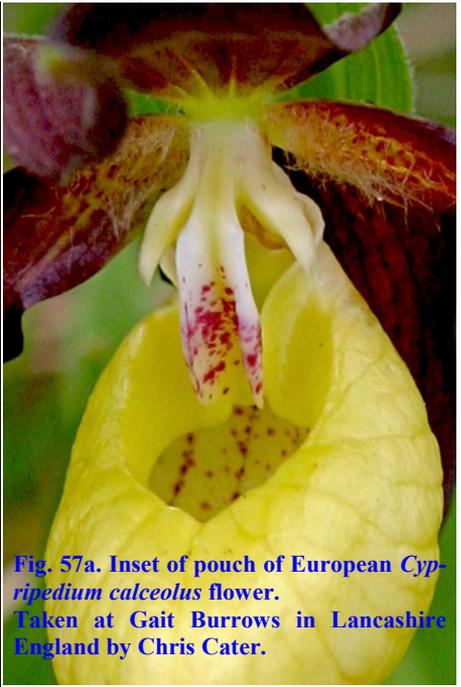
Fig. 54. Habitat and plant structure of *Cypripedium parviflorum* var. *exiliens* photographed by C. Sheviak from Alaska.



Fig. 55. Plants that were at one time called *Cypripedium parviflorum* var. *planipelatum* because of the relatively straight petals. The name is now considered synonymous with *Cypripedium parviflorum* var. *pubescens*. Photographed in Newfoundland.



**Fig. 56.** *Cypripedium parviflorum* var. *exiliens* showing the coloring in sepals and petals is a pattern of scattered dots rather than the lines or solid fill often seen in other varieties. The V-shape of the staminode is clearly visible.  
Photo by C. Sheviak from Alaska.



**Fig. 57a.** Inset of pouch of European *Cypripedium calceolus* flower.  
Taken at Gait Burrows in Lancashire England by Chris Cater.



**Fig. 57.** European *Cypripedium calceolus* flower showing remarkable similarities to American *Cypripedium parviflorum* except for the staminode.  
Taken at Gait Burrows in Lancashire England by Chris Cater.



Fig. 54. Habitat and plant structure of *Cypripedium parviflorum* var. *exiliens* photographed by C. Sheviak from Alaska.



Fig. 55. Plants that were at one time called *Cypripedium parviflorum* var. *planipelatum* because of the relatively straight petals. The name is now considered synonymous with *Cypripedium parviflorum* var. *pubescens*. Photographed in Newfoundland.

*Cypripedium passerinum* Richardson, Bot. App., ed. 2: 34 (1823).

(Figs. 58, 59, 60)

The most frequently used common names for *C. passerinum* are Sparrow's Egg Lady's Slipper and Small White Northern Lady's Slipper. Morris and Eames (1929) report that another common name is Franklin's Lady's Slipper in honor of John Franklin, an early explorer of the far North. *Cypripedium passerinum* is a relatively small plant, usually under 40 cm tall, with three to five alternating leaves. In contrast to most of our *Cypripedium* which have sepals and petals of the same color, *C. passerinum* has green sepals, and white petals. On many flowers the

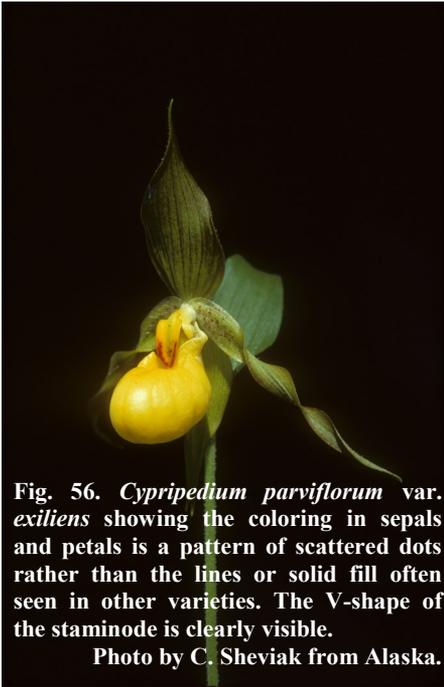


Fig. 56. *Cypripedium parviflorum* var. *exiliens* showing the coloring in sepals and petals is a pattern of scattered dots rather than the lines or solid fill often seen in other varieties. The V-shape of the staminode is clearly visible.  
Photo by C. Sheviak from Alaska.

