



# MARIPOSA

the newsletter of the *CALOCHORTUS SOCIETY*

c/o Robinett, P.O. Box 1993, Brookings, OR 97415 USA

*C. luteus*

## Seeds Available

Once again we especially thank members for their contributions of seeds – Nancy and Ames Gilbert of Grass Valley (proprietors of the Far West Bulb Farm), and Bob Werra of Ukiah. The origin of each group of seeds is noted in the table below. Members wanting seeds should please send us their “wish list” of the items they want from the following list, using the lot numbers shown below. The column headed “Availability” lists the approximate total number of seeds available in each lot. In a few cases, the numbers of seeds are very limited. We will divide the available seeds among those requesting them, and will send you at least 10 seeds (and usually more) of each lot you request – as long as the seeds last! Domestic members, please send \$1 to cover shipping costs; overseas members send US\$2, please.

Lot #	Species	Source	Approximate # Available
1	<i>C. albus</i> “Sierra form”	Collected in Yuba county, elevation approximately 1600 feet, 6/6/2000	500 seeds
2	<i>C. albus</i> “Sierra form”	From Bob Werra’s 2000 garden, in Ukiah, Mendocino county (elevation about 800 feet)	300 seeds
3	<i>C. amabilis</i>	Habitat collected this year near Ukiah, 900 feet	400 seeds
4	<i>C. amoenus</i>	This year’s seeds from Bob Werra’s garden	300 seeds
5	<i>C. argillosus</i>	Fresh seeds from Bob Werra’s garden	300 seeds
6	<i>C. catalinae</i>	From Bob Werra’s 2000 garden	250 seeds
7	<i>C. luteus</i>	This year’s garden seeds from Bob Werra	350 seeds
✓ 8	<i>C. obispoensis</i>	Fresh seeds from Bob Werra’s garden - maximum of 8 packets	80 seeds
✓ 9	<i>C. simulans</i>	From this year’s garden, Bob Werra	150 seeds
10	<i>C. splendens</i>	Fresh seeds from Bob Werra’s garden	500 seeds
✓ 11	<i>C. superbus</i>	Yuba county, elevation about 1800 feet, collected 9/10/2000.	Unlimited
12	<i>C. superbus</i>	Fresh garden seeds from Bob Werra, Mendocino county	100 seeds
13	<i>C. umbellatus</i>	Seeds from Bob Werra’s 2000 garden - maximum of 8 packets	80 seeds
14	<i>C. venustus</i> “sanguineus”	Fresh seeds from plants in shades of red in Bob Werra’s garden (he uses “sanguineus” to separate these from the next group)	100 seeds
✓ 15	<i>C. venustus</i> “varied colors”	This year’s seeds from Bob Werra’s garden	500 seeds
✓ 16	<i>C. vestae</i>	From lavender plants in Bob Werra’s garden, this year’s seeds	150 seeds
17	<i>C. vestae</i>	Fresh seeds from Bob Werra’s white plants	200 seeds
✓ 18	<i>C. weedii</i>	From Bob Werra’s 2000 garden	150 seeds

