Chapter 1

Introduction

The African tribe Crotalarieae (Fabaceae) consists of 11 genera (Van Wyk, 1991; Van Wyk and Schutte, 1995). *Lebeckia* Thunb. is the last remaining genus that has not been revised in recent years and the most recent information dates back to the last revision (Harvey, 1862).

*Lebeckia* includes ca. 33 species that are endemic to the western parts of southern Africa (see map in Van Wyk, 1988). All species in the genus are quite variable (Dahlgren, 1963; Van Wyk, 1991), but they are easily recognised by their suffrutescent or woody habit, equally lobed calyx and absence of stipules, except in two species (Van Wyk, 1991).

Following Bentham (1844), Harvey (1862) divided the genus into five sections: *Calobota* (Eckl. and Zeyh.) Walp., *Eu-Lebeckia* Benth., *Phyllodiastrum* Walp., *Stiza* Benth. and *Viborgioides* Harv. The 14 *Lebeckia* species with terete (needle-shaped), often articulated leaves belong to the type section (section *Lebeckia*) of which *Eu-Lebeckia* and *Phyllodiastrum* are synonyms (see later). They are endemic to the Cape Floristic Region and are often confused with one another, resulting in a high percentage of misidentifications in herbaria.

The aim of this project was an in-depth investigation of the following:

2. The correct names and typifications of the section and species.

3. The natural geographical distribution of the section and species.

4. The taxonomic and diagnostic value of various vegetative and reproductive morphological characters.

5. The contribution that molecular characters (ITS, *rbcL, trnL-F* and *trnS-trnG* genes) can make towards a better understanding of relationships.

6. The monophyly of section *Lebeckia* and phylogenetic relations between the species.

The overall aim was therefore a comprehensive taxonomic revision of this hitherto poorly studied group of Cape legumes.