

Plant portrait

Themeda triandra Rooigras or kangaroo grass

by **Martin Deasy, Botanical Horticulturalist**

Walking through the Merton Borders, visitors frequently pause to admire *Themeda triandra*, the Edward Scissorhands of ornamental grasses, with its remarkable talon-like inflorescences floating above a thatch of striking red stems and fresh green leaves. Economically and ecologically, rooigras ('red grass') is one of the most important grasses of the South African veld and East African savannah, its range extending into the semi-arid parts of the Arabian peninsula and across Asia into the Pacific. In Australia, where it is known as kangaroo grass, it was the dominant species in the temperate grasslands that covered much of New South Wales and Victoria prior to the introduction of settled farming.

Themeda triandra's distinctive inflorescences are unlike those of any other ornamental grass, with their extremely long green spatheoles - leaf-like organs that subtend each group of flowers - and long black awns projecting from the fertile florets. These hygroscopic (moisture-absorbing) awns have evolved to facilitate dissemination of the mature seed away from the parent plant, and to optimise the chances of successful germination in fire-prone environments. The awns respond to small local changes in humidity by alternately bending (when dry) and straightening (when humid). As atmospheric moisture fluctuates over the course of the day, the awns repeatedly flex and straighten, gradually propelling the fallen seed along the ground until it lodges in a soil crack. Upwards-pointing hairs at the base of the seed membrane now anchor it in position, and with each humidity cycle the seed is driven deeper into the soil, to a final depth of just over a centimeter. Protected from damage by fire, the buried seed is able to await the conditions most favourable for germination.

The type specimen of *Themeda triandra* (to which the scientific name of that species is formally attached) was collected in the mountains of Yemen in 1763 by Peter Forskål. He did not survive the expedition, dying aged 31 of a fever brought on (it is said) partly by frustration at being repeatedly refused permission to botanise on the tantalisingly flora-rich mountain of Jebel Saber. (His travelling companion Carsten Niebuhr gives a fascinating account of the ill-fated expedition in his *Travels through Arabia* [1774; English trans. 1792].)

Forskål called the grass after its local Arabic name *thaemed* ('little water'), the term for a shallow, seasonally drying pond used as a source of water. It is usually assumed that the Arabic name refers to *Themeda triandra*'s local Yemeni habitat; however, another plausible explanation might lie in rooigras's tendency to remain green and highly palatable throughout high summer, when most other grassland is parched and dry, a sort of nutritional oasis. For this reason, it is one of the most important summer grazing species in

seasonally dry grasslands, and therefore highly susceptible to overgrazing, a major cause of the soil erosion and consequent desertification seen throughout the South African Karoo.

Currently underused in British horticulture, *Themeda triandra*'s striking beauty, frost hardiness (to at least -5°C) and resilience during summer droughts render it admirably suited to the challenges of gardening in a changing climate. We can expect to see much more of this striking grass in future.