## Species of the Issue – *C. weedii* var. *vestus*

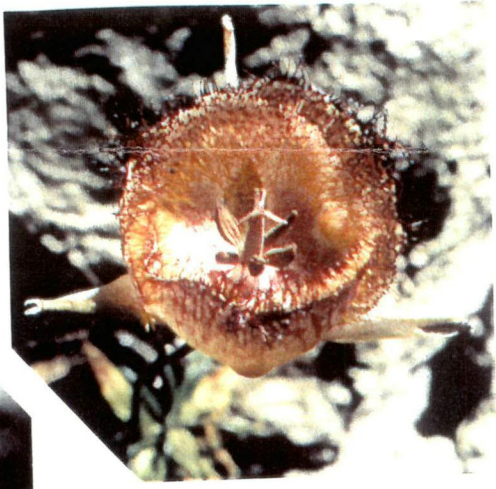
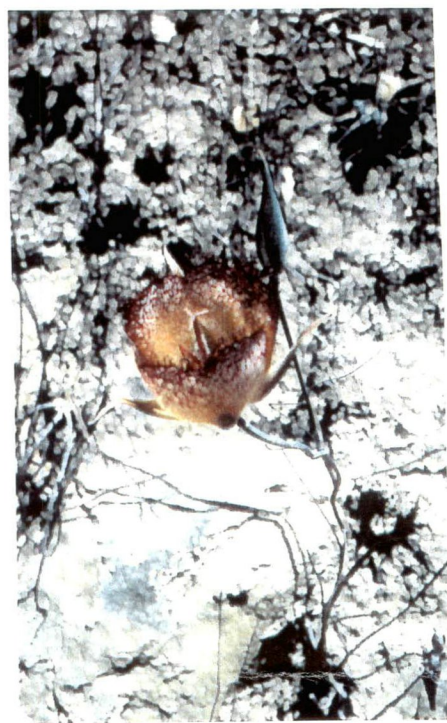
**Description** – We consider this taxon one of the most interesting members of the genus *Calochortus*. First, it is quite variable in color and very lovely. The basic underlying color of the petals is white to off-white – but “off” means the petals may have a pinkish cast, a tannish cast, a yellowish cast, or even an almost greenish cast. The petals are thickly “haired,” especially toward the apex, and the “hairs” range from light yellow to golden at the base, through one or more intermediate zones, to a rusty red or dark red-brown at the upper edge – all of which adds to the impression of color variability. The gland is golden yellow and oblong (taller than wide), thickly “haired” (especially at the upper side) and deeply depressed, creating a “bulge” on the outer surface of each petal. Below the gland on the claw of the petal are three pale purple blotches, with the two at either side more elongated than the central one. The sexual parts of the flower – style, stigma, filaments, and anthers – range from cream to yellow to gold to light reddish brown, providing an attractive complement to the petals. Each of the sepals is the same basic color as the petals and has a few hairs at the base and a long, oval pale purple patch running almost its full length. The sepals are generally longer than the petals – sometimes quite a bit longer – and tend to roll up around their long axes (rather than the more common pattern in *Calochortus* of curling back toward the flower), providing a striking setting for the petals. Seed pods are erect, very slender, a medium-light brown; seeds are small irregular oblongs, medium brown.

**History** – A second reason we find *C. weedii* var. *vestus* interesting is the taxonomic issues surrounding it. *C. weedii* itself was first published in 1868 by Alphonso Wood in the Proceedings of the Academy of Natural Sciences of Philadelphia; he did not distinguish any subspecies or varieties. In 1879, Sereno Watson (who with Baker in 1874 separated out the “subgenus” we today call Section CYCLOBOTHRRA), listed *C. weedii* var. *purpurascens* among the *Calochortus* in the Proceedings of the American Academy, but later authors concluded that his description was based more on material from both *C. plummerae* than from *C. weedii* var. *vestus*, so did not consider this a valid taxon. In 1900, Bailey named *C. weedii* var. *vestus* in the Cyclopedia Hortus (he also listed *C. weedii* var. *intermedius* – which has a lighter yellow flower and may be a hybrid between *C. weedii* var. *weedii* and *C. plummerae* – and *C. weedii* var. *obispoensis* – since raised to full species status as *C. obispoensis*). This same list of vars. of *C. weedii* was accepted by Carl Purdy in his Revision of the Genus Calochortus (1901). However, the Abrams Flora (published over the period 1923-40) includes only *C. weedii* – with no varieties separated – and elevates *C. obispoensis* as a separate species.

This brings us to Marion Ownbey’s 1940 *magnum opus*. Ownbey erected subsection WEEDIANI within section CYCLOBOTHRRA and clearly established *C. weedii* var. *vestus* as a separate taxon, describing it as follows: “Petals triangular-obovate, truncate, purplish, with a conspicuous, reddish brown fringe, densely bearded on the inner face with yellow or reddish brown hairs; anthers lanceolate, apiculate; otherwise quite similar to the species.” However, in unpublished notes, Stan Farwig and Vic Girard questioned whether var. *vestus* should not be elevated to full species status, based on the number of differences between it and *C. weedii* var. *weedii* (for example, shape of gland; depth of gland; distribution of “hairs” on the petal surface, including the gland; the “fringe-ing” of the upper edge of the petals – which is quite striking and which does not appear in *C. weedii* var. *weedii*; and details in the structure of the anthers) in addition to the more obvious flower color and geographic distribution differences. Basically, the position suggested by Farwig and Girard was that if *C. obispoensis* were a separate species, and not just a var. of *C. weedii*, it was difficult to justify not doing the same for *C. weedii* var. *vestus*.

