

**Appendix 1. Taxa included in the phylogenetic study of Abildgaardieae using sequences of *trnL*–F and ITS regions and palynological data.**

Specimens (species) in bold are illustrated Figs 5.2–5.33. Tribal classification of Cyperaceae according to Goetghebeur (1998, in bold) and Bruhl (1995, in parentheses). The sequences of specimens with n.a. (not available) in the GenBank number column have not yet been submitted to GenBank.

Species	Voucher and provenance/herbarium	GenBank Number <sup>◊</sup>
<b>Abildgaardieae (Abildgaardieae)</b>		
<i>(Fimbristylis macrantha</i> Bocck.) ♦	<b>K. L. Clarke 216, NT (Australia)/NE</b>	—
<i>'Abildgaardia macrantha'</i> ≈		
<i>Abildgaardia ovata</i> (Burm.f.) Kral	V. Klaphake 1410, NSW (Australia)/NSW♦	<b>AY506708</b> (AY506758)
<i>(Fimbristylis oxystachya</i> F.Muell.)	K. L. Clarke 165, WA (Australia)/NE	<b>AY506704</b> (AY506762)
<i>'Abildgaardia oxystachya'</i> ≈		
<i>(Fimbristylis pachyptera</i> S.T.Bruhl)	<b>K. L. Clarke 181, NT (Australia)/NE</b>	<b>AY506707</b> (AY506760)
<i>'Abildgaardia pachyptera'</i> ≈		
<i>Abildgaardia schoenoides</i> R.Br.	<b>K. L. Clarke 70, Qld (Australia)/NE</b>	<b>AY506706</b> (AY506761)
<i>Abildgaardia schoenoides</i> R.Br.	K. L. Clarke 111, WA (Australia)/NE	n.a.
<i>Abildgaardia vaginata</i> R.Br.	J. J. Bruhl 2057, NSW (Australia)/NE	<b>AY506705</b> (AY506759)
<i>Bulbostylis barbata</i> (Rottb.) C.B.Clarke	<b>K. L. Clarke 113, WA (Australia)/NE</b>	<b>AY506709</b> (AY506764)
<i>Bulbostylis densa</i> (Wall.) Hand.-Mazz.	V. Klaphake 1411, NSW (Australia)/NE	<b>AY506710</b> (AY506765)
<i>Bulbostylis striatella</i> C.B.Clarke	<b>J. J. Bruhl 2084, NSW (Australia)/NE</b>	<b>AY506711</b> (AY506765)
<i>Bulbostylis sp. nov. (NT1)*</i>	<b>K. L. Clarke 184, NT (Australia)/NE</b>	<b>AY506713</b> (AY506766)
<i>Bulbostylis sp. nov. (NT2)*</i>	K. L. Clarke 184a, NT (Australia)/NE	<b>AY506714</b>
<i>Bulbostylis sp. nov. (NT3)*</i>	K. L. Clarke 184b, NT (Australia)/NE	<b>AY506712</b>
<i>Crosslandia setifolia</i> W.V.Fitzg. (NT1)	<b>K. L. Clarke 246, NT (Australia)/NE</b>	<b>AY506718</b> (AY506768)
<i>Crosslandia setifolia</i> W.V.Fitzg. (WA1)	K. L. Clarke 115, WA (Australia)/NE	<b>AY506716</b> (AY506765)
<i>Crosslandia setifolia</i> W.V.Fitzg. (NT2)	K. L. Clarke 185, NT (Australia)/NE	<b>AY506717</b> (AY506767)
<i>Crosslandia setifolia</i> W.V.Fitzg. (NT3)	<b>K. L. Clarke 252, NT (Australia)/NE</b>	<b>AY506771</b> (AY506771)
<i>Crosslandia setifolia</i> W.V.Fitzg. (WA2)	K. L. Clarke 117, WA (Australia)/NE	<b>AY506774</b>
<i>Fimbristylis acuminata</i> Vahl	K.L.W 10059, WA (Australia)/NSW	
<i>Fimbristylis arnhemensis</i> Latz.	K. L. Clarke 177, NT (Australia)/NE	<b>AY506722</b> (AY506776)
<i>Fimbristylis bisumbellata</i> Bubani	K. L. Clarke 107, WA (Australia)/NE	<b>AY506724</b> (AY506778)
<i>Fimbristylis cephalophora</i> F.Muell.	<b>K. L. Wilson10070, WA (Australia)/NSW</b>	<b>AY506720</b>

## Appendix 1. (continued)

Species	Voucher and provenance/herbarium	GenBank Number <sup>◊</sup>
<i>Fimbristylis cinnamometorum</i> (Vahl) Kunth	J. J. Bruhl 2058, NSW (Australia)/NE	(AY506777) AY506721 (AY506772)
<i>Fimbristylis cinnamometorum</i> (Vahl) Kunth	K. L. Clarke 61, Qld (Australia)/NE	AY506725 (AY506773)
<i>Fimbristylis compacta</i> Turrill	K. L. Wilson 10040, WA (Australia)/NSW	AY506723 (AY506775)
<i>Fimbristylis complanata</i> (Retz.) Link♦	K. L. Clarke 310, Qld (Australia)/NE	—
<i>Fimbristylis cymosa</i> R.Br.	K. L. Wilson 10041, WA (Australia)/NSW	AY506750 (AY506798)
<i>Fimbristylis densa</i> S.T.Blake	K. L. Clarke 119, WA (Australia)/NE	AY506726 (AY506781)
<i>Fimbristylis densa</i> S.T.Blake	K. L. Clarke 180, NT (Australia)/NE	AY506747 (AY506779)
<i>Fimbristylis depauperata</i> R.Br. ♦	K. L. Clarke 169, WA (Australia)/NE	—
<i>Fimbristylis dichotoma</i> (L.) Vahl	J. Dalby 01/24, NSW (Australia)/NSW	AY506727 (AY506782)
<i>Fimbristylis ferruginea</i> (L.) Vahl	J. Hodgon 445, NSW (Australia)/NE, NSW	AY506744 (AY506797)
<i>Fimbristylis furva</i> R.Br. ♦	K. L. Clarke 226, NT (Australia)/NE, NSW	—
<i>Fimbristylis lanceolata</i> C.B.Clarke	K. L. Wilson 10113, WA (Australia)/NSW	AY506730 (AY506785)
<i>Fimbristylis laxiglumis</i> Latz	K. L. Clarke 106, WA (Australia)/NE	AY506736 (AY506785)
<i>Fimbristylis littoralis</i> Gaud. ♦	G. Orel 10, Dong Nai (Vietnam)/NSW	AY506715 (AY506799)
<i>Fimbristylis microcarya</i> F.Muell. (WA1)	K. L. Clarke 104, WA (Australia)/NE	AY506731 (AY506787)
<i>Fimbristylis microcarya</i> F.Muell. (WA2)	K. L. Clarke 131, WA (Australia)/NE	AY506735 (AY506783)
<i>Fimbristylis microcarya</i> F.Muell.	K. L. Clarke 322, Qld (Australia)/NE	—
<i>Fimbristylis neilsonii</i> F.Muell. (WA form)	K. L. Wilson 10051, WA (Australia)/NSW	AY506719 (AY506784)
<i>Fimbristylis mutans</i> (Retz.) Vahl	J. Hodgon 541, NSW (Australia)/NE	AY506733 (AY506789)
<i>Fimbristylis pauciflora</i> R.Br.	K. L. Clarke 50, Qld (Australia)/NE	(AY506783)
<i>Fimbristylis phaeoleuca</i> S. T. Blake♦	K. L. Clarke 321, Qld (Australia)/NE, NSW	—
<i>Fimbristylis polytrichoides</i> (Retz.) R.Br. (Qld1)	K. L. Clarke 91, Qld (Australia)/ NE	(AY506796)
<i>Fimbristylis polytrichoides</i> (Retz.) R.Br. (Qld2)	S. Jacobs 8688, Qld (Australia)/NSW	AY506737 (AY506795)
<i>Fimbristylis pterygosperma</i> R.Br. (WA1)	K. L. Clarke 118, WA (Australia)/NE	AY506729 (AY506794)
<i>Fimbristylis pterygosperma</i> R.Br. (WA2)	K. L. Clarke 164, WA (Australia)/NE	AY506732
<i>Fimbristylis pterygosperma</i> R.Br.	K. L. Clarke 179, NT (Australia)/NE	AY506734 (AY506793)
<i>Fimbristylis punctata</i> R.Br. (WA1)	K. L. Clarke 109, WA (Australia)/NE	AY506741
<i>Fimbristylis punctata</i> R.Br. (WA2)	K. L. Clarke 114, WA (Australia)/NE	AY506739
<i>Fimbristylis punctata</i> R.Br. (WA3)	K. L. Clarke 133, WA (Australia)/NE	AY506740
<i>Fimbristylis rara</i> R.Br.	K. L. Clarke 105, WA (Australia)/NE	AY506728 (AY506780)
<i>Fimbristylis schultzii</i> Boeck.	K. L. Clarke 108, WA (Australia)/NE	AY506748

