

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: ***Cypripedium parviflorum* Salisb. yellow lady's slipper, yellow moccasin-flower**

Evaluator's note: As presently circumscribed, this species comprises three intergrading varieties, of which at least two are reported to be found within Region 2. These are:

var. *parviflorum*

SYNONYM: *C. calceolus* L. var. *parviflorum* (Salisb.) Fernald [Van Bruggen 1976; Great Plains Flora Association 1977; Kaul 1991]; *C. calceolus* L. subsp. *parviflorum* (Salisb.) Hultén [Weber & Wittman 2001a, 2001b]

var. *pubescens* (Willd.) O.W. Knight

SYNONYMS: *C. calceolus* L. var. *planipetalum* (Fernald) Vict. & J. Rousseau; *C. calceolus* L. var. *pubescens* (Willd.) Correll [Van Bruggen 1976; Great Plains Flora Association 1977; Kaul 1991; Dorn 1992]

However, according to C.J. Sheviak (in litt.), a specialist in the genus, the precise distribution of infraspecific taxa within R2 is as yet uncertain. Especially problematic at this time is the identity(-ies) of the taxon(-a) found in WY and the Black Hills of SD. What follows is a preliminary report on current knowledge of the complex.

Criteria	Rank	Rationale	Literature Citations
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Criteria	Rank	Rationale	Literature Citations
2 Distribution outside R2	C	Species is very widely but discontinuously distributed throughout the n and e US and Canada, from AK and Yukon, e through Canada and s through WA, ID, OR, CA and into AZ; absent from NV, but in UT, NM, CO, WY, and MT; thence s and e through ND, SD, e NE, e KS, and OK; thence e throughout the e US (except FL). Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> • Sheviak in press
3 Dispersal Capability	B	Evaluator was unable to find any direct information on species' dispersal capability. Given species' light seed and very wide distribution in North America, it is likely that species may disperse readily, but is limited by the likelihood of pollination and habitat requirements, which appear to be largely unknown. Confidence in Rank High or Medium or Low	
4 Abundance in R2	B	R.L. McGregor (pers. comm.) reports that species is rare throughout KS, often not found in apparently suitable habitat. For their part, Weber & Wittman cite species as "rare and local, and very vulnerable to extermination by collectors, a plant of special concern." Given the paucity of herbarium records, I suspect that this is the case throughout R2. Because species is very wide spread, it seems unlikely that it may be imperilled either throughout its range or within R2. However, individual populations may face local extinction from habitat loss or, as postulated by Weber & Wittman and -for IA populations- by Niemann, the activities of orchid collectors. Populations should be protected wherever possible. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> • Niemann 1986 • Weber & Wittman 2001a
5 Population Trend in R2	D	Evaluator was unable to find any information about population trends within R2. Confidence in Rank High or Medium or Low	

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Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	A	Species appears to occupy a wide array of habitats throughout its range, from bogs, fens, marshes, and wooded swamps, to mesic grasslands, to well-drained sites in woodlands and open deciduous forests at ca 1000 ft in e KS, to montane aspen groves and ponderosa pine forests at ca 8000 ft in CO; often on rocky, silty, or sandy, alkaline or subalkaline soils. Cribb and Sheviak note that <i>Cypripedium</i> species tend to be early successional, populations colonize relatively open sites and decline in size as forests mature. Cribb remarks that population dynamics have not been studied, however. Sheviak reports that much of species' grassland habitat has been lost in IL, due to conversion to cropland. The frequency and quality of sites have undoubtedly declined in R2, due to habitat disturbance from livestock grazing, conversion to cropland, or other human activities (in particular, plant collecting!). However, evaluator is unaware of any studies on habitat trends within region. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> • Cribb 1997 • Sheviak 1974 • Spackman et al. 1997
7 Habitat Vulnerability or Modification	A/D	Species occupies a wide array of habitats, but does not appear to be particularly common anywhere in R2 and is often absent from apparently suitable habitat (R.L. McGregor, pers. comm.). Given species' rarity, habitat may be quite vulnerable to disturbance [rank A], but evaluator was unable to find reliable studies on what those requirements are [rank D]. Further study is warranted. Confidence in Rank High or Medium or Low	
8 Life History and Demographics	B	Perennial forb. Flowering late April through late May; fruiting early June through early August. Species is pollinated by one of several species of bees (males of <i>Ceratina calcarata</i> [Apidae] have been documented as pollinators of var. <i>pubescens</i>) but successful pollination may be infrequent, due to species' rarity. Sheviak has noted that species may exhibit dormancy in some year and surveys of known populations should probably be carried out over the course of several seasons. Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> • Cribb 1997 • Sheviak 1974
Evaluator: Caleb A. Morse, R.L. McGregor Herbarium (KANU), University of Kansas Campus West, 2045 Constant Ave, Lawrence KS 66047			Date: 01/02/01

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)¹ to occur:

¹ Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.

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Note: Given the uncertainty surrounding the identities of infraspecific taxa of *C. parviflorum* in R2, I have not tried to assign occurrences to one variety or the other.

<u>Colorado NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Kansas NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Nebraska NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>South Dakota NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Wyoming NF/NG</u>	<u>Known</u>	<u>Likely</u>
Arapaho-Roosevelt NF		X	Cimmaron NG			Samuel R. McKelvie NF			Black Hills NF	X2		Shoshone NF		X
White River NF		X				Halsey NF			Buffalo Gap NG			Bighorn NF		X
Routt NF		X				Nebraska NF		X	Ft. Pierre NG			Black Hills NF		X
Grand Mesa, Uncompahgre, Gunnison NF		X				Ogalaia NG						Medicine Bow NF		
San Juan NF		X										Thunder Basin NG		
Rio Grande NF		X												
Pawnee NG														
Pike-San Isabel NF		X												
Comanche NG														

2 KANU catalog # 224755: SD, Lawrence Co: 1 mi W Savoy, Roughlock Falls, 18 Jun 1980, G.E. Larson 6471; KANU catalog # 224765: SD, Lawrence Co: 8 mi NE Savoy, Spearfish Canyon, 3 Aug 1970, K.L. Johnson 2757 [determined as var. *parviflorum*].

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