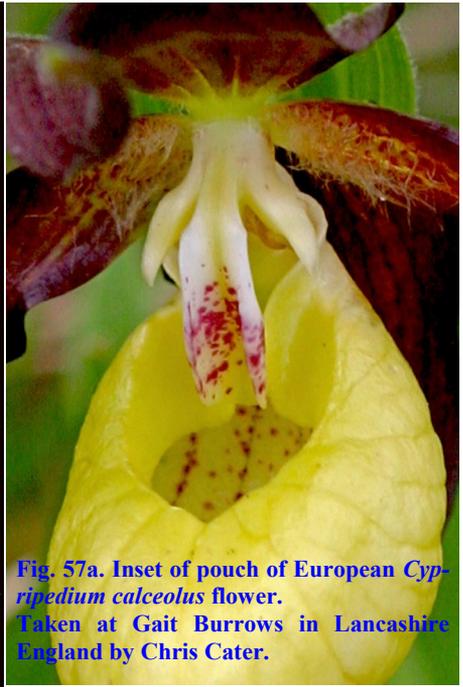


Fig. 57a. Inset of pouch of European *Cypripedium calceolus* flower.  
Taken at Gait Burrows in Lancashire England by Chris Cater.



Fig. 57. European *Cypripedium calceolus* flower showing remarkable similarities to American *Cypripedium parviflorum* except for the staminode.  
Taken at Gait Burrows in Lancashire England by Chris Cater.

green dorsal sepal is bent over the opening to the pouch. The petals are flat and spreading. The pouch is rather small, only 2 cm long, and the inner edge is lined with reddish to purple spots. The staminode is white with traces of yellow, and with spots the same color as on the inner pouch. Catling (1983b) reports that *C. passerinum* is the only *Cypripedium* that self-pollinates.

The primary distribution of *C. passerinum* is from North-Central Canada to

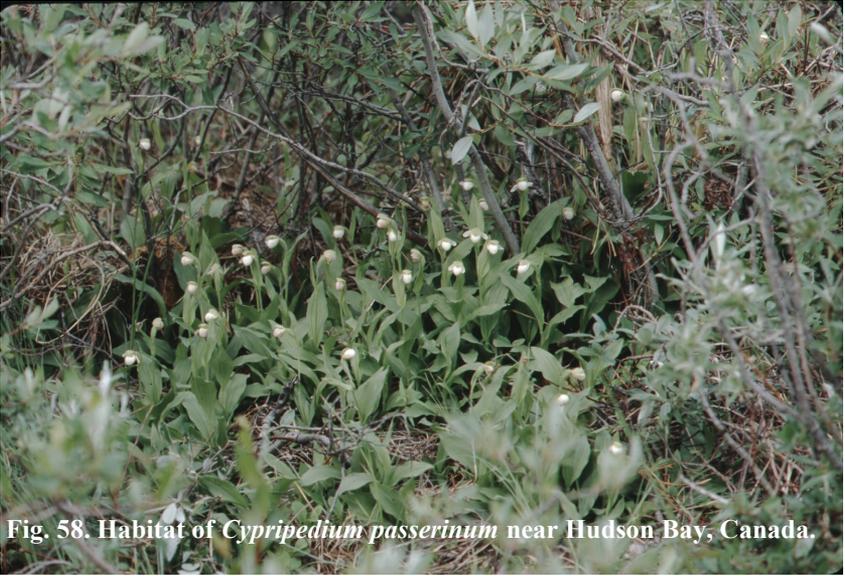


Fig. 58. Habitat of *Cypripedium passerinum* near Hudson Bay, Canada.



Fig. 59. *Cypripedium passerinum* with erect dorsal sepal.

Alaska. A few plants make it into Montana, the only place they grow in the lower 48 states. Luer (1975) reports that it grows within the Arctic Circle. There is a disjunct location in Côte-Nord, Quebec. Ames, et al (2005), report it is the only *Cypripedium* that grows near Hudson Bay in Manitoba, where orchid seekers must be on the lookout for polar bears.

