



Alberto Grossi

# *Hymenocallis* and other spider lilies

WHEN MY *Hymenocallis littoralis* flowered for the first time I was so proud that I called a few friends to ask them to visit me. I told them to come in the evening as this is when its scent is greatest. As soon as they saw it they were astonished by the handsome foliage and intoxicating scent. 'But they look all alike!', one told me. I explained that every species of *Hymenocallis* differs in the length of the tepals, in the shape of the corona, and in its scent. But he was right; at first glance they are all alike.

One could say that they look like the sea lilies, *Pancratium*, of the Old World, and *H. littoralis* shares with *Pancratium maritimum* the same habitat of sandy shorelines. Indeed, Nicolai Josephi Jacquin in *Selectarum Stirpium Americanarum Historia* (1763) described this species for the first time as *P. littorale* and he mentioned that it thrived on the beaches of the Isla Tierra Bomba, Colombia, in the



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*Hymenocallis eucharidifolia* (top) and  
*Hymenocallis littoralis* (above)

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surveys a group of  
three related genera;  
*Hymenocallis*, *Ismene*  
and *Leptochiton*

Caribbean. In 1812, botanist Richard A Salisbury named a new genus *Hymenocallis*, noting a few differences between it and *Pancratium*: 'The fruit of this genus differs exceedingly from that of *Pancratium*, in having only two seeds in each cell, which swell to a considerable size, like bulbs, and I have named it *Hymenocallis*, from the beautiful membrane which connects the filaments.' He transferred *Pancratium littorale* and a few other species into the new genus.

#### Characteristics of the genera

*Hymenocallis* is part of the tribe *Hymenocallideae* in the *Amoryllidaceae*, along with the genera *Ismene* and *Leptochiton* (Meerow *et al.* 2002). Some authorities regard the latter two genera to be part of *Hymenocallis*. Most species have 'pancratioid' floral morphology: a large, fragrant, crateriform flower with a staminal cup, adapted for sphingid moth pollination.



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*Hymenocallis speciosa*, one of the tropical, evergreen species

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*Hymenocallis caribaea*, plants under this name are often *H.* 'Tropical Giant'

The three genera have bulbs that are roundish or oblong, covered in a tunic, and producing thick whitish roots. The bulb is up to 15cm across in larger species of *Hymenocallis* but smaller in *Ismene* and *Leptochiton*. Most produce offsets but a few species are rhizomatous. *Ismene* and *Leptochiton* are deciduous, but *Hymenocallis* from tropical habitats are evergreen whereas those from arid areas are deciduous. The leaves vary in number and length and are usually distichously arranged but *H. eucharidifolia* has a rosette arrangement. They range from 5-7mm wide, sessile, linear and glaucous in *H. graminifolia* to 15cm wide, petioled, lanceolate and bright green in *H. speciosa*. In *Ismene* the leaf base forms a pseudostem up to 50cm tall.

The flowers, one or more, are held on long stems emerging from the inner leaves. The stems are usually compressed, 2-edged and solid. They may be produced at the beginning of the growing season, along with the leaves, or later. The flowers have a greenish, funnel- or salver-shaped

tube bearing six elongated segments that are usually white, occasionally yellow or greenish. The basal part of the stamens is fused to form the corona or staminal cup that is funnel-shaped or rotate. The stamens are more or less straight but in *Ismene* they are incurved. The seeds are large, oblong and green.

A lot of species are fragrant, mainly in the evening or night to attract sphingid moths. The scent is sweet, like that of *Mirabilis jalapa*, or spicy. Each flower lasts one or two days.

### ***Hymenocallis***

*Hymenocallis* contains about 70 species, distributed across the southeastern United States, Mexico, Central America, the West Indies and northern South America. Mexico is home to the greatest number of species with a secondary area of diversity in the US. Only three species are endemic to South America (*H. littoralis*, *H. pedalis* and *H. tubiflora*). The species have been grouped into six alliances based on morphological characters by Traub (1962).

### **Speciosa alliance**

Only a handful of species belong to this alliance, they are tropical in origin with evergreen, petiolate, broad leaves. *Hymenocallis speciosa* and *H. tubiflora* are the most widely grown. The leaves are about 60cm long; in *H. speciosa* the blade is lanceolate, in *H. tubiflora* the petiole is very long and the blade is almost cordate. They flower in autumn or winter with me and need high temperatures (at least 15°C at night) and moisture all year long. The compost has to be rich with good drainage and they are best grown in shade. They offset freely.

### **Caribaea alliance**

The members of this alliance are tropical and subtropical species with evergreen, sessile, broad, oblong leaves. *Hymenocallis caribaea* is the most widely grown of this group, it flowers in summer and offsets freely. It is best grown in full or half sun, and kept moist when growing but a little drier in winter when a temperature above 15°C is required.

