

## Two new species of *Trachyandra* sect. *Liriothamnus* (Xanthorrhoeaceae, Asphodeloideae) from the Western and Eastern Cape Provinces of South Africa

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### Abstract

*Trachyandra eriocarpa* and *T. bulbosa* are two new species from Northern and Eastern Cape Provinces of South Africa. They are placed in *T.* sect. *Liriothamnus* based on their wiry roots, the cataphylls not forming membranous collars, and the remains of the outer leaves forming a fibrous collar. *Trachyandra eriocarpa* from the Great Winterberg in Eastern Cape is recognised by its unusual, villous ovary and capsules; and *T. bulbosa* from north of Springbok in Northern Cape by the irregular, bulbous rhizome, microscopically puberulous leaves and maculate tepals.

### Introduction

The genus *Trachyandra* Kunth (1843: 573) (Xanthorrhoeaceae: Asphodeloideae) currently comprises ca. 55 species in Africa and Madagascar, with the majority of species concentrated in the Greater Cape Floristic Region (Obermeyer 1962; Boatwright & Manning 2010), where some 42 species are found (Manning & Goldblatt 2012; Snijman 2013).

Phylogenetic relationships within and among certain genera of Asphodeloideae are poorly understood and are the subject of ongoing taxonomic and molecular studies, during which several new species have come to light (Boatwright & Manning 2010; J.S. Boatwright *et al.* in prep.). Here we describe a further two, distinctive species of *T.* section *Liriothamnus* (Schlechter 1924: 145) Obermeyer (1962: 720). This section, which currently comprises 13 species, is characterised by wiry, unthickened roots; the lowest, entirely sheathing leaves or cataphylls (prophylls in the sense of Obermeyer 1962) not forming a membranous collar ('squamae' in the sense of Obermeyer 1962); and the remains of the leaf bases persisting around the base of the stem as a fibrous collar (Obermeyer 1962). Inflorescences are mostly simple and the perianth in most of the species is immaculate. Sections *Glanduliferae* Obermeyer (1962: 751) and *Trachyandra* have mostly branched inflorescences and often maculate tepals. Section *Glanduliferae* is diagnosed by the glandular-pubescence, at least on the ovary, and sect. *Trachyandra* by the  $\pm$  swollen roots, often fused into fleshy tubers, and the cataphylls transformed into membranous,

collar-like sheaths that surround the stem and individual leaf bases (Obermeyer, 1962). This sectional classification, however, remains to be tested.