*Cypripedium passerinum* prefers sandy soil in moist areas of coniferous forests and more open places in the tundra. It often grows in thickets on stream banks, lake shores and seeps, frustrating anyone wishing to photograph it.

Szczawinski (1959) tells of seeing large patches of *C. passerinum* growing along the Alaska Highway in

British Columbia. Smreciu and Currah (1989) report it growing on gravel out-washes and talus slopes. Whiting and Catling (1986) report it on sand dunes at Lake Superior. *Cypripedium passerinum* blooms in June and July.



**Fig. 60. *Cypripedium passerinum* with the more common presentation of the dorsal sepal folded forward over opening to the pouch.**

***Cypripedium reginae* Walter, Fl. Carol.: 222 (1788). (Figs 61 through 64)**  
Synonymy:  
*Cypripedium album* Aiton, Hort. Kew. 3: 303 (1789).

*Cypripedium spectabile* Salisb., Trans. Linn. Soc. London 1: 78 (1791).

*Cypripedium canadense* Michx., Fl. Bor.-Amer. 2: 261 (1803).

*Calceolus reginae* (Walter) Nieuwl., Amer. Midl. Naturalist 3: 117 (1913).

*Cypripedium hirsutum* f. *album* R.Hoffm., Proc. Boston Soc. Nat. Hist. 36: 246 (1922).

*Cypripedium reginae* f. *albolabium* Fernald & B.G.Schub., *Rhodora* 50: 230



Fig. 61. Habitat and plant structure of *Cypripedium reginae*.

(1948).

Many consider *C. reginae* the most beautiful of our *Cypripedium* and it has acquired common names such as Queen's Lady's Slipper, Showy Lady's Slipper, and Rose Lady's Slipper. *Cypripedium reginae* is one of our tallest species, comparable to *Cypripedium kentuckiense* in height. Plants reach 90 cm with up to nine alternating leaves, and often two flowers.

The sepals and petals are white; the petals flat and spreading. The base color of

the pouch is white, but it is often totally covered with reddish to maroon suffusion and often appears totally red. On some flowers the pouch is closer to pink. On others the pink to maroon coloring spreads out only part way from the pouch opening. Some flowers have a pouch that is totally white, and these have been given the name *Cypripedium reginae* forma *albolabium*. The pouch is relatively large, usually between 25 and 50 cm. The staminode is white with yellow markings and red dots. The flowers have a faint fragrance. *Cypripedium reginae* is the State Flower of Minnesota.

In Canada *C. reginae* grows in the southern parts of the Provinces from Saskatchewan to Newfoundland, where it is often locally common. Its



Fig. 62. A group of *Cypripedium reginae* with dark reddish pink pouches. Photographed in Newfoundland.



Fig. 63. *Cypripedium reginae* with pale pink markings on the pouch from the Bruce Peninsula.

southern limit in the United States is in Arkansas where Slaughter (1993) reports fewer than two dozen plants in the state.

From Arkansas it extends north to Maine, and northwest to Minnesota. The typical habitat is near the margins of wet areas and in tamarack and cedar bogs, or fens and seeps where it can find a constant supply of water. It grows well in prairies, and wet, even boggy woods. In the heart of its growing region it is often found growing fully exposed in wet roadside ditches. Voitk and Voitk (2006) observed it growing on limestone bedrock. Minnesota has designated a segment of County Road 29 in the Chippewa National Forest as the Lady's Slipper Scenic Byway, where masses of *C. reginae* bloom along the highway every year in June and July. More information about the Lady's Slipper Scenic Byway can be found at <https://www.ladyslipperscenicbyway.org/>.

In parts of its range *C. reginae* is often prey to heavy deer browsing, with entire



**Fig. 64.** The pure white form of *Cypripedium reginae*.  
photo by Mark Larocque).

plants consumed before seeds mature.

***Cypripedium yatabeanum* Makino, Bot. Mag. (Tokyo) 13: 91 (1899).**

Synonymy:

*Cypripedium guttatum* var. *yatabeanum* (Makino) Pfitzer in H.G.A.Engler (ed.), Pflanzenr., IV, 50: 33 (1903).