What is commonly sold or



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*Ismene longipetala*, a species that passes on its curling tepals to hybrid progeny

*Hymenocallis* 'Tropical Giant', an old, sterile cultivar

often grown in botanical gardens as *H. caribaea* is *H.* 'Tropical Giant', an old cultivar of possible hybrid origin. This cultivar has glossy, sword-shaped, arching leaves and in midsummer each stout stem bears 12 or more highly scented flowers. *Hymenocallis caribaea* is smaller in all its parts and has more erect, rigid leaves, also, the tepals are held in one plane whereas those of 'Tropical Giant' are more obviously borne in two planes. The cultivar does not normally set seed but I sometimes get a few set when I cross it with other *Hymenocallis* species. The luxurious foliage and vigour of 'Tropical Giant' makes it one of my favourites in the tropical landscape.

*Hymenocallis latifolia* is another favourite, often grown in the sandy beach gardens of the Gulf of Mexico. It is a large plant with erect, strap-shaped leaves and the small cupped flowers are vanilla-scented and open at the beginning of the summer.

#### Littoralis alliance

*Hymenocallis littoralis* has evergreen, linear, leathery leaves and it flowers

in mid summer. It needs a very wet sandy compost and warmth all year round to grow well.

*Hymenocallis acutifolia* is similar but is more tolerant of dry periods as it is found on river banks that are dry for part of the year. *Hymenocallis riparia* is deciduous.

#### Caroliniana alliance

The species of this alliance are distributed throughout the southeastern United States, usually in seasonally inundated habitats. They are deciduous and the leaves are linear, linear-lorate or ensiform and shortly narrowed to the obtuse apex. Flowering in spring and summer, none are common in cultivation but those most likely to be encountered are *H. caroliniana*, *H. coronaria*, *H. galvestonensis* and *H. rotata*. They need warm, wet conditions during the growing season with a little moisture when dormant.

#### Henryae alliance

*Hymenocallis henryae* is known from scattered localities in Florida. Each

stem bears two, rarely three, flowers with pale green tepals and a white corona. *Hymenocallis palmeri* is similar but has one single-flowered scape.

#### Mexicana alliance

Species in this alliance are native to Mexico. They are deciduous with broadly elliptic or elliptic-lorate leaves. They can cope with a very dry rest period and begin to grow and flower with the late spring rains.

The commonest in cultivation is *H. harrisiana* which has a flower stem of about 25–30cm normally bearing four flowers. It is hardy to USDA Zone 7 if kept dry during the rest period. Distinguished by its rosette-like leaf arrangement, *H. eucharidifolia*, first introduced in 1884, has been reintroduced in the last decade.

#### Leptochiton

This genus has only two species, *L. belianthus* and *L.quitoensis*, and is native to southwest Ecuador and northwest Peru at low elevations. It shares with *Hymenocallis* the absence of a pseudostem but it differs in



having black rather than green seeds. The flowers are yellow in *L. helianthus* and white in *L. quitoensis*. Both are rare in cultivation.

### **Ismene**

This genus is characterised by the presence of a pseudostem, consisting of leaf bases forming a sheathing neck. From this emerges a flattened stalk bearing several flowers. All species are deciduous and the genus has been split into three subgenera.

#### **Subgenus *Ismene***

Native to the central Andes of South America, the 5–7 species have white or yellow, actinomorphic, fragrant, ‘pancratioid’ flowers.

*Ismene narcissiflora* comes from rocky places in Peru at about 2,500m. The leaves are erect, 50–60 cm long and 5cm wide. The green tube bears white tepals and the staminal cup is striped green and about 5cm in diameter. *Ismene amancaes* is smaller with yellow, scented flowers.

In 1821 bulb specialist William Herbert made a cross between *I. amancaes* (seed parent) and *I. narcissiflora*, subsequently named *I. x spofforthiae* after his estate in England. The hybrid inherited the colour of the former and the vigour and the ease of care of the latter. Van Tubergen of the Dutch bulb company repeated the same cross in the 20th century and called the clone ‘Sulphur Queen’. In the 1960s, hybridiser Len Woelfle named a series of cultivars from the same cross, giving them Greek names: ‘Icon’, ‘Helios’ and ‘Pax’, the latter being the finest with bicoloured flowers of white with yellow tinges.

All require a very light sandy soil, particularly sandy for *I. amancaes*. Usually they begin their growth in late spring, at which point they need to be watered and fertilised. *Ismene amancaes* in particular should only be

rewatered after the medium has completely dried up. In autumn, after the leaves have yellowed and shrivelled, they need to experience an absolutely dry winter.