## Appendix 1. (continued)

Species	Voucher and provenance/herbarium	GenBank Number <sup>◊</sup>
<i>Fimbristylis sericea</i> R.Br.	K. L. Wilson 10042, WA (Australia)/NSW	(AY506791) <b>AY506743</b> (AY506803)
<i>Fimbristylis sieberiana</i> Kunth	S. Jacobs 8659, Qld (Australia)/NSW	<b>AY506742</b> (AY506801)
<i>Fimbristylis sphaerocephala</i> Benth. ♦	<b>K. L. Clarke 218, NT (Australia)/NE, NSW</b>	— <b>AY506749</b> (AY506800)
<i>Fimbristylis tetragona</i> R.Br.	K. L. Clarke 11, Qld (Australia)/NE	<b>AY506746</b> (AY506799)
<i>Fimbristylis tetragona</i> R.Br.	K. L. Clarke 173, WA (Australia)/NE	<b>AY506745</b> (AY506802)
<i>Fimbristylis tristachya</i> R.Br.	K. L. Clarke 3, Qld (Australia)/NE	<b>AY506738</b> (AY506792)
<i>Fimbristylis velata</i> R.Br.	K. L. Wilson 10028, WA (Australia)/NSW	<b>AY506738</b> (AY506792)
<i>Fimbristylis xyridis</i> R.Br. ♦	<b>K. L. Clarke 192, WA (Australia)/NE, NSW</b>	—
<b>Schoeneae (Arthrostylideae)</b>		
<i>(Fimbristylis composita</i> Latz) (NT1)	<b>K. L. Clarke 214, NT (Australia)/NE, NSW</b>	<b>AY506701</b>
' <i>Actinoschoenus composita</i> ' <sup>≈</sup>		(AY506754)
<i>(Fimbristylis composita</i> Latz) (NT2)	K. L. Clarke 213, NT (Australia)/NE	<b>AY506702</b>
' <i>Actinoschoenus composita</i> ' <sup>≈</sup>		(AY506755)
<i>(Fimbristylis composita</i> Latz) (NT3)	K. L. Clarke 186, NT (Australia)/NE, NSW	<b>AY506703</b>
' <i>Actinoschoenus composita</i> ' <sup>≈</sup>		(AY506756)
<i>Arthrostylis aphylla</i> R.Br. (NT1)	K. L. Clarke 212, NT (Australia)/NE	n.a.
<i>Arthrostylis aphylla</i> R.Br. (NT2)	<b>K. L. Clarke 183, NT (Australia)/NE</b>	<b>AY506700</b>
<i>Arthrostylis</i> sp.	K. L. Clarke 96, Qld (Australia)/NE, NSW	<b>AY506699</b>
<b>Fuireneae (Scirpeae)</b>		
<i>Bolboschoenus caldwellii</i> Soják	<b>K. Ghamkhar A1, NSW (Australia)/NSW</b>	<b>AY506698</b>
		(AY506752)
<i>Schoenoplectus litoralis</i> (Schrader) Palla	<b>K. L. Clarke 26, Qld (Australia)/NE</b>	<b>AY506697</b>
		(AY506753)
<i>Fuirena ciliaris</i> (L.) Roxb. <sup>†</sup>	K. L. Clarke 7, Qld (Australia)/NE	n.a.
<b>Eleocharideae (Scirpeae)</b>		
<i>Eleocharis cylindrostachys</i> Boeck.	<b>K. L. Wilson 9844, NSW (Australia)/NSW</b>	<b>AY506696</b>
		(AY506751)

\* = Three populations of the same species; † = This specimen was sequenced but was not used in the analyses because of sequence mismatches with other specimens; ≈ = These combinations are not yet published; ♦ Only used in the pollen morphological study; ◊ = *trnL*-F (in bold) and ITS (in brackets); ♣ = *Fimbristylis littoralis* is the only species, which I have doubt about its identification after it was found to be contaminated by traces of a *Cyperus* species. The contamination was found neither by me nor my supervisors because the sample was preserved in CTAB with the majority of sample being *F. littoralis*. Just after the submission my supervisor, Karen Wilson, noticed the contamination. Therefore further sampling of this species is necessary to make certain about the position of this species within the genus and the tribe Abildgaardieae.

**Appendix 2. Taxon by character data matrix of the pollen morphological study.**

See the text for the description of characters (the subset of 13 used in cladistic analyses) and Table 5.1 for a key to character numbers and state codes. A question mark indicates missing data, whereas a dash indicates an inapplicable character. NT = Northern Territory, WA = Western Australia.