*Cypripedium guttatum* subsp. *yatabeanum* (Makino) Hultén, Ark. Bot., a.s., 7 (1): 34 (1967 publ. 1968).

*Cypripedium yatabeanum* is the only species of *Cypripedium* native to the United States and Canada that I have not observed in the field. Data in this section are from Sheviak (2002). It goes by several common names such as Green Moccasin Flower, Palomino Lady's Slipper, and Yatabe's *Cypripedium*. *Cypripedium yata-*

*beanum* is a small plant, usually under 30 cm tall. It has two leaves part way up the stem, and typically a single flower. The sepals and petals have a whitish-cream base color. The dorsal sepal is almost completely covered with brownish to greenish stripes. The spreading petals have a pattern of brownish to greenish dots and a constriction near the apex much like the one found in *C. guttatum*. The pouch is narrower and more vertically elongated compared to the similar *C. guttatum*. The bottom third of the pouch becomes almost cone shaped. The pouch is brownish to greenish to yellowish with darker dots. On some plants the pouch appears nearly solidly colored except near the bottom. The staminode has the same color and spot pattern as the petals.

*Cypripedium yatabeanum* is extremely rare in the United



Fig. 65. *Cypripedium yatabeanum* showing the elongated yellowish spotted pouch and the spotted petals. Photo taken in Japan by C. Sheviak.



Fig. 66. Habitat of *Cypripedium x alaskanum* on Kodiak Island.

States, restricted to a few of the Aleutian Islands. It does not occur in Canada. It is more common in Japan and parts of Asia. Our knowledge of it here is incomplete. There are few herbarium specimens of it from the United States. Sheviak (personal correspondence) says he is confident of only one from the Shumigan Islands in the Aleutians. Because of the few places where it grows, it is reasonable to project that there are fewer plants of it in the United States and Canada than of any other *Cypripedium*. *Cypripedium yatabeanum* occurs in the tundra, subarctic meadows, and areas adjacent to marshes and dunes. In Japan

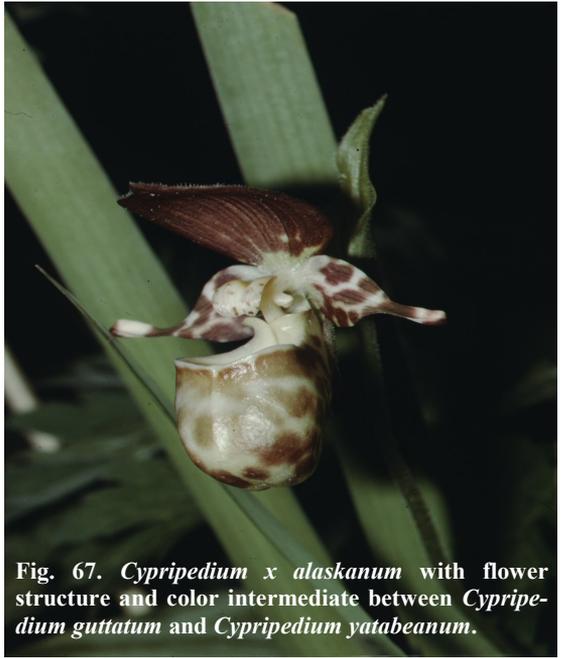


Fig. 67. *Cypripedium x alaskanum* with flower structure and color intermediate between *Cypripedium guttatum* and *Cypripedium yatabeanum*.

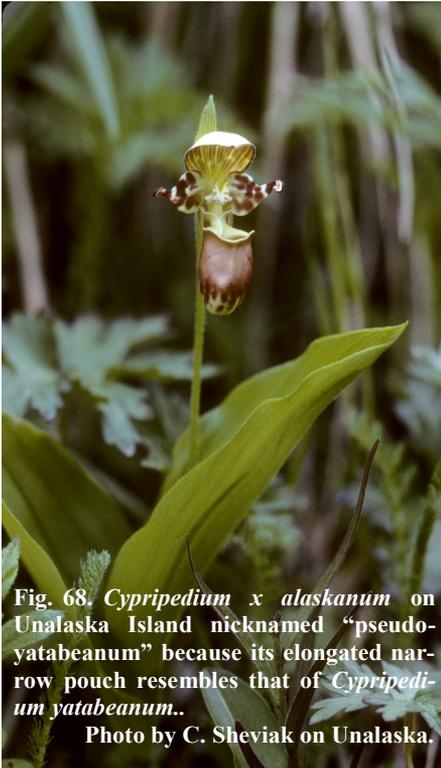


Fig. 68. *Cypripedium x alaskanum* on Unalaska Island nicknamed “pseudo-yatabeanum” because its elongated narrow pouch resembles that of *Cypripedium yatabeanum*..

