



Figs. 1 and 2. *E. racemosa* var. *citrina*, HBC 46329. Photos by Jim Dice.

## ECHEVERIA RACEMOSA VAR. CITRINA A NEW VARIETY FROM VERACRUZ, MEXICO

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The Crassulaceae of Mexico are usually found at higher elevations of between 1500 and 2500 meters. Aside from dudleyas, which commonly inhabit the coast of Baja California, only a very few members of the family are found near sea level: *Graptopetalum rusbyi* grows in the foothills of Sonora and Sinaloa, descending nearly to the shore at Topolobampo; and *Echeveria diffractens* (Kimmach and Lau, 1983) was found at an altitude of only 300 meters in Veracruz.

In February 1977, a year before he discovered *E. diffractens*, Alfred Lau was travelling along the dirt road that leads inland from near Palma Sola to Cardel, Veracruz. At an altitude of only 100-200 meters, near the small village of Palmas de Abajo, and about 15 km from the type locality of *E. diffractens*, he found another echeveria growing on rocks and in clay soil on grassy slopes. The leaves were reddened in sunlight, becoming greener where shaded.

Four years later, Loren Whitelock, a cycad spe-

cialist, collected similar echeverias on another road some ten km inland from Palma Sola. Among low rolling hills, he stopped to examine plants of *Dioon edule* among rock outcroppings in land cleared for grazing. The echeverias grew on the rocks both in full sun and under shrubs. The leaves glistened in the sunlight and were a vivid green even where fully exposed to the sun. In cultivation the four plants he collected show other differences from the Lau collection: the rosettes become much larger, attaining a width of 20 cm, the flowering stems reach 70 cm or more in height, and the flowers are 2-3 mm longer.

Both collections are closely allied to *E. racemosa* Schlecht. & Cham., found farther south in Veracruz, particularly in the vicinity of Jalapa. This species is characterized by green to purplish-red leaves, somewhat reflexed, deltoid, usually reddish grey sepals, and orange to red petals. *E. lurida* Haw., recognized by Walther (1972) as a distinct species, supposedly differs in having narrower, redder

