



Fig. 1. Inflorescence of *Echeveria prolifica* (M19133) 21 May 1975.

## ECHEVERIA PROLIFICA A New Species from Mexico

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At a small roadside nursery near the Hidalgo-Puebla boundary, Meyrán and Felipe Otero in 1969 found a small unknown echeveria with bright yellow flowers. The vendor said it was from a cañada just to the north, and Meyrán and some companions returned twice to seek it there, without success. The plant may well be there, perhaps very local and because of the rugged terrain and abundant vegetation very difficult to find. Thus the report of the vendor can be neither discounted nor fully accepted; and the source of the plant remains uncertain.

This attractive plant may also bear seeds but normally spreads by stolons and also multiplies abundantly by the small leaves of the floral stems, which fall at the slightest touch and grow new plantlets. It is thus making its way in the garden world, even threatening to become a greenhouse weed, and so needs a name. Considering how freely the Mexican Crassulaceae cross, the question may be raised whether it could be a garden hybrid. Aside from the fact that no prospective parents come to mind, Dr. Charles H. Uhl reports none of the irregularity in meiosis that would be very probable in a hybrid. There is thus no reason to doubt that it is a native species; and we therefore describe and name it.

*Echeveria prolifica* Moran & Meyrán, sp. nov.

Planta glabra, stolones ramis floriferis similes emittens. Rosulae sessiles 4-8cm latae, foliis 20-40 glaucis cuneato-obovatis cuspidatis 2-4cm longis. Rami floriferi graciles 15-25cm alti 20-30-foliati, foliis facile cadentibus radicanibusque. Cyma conferta ex 2-5 cincinnis 2-4 floratis con-

stans, pedicellis ca. 1mm longis. Sepala subadpressa subaequalia obovata obtusa 3mm longa. Corolla lutea prismatico-campanulata vix angulata 5-6mm longa. Typus: Meyrán 3462 (MEXU). Species ad *E. amoenae* L. de Smet et *E. microcalyci* Brit. et Rose proxima sed ab eis foliis latioribus cuspidatis, inflorescentia compacta, corolla brevior lutea, praesentiaque stolonum bene distincta.

Fig. 2 Rosette of *E. prolifica* with young apparently floral stems, 21 May 1975. X 1.0.



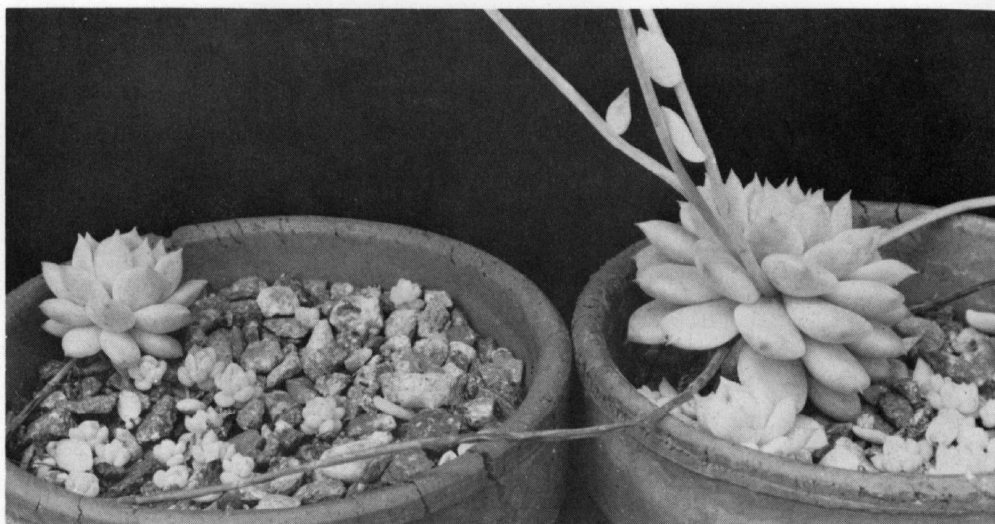


Fig. 3. Mother rosette of *E. prolifica* with daughter rosette still attached by stolon, 18 April 1976. Also note plantlets from fallen leaves. X 0.6.