Elevating *C. weedii* var. *vestus* to species status might lead to a nomenclature problem, as noted both in the Farwig-Girard notes and in Girard’s unpublished monograph on the *Calochortus*. Although the rules of the International Botanical Association do permit the use of an entirely new and different name for a plant so elevated, it is preferred that the name used will facilitate the tracing of the plant’s chronological and botanical history. But that would mean calling it *C. vestus* – with some risk of confusion with the mariposa *C. vestae*.

*Calochortus weedii* var. *vestus*



(Photographs by Jim Robinett)

which was first named *C. Vesta* by Bailey in 1900 "in compliment to [the author's] wife." This name was "corrected" to *C. vestae* by Carl Purdy in 1901, using the Latin dative case ending. The word-root "vest-" may be loosely translated as "bearded." It has historical precedence here, and fits the flower well. The name *C. purpurascens* is not acceptable, because "purpurascens" means "purplish or becoming purple," which is not the case with this plant. Equally important, the name "purpurascens" was applied by Sereno Watson to two taxonomically distinct and different plants, which is an error, and therefore not acceptable.

**Habitat** – *C. weedii* var. *vestus* seems to occupy a very distinct and limited habitat. It is found only in the South Coast Ranges, in a narrow zone well within the fog belt and along the edge of the transition between coastal scrub and coastal woodlands. Thus it may be seen most often at the edge of woodlands, in rocky clay or otherwise poor soils, and in at least one case on a serpentine outcrop (see "Distribution"). This separates it well from the preferences of *C. weedii* var. *weedii*, which is generally found in open sun and most often inland in near-desert conditions (though it is also seen right at the coast in the San Diego metropolitan area), as well as from *C. plummerae*, which occurs in habitats similar to *C. weedii* var. *weedii*, but further north, in a broad arc from Los Angeles county inland; and from *C. obispoensis*, which grows in full sun at the eastern edge of the fog belt in San Luis Obispo county.

**Distribution** – *C. weedii* var. *vestus* is most easily found near the ridgetop of the Santa Ynez Mountains behind the city of Santa Barbara. It is reported to the east of the city, along Camino Cielo Way and in upper Mission Canyon, but appears in its greatest profusion west of the city along the same road. The best stands we have seen were in openings along Refugio Canyon Road as it approached the top of the ridge near the west end of Camino Cielo, and at the junction of these two roads. It then appears off and on as one goes east on Camino Cielo, usually in gaps in the scrub. Other Santa Barbara county locations reported include upper areas of Rattlesnake Canyon, the Cuyama Valley, southeast of Lompoc, etc.

At the northern end of its range, *C. weedii* var. *vestus* can be found in scattered locations in the Santa Lucia Mountains of Monterey county; a few years ago we were guided to some of these locations by staff of the University of California-Santa Cruz Arboretum. Access can be accomplished along an often difficult dirt road called "Coast Trail" which runs south along the ridgetop from Nacimiento-Ferguson Road. This is where we saw the plant growing on a serpentine outcrop. The largest stand we saw here (though we did not see it in bloom, but in capsule) was along a rough foot-trail descending below an unimproved picnic area called "Lion's Den" the road to which was fit only for 4-wheel-drive vehicles.

The paucity of other locations is interesting. The website <[www.calflora.org](http://www.calflora.org)> lists 28 reports in Santa Barbara county, 12 reports in Monterey county, and only 2 reports in San Luis Obispo county, though it lies between the first two geographically. The website also lists 8 reports in Ventura county, mostly from the 1960's and earlier, though one observation is dated 1986. How many of these might still be extant is not discernible from the information given. No details are provided on-line regarding any of the Ventura county reports or either of the San Luis Obispo county reports. However, there is a fair amount of information regarding many of the Santa Barbara county locations. Interestingly, David Magney, in *A Flora of the Dry Lakes Ridge* (published in 1986), states that *C. weedii* var. *vestus* was seen and photographed on Dry Lakes Ridge (Ventura county) in July 1978, but adds, "not seen since." This appears to be the source of the observation dated 1986 by <[www.calflora.org](http://www.calflora.org)> and thus should be dated 1978, not 1986, we believe.

