Desmidorchis survives as a conserved name

Fig. 1 ***Desmidorchis retrospiciens*** **in Somalia (Photo: Al Laius)**

Desmidorchis as a genus of stapeliads (family Apocynaceae) has had a very chequered history. The taxonomic and nomenclatural issues involved are complex and merely outlined here, but the full story can be gleaned from the references given below. The genus was first proposed and very briefly circumscribed by Christian Gottfried Ehrenberg in 1829 for a species he first collected on Dahlak Island in the Red Sea. The name *Desmidorchis* refers to the clumped packets of pollen (pollinia) enclosed in groups of 'membraneous bags', similar to those of orchids, which Ehrenberg believed to be a distinguishing feature. However, as we now know, all stapeliads have their pollen packaged in such structures. The species name *Desmidorchis retrospiciens* Ehrenberg appeared later in 1831, and also in 1900 in a posthumous publication that included illustrations. Effective valid publication of both the genus and species has been accepted by some workers but dismissed as being invalid by others. Along the way it was renamed *Desmidorchis acutangula* Decaisne and confused with the Arabian species *D. quadrangula* (Forsskål) Gilbert & Raynal.

The genus has generally been considered to be a synonym of a broader *Caralluma*. However, Gilbert (1990) resurrected the name as *Caralluma* subgenus *Desmidorchis* with *D. quadrangula* as the type species. In contrast, Plowes (1995) split *Caralluma* into 17 genera including *Desmidorchis* with *D. retrospiciens* as the type, discussed later in great detail (Plowes, 1996). This resulted in two conflicting concepts of *Desmidorchis* with different types, so a resolution of this dispute was required.

The Nomenclature Committee is the recognised arbiter of such disputes to which Mottram (2009) proposed conservation of the name *Desmidorchis* Ehrenberg with *D. retrospiciens* as the conserved type. Bizarrely, it has taken until last year (Wilson, 2021) for this committee to come to a final decision on this matter. They do, however, admit in their defence that this was a "complicated proposal", but concluded that "the name and type are conserved". They say that the committee "considers that the name of the conserved type, *D. retrospiciens* Ehrenb., was validly published in Ehrenberg's paper on the pollinia of Asclepiadaceae (1831). Some people had disputed the adequacy of that as a protologue [first description], but the descriptive text is considered adequate". After nearly 200 years let us hope that this decision is final.

Fig. 2 Close-up of the inflorescence of ***D. retrospiciens*** **in Somalia (Photo: Al Laius)**

Now, therefore, in the narrow sense, *Desmidorchis* as a genus consists of around a dozen species with a wide distribution from tropical East Africa north to southern Arabia including Socotra and

across the Sahel region from Mauritania to Ethiopia and Somalia. *Desmidorchis retrospiciens* typifies the genus. This is one of the mightiest of the stapeliads forming shrubs up to 1.5m tall and 80cm across (Fig. 1). Plants are robust, erect, strongly 4-angled and moderately branched. The name *retrospiciens* in Latin means 'looking back', referring to the downward-pointing stem teeth. Its flowers are arranged into a dense ball-like inflorescence (umbel) up to 12cm across with up to 100 black-purple flowers all open more or less simultaneously (Fig. 2). The flowers are very foul-smelling, but in contrast a few species of *Desmidorchis* have sweet-smelling flowers.

None of the species of *Desmidorchis* are common in cultivation and appear to be tricky to grow and maintain for any length of time.

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Comments on *Kalanchoe* etymology

I loved the article 'The etymology of the generic name *Kalanchoe*' in the last issue, *CactusWorld* (2022) **40**(1): 23–25. However, I believe there is more to the story.

The first matter concerns the identity of the species that was seen by Kamel in Luzon in the Philippines. The species suggested by Smith et al (2019) was *Kalanchoe laciniata*. However, that species is only native to parts of Africa and Arabia. A more apt identification would be *Kalanchoe ceratophylla,* which is native to China; found in Fujian, Guangdong, Guangxi and Yunnan as well as Taiwan, Assam, Bangladesh and south-east Asia. The Flora of China online (2008) insists that reports of *Kalanchoe laciniata* from China were mistaken identifications of *Kalanchoe ceratophylla.* There was always much confusion between the two species (Wickens, 1982) since their first descriptions, despite the geographic separation of the two species by at least 4,000km.

Though Kamel reported it from Luzon, the most northerly large island of the Philippines, he wrote "*Sinarum Kalanchauhuy*", which can mean either "China's Kalanchauhuy" or "Chinese Kalanchauhuy". Luzon is 650km from the coast of Guangdong at its nearest to the mainland of China and 360km from Taiwan. The Flora of China online comments that *Kalanchoe ceratophylla* is grown as an ornamental and used in medicine. This species is the only one they name 伽蓝菜 (jiā lán cài) without qualification. This species also agrees with the descriptions and drawings of Kamel and Rumphius.

The second matter concerns the meaning of the name *Kalanchauhuy*. Boiteau & Allorge-Boiteau (1995) have the translation as "Qui tombe et qui pousse", provided by Christiane Kan of the Institut de Chimie des Substances Naturelles near Paris. The meaning "That which falls and which sprouts" seems very appropriate. Unfortunately, the authors give only the translation and neglect to mention what that phrase is in Chinese script or transcribed in the Roman alphabet. None of the species of *Kalanchoe* native to China have the famous little plantlets that fall from the edges of the leaves to propagate new plants.

Neither do those authors mention the Chinese languages Cantonese and Hokkien, which are written with the same script as Mandarin but spoken quite differently. Cantonese is used in Fujian, Guangdong, Guangxi and Taiwan. We are all familiar with the Cantonese names for certain Chinese *Brassica* cultivars, perhaps the most famous being pak choi. The last part is the same as the last part of the Kalanchoe name, 菜 *cài* in Mandarin but *choi* in Cantonese. The word simply means 'vegetable'. The first part 伽蓝 is given as *jiā lán* in pinyin by the Flora of China. A better form is probably *qié lán* as *jiā* is usually used only to translate foreign words like gamma ray. 伽蓝 as *qiélán* means 'Buddhist temple''. In Cantonese, this is *gaa*1 *laam*4 *coi*3 using the Jyutping transcription scheme or *gā làahm choi* in the Yale Romanisation.

Buddhist temples in China were often tall narrow pagodas with many eaves. I feel that the comparison with the fat, tapering stalk of *Kalanchoe ceratophylla* with its many horizontal leaf-scars is obvious.

There is a more mundane possibility if the Flora of China have recorded a modern version of the name of the plant rather than one handed down from the 18th century. There is a type of *Brassica* used as a vegetable called kailan, gailan or Chinese broccoli in English. The main language of the Chinese people in the Philippines is Hokkien, from parts of Fujian, Guangdong and Taiwan. In Hokkien, this vegetable is called *kai*1*lan*3 *chye*3. Apart from the undivided leaves, the *Brassica* has a similar look to *Kalanchoe*, having possibly bluish leaves, a thick, succulent stem, a dense tuft of leaves at the top of the stalk and four-petalled flowers. The literal translation of *kailanchye* can be either 'mustard blue vegetable' 芥蓝菜 or 'mustard orchid vegetable' 芥蘭菜. Unlike the delicious vegetable, *Kalanchoe* is probably poisonous, unfortunately. Perhaps one Chinese resident of Luzon was kidding the Jesuit missionary.

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