A taxonomic study of the grassland species of Thesium L. (Santalaceae)

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The genus Thesium L. forms part of the family Santalaceae and consists of ca. 350 species with the centre of diversity situated in southern Africa (ca. 170 species). Relatively little is known about this genus and its ecological role in the environment, such as host specificity, the influence of its presence as a hemi-parasite which might influence the abundance and diversity of itself and its host(s), whether it is beneficial to the environment or even critical to the continued existence of host plants. However, basic identification of these species is a necessity to address such questions but is currently troublesome due to the lack of foundational information such as distribution ranges, detailed descriptions and a comprehensive identification key. The last taxonomic revision of the southern African Thesium species dates back to Hill's treatment in Flora Capensis published in 1925. Hill's classification system presented here is mostly only relevant to the southern African species due to the limited geographic range of the study. Pilger attempted to reconcile Hill's classification in 1935 with those published before by De Candolle and Sonder. More recently, a phylogenetic study was published in which four main clades were identified but these clades are incongruent with the four currently recognised sections. The study by Moore et al. never culminated in an updated classification system nor any revisionary work. In preparation of a taxonomic revision of the South African species, we are aiming at studying the species in their natural habitat, especially those that occur in the Grassland Biome (as these taxa have not received much attention in recent years). The study will include anatomical and morphological characters, the habitat and host specificity alongside the molecular data to identify more natural groups that can be treated systematically in future.