

Aloe jucunda Reynolds – a highly localised, critically endangered Somali endemic

Colin C. Walker (c.walker702@btinternet.com)

Introduction

Aloe jucunda is a popular species and now commonly cultivated. This is mainly due to its small size (although in time it can grow into a large clump), ease of propagation from offsets which are readily produced and its free-flowering habit. Its closest relative may possibly be *Aloe somaliensis*; both are endemic to Somalia with *A. jucunda* being very localised and critically endangered. *Aloe jucunda* has also been popular as a parent in many hybrids. All these aspects are discussed below.

History, Distribution, Habitat and Conservation Status

Aloe jucunda was described by Reynolds (1953) using the Latin '*jucundus*' meaning 'pleasant or nice'. He recorded that "This charming and very distinctive little Aloe was collected by Mr. P.R.O. Bally, botanist at the Coryndon Museum, Nairobi, on 2nd May 1949, at Gaan Libah, Somaliland Protectorate. This locality is at the western end of the Golis Range about five miles east of Mandera (which is on the Berbera–Hargeisa road), and about 25 miles west of Upper Sheik (on the Berbera–Burau road). Mr. Bally found numbers of plants forming large clumps, 1–2 ft. across, commonly hidden in bushes in open places on the upper edge of a dry, windswept escarpment, flowering on 2nd May 1949".

Carter *et al.* (1984) later reported that "it has been collected from only [this] one small area... where it was found still to exist in 1981 among rock crevices and in the shelter of bushes of *Buxus hildebrandtii*, despite fears that it might have become extinct due to overgrazing by goats and camels. Recent searches revealed its presence also on the ledge forming the Mirsa Plateau below the Gaan Libah escarpment, where Bally had discovered it. Instead of the usual diploid number of $2n = 14$ chromosomes, the plant brought by Bally from this locality (*Bally* 11741) into cultivation at Kew proved to be a triploid... with $2n = 21$ chromosomes, a very rare occurrence in the wild. A few of the plants

recently found at the same locality also proved to be triploid".

From a conservation perspective, *A. jucunda* has been assessed for *The IUCN Red List of Threatened Species* (Weber, 2013) and is listed as 'Critically Endangered' under criteria B1ab(iii). The habitat of *A. jucunda* is recorded as showing signs of degradation as early as 1981. The principal impacts accounting for the decline are recorded as "intensive grazing by livestock, wood-cutting and charcoal burning" (Carter *et al.* 2011).

Aloe jucunda in cultivation

My plant from the type collection, *Bally* 7157, from Gaan Libah, Somalia, is relatively slow-growing. Individual rosettes are up to 10 cm diameter (fig 1), but in other clones rosettes are often significantly smaller than this. It branches freely from the base and in time large clumps can be produced. Indeed, some exceptionally large specimens with dozens of heads have been exhibited at NCSS or BCSS national shows in the past. Leaves are spreading to recurved, broadly ovate-acuminate, bright glossy green with numerous white oval spots on both surfaces and are armed with prominent, horny, reddish-brown sharp teeth on the margins. The inflorescence (fig 2) is short and always unbranched up to 35 cm tall with a raceme up to 13 cm tall. Flowers (fig 3) are small, laxly arranged, up to 25 mm long, pale peachy pink at the base, fading to cream at the perianth tips with prominent pale brown



Fig 1. Rosette of *A. jucunda* ca. 9 cm in diameter.

stripes. Overall this is a very handsome *Aloe* indeed, well deserving of its popularity.

Relationships

Reynolds (1953) compared his new species to the Ethiopian *Aloe mcloughlinii* Christian, but also noted “a slight resemblance” to the South African *Haworthia tessellata* Haworth (now *Haworthiopsis tessellata* (Haworth)



Fig 2. *Aloe jucunda* flowering in a 10 cm diameter pot (the type collection Bally 7157).

Boatwright & J.C. Manning), a very remote relationship indeed. Later Reynolds (1966) included *A. jucunda* in his Group 4 of tropical African aloes, characterised as small stemless plants (apart from *A. jacksonii* Reynolds which has well-branched stems) with \pm striped flowers which included 8 species. Of these, *A. jacksonii* is no longer considered to be a close relative of *A. jucunda* (Walker, 2017).

However, more recent work has shown that *A. jucunda* belongs to a small group of just four species endemic to Somalia including *Aloe somaliensis* W. Watson, *A. hemmingii* Reynolds & Bally and *A. peckii* Bally & Verdoorn. This group of species was studied by Carter *et al.* (1984) using a multidisciplinary approach involving anatomy, biochemistry, cytology (the study of chromosomes) and morphology. The study

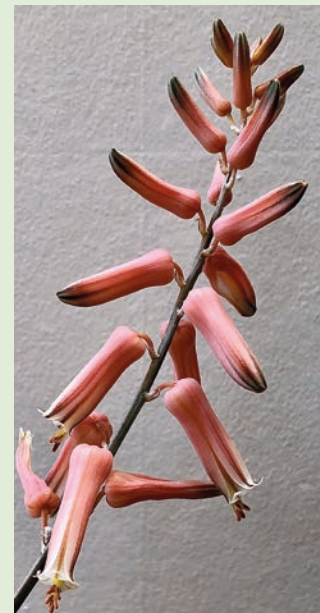


Fig 3. Close up of the inflorescence of *A. jucunda*.

concluded that “A morphological distinct species, which nevertheless shows extremely close anatomical, biochemical and genetical affinities with *A. somaliensis*, is *A. jucunda*... The main, very obvious difference between diploid *A. jucunda* plants and densely spotted forms of *A. somaliensis* is one of size, with rosettes of the former not more than 10 cm in diameter and usually much less. They sucker freely to form dense clumps and the inflorescence is unbranched. Triploid individuals of *A. jucunda*, however, exhibit characters indistinguishable from smaller, spotted plants of *A. somaliensis*, with leaves of the same size and with taller branched inflorescences”.

However, the latest molecular family tree for aloes (Grace *et al.*, 2015) tells a different, conflicting story. In this, *A. jucunda* is not closely associated with *A. somaliensis*, but instead belongs to a branch which includes the following Ethiopian/Somalian species: *Aloe debrana* Christian, *A. retrospecticiens* Reynolds & P.R.O. Bally and *A. trichosantha* A. Berger, none of which are especially closely related to *A. jucunda* from a morphological perspective. *Aloe retrospecticiens* in particular would not seem to be a close ally of the stemless *A. jucunda* since it is a small shrub with branching stems up to 1.25 m tall. This highlights that we are a long way from a proper understanding of the relationships and evolutionary history within *Aloe*.

As an aside, *A. hemmingii* was reduced to synonymy under *A. somaliensis* as another conclusion in the study by Carter *et al.* (1984). However, more recent re-assessments by Lavranos (1995), Carter *et al.* (2011) and Newton (2020) have reinstated *A. hemmingii* as a distinct species.

Hybrids

Aloe jucunda, because of its many desirable characteristics outlined above, has been used many times as a parent in the production of novel dwarf *Aloe* hybrids. Jonkers (2014) listed 14 such crosses and named one new cultivar: *Aloe* ‘Hanky Panky’ with the parentage *A. jucunda* \times *A. dhufarensis*. Another cross in

Jonker’s list is *A. jucunda* \times *A. erensii*, that was subsequently named by myself and Suzanne Mace as *Aloe* ‘Erensjucc’ (Walker & Mace, 2019). It is inevitable that other hybrids have also been raised with *A. jucunda* as one of the parents.

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