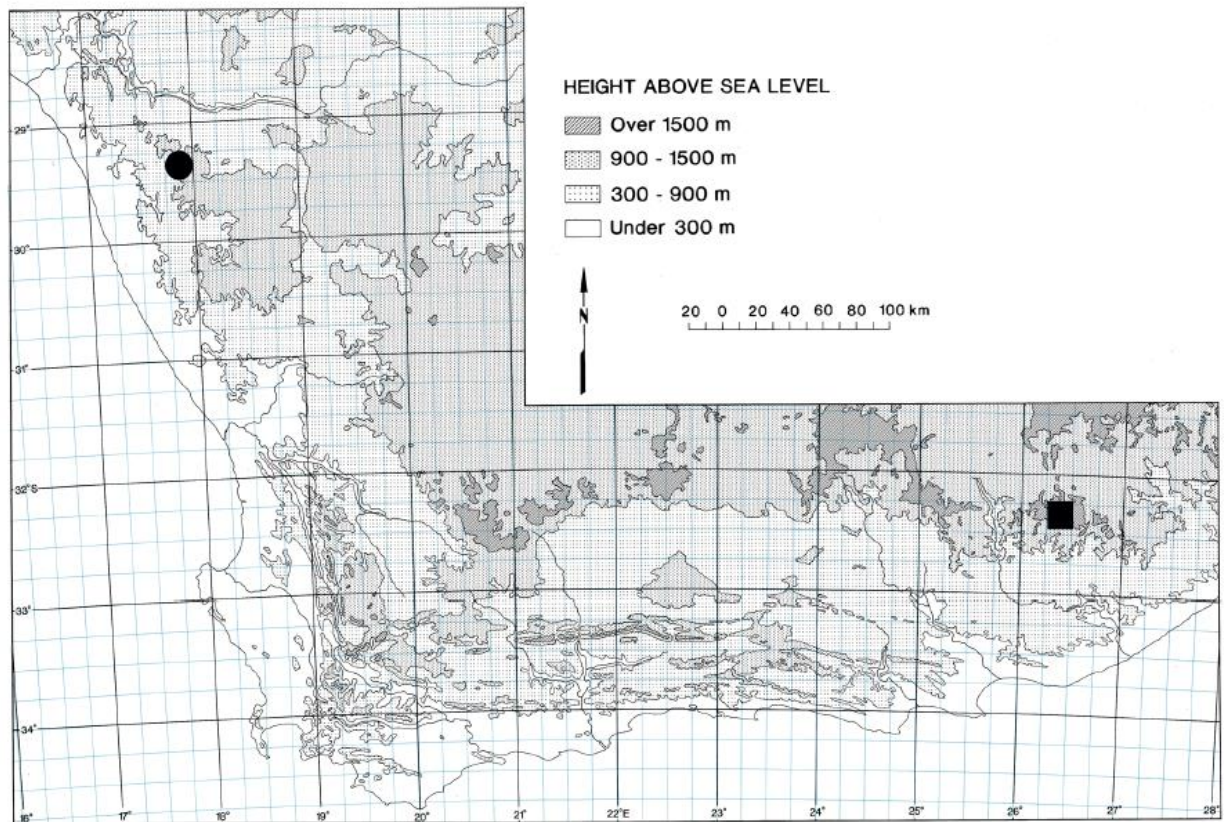


FIGURE 3. Known geographical distribution of *Trachyandra eriocarpa* (square) and *T. bulbosa* (circle).

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## References

- Baker J.G. (1876) Revision of the genera and species of Anthericeae and Eriospermae. *Journal of the Linnean Society* 15: 253–363. <http://dx.doi.org/10.1111/j.1095-8339.1876.tb00247.x>
- Boatwright, J.S. & Manning, J.C. (2010) Notes on the genus *Trachyandra* (Asphodelaceae: Asphodeloideae) 1: a review of the *T. thyrsoides* group (Section *Trachyandra*), including three new species from the Northern Cape. *South African Journal of Botany* 76: 499–510. <http://dx.doi.org/10.1016/j.sajb.2010.03.007>
- Compton, R.H. (1931) Novitates Africanae. *Journal of Botany, British and Foreign* 69: 10–11.
- Edwards, D. & Leistner, O.A. (1971) A degree reference system for citing biological records in southern Africa. *Mitteilungen des Botanische Staatssammlung München* 10: 501–509.
- Kunth, C.S. (1843) *Enumeratio plantarum omnium hucusque cognitarum: secundum familias naturales disposita, adjectis characteribus, differentiis et synonymis* 4. J.G. Cotta, Stuttgart, 752 pp. <http://dx.doi.org/10.5962/bhl.title.67381>
- Kuntze, O. (1898) *Revisio generum plantarum* 3, 2. Arthur Felix, Leipzig, 576 pp.
- Leistner, O.A. & Morris, J.W. (1976) South African place names. *Annals of the Cape Provincial Museums* 12: 1–565. Manning, J.C. (1990) A new species of *Trachyandra* section *Liriothamnus* (Asphodelaceae) from the Richtersveld. *South African Journal of Botany* 56: 1–5. <http://dx.doi.org/10.1016/j.sajb.2010.03.007>
- Manning, J.C. & Goldblatt, P. (2012) *Plants of the Greater Cape Floristic Region 1: The Core Cape Flora*. Strelitzia 29. South African National Biodiversity Institute, Pretoria, 853 pp.
- Mucina, L., Jürgens, N., le Roux, A., Rutherford, M.C., Schmiedel, U., Essler, K.J., Powrie, L.W., Desmet, P.G. & Milton, S.J. (2006) Succulent Karoo Biome. In: Mucina, L. & Rutherford, M.C. (eds.) *The Vegetation of South Africa, Lesotho and Swaziland*. Strelitzia 19. South African National Biodiversity Institute, Pretoria, pp. 221–299.
- Obermeyer, A.A. (1962) A revision of the South African species of *Anthericum*, *Chlorophytum* and *Trachyandra*. *Bothalia* 7: 669–767.
- Schlechter, R. (1924) Drei neue Gattungen der Liliaceen aus Südafrika. *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9: 145–151. <http://dx.doi.org/10.2307/3994398>
- Snijman, D.A. (2013) *Plants of the Greater Cape Floristic Region 2: The Extra Cape Core Flora*. Strelitzia 30. South African National Biodiversity Institute, Pretoria, 542 pp.
- Thiers, B. (2011) *Index Herbariorum: A global directory of public herbaria and associated staff*. New York Botanical Garden's Virtual Herbarium. Available from <http://sweetgum.nybg.org/ih/> (accessed: 20 November 2013).