**Cultivation** – Jim tried growing *C. weedii* var. *vestus* in Sonoma county in tubs and boxes, but without much luck. It seemed to grow very slowly, and never reached blooming size. As it occurs naturally in heavy soils and blooms quite late (mostly July and August), he thinks it might have done better had he been able to put it in the ground, in heavy clay which might retain a little moisture longer into the summer season. We'd be happy to have any reports from readers who have had more success growing this taxon.

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### Readers' Forum –

☘ From Colin Jennings, Highbury, South Australia - "From your 1999 seed I have had quite good results. All seed was planted towards the end of April on the surface of a general potting mixture, consisting of milled pine bark, peat, and sand. The seed is lightly covered with a coarse propagating sand, to prevent water splashing, and it also helps to prevent the growth of algae/mosses. I spray the surface of the mixture with a fungicide called Fongarid [active ingredient is furalaxyl (250g/kg) and it works well against pythium and phytophthora]. The seeds are also sprayed with this material, and the sand topping is also given a spray. After sowing, the pots are placed outdoors where they receive the full effect of weather – our winters are cold and wet (had almost 275mm in May, June, and July together), but we do not experience frosts, though it does get close at times. Details of the results are:

Lot # 10	<i>C. howellii</i>	8/18	Lot # 23	<i>C. syntrophus</i>	nil
Lot # 11	<i>C. kennedyi</i>	8/28	Lot # 25	<i>C. venustus</i>	20/35
Lot # 16	<i>C. nudus</i>	nil	Lot # 30	<i>C. vestae</i>	35/40

Have also managed to get a varied set of germination results from seed obtained from other sources, including NARGS, Alpine Garden Society (UK), Scottish Rock Garden Society, Southwestern Native Seeds (Arizona), and Jim Archibald (Wales)."

*Results in this detail are very useful to those of our readers who are working on propagation. Colin's note also reminds us that we inadvertently omitted one important source of Calochortus bulbs from our list last issue – our friend Wim de Goede, who is one of our members, has had considerable success with propagation in large quantities, particularly among the mariposas. For a list of what he has available, write him at Middenweg 53, 1764 - KL - Breezand, The Netherlands. In addition, we learned from The Bulb Newsletter (B & M Mathew, 90 Foley Road, Claygate, Esher, Surrey KT10 0NB, UK) that the 2000 catalogue of Broadleigh Gardens (Bishops Hull, Taunton, Somerset TA4 1AE, UK) will list several species of Calochortus. The Gardens request two first class stamps (total \$2 to those of us on this side of the Atlantic) to receive the catalog. They also have a website – <[www.broadleighbulbs.co.uk](http://www.broadleighbulbs.co.uk)>*

☘ Lottie Jenvey, of Mountain View, California, has sent us another of her beautiful photographs – this one of an extremely red *C. venustus*. She writes – "Did you ever see such a red – not even the one at Mt. Piños – and this photo is quite true to color. I got the bulb from [————] and they called it *C. venustus sanguineus*. Have you seen that in any classification? It's not in my Jepson Manual."

*Back in the 19th century, many botanists and naturalists were "splitters" – that is, any slight variation in form was viewed as justifying at least a "variety" or "subspecies" designation, to their way of thinking – including variation only in color. Thus in 1900, Bailey (writing in the Cyclopedia Hortus) mentions *C. venustus* var. *sanguineus* as one of the many color forms of what he called *C. venustus* var. *eldorado*. In 1901, in his revision of the genus, Carl Purdy separated out *C. venustus* var. *roseus*, var. *eldorado*, var. *purpurascens*, and var. *sulphureus*, but did not list var. *sanguineus* as being distinct. After the turn of the century, the botanical powers-that-be moved away from "splitting" toward "lumping," and it became "unacceptable" to separate out something only for being a different color. In his Flora of California (1909-22), Jepson reduced all named color forms of *C. venustus* to synonymy with the basic species: and he no longer even mentioned the different color forms in A Manual of the Flower Plants of California (1925) – the original "Jepson Manual." By the time Ownbey published his definitive Mono-graph of the Genus Calochortus in 1940, he had subsumed a total of ten color variants into *C. venustus*.*

including var. *sanguineus*. In short, your bulb source is using a name that has not been recognized for nearly a hundred years. The plant in question is nonetheless spectacular (as is your photograph). We judge it was probably grown from Mt. Piños seed, even though the petal markings are a little atypical for that form; however, its creamy-pink anther color is in our experience found nowhere else. We have seen reds nearly as good among the many colors found at Stump Springs in eastern Fresno county – but there the anther colors are golden to orange to red-brown.