Specimens/Characters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Abildgaardia macrantha</i>	0	2	1	2	1	2	0	0	2	0	1	0	0	0	0	?
<i>Abildgaardia ovata</i>	1	-	-	-	-	4	2	0	2	0	0	1	-	0	0	?
<i>Abildgaardia oxystachya</i>	0	2	2	2	1	2	0	0	2	0	0	0	0	0	1	1
<i>Abildgaardia pachyptera</i>	0	0	2	1	1	3/4	2	0	3	1	1	0	0	0	0	1
<i>Abildgaardia schoenoides</i>	0	0	2	1	1	4	2	1	2	0	0	1	0	0	0	1
<i>Bulbostylis barbata</i>	0	2	2	2	0	0	0	1	1	0	2	1	0	1	0	1
<i>Bulbostylis densa</i>	0	2	2	2	0	2	0	1	1	0	1	0	0	1	0	?
<i>Bulbostylis</i> sp. nov.	0	2	2	2	0	4	0	1	1	0	0	1	0	1	0	0
<i>Bulbostylis striatella</i>	0	2	2	2	0	2	0	1	1	0	0	1	0	1	1	1
<i>Crosslandia setifolia</i> NT1	0	2	2	2	1	4	0	0	2	0	0	0	0	0	1	1
<i>Crosslandia setifolia</i> NT2	0	2	2	2	1	Var.	0	0	3	0	1	0	0	0	1	1
<i>Crosslandia setifolia</i> WA	0	0	2	1	1	0	0	0	2	0	2	0	0	0	0	1
<i>Fimbristylis acuminata</i>	0	2	2	2	1	3,4,5	0	0	2	0	1	0/1	0	0	1	1
<i>Fimbristylis cephalophora</i>	0	2	2	2	1	1	0	0	2	0	0	0	0	0	1	1

**Appendix 2. (continued)**

Specimens/Characters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Fimbristylis compacta</i>	0	2	2	2	0	0/1	0	0	1	1	1	0	0	0	1	0
<i>Fimbristylis complanata</i>	0	1	0	0	0	0	0	0	2	0	1	0	1	0	1	1
<i>Fimbristylis cymosa</i>	0	0	2	1	0	2	2	0	2	0	1	0	0	0	1	1
<i>Fimbristylis densa</i>	0	0	1	1	1	3	0	0	2	0	0	0	0	0	1	1
<i>Fimbristylis depauperata</i>	0	2	2	2	0	3	0	0	2	0	0	0	0	1	1	?
<i>Fimbristylis dichotoma</i>	0	2	?	2	?	3	0	0	2	0	0	0	?	0	1	?
<i>Fimbristylis ferruginea</i>	0	2	2	2	0	3	0	0	0	0	1	0	0	1	1	1
<i>Fimbristylis furva</i>	0	2	2	2	1	2	1	0	2	1	0	0	0	1	1	1
<i>Fimbristylis lanceolata</i>	0	1	0	0	0	4	0	0	3	1	1	0	0	0	1	0
<i>Fimbristylis laxiglumis</i>	0	0	2	1	0	4	2	0	2	0	1	1	0	0	1	1
<i>Fimbristylis littoralis</i>	1	–	–	–	–	?	2	0	2	0	1	0	–	0	0	1
<i>Fimbristylis microcarya</i>	0	2	2	2	0	2	0	0	2	1	1	0	0	0	1	0
<i>Fimbristylis neilsonii</i> (form)	0	2	2	2	0	2,3,4	0	0	2	1	1	0	0	0	1	1
<i>Fimbristylis nutans</i>	0	0	1	1	0	4	1	0	2	0	0	1	0	0	1	?
<i>Fimbristylis pauciflora</i>	0	2	2	2	0	1	2	0	3	1	1	0	0	0	1	1
<i>Fimbristylis phaeoleuca</i>	0	2	2	2	1	2	0	0	2	0	1	0	0	1	1	?
<i>Fimbristylis polytrichoides</i>	0	?	?	?	0	?	?	0	2	1	1	?	0	0	1	?
<i>Fimbristylis pterygosperma</i>	0	0	1	1	1	3	0	0	2	0	1	0	0	0	1	1

**Appendix 2. (continued)**

Specimens/Characters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Fimbristylis punctata</i>	0	2	2	2	1	3	0	0	2	0	1	0	0	0	1	0
<i>Fimbristylis rara</i>	1	—	—	—	—	2	0	0	2	0	0	0	—	0	1	1
<i>Fimbristylis schultzii</i>	0	0	2	1	1	5	1	0	2	0	1	0	0	0	1	1
<i>Fimbristylis sericea</i>	0	0	2	1	0	2	1	0	3	1	1	0	0	0	1	?
<i>Fimbristylis sieberiana</i>	0	0	2	1	0	2	0	0	2	1	1	0	0	0	1	0
<i>Fimbristylis sphaerocephala</i>	0	0	1	?	1	2	0	0	3	0	2	0	?	0	1	1
<i>Fimbristylis tetragona</i>	1	—	—	—	—	2	2	1	1	0	0	0	—	0	1	1
<i>Fimbristylis tristachya</i>	0	0	2	1	0	3	0	0	3	0	1	0	0	0	1	1
<i>Fimbristylis velata</i>	0	0	1	1	0	2,3	2	1	1	0	0	0	0	0	1	1
<i>Fimbristylis xyridis</i>	0	0	2	1	0	4	0	0	0	0	0	0	0	0	1	0
<i>Actinoschoenus</i> sp.	0	1	2	0	0	3	0	0	3	0	2	1	1	0	1	1
<i>Arthrostylis aphylla</i>	0	2	2	2	0	2,3,4	0	0	1	0	0	0	0	1	0	0
<i>Bolboschoenus caldwellii</i>	0	2	2	2	0	4	0	1	2	0	0	1	0	1	0	0
<i>Eleocharis cylindrostachys</i>	0	2	2	2	0	2	0	1	1	0	1	1	0	1	0	1
<i>Schoenoplectus litoralis</i>	0	2	2	2	0	3	0	0	1	0	1	1	0	1	0	0

### Appendix 3. Data set for phylogenetic analysis of *trnL*–*trnF*

Nexus file format with 55 terminal taxa and 1980 characters.

### Appendix 3

*Eleocharis\_cylindrostachys* :: :AG :CC TA\ CAA AAA AT: :: :: A:: ::: :: :A PAA ATA :AT  
*Schoenoplectus\_littoralis* :: :AG :CC CA\ CAA AAA ATT TAT TCG A:: ::: :: :A PAA GTG GAA

Bolboschoenus\_caldwellii :::::AG :CC CAA CAA AAA ATT TAT TCA A:: ::::: ::::: :::A AAA ATT GAA  
 Arthrostylis\_aphylla\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA AGT  
 Arthrostylis\_aphylla\_NT :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Actinoschoenus\_NT1 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Actinoschoenus\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Abil\_oxytachya :::::AA :CC TAA TAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Abil\_vaginata :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Abil\_schoenoides :::::AA :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Abil\_pachptera :::::AG :CC TAA CAA AAA ATT GAT TCA AAA AAA AAG TCA AAA AAA :GT  
 Abil\_ovata :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Bulb\_barbata ::::ATT GAG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA AGT  
 Bulb\_densa :::::AG :TC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Bulb\_striatella :::::AG :TC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Bulb\_sp\_nov\_1 :::::AG :TC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_littoralis :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Cross\_setifolia\_NT2 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA AGT  
 Cross\_setifolia\_NT3 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Cross\_setifolia\_NT1 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_neilsonii :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_cephalophora :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_cinnamometorum\_NSW :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_arnhemensis :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_compacta :::::AA :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_bisumbellata :::::AA :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_cinnamometorum\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_densa\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_dichotoma :::::AA :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_rara :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_pterygosperma\_WA1 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_lanceolata :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_microcarya\_WA1 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_nutans :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_pterygosperma\_NT :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_microcarya\_WA2 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_laxiglumis :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_polytrichoides :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_yelata :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_sieberiana :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_cericea :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_ferruginea :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_tristachya :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_tetragona\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_densa\_NT :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_schultzii :::::AG :CC TAA CAA AAA ATT GAT TCA AAA AAA AAG TCA AAA AAA :GT  
 Fimb\_tetragona\_Qld :::::AG :CC TAA CAA AAA ATT GAT TC: A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_cymosa :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Actinoschoenus\_NT2 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Bulb\_sp\_nov\_3 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Bulb\_sp\_nov\_2 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_pterygosperma\_WA2 :::::AG :CC TAA CAA AAA ACT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_punctata\_NT :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_punctata\_WA :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT  
 Fimb\_punctata\_NT1 :::::AG :CC TAA CAA AAA ATT GAT TCA A:: ::::: ::::: :::A AAA AAA :GT

