

= Schlumbergera =

Schlumbergera is a small genus of cacti with six species found in the coastal mountains of south-eastern Brazil . Plants grow on trees or rocks in habitats that are generally shady with high humidity , and can be quite different in appearance from their desert dwelling cousins . Most species of Schlumbergera have stems which resemble leaf-like pads joined one to the other and flowers which appear from areoles at the joints and tips of the stems . Two species have cylindrical stems more similar to other cacti . In Brazil , the genus is referred to as Flor de Maio (May flower) , reflecting the period in which they flower in the Southern Hemisphere .

This genus contains the popular house plants known by a variety of names including Christmas Cactus , Thanksgiving Cactus , Crab Cactus and Holiday Cactus , which are Schlumbergera cultivars , and flower in white , pink , yellow , orange , red or purple . (The Easter Cactus or Whitsun Cactus , which may also be called a Holiday Cactus and has vivid scarlet flowers in the most commonly grown form , is now placed in the genus Hatiora .) The cultivars of Schlumbergera fall into two main groups :

The Truncata Group contains all cultivars with features derived mainly from the species *S. truncata* : stem segments with pointed teeth ; flowers held more or less horizontally , usually above the horizontal , whose upper side is differently shaped from the lower side (zygomorphic) ; and pollen which is yellow . They generally flower earlier than members of the Buckleyi Group and although common names are not applied consistently may be distinguished as Thanksgiving Cactus , Crab Cactus or Claw Cactus .

The Buckleyi Group contains all cultivars with at least some features clearly showing inheritance from *S. russelliana* : stem segments with rounded , more symmetrical teeth ; more or less symmetrical (regular) flowers which hang down , below the horizontal ; and pollen which is pink . They generally flower later than members of the Truncata Group and are more likely to be called Christmas Cactus .

= = Etymology = =

Botanist Charles Lemaire (1801 - 1871) gave the name Schlumbergera to this genus in 1858 , honouring Frédéric Schlumberger (1823 - 1893) , French cactus and other succulent plant collector .

= = Description = =

In the wild , the species of Schlumbergera grow either on trees (epiphytic) or on rocks (epilithic) and can form sizeable shrubs with woody bases ; a height of up to 1 - 2 m (4 ft) has been reported for one species (*S. opuntioides*) . They are leafless , the green stems acting as photosynthetic organs . The stems are composed of segments , which take one of two forms . In most species the segments are strongly flattened (cladodes) , being made up of a central core with two (or more rarely three) " wings " . Special structures characteristic of cacti , called " areoles " , then occur at the ends of the segments of the stem . In two species the stems are less flattened , more cylinder-shaped , and the areoles are arranged in a more or less spiral pattern all over the segments . In both cases , the areoles , which may have wool and bristles , are where the flower buds appear .

The flowers either hang downwards and are almost regular (radially symmetrical or actinomorphic) or , as in most species , are held more or less horizontally with the higher side of the flower different from the lower side (radially asymmetrical or zygomorphic) . In those species whose flowers are held up , their angle with the horizontal is relatively constant and is characteristic of the species . Each flower has 20 - 30 tepals . The outer tepals - those closer to the base of the flower - are short and unconnected , and spread out or curve backwards . The inner tepals - those towards the tip of the flower - are longer and become progressively more fused together at the base to form a floral tube . In some species the difference between the outer and inner tepals creates the appearance of

a " flower within a flower " . The flowers produce nectar in a chamber at the base of the floral tube . The many stamens are arranged in two series , which is a distinctive characteristic of the genus . The inner stamens are fused at the base to form a short tubular structure . The outer stamens arise from along the floral tube . The style is usually dark red and has a stigma with 6 ? 8 lobes ; the style plus stigma is roughly the same length as the stamens . If the flower is fertilized , a fleshy fruit forms , either smooth or with ribs . The brown or black seeds are about 1 mm in diameter .

= = Taxonomy = =

The genus is one of a small number belonging to a group of cacti classified as the tribe Rhipsalideae . Species of cacti belonging to this group are quite distinct in appearance and habit from most other cacti since they grow on trees or rocks as epiphytes or lithophytes . Although the species are easy to identify as members of the Rhipsalideae , for many years there was confusion as to how they should be divided into genera . This confusion extended to *Schlumbergera* , whose complicated taxonomic history has been detailed by McMillan and Horobin . The modern genus *Schlumbergera* was created by Charles Lemaire in 1858 . The name commemorates Frédéric Schlumberger , who had a collection of cacti at his chateau near Rouen . Lemaire placed only one species in his new genus ? a plant discovered in Brazil in 1837 which had been named *Epiphyllum russellianum* by William J. Hooker . Lemaire renamed it *Schlumbergera epiphyllodes* (under the current rules of botanical nomenclature it should have been called *Schlumbergera russelliana* , which is its current name) .

