
ABSTRACT

Lachnaea L. (Thymelaeaceae), a genus established in 1753, is endemic to the Cape Floristic Region (CFR) of southern Africa. It demonstrates a high level of regional endemism, with 55% of the species endemic to one of the six centres in the CFR. The first detailed taxonomic account of the genus was published by Meisner in 1840 based on the collections of Drège. Three sections were recognised, namely *Sphaeroclinium* Meisn., *Conoclinium* Meisn., and *Microclinium* Meisn., based mainly on the inflorescence structure. The circumscription of *Lachnaea* has been extended to include all five species previously placed in *Cryptadenia* Meisn. and at present 40 species and two subspecies are recognised. In this study a detailed species-level phylogenetic tree for *Lachnaea* was produced using 3 283bp of plastid DNA and 679bp of nuclear DNA for 38 accessions and various outgroups. The loci sequenced were *trnL* intron and *trnL-F* spacer, *rbcL*, *rps16* intron and the nuclear gene ITS. Parsimony and Bayesian analyses yielded identical relationships and these are consistent with morphological data, producing the best-supported phylogenetic assessment currently available for the genus. Five informal groupings are also described in the study. The start of the diversification of *Lachnaea* was estimated at 7.2Mya with a major proliferation around 6Mya. Sympatric speciation in this genus appears to be plausible with patterns suggesting that altitudinal differences and pollinators have been involved in the speciation process.