- ❁ We promised members a list of notes on Los Angeles county occurrences of *Calochortus* (especially in the Santa Monica Mountains) sent to us by Geoff Burleigh of San Fernando, California, and here it is –
- C. albus* – White, rarely pale pink. Scattered throughout in protected places: oak woodlands, chaparral, trail banks, ravines, canyon bottoms, etc. And in open places especially after fire. April–June.
- C. catalinae* – Common throughout. Especially abundant after fire. April–June. [We found a nice stand of several hundred plants along the inland side of Mulholland Drive about 1.8 or 1.9 miles west of the intersection with Kanan Road; they were in pod, just starting to dehisce, on 6/17/95 – Eds.]
- C. clavatus* – Petals and sepals bright yellow, markings variable, some plain with no markings, others with dark red markings, such as a zigzag line and basal blotch on each petal and two  $\cap$ -shaped spots on each sepal. Anthers very dark blue-purple. Common throughout. Especially abundant after fire. May–June. [There is a nice stand at the southwest corner of the intersection of Mulholland and Kanan Road; they were in late bloom on 6/17/95. We also saw some scattered along the old Ridge Route, and on Highway 126 a little east of Fillmore. – Eds.]
- C. plummerae* – Open deep pink, then turn to purple, sometimes fimbriate (red hairs along the tips of the petals). Scattered throughout in open rocky places. More numerous after fire. June–July. [We found stands in two places nearby – in San Bernardino county, across from Las Flores Ranch, a couple of tenths east of Highway 138, in early bloom on 6/6/92; and in Riverside county in an area called “The Badlands,” along Jackrabbit Trail which runs between Highway 60 and Gilman Springs Road – Eds.]
- C. splendens* – Lilac, rare, on hillsides along Piuma Road near Monte Nido, and in Malibu Creek State Park near the trail to Tapia Peak. More numerous after fire. May–June. [On 6/16/91 we found an incredible blooming of thousands of *C. splendens* in Ventura county, at the west end of Lockwood Valley Road at it approaches Highway 33. Color was variable; some were actually white. All had long silky white hairs scattered on their petal surfaces. The massive numbers seemed to be the result of unusual rainfall the previous winter – Eds.]
- C. venustus* – White, rare, on a hillside southeast of Cornell Road between Agoura Road and Kanan Road (with *C. clavatus*). In Ventura county, on the hillside and ridge on the east side of Westlake Boulevard (Highway 23) south of Potrero Road. May–June. *C. albus*, *C. catalinae*, *C. clavatus*, and *C. plummerae* also grow in this vicinity. [There is an extensive stand of an interesting form of *C. venustus* along the western end of Lancaster Road (Highway 138). Mostly white, though some are lavender and a few are purple, with markings which might be described as “distortions” of the 2-spot form; gland shape is quite variable. More representative examples of the 2-spot form are scattered along the southern and eastern slopes of Mt. Piños, on the Ventura–Kern county border. Here some are quite pink and even cerise, almost looking as if they might be crosses with *C. kennedyi* – “impossible” because they have different chromosome numbers. And there is the beautiful red Mt. Piños form of *C. venustus* discussed above. It is found mostly near the intersection of Mt. Piños Road and Cuddy Valley Road, which is in Kern county. In 1991 we saw a great number of *C. venustus* along Highway 33 in the hills south of Lockwood Valley Road, in Ventura county. – Eds.]
- [Finally, no Los Angeles county list is complete without mentioning *C. kennedyi*, which occurs in a number of locations along Big Pines Highway east of Lancaster, and in Big Rock Canyon, to name but a few places; and the very rare *C. striatus*, which can be found in low spots in the desert north of Lancaster – Eds.]