Photo by C. Sheviak on Unalaska.

it grows in open forest and grassy areas such as meadows. *Cypripedium yatabeanum* blooms from June to August.

For many years plants on Kodiak Island in Alaska, were believed to be representative of *C. yatabeanum*. They are spotted with brown instead of the reddish color of *C. guttatum* and the pouch is slightly longer. However Brown (1995) determined they were a natural hybrid between *C. yatabeanum* and *C. guttatum* and named them *Cypripedium x alaskanum*. Sheviak (2002) recognized this hybrid and said “most reports and illustrations of *C. yatabeanum* in Alaska are in fact based on them.”

***Cypripedium x alaskanum* P.M.Br., N. Amer. Native Orchid J. 1: 199 (1995).**

**(Figs 66 through 71)**

*Cypripedium x alaskanum* is the natural hybrid between *C. guttatum* and *C. yatabeanum*. Characters of the hybrid are intermediate between the parents. The

pouch is clearly longer than that of *C. guttatum* but not as long and narrow as that of *C. yatabeanum*. It is found on the southern mainland, the Aleutian Islands, Unalaska, and Kodiak Island. Brown (1995) chose a plant from Anchorage as the type specimen. Sheviak (2002) suggests that plants otherwise matching *C. guttatum* elsewhere in Alaska, but with lighter brown, or tan, or pink markings suggestive of *C. x alaskanum* are due to interbreeding long ago when *C. yatabeanum* was more widely distributed in North America.

For years lovers of native orchids have been going to Kodiak Island in search of *C. yatabeanum*, and I was numbered among them, making the journey in the year 2000. There may be some who still incorrectly insist the plants on Kodiak are in fact *C. yatabeanum*. Sheviak (personal correspondence) presents compelling evidence for the hybrid origin of the plants on Kodiak. He has a series of photographs, reproduced here, of a hybrid swarm of *C. x alaskanum* taken on the Island of Unalaska in the Fox Islands group of the Aleutian Islands. One plant he calls “pseudo-yatabeanum” because its elongated pouch approaches the structure of the pouch on *C. yatabeanum*. Growing on the same hillside are his *C. x alaskanum* 1, 2, and 3. These have gradations of more rounded and shorter pouches reminiscent of the pouch on *C. guttatum*. In particular *C. x alaskanum* 3 is very much in both color and shape like the plants on Kodiak Island. Sheviak contends this is conclusive evidence for the hybrid



Fig. 69. *Cypripedium x alaskanum* 1 on Unalaska Island with pouch slightly elongated and slightly rounded. Photo by C. Sheviak.

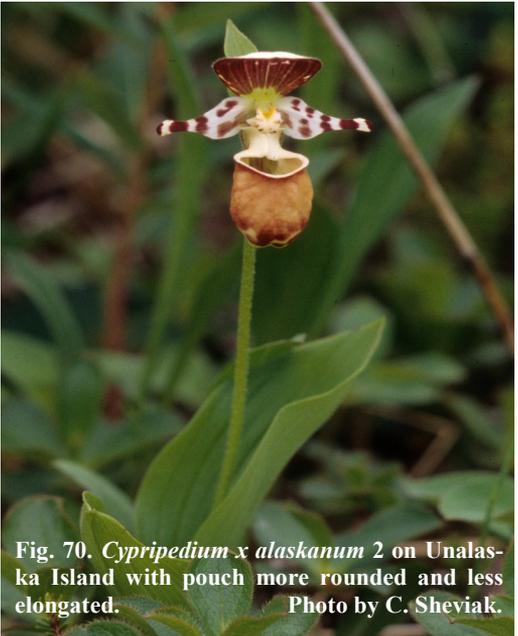


Fig. 70. *Cypripedium x alaskanum* 2 on Unalaska Island with pouch more rounded and less elongated. Photo by C. Sheviak.



