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Appendix 2. Primers used for the amplification of *matK* along with their sequences and the taxa for which they were designed. References are given for primers that were not designed for this study.

Primer name	Sequence	Taxa	Reference
ACmatK500F	TTCTTCTTTGCATTTATTACG	Amaranthaceae/ Chenopodiaceae	this study
ALImatK470F	CCS TAT CCC ATT CAT CTC G	Alismataceae	this study
ARAMatK480F	CAT CTC GAA ATC TTG GTT C	Araceae	this study
FAMatK490F	GAA ATC TTG GTT CAA AYC CTT CG	Fabaceae	this study
GEmatK490F	ATC TTG GTT CAA ACY CTT CGC	Geraniaceae	this study
GImatK1314R	TAC TTT TAT GTC TAC AGG C	<i>Ginkgo</i>	this study
GNmatK1056R	TCC CTG GTA ATG AAC TCT GC	Gnetaceae	this study
GYmatK480F	CAT CCR GAA ATT TTG GTT C	Coniferales	this study
LEtrnK 1580F	TAC GAT TCT TTC TCA GCG	Lamiales	Müller et al. (in press)
LEtrnK 2000F	CCT GAA TAA ATG GAA ATG	Lamiales	Müller et al. (in press)
LEtrnK 1590R	CTC GCT GAG AAA GAA TCG	Lamiales	Müller et al. (in press)
LEtrnK 2050F	TTT TCC TTG TGG TTT CCT G	Lamiales	Müller et al. (in press)
LEtrnK 2450R	CTT TGT GTT TCC GAG CC	Lamiales	Müller et al. (in press)
LEtrnK 1280RA	ATA ACA GCA AAC CCT TCT G	Lamiales	Müller et al. (in press)
LEtrnK 1280RB	ATA CAA ACA AAA ACC TCT G	Lamiales	Müller et al. (in press)
LEtrnK 2600F	GTC GGA TTT GGT ATT TGG	Lamiales	Müller et al. (in press)
LEtrnK 1800R	AAA TGA AAG GAG TGG TTG C	Lamiales	Müller et al. (in press)

LEtrnK 7F	GGG TTG CTA ACT CAA CGG TAG	Lamiales	Müller et al. (in press)
LEtrnK1R	ATA GAA ATA GAT TCG TTC	Lamiales	Müller et al. (in press)
LEtrnK2F	TGG TAC GGA GTC AAA KTC	Lamiales	Müller et al. (in press)
LEtrnK3F	ACC AAT CCT TTC ATT TAC G	Lamiales	Müller et al. (in press)
LEtrnK4R	TTC GCC TGA AAA TCC GTA ACC	Lamiales	Müller et al. (in press)
MG1	AAC TAG TCG GAT GGA GTA GAT	angiosperms	Liang and Hilu (1996)
MG15	ATC TGG GTT GCT AAC TCA ATG	angiosperms	Liang and Hilu (1996)
MOmatK480F	CAT WTG GAA ATC TTG GTT C	derived monocots	this study
NYmatK 480F	CAT CTG GAA ATC TTG STT C	Nymphaeaceae	Borsch (2000)
PImatK470F	TTC AAA CCC TTC GYT RCT GG	Piperaceae	this study
PRmatK521F	TTC YTT GCA TTT ATT GCG ATT C	Proteaceae	this study
psbA-R	CGC GTC TCT CTA AAA TTG CAG TCA T	angiosperms	Steele (1995)
RAmatK470F	ACC CTA CCC YAT CCA TCT G	Ranunculaceae	this study
RAmatK670F	CCR TAT TTG TTT TTC TCC G	Ranunculaceae	this study
SCHImatK895F	ATC ACC TTG TTA ATT TCT GG	Schisandraceae	this study
TOmatK480F	CAT CTK GAA ATC TTG GTT C	Tofieldiaceae	this study
trnK2R	AAC TAG TCG GAT GGA GTA G	angiosperms	Johnson and Soltis (1995)
trnK3914Fdi	GGG GTT GCT AAC TCA ACG G	dicots	Johnson and Soltis (1995)
WELmatK	TAC TTA ATA CGA TCT AAA TAT GC	<i>Welwitschia</i>	this study
ZAmatK	AAT GGA AGA TGC TTC TCC	<i>Zamia</i>	this study
390F	CGA TCT ATT CAT TCA ATA TTTC	Caryophyllales	Cuénoud et al. (2002)
1326R	TCT AGC ACA CGA AAG TCG AAGT	Caryophyllales	Cuénoud et al. (2002)

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