

# Plant of the Week

## Crab Cactus

In Australia, the plant which we have called *Zygocactus* for aeons, is actually a *Schlumbergera*, a genus of epiphytic cacti from the rainforests of **Brazil**. In the northern hemisphere, it is often referred to as “Christmas Cactus” or “Thanksgiving Cactus” because the flowers appear prior to these holiday seasons. Botanist Allan Cunningham introduced *Schlumbergera* to Europe in about 1816<sup>1</sup> and it has been popular ever since. The name “Crab Cactus” comes from the unique “crab claw” sections of the stem. *Schlumbergera* belongs to the plant family Cactaceae which is found throughout the Americas and reaches its greatest diversity in northern Mexico and southern Argentina and Bolivia. There is only one cactus species found elsewhere in the world, and this is *Rhipsalis baccifera*, which occurs not only in the Americas but also in Africa, Madagascar and Sri Lanka where it was probably spread by migratory birds<sup>2</sup>.



Most cacti grow in arid conditions. During the day their stomates remain closed to reduce water loss and then open at night when CO<sub>2</sub> is fixed and stored in leaves or stems as malic acid. The next day CO<sub>2</sub> is released round the enzyme RuBisCo to increase photosynthetic efficiency. This photosynthetic pathway is known as **CAM photosynthesis**. CAM stands for “**Crassulacean acid metabolism**”, a reference to the plant family **Crassulaceae** in which the pathway was first identified, and because the CO<sub>2</sub> is stored overnight as an acid<sup>3</sup>.

<sup>1</sup>Wikipedia: <http://en.wikipedia.org/wiki/Schlumbergera>

<sup>2</sup>Wikipedia: <http://en.wikipedia.org/wiki/Cactaceae>

<sup>3</sup>Wikipedia: [http://en.wikipedia.org/wiki/CAM\\_photosynthesis](http://en.wikipedia.org/wiki/CAM_photosynthesis)



**Text and photographs: Alison Downing & Kevin Downing, Biological Sciences, 12 June 2011.**