Fig. 71. Left. *Cypripedium x alaskanum* 3 on Unalaska Island that is very similar to those from Kodiak Island. Photo by C. Sheviak.

origin of *C. x alaskanum*, including the plants on Kodiak Island.

*Cypripedium x andrewsii* A.M.Fuller, *Rhodora* 34 No. 402 (1932). (Fig. 72)

*Cypripedium x andrewsii* is the name of the natural hybrid between *C. candidum* and *C. parviflorum*. Flower size and color are intermediate between the two parents but vary widely. Hybrid swarms exist where the flowers appear on a continu-

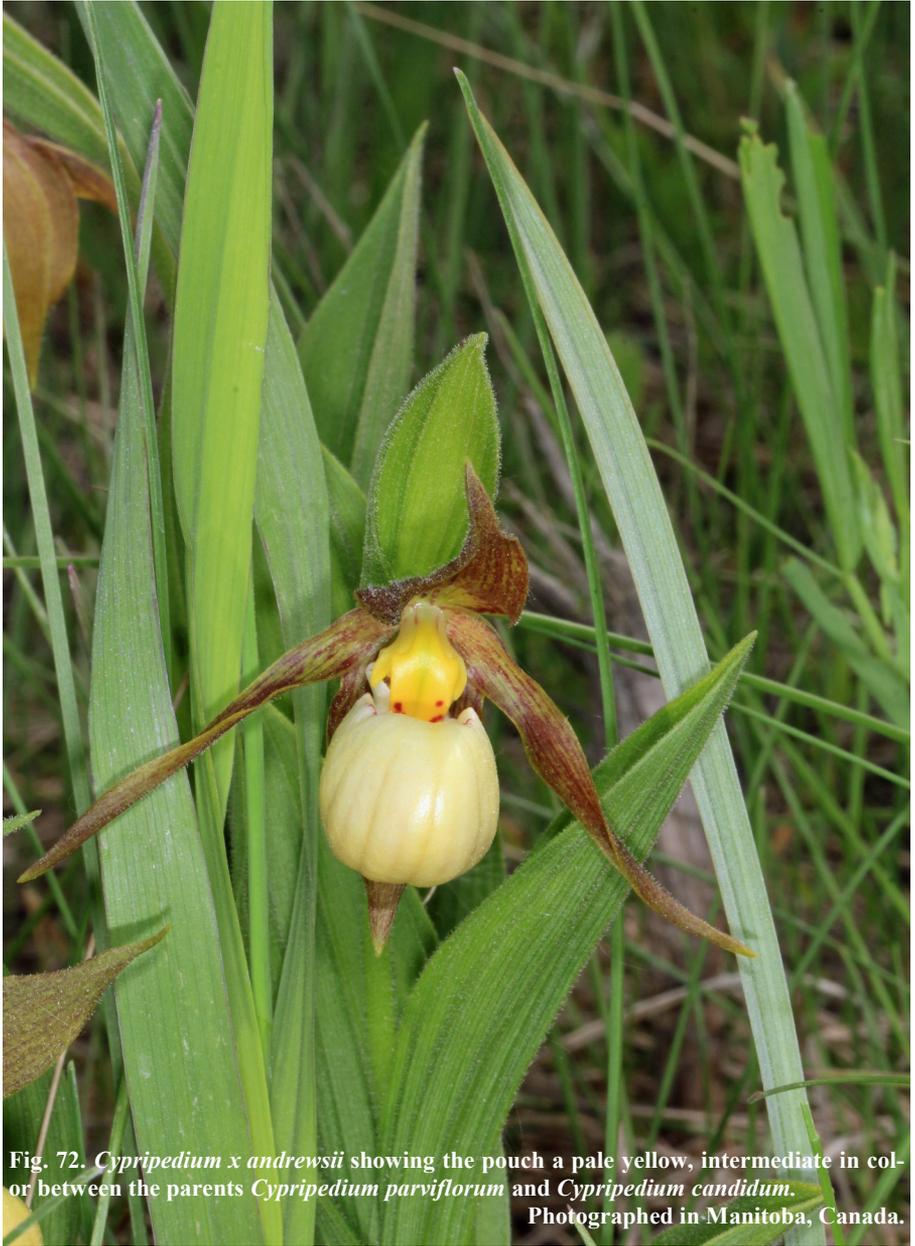


Fig. 72. *Cypripedium x andrewsii* showing the pouch a pale yellow, intermediate in color between the parents *Cypripedium parviflorum* and *Cypripedium candidum*.  
Photographed in Manitoba, Canada.

um between the extremes of the parents as a result of backcrossing. *Cypripedium x andrewsii* is most easily recognized by the color of its pouch, which is creamy to pale yellow. The sepals and petals can be pale brown, or greenish brown. The hybrid can be expected wherever the two parents grow together.

Different hybrid names have been applied to the natural crosses between *C. can-*

*didum* and two of the varieties of *C. parviflorum*. *Cypripedium x andrewsii* was applied to the natural hybrid between *C. candidum* and *C. parviflorum* var. *makasin*. Then *Cypripedium x favillianum* was used for the hybrid between *C. candidum* and *C. parviflorum* var. *pubescens*. *Cypripedium x landonii* was applied to a back cross involving *Cypripedium x favillianum* and *C. parviflorum* var. *parviflorum*. However Crib (1997) points out that the hybrid name depends only on the primary species, independent of varieties or backcrossing. The correct name then for any hybrid between *C. candidum* and *C. parviflorum* is *C. x andrewsii*.

***Cypripedium x columbianum* Sheviak, American Orchid Society Bulletin 61(6) (1992).**

Sheviak (1992) used the name *Cypripedium x columbianum* for the natural hybrid between *C. montanum* and *C. parviflorum*. The hybrid features creamy yellow pouches and dark sepals and petals. The ranges of *C. montanum* and *C. parvi-*



*florum* overlap in only a few places. Therefore *C. x columbianum* is found only in a few parts of Southwestern Canada and Northwestern United States.