Eleocharis\_cylindrostachys CAA ATT GAA GAT ATT TGA CA: ::::: ::::: ::::: ::::: ::::: :::T TTT  
 Schoenoplectus\_littoralis TAG ::::: TAA :AT :G: TTA AGA TAT TGA TAT ::::: ::::: :::T TAT  
 Bolboschoenus\_caldwellii TAG ::::: TCA :AT :G: TTA AGA TAT TGA TAT TAA ATT GAT ATT TAT  
 Arthrostylis\_aphylla\_WA CAA TGT TTA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Arthrostylis\_aphylla\_NT CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Actinoschoenus\_NT1 CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Actinoschoenus\_WA CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Abil\_oxytachya CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Abil\_vaginata CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Abil\_schoenoides CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Abil\_pachptera CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Abil\_ovata CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Bulb\_barbata CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Bulb\_densa CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Bulb\_striatella CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Bulb\_sp\_nov\_1 CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Fimb\_littoralis CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Cross\_setifolia\_NT2 CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Cross\_setifolia\_NT3 CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Cross\_setifolia\_NT1 CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Fimb\_neilsonii CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::C TAT  
 Fimb\_cephalophora CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT  
 Fimb\_cinnamometorum\_NSW CAA TGT TAA TAA TAT TGA TA: ::::: ::::: ::::: ::::: :::T TAT



Fimb_densa_NT	TG: :::: GTA ATA ATA AT: :::: ATA TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_schultzii	TG: :::: GTA ATG ATC AT: :::: ATA TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_tetragona_Qld	TG: :::: GTA ATG ATA AT: :::: ATC TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_cymosa	TG: :::: GTA ATG ATA GT: :::: ATA TAG AGA TTT TTC TCA TAG GCT TAG
Actinisochoenus_NT2	TG: :::: GTA ATA ATA :T: CAC CAA TAG AGA TTT TTT GCA TAT GCT TAG
Bulb_sp_nov_3	TG: :::: GTA ATA ATA :T: CA: ATA TAG AGA TTT ATT GCA TAT GCT TAG
Bulb_sp_nov_2	TG: :::: GTA ATA ATA :T: CA: ATA TAG AGA TTT ATT GCA TAT GCT TAG
Fimb_pterygosperma_WA2	TG: :::: GTA TCT CTA AT: :::: ATA TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_punctata_NT2	TG: :::: GTA ATG ATA AT: :::: ATA TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_punctata_WA	TG: :::: GTA ATG ATA AT: :::: ATC TAG AGA TTT TTA TCA TAT GCT TAG
Fimb_punctata_NT1	TG: :::: GTA ATG ATA AT: :::: ATA TAG AGA TTT TTA TCA TAT GCT TAG
Eleccharis_cylindrostachys	CTT TTC ATA AGA TAA GAT ATN GAT TAT GAA ATT CAT ATT TAT ATG AAT
Schoenoplectus_littoralis	ATT TT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bolboschoenus_caldwellii	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Arthrostylis_aphylla_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Arthrostylis_aphylla_NT	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Actinoschoenus_NT1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Actinoschoenus_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Abil_oxytachya	ATT AT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Abil_vaginata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Abil_schoenoides	ATT AT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Abil_pachptera	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Abil_ovata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_barbata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_densa	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_striatella	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_sp_nov_1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_littoralis	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Cross_setifolia_NT_2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Cross_setifolia_NT3	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Cross_setifolia_NT1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_neilsonii	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_cephalophora	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_cinnamometorum_NSW	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_arnhemensis	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_compacta	ATT AT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_bisumbellata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_cinnamometorum_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_densa_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_dichotoma	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_rara	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_pterygosperma_WA1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_lanceolata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_microcarya_WA1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_nutans	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_pterygosperma_NT	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_microcarya_WA2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_laxiglumis	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_polytrichoides	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_velata	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_sieberiana	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_cericea	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_ferruginea	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_tristachya	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_tetragona_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_densa_NT	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_schultzii	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_tetragona_Qld	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_cymosa	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Actinisochoenus_NT2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_sp_nov_3	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Bulb_sp_nov_2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_pterygosperma_WA2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_punctata_NT2	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_punctata_WA	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Fimb_punctata_NT1	ATT CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::
Eleocharis_cylindrostachys	TTA TAA TAT A''T TAT TAT ATT ::A AT: :::: :::: :::: :::: :::: :::
Schoenoplectus_littoralis	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Bolboschoenus_caldwellii	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Arthrostylis_aphylla_WA	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Arthrostylis_aphylla_NT	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Actinoschoenus_NT1	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Actinoschoenus_WA	:::: :::: :::: :::: :::: TTT C:: :::: :::: :::: :::: :::: :::: :::: :::
Abil_oxytachya	:::: :::: :::: :::: :::: TTT ATC ::T AA: :::: :::: :::: :::: :::: :::
Abil_vaginata	:::: :::: :::: :::: :::: TTT CTT ::A AT: :::: :::: :::: :::: :::: :::