Plant glabrous. Caudex short, simple or commonly stoloniferous, 4-7mm thick; stolons like floral stems, 15-22cm long, 1.5-2mm thick, with ca. 20-30 scattered leaves and a terminal rosette, rooting at several distal nodes. Mature rosettes dense, 4-8cm wide, of 20-40 leaves. Leaves light glaucous green, often pink-tipped, turgid, obovate-cuneate, obtuse to rounded, cuspidate, 2-4cm long, 10-16mm wide above, 3-5mm wide at base, 4-8mm thick, rounded dorsally, slightly keeled towards apex, convex ventrally, the margins obtuse to narrowly rounded. Floral stems February to June, weakly erect or becoming decumbent, pale glaucous green, becoming reddish, 15-25cm tall, 2-2.5mm thick below, slightly thinner above, with (10-) 20-30 leaves but mostly bare by anthesis. Stem leaves ascending and sub-ventrally attached, obovate-cuneate or the upper narrower and more elliptic, acuminate, 7-13mm long, 4-8mm wide, 2-3mm thick, biconvex with narrowly rounded margins, readily detached and rooting to form new plantlets. Inflorescence a compact cyme 2-3cm wide, of 5-18 flowers on 2-5 crowded cincinnal branches, each with (1-) 2-4 flowers; pedicels ca. 1mm long and thick. Calyx cup-shaped, 2-4mm long, 6-7mm wide, truncate to sub-umbilicate below, the disk 2.5-3mm wide, the segments upcurved, with tips ca. 0.5-1mm from corolla, somewhat unequal, oblong to obovate, obtuse, 2.5-3mm long, 1.5-2.5mm wide, 1-1.25mm thick above, ca. 0.5mm thick at base, biconvex with obtuse margins. Corolla in bud subglobose-obtuse, with petals imbricate, at anthesis yellow, greenish medially above, prismatic-campanulate but scarcely angled, with tips slightly outcurved, 5-6mm long,

4-5mm wide below and 5-7mm above. Petals ovate, broadly acute, somewhat apiculate, 2.5-3.5mm wide, connate ca. 1mm or less, flattish and low and obtusely keeled above, keeled to depth of nearly 2mm below, but thin and hollowed with indistinct nectar cavity, gibbous at base. Filaments yellow, ca. 4-5mm long from corolla base, the epipetalous adnate ca. 1mm, ca. 0.6mm wide, the antesealous ca. 0.5mm wide; anthers yellow, ca. 1mm long. Nectar glands yellowish, 1-1.5mm wide and 0.3-0.5mm high. Gynoecium 4.5-6mm high, 2-3mm thick, the ovaries nearly distinct, green, 3-4mm high, 1-1.5mm thick, obtusely keeled dorsally, the styles yellowish, distinct, slender, 1.5-2mm long or to 3mm in age. Ovules ca. 38, ca. 0.4mm long and 0.2 mm thick. Chromosomes:  $n=33$ .

**TYPE:** Bought at Venta Grande, Puebla, on the Mexico-Tuxpan highway SW of Huauchinango, México (near 20°10'N, 98°05'W), in 1969; said to have come from the cañada just to the north; grown in Mexico City and San Diego; *Meyrán 3462* (= *Moran 19133*): holotype, MEXU; isotypes, ENCB, SD, and to go.

**DISTRIBUTION:** Known only from the type collection and its teeming progeny.

From a plant of the type collection of *E. prolifica*, Dr. Charles H. Uhl reports a gametic chromosome number of  $n=33$ . He found meiosis regular.