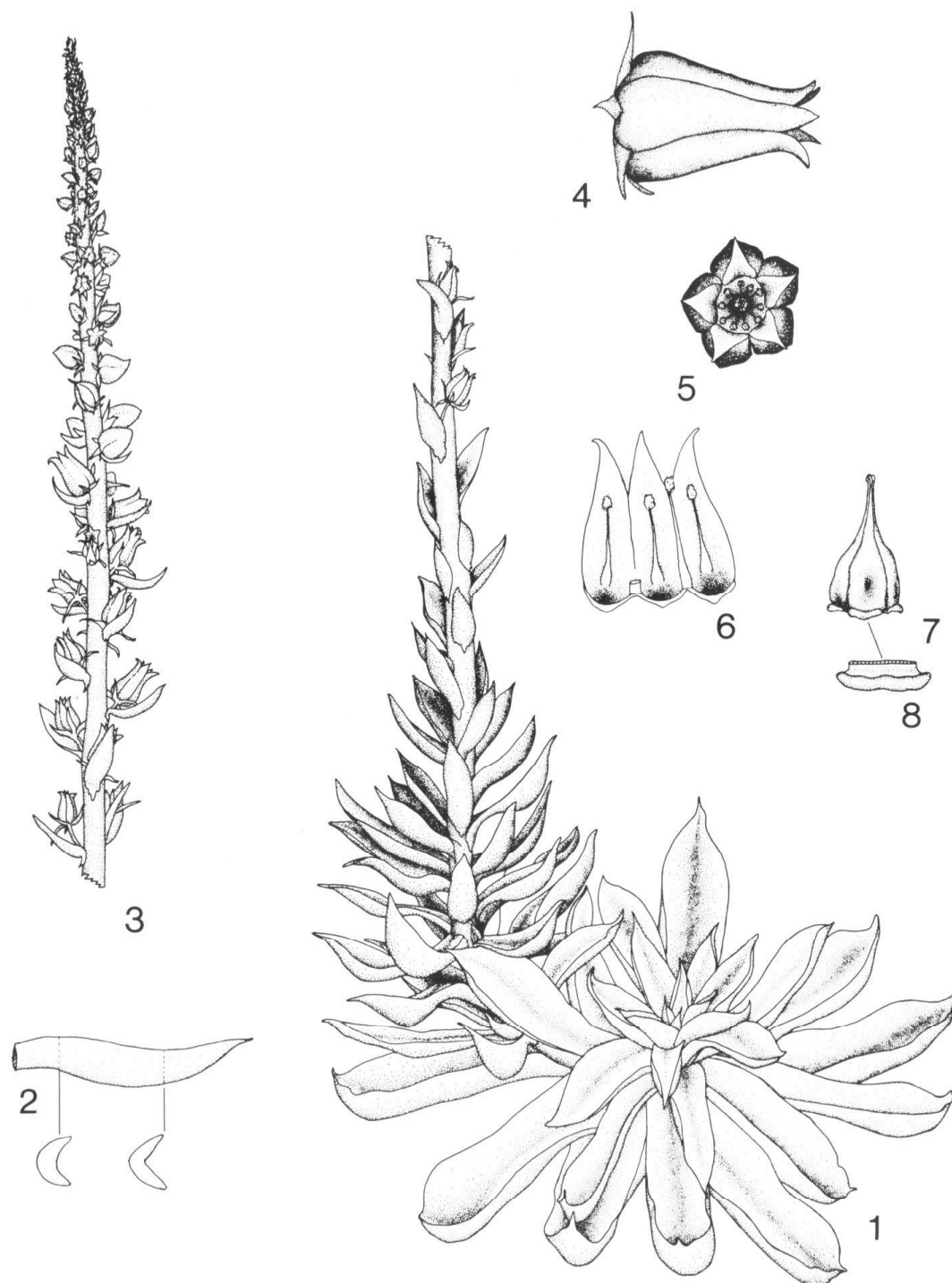


Fig. 3. *Echeveria racemosa* var. *citrina* Kimn., HBG 46329. 1. Rosette and basal half of flowering stem, X 0.33. 2. Leaf, X 0.5. 3. Apical half of flowering stem X 0.33. 4. Flower, lateral view, X 1.5. 5. Flower, apical view, X 1.5. 6. Petals and stamens, X 1.5. 7. Gynoecium, X 2. 8. Nectary, greatly enlarged. Drawing by Diana Jacobs, 1983, financed by a grant from the San Diego Cactus and Succulent Society.

leaves. Jorge Meyrán informs me that it was re-collected in 1973 by Otero and Hunt near Palo Gacho, above Jalapa; the leaves of this collection were 10 mm wide, deeply concave, wine-red in color, and the corolla was orange-red. Although I have not examined living plants of *E. lurida*, neither descriptions nor illustrations appear to justify its retention as a separate taxon and it is regarded here as a synonym of *E. racemosa*.

The collections of Lau and Whitelock differ from typical *E. racemosa* in the somewhat more papillose upper leaf-surface, in the clear yellow petals, and in the sepals, which are larger, green, less glaucous, apically upcurving and deltoid-lanceolate; less important differences are the basally tapering filaments, more acuminate pistils and green (rather than red) stigmas. The more robust Whitelock collection is so different from *E.*



*racemosa* as illustrated by Walther (figs. 183, 184, 185) that it might even be considered a separate species; however, Lau's collection, with its smaller reddish leaves and shorter flowering stem, is somewhat intermediate. Narrowing the gap even further is a plant shown in plate eleven of Walther's work; collected at Jalapa; it has ascending sepals and a yellowish orange corolla. Although such intergradation requires the joining of all these variants under one species, the plants with pure yellow flowers seem worthy of varietal status.

***Echeveria racemosa* var. *citrina* Kimnach, var. nov.**

*Differt a var. racemosa corolla lutea vivida.*

**Plant** glabrous in all parts; stems less than 4 cm long, ca. 3 cm thick; rosette rather flat, somewhat diffuse, usually single, sometimes offsetting sparsely, 10-20 cm wide, with 20-30 leaves; **leaves** oblanceolate to linear-oblong, often with a deltoid, 2 mm long, reddish mucro, (4-) 6-11 cm long, 15-20 mm wide near base, 20-34 mm wide ca. 2-3 cm below apex, 3-5 mm thick, the upper side strongly concave on young leaves, slightly so on older leaves, flat to somewhat convex near base, convex below and obscurely keeled, the upper surface very minutely papillose because of slightly convex cells; margins smooth, with a semi-translucent, whitish green border 1 mm wide; epidermis light green or often more or less reddened.