### Appendix 3

Abil_schoencides	TTT ATC :T AA : : : : : :
Abil_pachptera	TTT CTT :A AT: : : : : : :
Abil_ovata	TTT CTT :A AT: : : : : : :
Bulb_barbata	TTT C:: : : : : : :
Bulb_densa	TTT C:: : : : : : :
Bulb_striatella	TTT C:: : : : : : :
Bulb_sp_nov_1	TTT C:: : : : : : :
Fimb_littoralis	TTT ATT :A AT: : : : : : :
Cross_setifolia_NT_2	TTT CTT :A AT: : : : : : :
Cross_setifolia_NT3	TTT CTT :A AT: : : : : : :
Cross_setifolia_NT1	TTT CTT :A AT: : : : : : :
Fimb_neilsonii	TTT ATT :A AT: : : : : : :
Fimb_cephalophora	TTT CTT :A AT: : : : : : :
Fimb_cinnamometorum_NSW	TTT CTA TAT AT: : : : : : :
Fimb_arnhemensis	TTT CTT :A AT: : : : : : :
Fimb_compacta	TTT ATT :A TT: : : : : : :
Fimb_bisumbellata	TTT CTT :A AT: : : : : : :
Fimb_cinnamometorum_WA	TTT CTA :T AT: : : : : : :
Fimb_densa_WA	TTT CTT :C TT: : : : : : :
Fimb_dichotoma	TTT CTT :A AT: : : : : : :
Fimb_rara	TTT CTT :A AT: : : : : : :
Fimb_pterygosperma_WA1	TTT CTT :A AT: : : : : : :
Fimb_lanceolata	TTT CTT :A AT: : : : : : :
Fimb_microcarya_WA1	TT: : : : : AT: : : : : : :
Fimb_nutans	TTT CTT :A AT: : : : : : :
Fimb_pterygosperma_NT	TTT CTT :A AT: : : : : : :
Fimb_microcarya_WA2	TT: : : : : AT: : : : : : :
Fimb_laxiglumis	TTT CTT :A AT: : : : : : :
Fimb_polytrichoides	TTT CTT :A GAT TCA CGT AAA ATT TTG CGA TAG
Fimb_velata	TTT CTT :A AT: : : : : : :
Fimb_sieberiana	TTT CTT :A AT: : : : : : :
Fimb_cericea	TTT CTT :A AT: : : : : : :
Fimb_ferruginea	TTT CTT :A AT: : : : : : :
Fimb_tristachya	TTT CTT :A AT: : : : : : :
Fimb_tetragona_WA	TTT CTT :C TT: : : : : : :
Fimb_densa_NT	TTT CTT :C TT: : : : : : :
Fimb_schultzii	TTT CTT :A AT: : : : : : :
Fimb_tetragona_Qld	TTT CTT :C TT: : : : : : :
Fimb_cymosa	TTT CTT :A AT: : : : : : :
Actinischoenus_NT2	TTT C:: : : : : : :
Bulb_sp_nov_3	TTT C:: : : : : : :
Bulb_sp_nov_2	TTT C:: : : : : : :
Fimb_pterygosperma_WA2	TTT CTT :A AT: : : : : : :
Fimb_punctata_NT:	TTT ATT :A TT: : : : : : :
Fimb_punctata_WA	TTT ATT :A TT: : : : : : :
Fimb_punctata_NT!	TTT ATT :A TT: : : : : : :
Eleocharis_cylindrostachys	AA TAT ATA TA: : : : : TT T:A TT T:A AAT : : : : AAT ATA TAA
Schoenoplectus_littoralis	TTT CTT :A AT: : : : : : :
Bolboschoenus_caldwellii	TTT CTT :A AT: : : : : : :
Arthrostylis_aphylla_WA	TTT CTT :A AT: : : : : : :
Arthrostylis_aphylla_NT	TTT CTT :A AT: : : : : : :
Actinoschoenus_NT1	TTT CTT :A AT: : : : : : :
Actinoschoenus_WA	TTT CTT :A AT: : : : : : :
Abil_oxytachya	:TC :TT AAA TAT ATA TTA A:G AAT ATT : : : : : ATA TTT
Abil_vaginata	:AT :TA TA: : : : : TA T:A TAT ATA TTA TT: : : : : :
Abil_schoenoides	:TC :TT A:: : : : : AA A:T ATA TTA : : AG ATG AAT ATA TAT
Abil_pachptera	:A: : : : : : : : : : : : : : : : : :
Abil_ovata	:AT :TA TA: : : : : TA A:G AAA ATG TAA TAT ATA ATA TTA CAT
Bulb_barbata	TTT CTT :A AT: : : : : : :
Bulb_densa	TTT CTT :A AT: : : : : : :
Bulb_striatella	TTT CTT :A AT: : : : : : :
Bulb_sp_nov_1	TTT CTT :A AT: : : : : : :
Fimb_littoralis	TTT CTT :A AT: : : : : : :
Cross_setifolia_NT_2	TTT CTT :A AT: : : : : : :
Cross_setifolia_NT3	TTT CTT :A AT: : : : : : :
Cross_setifolia_NT1	TTT CTT :A AT: : : : : : :
Fimb_neilsonii	TTT CTT :A AT: : : : : : :
Fimb_cephalophora	TTT CTT :A AT: : : : : : :
Fimb_cinnamometorum_NSW	TTT CTT :A AT: : : : : : :
Fimb_arnhemensis	TTT CTT :A AT: : : : : : :
Fimb_compacta	TTT CTT :A AT: : : : : : :
Fimb_bisumbellata	TTT CTT :A AT: : : : : : :
Fimb_cinnamometorum_WA	TTT CTT :A AT: : : : : : :
Fimb_densa_WA	TTT CTT :A AT: : : : : : :
Fimb_dichotoma	TTT CTT :A AT: : : : : : :
Fimb_rara	TTT CTT :A AT: : : : : : :

Fimb\_pterygosperma\_WA1 :AT ::::TA T:: :::: :::: :TA A:G AAT ATA TAA TAT AAT ATA TTC TA:  
 Fimb\_lanceolata :TT ::::TA T:: :::: :::: :TA T:T AAG AAF TAA TAG ATA TAT ATA TCT  
 Fimb\_microcarya\_WA1 :AT ::::TA T:: :::: :::: :TA T:T AAT ATA TAA TAG ATA TAT ATA TTA  
 Fimb\_nutans :AT ::::TA T:: :::: :::: :TA A:G AAT ATA TAA TAT C:: :::: :::: :::  
 Fimb\_pterygosperma\_NT :AT ::::TA T:: :::: :::: :TA A:G AAT ATA TAA TAT AAT ATA TTC TAT  
 Fimb\_microcarya\_WA2 :AT ::::TA T:: :::: :::: :TA T:T AAT ATA TAA TAG ATA TAT ATA TTA  
 Fimb\_laxiglumis :AT ::::TA T:: :::: :::: :TA T:T AAT ATA TAA TAG ATA TAT TA: :::  
 Fimb\_polytrichoides AAT ::::TA T:: :::: :::: :TA T:T AAT AGA TAA TAT AGA TAT TAA TAT  
 Fimb\_velata :AT ::::TA T:: :::: :::: :TA T:T AAT AGA TAA TAG ATA TAT ATA TAT  
 Fimb\_sieberiana :AT ::::TA T:: :::: :::: :TA T:T AAT ATA TAA TAG ATA TAT TA: :::  
 Fimb\_cericea :TT ::::TA T:: :::: :::: :TA T:T AAA AAA TAG ATA TAT ATA TAT ATA TAT  
 Fimb\_ferruginea :AT ::::TA T:: :::: :::: :AA A:T ATT ATA TAA TAT TTT ATT ATA TA:  
 Fimb\_tristachya :AT ::::TA T:: :::: :::: :TA TCT ATA TTA :::: :TAG ATA TAG ATA TAT  
 Fimb\_tetragona\_WA :CT ::::TA T:: :::: :::: :TA A:G AAG ATA :::: :::: :::: ATA TAT  
 Fimb\_densa\_NT :AT ::::TA T:: :::: :::: :TA T:A TAT ATA GAT :::: :::: AAT ATA TTA  
 Fimb\_schultzii :A: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_tetragona\_Qld :CT ::::TA T:: :::: :::: :TA A:G AAG ATA :::: :::: :::: ATA TAT  
 Fimb\_cymosa :TT ::::TA T:: :::: :::: :TA T:T AAG AAT TAA TAG ATA TAT ATA TCT  
 Actinischoenus\_NT2 :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Bulb\_sp\_nov\_3 :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Bulb\_sp\_nov\_2 :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_pterygosperma\_WA2 :AT ::::TA T:: :::: :::: :TA A:G AAT ATA TAA TAT AAT ATA TTC :::  
 Fimb\_punctata\_NT? :AT ::::TA T:: :::: :::: :TA A:T AAT A: :::: :::: :::: :::  
 Fimb\_punctata\_WA :AT :::: :::: :::: :::: :::: :::: :::: :::: :AT ATA TTC :::  
 Fimb\_punctata\_NT1 :AT ::::TA T:: :::: :::: :TA A:T AAT A: :::: :::: :::: :::  
  
