

Aloe whitcombei Lavranos – a unique and highly localised Omani endemic

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Introduction

Aloe whitcombei is unique as the only Arabian species producing white flowers. In habitat it is restricted to the tops of immense vertical cliffs and it has a very localised distribution range being endemic to Oman. These features, together with its dwarf stature, make it an interesting, isolated species with no obvious close relationships.

History, habitat and distribution

Dr Robert Peter Whitcombe graduated from the University of Durham in 1976 with a B.Sc. degree in Biology/Ecology. In the 1980s he was working in Oman and studying bee ecology for which he was awarded his PhD. In 1984 for a thesis entitled ‘The biology of *Apis* spp. in Oman with special reference to *Apis florea* Fab.’ Whilst doing fieldwork in Oman in October 1989 he collected a dwarf aloe growing at the top of precipitous cliffs west of Salalah in the Province of Dhofar. Plants grown by Whitcombe later flowered in his garden at Salalah producing remarkable white flowers. This was brought to the attention of Sheila Collenette, the well-known explorer of the Arabian flora who had a particular interest in aloes. In 1993 Collenette, in the company of Ian McLeish and Shahina Ghazanfar revisited Whitcombe’s locality to collect more material and to photograph the plant in habitat. John Lavranos used their material and information to name a new species *Aloe whitcombei* Lavranos in honour of the discoverer (Lavranos, 1995). Its type locality is recorded as “Dhofar Province: Ras Sajr, on 800 m vertical cliff-face, S. of Shaat, ca. 80 km W. of Salalah”.

Tom McCoy, in preparation for the first monograph of aloes from Arabia including Socotra, also revisited the type locality of *A. whitcombei* several times. He records its distribution as being restricted to a single site at

the top of these stupendous cliffs. Despite many searches along these cliffs no further populations have been found, so this species is apparently very localised. He describes the habitat as follows: “This diminutive aloe grows exclusively out of solution cavities or clefts on vertical limestone cliffs that drop from more than 800 m (2,600 ft) ASL directly into the Indian Ocean. The top of these cliffs is often shrouded in heavy fog and mist during the four-month period of the monsoon season, June to early October, and to a lesser extent at other periods of the year. Due to the proximity of the warm Indian Ocean, the humidity and temperatures are always high” (McCoy, 2019). *Aloe whitcombei* can therefore be described as an **obligate cremnophyte**, since it only grows on cliffs.

This aloe grows in association with several other interesting succulents: *Dracaena serrulata* subsp. *dhofarica* T.A. McCoy & Lavranos (the Dhofar Dragon Tree), *Euphorbia momccoyae* Lavranos, *Kleinia butleri* T.A. McCoy & Lavranos and *K. lauschsii* Lavranos & T.A. McCoy. All of these, apart from the euphorbia, are narrow Omani endemic cremnophytes.

Also of note is the fact that McCoy (2019), in preparation for his monograph, used a drone-mounted camera to photograph *A. whitcombei* face-on in its cliff-top habitat – a first such use of this technology to study an aloe in the wild as far as I am aware, which produced some stunning habitat shots.

Aloe whitcombei in cultivation

My cultivated plant is shown in fig 1. It came from Kew with the accession number Kew 1994-887 with the following collection data: Ian McLeish No. 31, 23/09/1993, Ras Sajr West, Dhofar Province, Oman, 800 m, growing over a cliff face.

The stem is only 5 cm long but with age stems can grow up to 30 cm (McCoy, 2019). It is currently unbranched but does branch from the base to form small clumps. The rosette is 15 cm across with leaves up to 7 cm long and 2.5 cm across at the widest point. Leaves are basally sheathing bearing more pale oval spots on the lower surface than on the upper surface.

In October to November 2022 my plant flowered for the first time (figs 2–4). The inflorescence is simple, arching, 10 cm long bearing a dense raceme only 4 cm long and bracts 5 mm long and 2 mm wide at the base. The small flowers (fig 4) are 13 mm long, white with very pale green mid-stripe, grading to a darker green at the tepal tips.

Relationships

Aloe whitcombei is unique amongst the 50 species of aloe recorded from Arabia including Socotra (McCoy, 2019) in having white flowers. Most aloe flowers are yellow, orange or red and attract bird pollinators. White flowering

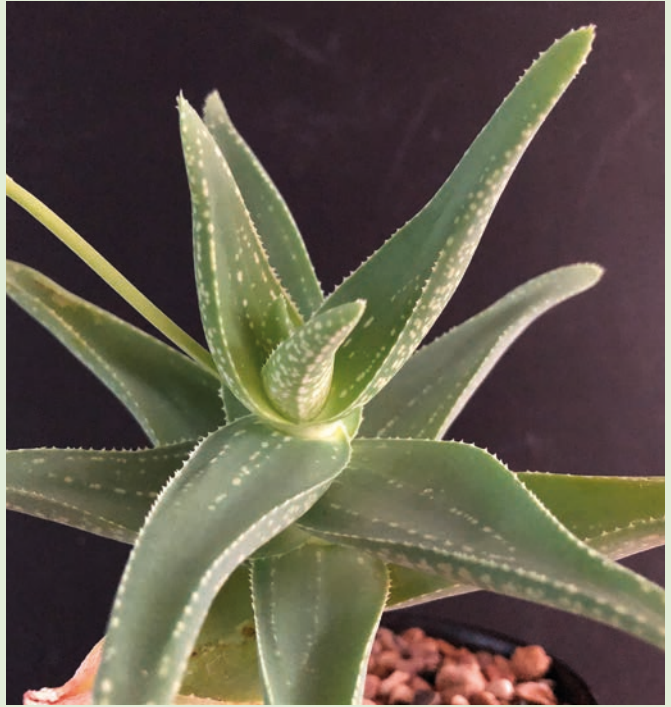


Fig 1. *Aloe whitcombei*.



Fig 2. *Aloe whitcombei* in bud. For scale the plant is shown in a 12 cm diameter pot.



Fig 3. *Aloe whitcombei* in flower.



Fig 4. Detail of flowers of *A. whitcombei*.

species are very rare and are restricted to species such as *Aloe albiflora* Guillaumin, *A. calcairophila* Reynolds and *A. droseroides* Lavranos & T.A. McCoy from Madagascar and *A. albida* (Stapf) Reynolds from Southern Africa. None of these species appear to be at all closely related to *A. whitcombei* since the only key similarity between them is the flower colour. What is especially interesting is that these flowers must be attractive to different pollinators, presumably nocturnally active moths. For the Omani species, no pollinator has yet been observed, so this could be a potential small research project for some aloe student in the future.

Lavranos (1995) compared his new species to the cremnophytic Socotran endemic *Aloe squarrosa* Baker. Carter *et al.* (2011) made the same comparison and included both species in their informal group G for pendulous or sprawling aloes. However, there does not appear to be a close relationship between these two species. At the same time

Lavranos published a second Omani endemic, *Aloe collenetteae* Lavranos but again the only apparent relationship to *A. whitcombei* is that they are both obligate cremnophytes.

We must await further molecular studies for the true relationships of the unique *A. whitcombei* to be further elucidated.

Acknowledgements

I am deeply indebted to Mike Cullen for material of the Kew collection of *A. whitcombei*. My wife Marjorie read and commented on an earlier draft of this article.

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