Lemaire noted the similarity of his *Schlumbergera epiphyllodes* to a species first described as *Epiphyllum truncatum* by Adrian Hardy Haworth in 1819 , but did not accept that the two species should be included in the same genus . In 1890 , Karl Moritz Schumann created the new genus *Zygocactus* , transferring *Epiphyllum truncatum* to *Zygocactus truncatus* . Although he later placed it back in *Epiphyllum* , abandoning *Zygocactus* , the generic name *Zygocactus* continued to be widely used .

In 1913 , Nathaniel Britton and Joseph Rose followed Lemaire in keeping *Schlumbergera russelliana* and *Zygocactus truncatus* in separate genera . (They also transferred the Easter Cactus ? now *Hatiora gaertneri* ? to *Schlumbergera* as *S. gaertneri* , initiating a lasting confusion between these two genera .)

In 1953 , Reid Venable Moran placed both *Schlumbergera russelliana* and *Zygocactus truncatus* in the genus *Schlumbergera* . Other species were added later by David Hunt , including those formerly placed in *Epiphyllanthus* , to form the modern total of six full species and a number of hybrids .

= = = Synonymy = = =

The following genera are now synonyms of *Schlumbergera* (i.e. they have no species not moved into *Schlumbergera*) :

Epiphyllanthus A.Berger

Opuntiosis Knebel (nom. inval .)

Zygocactus K.Schum.

Zygocereus Fri? & Kreuz . (orth. var .)

Epiphyllum Pfeiff. but not *Epiphyllum* Haw .

The case of *Epiphyllum* is complex . In 1753 Carl Linnaeus created the genus *Cactus* . As more species were discovered this proved too broad , and new genera were set up to subdivide the cacti . The genus *Epiphyllum* was created in 1812 by Haworth , based on Linnaeus 's *Cactus phyllanthus* . In 1831 Johann Link created the genus *Phyllocactus* based on the same species . Following Ludwig Pfeiffer in 1837 , the European tradition was to use *Phyllocactus* for epiphytic cacti with large regular flowers and *Epiphyllum* for the irregular @-@ flowered species now called *Schlumbergera truncata* . Under modern rules , *Phyllocactus* is an illegitimate name , as is *Epiphyllum* in the sense of Pfeiffer ; thus *Epiphyllum* Pfeiff. is a synonym of *Schlumbergera* . The true genus *Epiphyllum* Haw. now has around 19 species .

= = = Species = = =

Six species are currently recognized . Only synonyms which have been widely used (and their basionyms) are given in the list below .

Schlumbergera kautskyi (Horobin & McMillan) N.P.Taylor

syn . *S. truncata* subsp. *kautskyi* Horobin & McMillan

Schlumbergera microsphaerica (K.Schum.) Hoevel

syn . *Cereus microsphaerica* K.Schum. , *Epiphyllanthus microsphaericus* (K.Schum.) Britton & Rose , *Cereus obtusangulus* K.Schum. , *Epiphyllanthus obtusangulus* (K.Schum.) A.Berger , *Zygocactus obtusangulus* (K.Schum.) Loefgr . , *S. obtusangula* (K.Schum.) D.R.Hunt

Schlumbergera opuntioides (Loefgr . & Dusén) D.R.Hunt

syn . *Epiphyllum opuntioides* Loefgr . & Dusén , *Zygocactus opuntioides* (Loefgr . & Dusén) Loefgr . , *Epiphyllanthus opuntioides* (Loefgr . & Dusén) Moran

Schlumbergera orssichiana Barthlott & McMillan

Schlumbergera russelliana (Hook .) Britton & Rose

syn . *Epiphyllum russellianum* Hook . , *S. epiphyllloides* Lemaire , nom. illeg .

Schlumbergera truncata (Haw .) Moran

syn . *Epiphyllum truncatum* Haw . , *Zygocactus truncatus* (Haw .) K.Schum. , nom. illeg .

Four hybrids have been named , all made in cultivation (although the first may possibly occur in the wild) . The International Code of Nomenclature for Cultivated Plants recommends that cultivated plants should be named under its rules , not those appropriate for natural species and hybrids . The Group names given below were provided by McMillan and Horobin .