

Hemerocallis 'Stella de Oro' (Liliaceae family)

“Daylily”



Native to China, Japan, Korea, and Eastern Siberia, daylilies are herbaceous perennials that are currently found all over the world. Their many beautiful colors, continual blooming, hardiness, and ease of growing make them popular plants for use in special gardens, mixed flower borders, commercial landscaping, mass plantings, containers, and as foundation plants. Daylilies were most likely introduced to the Mediterranean area from China around 1550 A.D. and were brought to the Americas sometime after (Munson 6).

Although Westerners do not think of them as food, daylilies have been used in China for centuries, where gardeners grow them as an edible cash crop. All parts of the plant are edible, including the tuberous roots, the crown, and the flowers (Lewis 47). In China the plants which grew wild in the woods were moved into the garden for use at the table, not unlike the way we grow and use herbs today (Munson 6).

'Stella de Oro', a hybrid, diploid daylily was introduced by Walter Jablonski in 1975. This scape of this miniature version measures 11 inches (27.9 cm) with flowers measuring 2 ¾ inches (7.0 cm). It begins blooming early mid-season and continues well into the fall months producing ruffled golden miniature flowers with a small green throat (Peat 37, 134).

Daylilies feature large clumps of arching, sword-shaped leaves with clusters of large, showy, lily-like flowers at the ends of generally leafless stems which stand well above the foliage (Sunset). The leaves and scapes arise from a mass of fleshy, tuberous roots. Some roots are thong-like while others are equipped with thickened segments utilized for the storage of water. Both types occur on the same plant and form a dense mass. The point at which the roots meet the base of the leaves is called a crown, which is a modified stem. At the base of each leaf is a bud that develops into next year's stem. Spaces along the stem between the leaf nodes are called internodes. In the daylily crown, all these structures are present in a very compact form. Nodes, internodes, and axillary buds are compressed. Leaf scars are evident in the form of thin rings encircling the stem where the leaves and roots meet. Above each scar is an axillary bud, which can develop into a new crown. As new

plants develop from the axillary buds, the plants increase in size and form clumps. These clumps can be divided and replanted (Eddison 34).

Additionally, daylilies reproduce from seeds. The female parts unite in a slender, translucent tube that sweeps forth, often extending beyond the rim of the fully opened blossom. This fine tube, called the pistil, is made up of three sections terminating in a three-chambered ovary containing immature ovules. If fertilized, these ovules become seeds. Surrounding the pistil are six stamens, which end in a tiny oblong anther sac full of pollen. The stamens are attached to the base of each flower segment and all six curve deferentially behind the pistil. Stamens joined to the sepals appear shorter than those associated with the petals. On a warm day, the flower bud flings wide its sepals and petals, which exposes the stamens and pistils. Almost immediately, the anthers split in half lengthwise, the outside edges roll back, and yellow pollen grains containing the male cells are available for a pollinator, possibly a bumblebee, to carry to another plant (Eddison 10).

Within minutes of touching the stigmatic projections, the pollen grain sends out a tiny, clear tube that enters one of the pistil's hollow tubes and heads to the ovule. As it nears the ovule the pollen tube explodes, ejecting the sperm cells, one of which unites with the egg. That evening, the flower collapses, and within a few days, drops to the ground (Eddison 11).

Two to three weeks later, the three-chambered ovary begins to look like a small green barrel with bulging staves. Within the staves, six or seven pairs of seeds, stacked in pairs, and growing. During the course of about three weeks, they will turn from white to glittering jet-black. When the seeds are ripe, cracks appear between the staves at the top of the barrel. As the cracks widen in the drying barrel over the next few days, the seeds spill out onto the ground, where if left alone they will eventually sprout (Eddison 11).

Daylilies are easy to hybridize. Simply pluck a pollen bearing stamen and brush the pollen-bearing anther across the sticky tip (the stigma) of the pistil. Minute projections on the stigma trap the pollen grains, and a drop of stigmatic fluid promotes germination (Eddison 10).

These tough perennials survive droughts and floods, and hot and cold climates, and are found in mountainous, coastal, and inland regions. They will grow in dry, well drained soil or wet, boggy conditions, and in shade or full sun. For optimum growth and the best flowers, however, daylilies should be planted away from the competition of the roots of large trees or shrubs in soil with good drainage and where they receive several hours of sunlight each day. They are undemanding regarding the soil and will tolerate anything from slightly acidic to alkaline conditions, however, a pH range of $6 < \text{pH} < 8$ will give good results (Grosvenor 9).

While in ancient times the Chinese used daylilies as an herbal to relieve physical and mental pain, and continue to use them as food today, in Western gardens the daylily brings pleasure with its exquisiteness, charm and beauty.

References:

1. Eddison, Sydney. A Passion for Daylilies, the Flowers and the People. New York, NY: Harper Collins Publishers. 1992.
2. Grosvenor, Graeme. Growing Daylilies. England: Kangaroo Press. 1986.
3. Hill, Lewis and Hill, Nancy. Daylilies, the Perfect Perennial. Powell, VT: Garden Way Publishing. 1991.
4. Munson Jr., R.W. Hemerocallis, the Daylily. Portland, OR: Timber Press. 1989.
5. Peat, John P. and Petit, Ted L. The Daylily, a Guide for Gardeners. Portland, OR: Timber Press, Inc. 2004.
6. Sunset Western Garden Book. Ed. Kathleen Norris Brenzel. Menlo Park, CA: Sunset Publishing. 2007.

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