***Cypripedium x herae* Ewacha and Sheviak, Orchids 73(4) (2004).**

The two natural hybrids with *C. parviflorum* discussed previously are both within the *Cypripedium parviflorum* Complex. That complex contains the closely related and similar appearing species of *C. parviflorum*, *C. montanum*, *C. candidum*, and *C. kentuckiense*. Hybrids with *C. parviflorum* outside of this complex would not be expected due to

**Fig. 73. *Cypripedium x columbianum* showing the pouch intermediate in color between the parents *Cypripedium parviflorum* and *Cypripedium montanum*. Photographed in Alberta, Canada.**

differences in flower morphology which suggest different pollinators. That expectation was shattered when Ewacha and Sheviak (2004) published a description of

*C. x herae* as a natural hybrid between *C. parviflorum* and *C. reginae*. Notes on the specimen sheet indicate that the hybrid was found growing in a roadside ditch along with *C. parviflorum* and *C. reginae*. A live plant was collected from the field in 2000, and grown successfully in cultivation. A specimen was taken from the cultivated plants for the herbarium record in 2003. The sepals and petals are yellowish to whitish yellow, with scattered red spots. The pouch is dull yellow with hints of pink, and stripes of reddish dots. So far the only report of *C. x herae* is the original collection from Manitoba. Because of its extreme rarity, and the differences in floral morphology and blooming seasons of the reported parents, anecdotal speculation suggests this hybrid



Fig. 74. A plant of *Cypripedium x columbianum* with two flowers, as often seen in the parent *Cypripedium montanum*.

may have resulted from human assisted pollination. Clearly more field searches for *C. x herae* are necessary to clarify its status. This is one of our *Cypripedium* that I have not seen in the field, so the description data herein are from Ewacha and Sheviak (2004). I have been unable to obtain an image of it to show here.

Carson Whitlow of Cyp Haven created a hybrid between *C. parviflorum* and *C. reginae* in his laboratory some time before what we are calling *C. x herae* was found in the wild. He registered his hybrid as C. Genesis.

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