 Eleocharis\_cylindrostachys TAT CTA TAT ATT :::: :::: :::: :::: :::: :::: :::: :::  
 Schoenoplectus\_littoralis :::: :AT ATG CTT CTA CTT :::: :::: :::: :::: TAA TAG A: :::: GCA TAT  
 Bolboschoenus\_caldwellii :::: :AT ATA CTT ATA TTT :::: :::: :::: :::: TAA TAT A: :::: :AG TAT  
 Arthrostylis\_aphylla\_WA :::: :AT ATT CTT ATA TAT :::: :::: :::: :::: GAA TAT A: :::: :TA TTC  
 Arthrostylis\_aphylla\_NT :::: :AT ATT CTT ATA TAT :::: :::: :::: :::: GAA TAT A: :::: :TA TTC  
 Actinoschoenus\_NT1 :::: :AT ATT CTT :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Actinoschoenus\_WA :::: :AT ATT CTT ATA TAT :::: :::: :::: :::: :::: GAA TAT A: :::: :TA TTC  
 Abil\_oxystachya TAT ATA TTT T'C :::: :::: :::: :::: :::: :::: :::: :::  
 Abil\_vaginata AAT ATA TTT T'T :::: :::: :::: :::: :::: :::: :::: :::  
 Abil\_schoenoides TAT ATT TTT T'C :::: :::: :::: :::: :::: :::: :::  
 Abil\_pachptera TAT ATA TAT T'T :::: :::: :::: :::: :::: :::: :::  
 Abil\_ovata TAT ATA TTT T'T :::: :::: :::: :::: :::: :::: :::  
 Bulb\_barbata :::: :AT C'T TGA AGA AGA GGA AGA AGA GAA TAT A: :::: :TA TAT  
 Bulb\_densa :::: :AT ATT C'T TTC TTT GAA AAA AAA AAA :::: :::: :::: :::  
 Bulb\_striatella :::: :AT ATT C'T TTC TTT :::: :::: :::: :::: TAA TAT A: :::: :TA TAT  
 Bulb\_sp\_nov\_1 :::: :AT ATT C'T TGA AGA ATA :::: :::: :::: GAA TAT A: :::: :TA TAT  
 Fimb\_littoralis :::: :AT ATT T'T :::: :::: :::: :::: :::: :::: :::: :::  
 Cross\_setifolia\_NT2 :::: :AT ATT T'T :::: :::: :::: :::: :::: :::: :::  
 Cross\_setifolia\_NT3 :::: :T ATA TAT A'T :::: :::: :::: :::: :::: :::  
 Cross\_setifolia\_NT1 :::: :T ATA TAT A'T :::: :::: :::: :::: :::: :::  
 Fimb\_neilsonii :::: :T ATA TAT T'T :::: :::: :::: :::: :::: :::  
 Fimb\_cephalophora :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_cinnamometorum\_NSW :::: :AT ATA :::: :::: :::: :::: :::: :::: :::  
 Fimb\_arnhemensis TAT ATA TAT A'T :::: :::: :::: :::: :::: :::  
 Fimb\_compacta TTT ATA TTT T'C :::: :::: :::: :::: :::: :::  
 Fimb\_pisumbellata :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_cinnamometorum\_WA :::: :AT ATA :::: :::: :::: :::: :::: :::  
 Fimb\_densa\_WA :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_dichotoma :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_rara :::: :AT ATA T'T :::: :::: :::: :::: :::: :::  
 Fimb\_pterygosperma\_WA1 :::: :A TAT T'T :::: :::: :::: :::: :::  
 Fimb\_lanceolata :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_microcarya\_WA1 TAT ATA GAT A'T :::: :::: :::: :::: :::  
 Fimb\_nutans TAT ATA TAT T'T :::: :::: :::: :::: :::  
 Fimb\_pterygosperma\_NT TAT ATA ATT T'T :::: :::: :::: :::  
 Fimb\_microcarya\_WA2 TAT ATA GAT A'T :::: :::: :::: :::: :::  
 Fimb\_laxiglumis :::: :T ATT T'T :::: :::: :::: :::: :::  
 Fimb\_polytrichoides :::: :::: :::: :::: :::: :::: :::  
 Fimb\_velata :::: :::: :::: :::: :::: :::: :::  
 Fimb\_sieberiana :::: :::: :::: :::: :::: :::: :::  
 Fimb\_cericea :::: :::: :::: :::: :::: :::: :::  
 Fimb\_ferruginea :::: :AT ATA T'T :::: :::: :::: :::: :::  
 Fimb\_tristachya :::: :::: :::: :::: :::: :::: :::  
 Fimb\_tetragona\_WA :::: :AT ATA T'M T :::: :::: :::: :::  
 Fimb\_densa\_NT :::: :::: :::: :::: :::: :::: :::  
 Fimb\_schultzii TAT ATA TAT T'M T :::: :::: :::: :::: :::  
 Fimb\_tetragona\_Qld :::: :AT ATA T'M T :::: :::: :::: :::  
 Fimb\_cymosa :::: :::: :::: :::: :::: :::: :::: :::  
 Actinischoenus\_NT2 :::: :AT ATT C'T ATA TAT :::: :::: GAA TAT A: :::: :TA TTC  
 Bulb\_sp\_nov\_3 :::: :AT ATT C'T TGA AGA ATA :::: :::: GAA TAT A: :::: :TA TAT  
 Bulb\_sp\_nov\_2 :::: :AT ATT C'T TGA AGA ATA :::: :::: GAA TAT A: :::: :TA TAT







