

A new *Aloe* species in Kenya

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A new species of *Aloe* is described from an isolated hill near the coast of Kenya. Photographs by Ann Robertson (Fig. 1) and Kathleen Bisset (Figs. 2–4).

In the course of a Coastal Forest Survey in Kenya (Robertson & Luke, 1993), in March 1990 Ann Robertson and Quentin Luke found an *Aloe* species at the north end of Mangea Hill. This is an isolated sandstone hill, to 520m altitude, in the plains 50km inland from the coastal town of Malindi. There is forest on much of the hill, where the first author has seen the tree species *Aloe volkensii* subsp. *volkensii*. On lower slopes, where the currently discussed *Aloe* was found, there is more open vegetation with scattered rocks. Mrs Robertson cultivated a collected specimen in her Malindi garden and prepared herbarium specimens when it flowered. A living plant was given to Newton, but it did not flower in his Nairobi garden (1,676m) before his final departure from the country. Later the present authors examined the specimens deposited by Robertson and Luke at Kew and concluded that it is an undescribed species. This is described below. It is named for the locality where it was collected, to draw further attention to the need for conservation of the vegetation on Mangea Hill.

Aloe mangeaensis L.E.Newton & S.Carter sp. nov.

With affinity to *Aloe rabaiensis*, differing in the longer and more densely rosulate leaves, which are a brighter green and without spots, and have longer marginal teeth, the taller inflorescence with fewer, more widely spaced branches, bearing subdensely-flowered cylindrical racemes with orange-pink flowers, and floral bracts longer than the pedicels. Type: Kenya, Kilifi County, Mangea Hill, 28 February 2015, Robertson 7974 (K, holo., EA, iso.).



Fig. 1 North end of Mangea Hill



Fig. 2 *Aloe mangeaensis* in cultivation

Leaf-succulent plant with usually unbranched stem to 50cm long, becoming decumbent and rooting where it touches the ground, with dead leaves persistent below the rosette, occasionally suckering; **leaves** to 30, semi-densely rosulate, lanceolate, to 80cm long, to 7cm wide near base, apex acute, uniformly green, surface smooth; marginal teeth deltoid, pungent, 5mm long, 10–15mm apart, green, brown-tipped; exudate yellow; **inflorescence** erect, to 1m long, with 4–6 branches, peduncle 40cm to first branch; racemes cylindrical, sub-dense, to 10cm long; **bracts** scarious, ovate, apex acute, 10–12mm long, 4–5mm wide near base, with 7 brown nerves, central ones reaching apex; pedicels 10mm long; **flowers** with perianth 26mm long, dusky pink in bud with grey tip, orange/pink, lobes pale yellow-tipped with pale green median stripe inside, cylindrical-trigonous, base rounded, 4mm diameter across ovary, narrowed to 3mm above, widened to 4mm at mouth, outer tepals free for 11mm; anthers exserted 4–8mm, stigma exserted 6mm; **capsule** to 20mm long, 12mm diameter; **seeds**, including wing, 8mm long, 3mm wide.

KENYA, Kilifi County, north end of Mangea Hill, 3°14'S, 39°43'E, 305m alt., 29 March 1990, Robertson & Luke 6492 (K, EA); 29 March 1990, Luke & Robertson 2210 (K); cultivated in Malindi (collected as R&L 6492), 28 February 2015, Robertson 7974 (K, holo., EA, iso.).



Fig. 3 *Aloe mangleensis* flowering in cultivation



Fig. 4. *Aloe mangleensis* raceme

In the last account of the whole genus (Carter et al, 2011) this new species belongs in Group I, accommodating shrubby aloes and an inflorescence with three or more branches. Its nearest relative appears to be *Aloe rabaiensis* Rendle, which also occurs in low hills not far from the coast, but it differs significantly in several features. Its leaves at the apex of the stem are more densely rosulate, a uniformly brighter green without any spotting, and much longer at up to 80cm rather than up to 45cm. The marginal teeth are also larger at 5mm long instead of 3mm. The inflorescence is taller, to 1m instead of 60cm, and produces fewer, more widely spaced branches – up to 6 instead of 9. Its subdensely-flowered cylindrical racemes of orange-pink flowers differ most noticeably from the shorter, subcapitate racemes of *A. rabaiensis* with its yellow-orange flowers. Finally, the floral bracts are distinctly longer than the pedicels compared with slightly shorter bracts than pedicels in *A. rabaiensis*. This last feature also sets *A. mangleensis* apart from other shrubby species in the same group, such as *A. ngongensis* from higher inland altitudes, with its thickly fleshy greyish leaves, glossy scarlet flowers in densely capitate racemes and bracts distinctly shorter than the pedicels.

From the 55 species recorded for Kenya in the regional flora account (Carter, 1994), this species now brings

the total number of Kenyan aloes to 62 species, three of which have infraspecific taxa. Considerable disturbance of the vegetation on Mangea Hill by human activity is reported, and Robertson & Luke (1993) recommended that some of the hill should become a forest reserve. *Aloe mangleensis* adds to the uniqueness of the Mangea Hill vegetation, but it was found close to a cultivated area, and its conservation status is likely to be 'Vulnerable'.

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