Stolons and floral stems start among the rosette leaves and at first are indistinguishable. The stolons become identifiable as such when they persist and the mother rosette grows beyond their attachment to the caudex. Undoubtedly, they are modified floral stems. However, it is uncertain whether each stolon starts out to be a stolon, starts to be a floral stem but for some reason fails to flower, or just starts to be whatever it can.

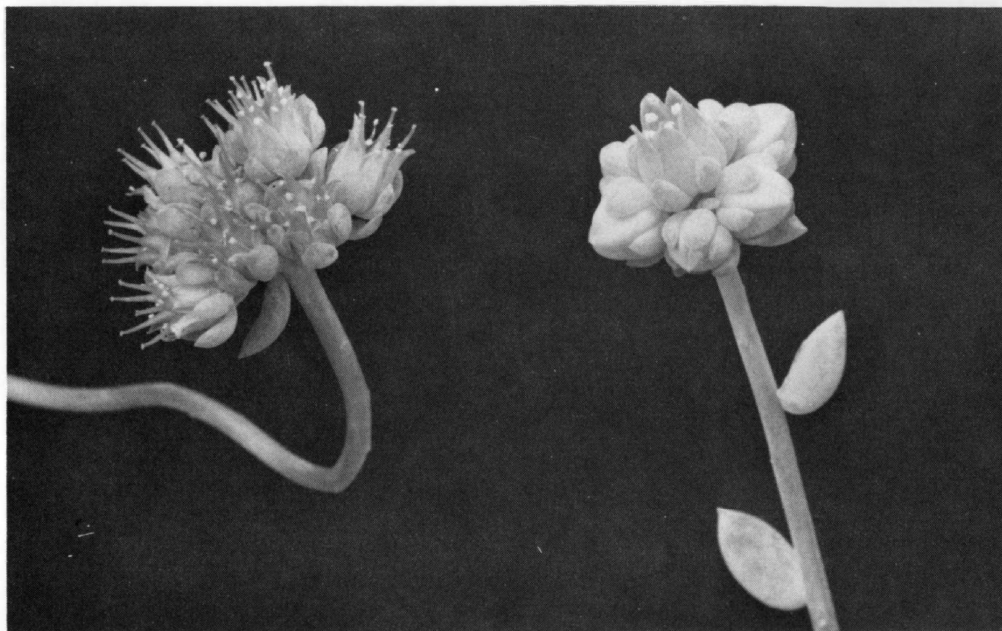


Fig. 4. Old and young inflorescences of *E. prolifica*, 18 April 1976. X 1.8.

*Echeveria prolifica* seems most closely related to *E. amoena* de Smet and *E. microcalyx* Britt. & Rose, both native in east central Mexico. These likewise are rather small plants with small flowers, and the cauline leaves are easily detached and will readily root and form new plants. Again the cymes are of a few cincinni, the sepals are short, blunt, and subappressed, and the corolla is scarcely angled. Also, Dr. Uhl found  $n=66$  in *E. amoena* and  $n=33$  in *E. microcalyx*. In view of these similarities, we place *E. prolifica* as a third species in the series *Paniculatae* Berger, for

which Walther (1959) named *E. amoena* lectotype.

*Echeveria amoena* and *E. microcalyx* evidently are very close, if indeed distinct. *Echeveria prolifica* differs from them in several respects: the plant is stoloniferous; rosette and stem leaves are relatively broader and more cuspidate; pedicels are much shorter and the inflorescence therefore compact; and the corolla is shorter and relatively broader and is bright yellow rather than deep pink.

#### REFERENCE

Walther, Eric. 1959. *Echeveria*: conspectus serierum. Leaflet. West. Bot. 9:1-4.

#### HERMAN JACOBSEN

1898 - 1978

The succulent world has lost one to whom we owe a great debt of gratitude with the death of Dr. Jacobsen on August 19th, in Kiel, Germany, at the age of 80. His major works, the indispensable three volume *Handbook of Succulent Plants* and the more recent *Succulent Lexicon* will remain monuments to his dedication as long as there is interest in succulent plants. We are proud that he was a fellow of the CSSA.