Bolboschoenus\_caldwellii GAT CT: :::: :YT TTG CCA AAT ::G :AC AAA ATA GAA TGA ATT A:: :::  
 Arthrostylis\_aphylla\_WA AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Arthrostylis\_aphylla\_NT AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Actinoschoenus\_NT1 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Actinoschoenus\_WA AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Abil\_oxystachya :::: :::: :::: TTA CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Abil\_vaginata AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Abil\_schoenoides :::: :::: :::: TTA CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Abil\_pachptera AAT CT: :::: :YT TTG CCA CAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Abil\_ovata AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA AAG  
 TCT ATT TGC CTT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 TCT ATT TGC C:: :::: :A AAT ::G :AG AAA ATT GAA TGA ATT AGA :::  
 AAT CA: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 TCT ATT TGC CAT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATA AGA :::  
 AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_littoralis AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Cross\_setifolia\_NT2 AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Cross\_setifolia\_NT3 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Cross\_setifolia\_NT1 AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_neilsonii AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_cephalophora AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_cinnamometorum\_NSW AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_arnhemensis AAT CT: :::: :YT TTG TCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_compacta :::: :::: :::: TTA CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Fimb\_bisumbellata AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_cinnamometorum\_WA AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_densa\_WA AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_dichotoma AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT ATA :::  
 Fimb\_rara AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_pterygosperma\_WA1 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_lanceolata AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_microcarya\_WA1 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_nutans AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_pterygosperma\_NT AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_microcarya\_WA2 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_laxiglumis AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_polytrichoides AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_velata AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_sieberiana AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_cericea AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_ferruginea AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_tristachya AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA AAA TGA ATT AGA :::  
 Fimb\_tetragona\_WA AAT CT: :::: :YT TTG CCA AT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_densa\_NT AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_schultzii AAT CT: :::: :YT TTG CCA CAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_tetragona\_Qld AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_cymosa AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Actinoschoenus\_NT2 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 TCT ATT TGC CTT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Bulb\_sp\_nov\_3 TCT ATT TGC CTT TTG CCA AAT ::G :AA AAA ATT GAA TGA ATT AGA :::  
 Bulb\_sp\_nov\_2 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_pterygosperma\_WA2 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_punctata\_NT2 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_punctata\_WA AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Fimb\_punctata\_NT1 AAT CT: :::: :YT TTG CCA AAT ::G :AA AAA ATA GAA TGA ATT AGA :::  
 Eleocharis\_cylindrostachys T:A AGT T:A ATT :::: :::: A:: :::: TAG TGA A:T TTT TTT TC: :AC TTT  
 Schoenoplectus\_littoralis :::: :::: GAA ACT :::: :::: A:: :::: TAG TGA A:T TTT TTT TT: :AC TTT  
 Bolboschoenus\_caldwellii :::: :::: GAA ACT :::: :::: A:: :::: TAG TGA A:T TTT TTT TTT CAC TTT  
 Arthrostylis\_aphylla\_WA ::: A AGT GAA ACT :::: :::: A:: :::: TAG TGA ATT TTT TTT TT: :AC TTT  
 Arthrostylis\_aphylla\_NT ::: A AGT GAA ACT :::: :::: A:: :::: TAG TGA ATT TTT TTT TT: :AC TTT  
 Actinoschoenus\_NT1 ::: A AGT GAA ACT :::: :::: A:: :::: TAG TGA A:T TTT TTT TT: :AC TTT  
 Actinoschoenus\_WA ::: A AGT GAA ACT :::: :::: A:: :::: TAG TGA ATT TTT TTT TT: :AC TTT  
 Abil\_oxystachya ::: A AGT GAA ACT :::: :::: A:: :::: TAA TGA AAT TTT TT: :GAA TTT  
 Abil\_vaginata ::: A AGT GAA ACT :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Abil\_schoenoides ::: A AGT GAA ACT :::: :::: A:: :::: TAA TGA AAT TTT TT: :GAA TTT  
 Abil\_pachptera ::: A AGT GAA ACT :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Abil\_ovata TGA AGT GAA ACT :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Bulb\_barbata ::: A AGT GAA ACT GAA AGT ATA GTG TAG TGA A:: TTT TTT TT: CAC TTT  
 Bulb\_densa ::: A AGT GAA ACT :::: :::: A:: :::: TAG TGA A:T TTT TTT TT: CAC TTT  
 Bulb\_striatella ::: A AGT GAA ACI GAA AGT A:: :::: TAG TGA A:T TTT TTT TT: CAC TTT  
 Bulb\_sp\_ncv\_1 ::: A AGT GAA ACI :::: :::: A:: :::: TAG TGA A:: TTT TTT TT: CAC TTT  
 Fimb\_littoralis ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA AAT TTT TT: CAC TTT  
 Cross\_setifolia\_NT2 ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Cross\_setifolia\_NT3 ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Cross\_setifolia\_NT1 ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Fimb\_neilsonii ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA AAT TTT TTG ::: AAC TT:  
 Fimb\_cephalophora ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA ATT TTT TTT ::: CAC TTT  
 Fimb\_cinnamometorum\_NSW ::: A AGT GAA ACI :::: :::: A:: :::: TAA TGA ATT TTT TTT ::: CAC TTT

Fimb_arnhemensis	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_compacta	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTT ::: GAA TTT
Fimb_bisumbellata	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTT ::: CAC TTT
Fimb_cinnamometorum_WA	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TT: ::: CAC TTT
Fimb_densa_WA	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_dichotoma	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTT ::: CAC TTT
Fimb_rara	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_pterygosperma_WA1	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTT ::: AAC TTT
Fimb_lanceolata	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: CAC TTT
Fimb_microcarya_WA1	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_nutans	::A AGT GAA AGT :::: A:: :: TAG TGA AAT TTT TTG ::: AAC TTT
Fimb_pterygosperma_NT	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_microcarya_WA2	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: CAC TTT
Fimb_laxiglumis	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_polytrichoides	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTG ::: AAC TTT
Fimb_velata	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTT ::: AAC TTT
Fimb_sieberiana	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_cericea	::A AGT GAA AGT :::: A:: :: TAA TGA ATT TTT TTG ::: AAC TTT
Fimb_ferruginea	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_tristachya	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTG ::: AAC TTT
Fimb_tetragona_WA	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_densa_NT	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_schultzii	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_tetragona_Qld	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_cymosa	::A AGT GAA AGT :::: A:: :: TAA TGA GAT TTT TTG ::: AAC TTT
Actirischcenus_NT2	::A AGT GAA AGT :::: A:: :: TAG TGA A:T TTT TTG ::: AAC TTT
Bulb_sp_ncv_3	::A AGT GAA AGT :::: A:: :: TAG TGA A:: TTT TTG ::: AAC TTT
Bulb_sp_ncv_2	::A AGT GAA AGT :::: A:: :: TAG TGA A:: TTT TTG ::: AAC TTT
Fimb_pterygosperma_WA2	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_punctata_NT2	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_punctata_WA	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Fimb_punctata_NT1	::A AGT GAA AGT :::: A:: :: TAA TGA AAT TTT TTG ::: AAC TTT
Eleccharis_cylindrostachys	TTT :: ATC AAA AAA :::: :AA AG: ::: ::: ::: ::: :AA GAA ATG
Schencenoplectus_littoralis	TTC :: ATC AAA AAA :::: :AA AAA AGA AAG TGA AAA AAA AAA AAG
Bolboschoenus_caldwellii	TTC :: ATC AAA A:: TC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Arthrostylis_aphylla_WA	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Arthrostylis_aphylla_NT	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Actiroschoenus_NT1	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Actiroschoenus_WA	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Abil_oxytachya	TTC :: ATA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Abil_vaginata	::: :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Abil_schoenoides	TTC :: ATA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Abil_pachptera	TTC :: AAA AAA AA: CA: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Abil_ovata	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Bulb_barbata	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Bulb_densa	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Bulb_striatella	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Bulb_sp_nov_1	TTG :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_littoralis	TTC :: ATC AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Cross_setifolia_NT_2	::: :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Cross_setifolia_NT3	::: :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Cross_setifolia_NT1	::: :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_neilsonii	TTC :: AAA AAA AA: CCA AAA TAA AG: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_cephalophora	TTC :: AA AAA AAA AA: CC: ::: ::: ::: ::: ::: TAA ATA AAG AAG
Fimb_cinnamometorum_NSW	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_arnhemensis	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_compacta	TTC :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_bisumbellata	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_cinnamometorum_WA	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATT AAG AAG
Fimb_densa_WA	TTC :: AA CAA AAA AA: CCA AAA TAA AG: ::: ::: ::: ::: ::: AAA AAA ATA
Fimb_dichotoma	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_rara	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_pterygosperma_WA1	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_lanceolata	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_microcarya_WA1	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_nutans	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_pterygosperma_NT	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_microcarya_WA2	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_laxiglumis	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_polytrichoides	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_velata	TTC :: A AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_sieberiana	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_cericea	TTC :: AA AAA AAA AA: CC: ::: ::: ::: ::: ::: TAA ATA AAG AAG
Fimb_ferruginea	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_tristachya	CTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA ATA AAG AAG
Fimb_tetragona_WA	TTC :: AAA AAA AA: CC: ::: ::: ::: ::: ::: AAA AGA AAG AAG