**Flowering stems** 1 or 2, more or less erect, 16-70 cm long; peduncle 10-35 cm long, 4-9 mm thick near base, 4-6 mm thick below lowest flower, greenish yellow, shiny; **leaves** 5-20 mm apart, closely similar to rosette leaves, 1-5 cm long and 4-12 mm wide, with a prominent whitish basal spur, easily detached, those on lower half of stem horizontal, the upper ones ascending; **inflorescence** equilaterally racemose, 8-40 cm long, with 15-75 flowers attached 5-10 mm apart; rachis 4-6 mm thick at base, ca. 3 mm thick near apex, straight to sinuous, greenish yellow, shiny; bracts usually subtending each pedicel, or 2 or 3 on rachis between pedicels, or 1-3 attached to pedicel 1-2 mm from base, dried and often deciduous before anthesis of adjacent flowers, linear, acuminate, the subtending

bracteoles to 15 mm long and 4 mm wide, the smallest on pedicels to 5 mm long and 1 mm thick; **pedicels** horizontal before anthesis, ascending afterwards, 1-flowered, 2-5 (-9) mm long, ca. 2 mm thick; **sepals** more or less rotate, with upcurving apices, forming a calyx disc ca. 6 mm wide, somewhat unequal, deltoid-lanceolate, acute, the free portion 3-7 mm long, ca. 3 mm wide near base, ca. 1 mm thick, green, slightly glaucous; **corolla** urceolate, bright yellow, 11-14 mm long, 6-8 mm thick 2 mm above base, 5-7 mm thick just above middle, the limb ca. 4 mm wide; **petals** ovate-lanceolate, subacute, the apices recurving, 10-11 mm long, 4-5 mm wide, the exterior face shiny and strongly convex, obscurely keeled, the inner face dull and canaliculate, most deeply along basal half; **filaments** light yellow, acuminate, ca. 1 mm thick near base, the antesealous ca. 9 mm long, the epipetalous ca. 8 mm long; **anthers** 1 mm long, 0.5 mm wide, oblong, flattened, yellow; **gynoecium**, ovoid, 9 mm long, ca. 5 mm thick near base, the apex abruptly long-acuminate, the pistils appressed, light yellow, deeply concave near base, the stigmas appressed, yellowish green; **nectaries** cuneate, the apex elliptical-oblong, less than 1 mm long, ca. 2 mm wide, yellowish cream. **Gametic chromosome number:**  $n = 18$ .\*

**MEXICO:** Veracruz: near Palmas de Abajo, close to the road between Cardel and Palma Sola, Feb. 1977, *Lau 060*, Huntington B.G. 41281 (HNT, paratype); 10 km along road W. of Palma Sola, Feb. 1981, *Whitelock s.n.*, Huntington B.G. 46329 (HNT, holotype; CAS, MEXU, US, isotypes).

*E. racemosa* var. *citrina* is easily grown, although the Lau collection is much less vigorous than the green form. At the slightest touch, the floral-stem bracts fall and later produce new plantlets. The bright yellow flowers and the attractively colored, glistening leaves of both forms make this one of the more desirable echeverias.

#### REFERENCES

- Kimnach, M., and A. Lau. 1981. *Echeveria diffractens*, sp. nov. Cact. Succ. Journ. (USA) 53: 4-7.  
Walther, E. 1972. *Echeveria*.

\*Counted by Charles H. Uhl, Cornell University.

#### AN ECHEVERIA SOCIETY

E. Hernandez and F. Otero are organizing a non-profit, cooperative organization dedicated to the study and cultivation of *Echeveria* and related Crassulaceae. The structure of the organization will be very informal. Membership will be limited to those seriously interested in the purposes of the society. It will compile a quarterly newsletter on topics of interest. Minimal dues will be established and announced in the first issue of the newsletter, to cover costs of printing and mailing. new collections will be propagated and distributed to members on a first priority basis. Those interested write: Echeveria Society, c/o E. Hernandez & F. Otero, Tabachin 7-A, Viveros de la Loma, 54070 Tlalnepantla, Edo. de Mexico, Mexico.