

Moss Rose, *Portulaca grandiflora*



Moss rose, *Portulaca grandiflora*, is a drought and heat tolerant annual native to hot, dry plains in Argentina, southern Brazil, and Uruguay. This herbaceous plant in the purslane family (Portulacaceae) is cultivated throughout the world as a garden annual for its showy flowers that bloom all summer long with little care. It is related to the weed purslane (*P. oleracea*), and like that plant has escaped to naturalize in some parts of the country on roadsides and in waste places. In the ornamental industry moss rose may be listed as *P. oleracea*, *P. umbraticola* or *P. grandiflora*, but many cultivars are likely hybrids.

Moss rose is a semi-succulent plant that stores water in its fleshy leaves and stems. The bright green leaves are oblong to cylindrical with pointed tips. They are up to an inch long and are arranged alternately or in small clusters along the reddish,

Moss rose, *Portulaca grandiflora*, is a heat tolerant annual.

multi-branched prostrate to slightly ascending stems. *P. oleracea* and hybrids with that species have flat leaves. The stems can be somewhat fragile and break easily (although broken pieces will root if the soil is moist enough). The low-growing plants form a mat up to a foot across and 3 to 8 inches high arising from the central fibrous root system.



Moss rose has fleshy, succulent leaves and stems.



A moss rose with flat leaves.

The saucer-shaped, rose-like flowers are produced on the stem tips, held facing up above the foliage, opening from buds that resemble little popcorn kernels. They are only open in bright sunlight, closing at night and on cloudy days, but most of the newer hybrids will remain open throughout the day. When open



The solitary flowers open from small buds (L) and may be single (C) or double (R).

the flowers can nearly hide the foliage. Flowers come in white and a wide range of warm colors, including pink, peach, yellow, orange, red, fuchsia, magenta, lavender and purple. Newer cultivars and hybrids offer a greater range

of shades than in the species, and some are striped or spotted with contrasting colors. Each flower has 5 paper thin petals, although semi-double and double types have been developed with multiple sets of petals. The petals surround a group of 40 or more stamens and 5 to 8 stigmas in the center. Depending on the variety, flowers can be 1-3 inches across.

After pollination, rounded 1/8-1/4 inch diameter seed capsules develop. When ripe, they split open, spilling numerous tiny, rounded to elongate, iridescent blue-grey seeds from the each capsule. Moss rose often reseeds. The seeds are edible raw or cooked (although it would be time consuming to collect enough to use as food!).



Use moss rose as a ground cover for hot areas.

Moss rose makes a good bedding plant in hot, dry areas where other plants struggle. It can be used as an edging plant along walkways, as an annual groundcover en masse, or interplanted in bulb beds to cover the ground after the bulb foliage dies back. It will grow in between rocks and flagstones (but does not tolerate any foot traffic), and looks nice draped over stones in a rock garden or in the cracks in a rock wall. It combines well in containers with other plants that also thrive in hot, sunny sites such as nasturtium and zinnia. The fine texture of moss rose contrasts well with the bold rounded leaves of nasturtium, while its short stature contrasts with all types of zinnias. In containers the brightly colored blossoms show up nicely when planted with ornamental sweet potato vine in either lime green or dark purple (but be aware that the vigorous growth of the sweet potato could easily overrun the smaller moss rose, especially when planted in the ground). Moss rose can also be used in hanging baskets as a

Seed capsules following the flowers are filled with tiny black seeds.

trailing plant hanging over the edge of the container.

Grow moss rose in full sun in most soil types as long as they are well-drained. It is a good choice for lean, sandy, gravelly or rocky areas. Grow from seed sown directly in the ground or started indoors 4-8 weeks before the average last frost for earlier bloom. Just barely cover the tiny seeds whether sown indoors or out. Mixing the tiny seeds with sand before sowing will make it easier to scatter them uniformly. Seeds should germinate in 1½-2 weeks. Because they are frost tender, wait until the soil is warmed and the danger of frost has passed to seed or transplant into the garden. Thin the seedlings to 3 inches or more apart. Established plants can also be propagated by cuttings. Although moss rose survives difficult conditions, plants will produce more lush growth and flowers when provided sufficient moisture and rich soils. Pinching or deadheading will promote greater flowering and reduce reseeding. Plants can be pruned or sheared in midseason if they begin to look straggly for a neater appearance and to promote fuller growth.



Plant moss rose in full sun.

Moss rose has few pest problems, although occasionally aphids or slugs can be a problem. Stem or root rots can be a problem in wet soils. This plant is not favored by deer in most places.

Seeds are offered as single varieties and in mixtures. Many types are available as bedding plants in garden centers and from other retailers in the spring. Some common varieties (although more are always being developed) include:

- 'Afternoon Delight' has 2 inch flowers that stay open longer in the afternoon than the species.
- 'Calpyso Mix' has bright double flowers in shades of yellow, red, pink, orange, purple and white.
- 'Duet' offers bicolor single flowers on compact, free-flowering plants.
- The 'Fairy Tale' series flowers have a pom-pom of petals in the center and flat outer petals in bright colors. Although listed as *P. grandiflora*, it has the flat leaves typical of *P. oleraceae*. The cultivars in this series have appropriate names, such as 'Cinderella' for the bicolor yellow and red one, 'Snow White' for the all-white version and 'Sleeping Beauty' for the yellow.
- The 'Happy Hour' series, bred for reduced photoperiod requirement (so it will bloom earlier), comes in 8 vivid colors with tropical names like banana, coconut, lemon, orange and rosita. The plant has a fuller habit than most moss roses and has large, double blooms.
- 'Margarita' is a series of compact, mounding, early-flowering plants with flowers in shades of red, pink, orange, white, yellow and purple.
- 'Mojave' series has large white, pink, red, tangerine, and yellow flowers.
- The 'Rio' series is mix of 6 separately patented cultivars with large, brightly colored flowers.
- 'Sundance' has semi-double flowers in four colors that remain open most of the day.
- The 'Sundial' series is early blooming, with double flowers that open in cooler and cloudier weather. The compact plants come in nine colors (which may be available separately rather than only in a mixture) including 'Fuchsia' with magenta-pink flowers, 'Peppermint' with hot pink-striped white flowers, and white, pink, peach, 'Mango' (orange), red and yellow.
- The Tequila™ series are hybrids with flowers in a mix of colors, such as the red which is red on the outside and yellow in the center. It has been shown to be slightly more tolerant of cool and moist conditions than other types, and is slightly less daylength sensitive than other varieties. It was replaced by the Happy Trails series in 2013, with additional colors which were not available in the Tequila series and a shorter minimum photoperiod (so will bloom earlier).
- The 'Yubi Summer Joy' series includes several colors of single blossoms that are nearly three inches across and remain open late in the day. Plants are more trailing and have broad leaves.



'Margarita Rosita'



'Sundance Yellow'



'Fairy Tales Cinderella'



'Sundial Peppermint'

– Susan Mahr, University of Wisconsin - Madison

Additional Information:

- *Portulaca grandiflora* – on the Missouri Botanic Garden's Kemper Center for Home Gardening website at www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a602/portulaca-grandiflora.aspx
- *Portulaca grandiflora* – on Floridata at www.floridata.com/Plants/Portulacaceae/Portulaca%20grandiflora/623
- Portulaca – a Cornell University Growing Guide at www.gardening.cornell.edu/homegardening/scene3552.html