SOME OBSERVATIONS ON *ELEPHANTORRHIZA BURKEI* AND *E. ELEPHANTINA*

In a revision of the genus *Elephantorrhiza* Benth., in Bothalia 11:252 (1974), it was stated that "*E. burkei* appears to have smaller seeds than *E. elephantina*, but more fruiting material is required to confirm this." In an attempt to glean further information on this matter, populations of these two species growing naturally in the Pretoria National Botanic Garden were kept under observation from spring 1974 until the end of winter 1975.

In *E. elephantina* the flowering racemes are usually confined to the lower part of the stem with the result that the pods are normally suspended just above the ground or else rest on the ground where they tend to be inconspicuous. In *E. burkei*, however, the flowering racemes are borne on the branched stems some distance from the ground and so the pods are conspicuous, especially when mature or approaching maturity.

Seeds of both species were collected, particularly those of *E. burkei* about which less was known and which were far more numerous. Considerable variation in the shape of the seeds was noted in *E. burkei*, seeds varying from elliptic to almost quadrate, the latter as a result of the seeds being tightly compacted and laterally compressed in the pods. The seed dimensions recorded for *E. burkei* were 9–15 × 8–12 × 5–7 mm and those for *E. elephantina* 17–26 × 13–18 × 6–13 mm. These measurements confirmed the suspected existence of a difference in seed size between the two species, the seeds of *E. burkei* apparently being consistently smaller than those of *E. elephantina*. As indicated in Bothalia *l.c.*, the pods of *E. burkei* tend to be longer and narrower than those of *E. elephantina*.

At maturity the valves of the pods in both species separate from the margins, the margins persisting as an almost continuous but empty frame in a manner reminiscent of most species of *Entada* (see illustration in Palmer & Pitman, Trees S. Afr. 2:827, 1973). This is particularly conspicuous in *E. burkei* where the valves roll back and together with the margins usually persist on the plant for many months. In *E. elephantina* the pods tend to disintegrate and disappear more rapidly.

A considerable amount of variation in the size of individual plants was noted in the population of *E. elephantina*. Scattered in amongst the population were several plants that were substantially larger than the surrounding plants, almost as though they had been the recipients of a heavy application of fertilizer. A cytogenetical study of this population may yield interesting results and would give an indication of whether or not polyploidy is involved.

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