When grown in a container, three bulbs in a 20cm pot is ideal. If lifted from a border before winter you should avoid damaging the large roots and store them in sand in a cool place.

Another interesting hybrid, but rare in cultivation, is *Hymenocallis* x *Ismene* ‘Daphne’ (*H. speciosa* x *I. narcissiflora*), raised by Van Tubergen nurseries before 1900. It combines the large corona of *Ismene* with the elegant scented flowers of *H. speciosa*. It is evergreen but the foliage is more like that of *I. narcissiflora* with long narrow leaves and a constriction at the base as in *H. speciosa*. It is a tender cultivar and needs subtropical conditions.

#### **Subgenus *Elisena***

In this subgenus the flowers are zygomorphic and not fragrant. The 2–4 species come from mid to high elevations in Peru and Ecuador.

In *I. longipetala* the flowering stem

exceeds the long leaves which are 90 x 3–5cm. The flowers are semi-transparent, white, with a long funnelliform perianth, greenish at the base. The narrow curly tepals are about 10cm long and the corona is about 3cm in diameter. This species has been involved in a lot of hybrids. *Ismene x festalis* (*I. calathina* x *I. longipetala*) was first created by the English bulb fancier Arthington Worsley. *Ismene* ‘Advance’ is a hybrid between *I. x festalis* and *I. narcissiflora*. *Ismene* ‘Zwanenburg’ is a vigorous selection of *I. x festalis*. *Ismene* ‘Ballerina’ and *Ismene* ‘Dancing Dolls’ were raised by Len Woelfle by crossing *I. amancaes* and *I. longipetala*. These hybrids inherit the curling petals of *I. longipetala* and, depending on the parent, either the scent of *I. narcissiflora* or the yellow tinges of *I. amancaes*. They need the same cultural care as *I. narcissiflora*.

#### **Subgenus *Pseudostenomesson***

The 2 species of this subgenus, *I. morrisonii* and *I. vargasii*, are endemic to Peru from elevations of around 3,000 m. They have funnelliform-tubular, actinomorphic, ▶



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*Ismene x festalis*, noted for its large corona



Photos: Horticultural / Photostock

*Ismene x spofforthiae* ‘Sulphur Queen’



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The green seeds of *Hymenocallis speciosa* are typical of the genus

unscented, pendulous flowers. They are not common in cultivation.

### Cultivation

Compost for growing spider lilies needs to be well-drained. I use equal parts sand, grit and rich loam. Species of the Caroliniana and Henryae alliances need an acid soil. I prefer clay pots, as it is easier to dry them out if you overwater, but plastic pots will work for experienced growers.

Deciduous species begin to sprout late in the spring: wait until the leaves emerge before watering. Evergreen species have to be kept moist and warm all year around, only reducing watering in winter when they have a rest period. The evergreen and water-loving species may be grown during summer with the pots sitting in a saucer of water. I grow *H. littoralis* with the pots completely immersed in water in summer. For the deciduous species I let the soil dry out a bit before watering again. I feed them every fortnight with a fertiliser rich in potassium.

*Ismene* are harder than *Hymenocallis*

and can tolerate a little frost if kept dry. In summer *Ismene* should not be allowed to get too hot, otherwise the bulbs split into smaller bulbs which inhibits flowering. When grown in containers they need to be frost-free.

The tropical species of *Hymenocallis* (*Speciosa* and *Caribaea* alliances) require warmth all year round with a minimum of 15°C in winter by night. Members of the *Littoralis* alliance, although evergreen, can winter at a lower temperature, while deciduous species of the other alliances can stand in their pots at 5–8°C in winter, if completely dry. All species need full sun, other than those of the *Speciosa* and *Caribaea* alliances and *H. eucharidifolia*, that prefer a shaded but bright position.

### Propagation

Multiplying spider lilies from offsets or seed is easy. Bulb offsets can be detached from the mother-bulb when dormant and potted on.

For all species, growing from seed is a good way to produce new plants. Each capsule may contain one or

more seeds that ripen two to three weeks after pollination. They vary in shape and size according to the species, anything from 1–3.5 cm in length and they can be ovoid or globular, and pale yellow-green to dull blue-green. They may germinate when still attached to the mother plant. I have just received seeds of *H. cleo* and I have noticed that about half have two germination points, with two white radicles. Polyembryony appears to be a frequent phenomenon with *Hymenocallis* (Newton 1985).

Fresh seed should be sown in a sandy compost and half-covered with grit. Keep them moist and germination will usually happen in a few weeks, although occasionally I have had seeds germinating the following year. After the radicle has extended 2–3 cm it swells to form a little bulb from which roots and leaves develop. In the deciduous species, withering of the leaves indicates that the new bulbs are going to rest. Then they can be treated as mature bulbs.

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