

Phylogenetic Relationships in *Coffea* (Rubiaceae) Inferred from Molecular Sequence Data

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SUMMARY

The phylogenetic relationships of *Coffea* and the closely related genus *Psilanthus* are inferred using plastid sequence data from four plastid regions (*trnL-F* intron, *trnL-F* IGS, *rpl16* intron and *accD-psaI* IGS), and the ITS region of nuclear rDNA (ITS 1/5.8S/ITS 2). Our results show that *Coffea* plus *Psilanthus* forms a well-supported and easily characterized clade but that the monophyly of these genera are unresolved. In terms of the present classification of *Coffea*, *Coffea* subgen. *Baracoffea* is monophyletic but *Coffea* subgen. *Coffea* is paraphyletic. Well supported clades corresponding to phytogeographical regions, or having geographical coherence, are recovered in *Coffea* and *Psilanthus*. Low levels of sequence divergence do not allow complete resolution of relationships, most notably for the species of *Coffea* occurring in Madagascar. The origin of *C. arabica*, by recent hybridization between *C. canephora* and *C. eugenioides*, is supported.