Fimb_densa_NT	TTC :AA CAA A:A AA: CCA AAA TAA AG: :::: :::: :::: :::: :AA AAA ATA
Fimb_schultzii	TTC ::: AAA A:A AA: CA: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Fimb_tetragona_Qld	TTC ::: AAA A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Fimb_cymosa	TTC ::: AAA A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Actinischoenus_NT2	TTC ::: ATC A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Bulb_sp_nov_3	TTC ::: ATC A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Bulb_sp_nov_2	TTC ::: ATC A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Fimb_pterygosperma_WA2	TTC ::: AAA A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAA
Fimb_punctata_NT2	TTC ::: AAA A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Fimb_punctata_WA	TTC ::: AAA A:A AAA CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Fimb_punctata_NT1	TTC ::: AAA A:A AA: CC: :::: :::: :::: :::: :::: AAA ATA AAG AAG
Eleocharis_cylindrostachys	AAA TAT TTA G:A AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Schoenoplectus_littoralis	AAA AAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Bolboschoenus_caldwellii	AAA AAT TTA GGA AAT CAA ATG GGC TTT TTA CAA ATG GGC :::: :::: TTT
Arthrostylis_aphylla_WA	AAA TAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Arthrostylis_aphylla_NT	AAA TAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Actinoschoenus_NT1	AAA TAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Actinoschoenus_WA	AAA TAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Abil_oxystachya	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Abil_vaginata	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Abil_schoenoides	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Abil_pachptera	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Abil_ovata	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Bulb_barbata	AAA TAT TTA GGA AAT CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Bulb_densa	AAA TAT TTA GGA AAA CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Bulb_striatella	AAA TAT TTA GGA AAA CTA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Bulb_sp_nov_1	AAA TAT TTA GGA AAA CAA ATG GGC :::: :::: :::: :::: :::: :::: TTT
Fimb_littoralis	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Cross_setifolia_NT_2	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Cross_setifolia_NT3	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Cross_setifolia_NT1	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_neilsonii	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_cephalophora	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_cinnamometorum_NSW	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_arnhemensis	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_compacta	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_bisumbellata	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_cinnamometorum_WA	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_densa_WA	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_dichotoma	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_rara	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_pterygosperma_WA1	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_lanceolata	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_micrcarya_WA1	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_nutans	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_pterygosperma_NT	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_micrcarya_WA2	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_laxiglumis	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_polytrichoides	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_velata	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_sieberiana	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_cericea	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_ferruginea	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_tristachya	AAA TAT TTA GCA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_tetragona_WA	AAA TAT TTA GCA AAT CGA ATG GAC :::: :::: :::: :::: :::: TTT TTA TTT
Fimb_densa_NT	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_schultzii	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_tetragona_Qld	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_cymosa	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Actinischoenus_NT2	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Bulb_sp_nov_3	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Bulb_sp_nov_2	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_pterygosperma_WA2	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_punctata_NT2	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_punctata_WA	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Fimb_punctata_NT1	AAA TAT TTA GGA AAT CAA ATG GAC :::: :::: :::: :::: :::: :::: TTT
Eleocharis_cylindrostachys	CT: TTT GGG GAT AGA GGG ACT TGA ACC CTC ACG ATT CAA AAA A:T CGA
Schoenoplectus_littoralis	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TAA AAA A:T CGA
Bolboschoenus_caldwellii	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TAA AAA A:T CGA
Arthrostylis_aphylla_WA	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TCA AAA A:T CGA
Arthrostylis_aphylla_NT	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TCA AAA A:T CGA
Actinoschoenus_NT1	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TCA AAA A:T CGA
Actinoschoenus_WA	TT: ATT GGG GAT AGA GGG ACT TGA ACC CTC ATG ATT TCA AAA A:T CGA
Abil_oxystachya	TT: ATT GGG GAT AGA GGG ACT CGA ACC CTC ATG ATT TCA AAA A:T CGA
Abil_vaginata	TT: ATT GGG GA' AGA GGG ACT TGA ACC CTC ATG ATT TCA AAA A:T CGA



Fimb_pterygosperma_WA1	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_lanceolata	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_microcarya_WA1	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_nutans	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_pterygosperma_NT	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_microcarya_WA2	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_laxiglumis	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_polytrichoides	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_velata	C:G GAT TTT CCT CTT ACT CTA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_sieberiana	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_cericea	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_ferruginea	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_tristachya	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_tetragona_WA	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_densa_NT	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_schultzii	CGG GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_tetragona_Qld	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_cymosa	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Actinischoenus_NT2	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Bulb_sp_nov_3	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Bulb_sp_nov_2	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_pterygosperma_WA2	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_punctata_NT2	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_punctata_WA	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Fimb_punctata_NT1	C:G GAT TTT CCT CTT ACT ATA AAT TTC ATT GTT GTC GAT ATT GAC ATG
Eleocharis_cylindrostachys	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTP A:: ::A TTC AAA TTA
Schoenoplectus_littoralis	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTG A:: ::T TTA TCA TCA
Bolboschoenus_caldwellii	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTG A:: ::T TTA TCA TCA
Arthrostylis_aphylla_WA	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Arthrostylis_aphylla_NT	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Actinoschoenus_NT1	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT AGA C:: ::T GTG TCT TCA
Actinoschoenus_WA	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Abil_oxytachya	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Abil_vaginata	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Abil_schoenoides	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Abil_pachptera	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Abil_ovata	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Bulb_barbata	TAG AAT GGA C'C TCC CTT TAT T:: :CT CCT TTA TTT ATA TTT TCA TCA
Bulb_densa	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA TTT AGA TTT TCA TCA
Bulb_striatella	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA TTT AGA TTT TCA TCA
Bulb_sp_nov_1	CAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA TTT AGA TTT TCA TCA
Fimb_littoralis	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Cross_setifolia_NT_2	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Cross_setifolia_NT3	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Cross_setifolia_NT1	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_neilsonii	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_cephalophora	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_cinnamometorum_NSW	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA CTA TCA
Fimb_arnhemensis	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_compacta	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_bisumbellata	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTC TCA TCA
Fimb_cinnamometorum_WA	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA CTA TCA
Fimb_densa_WA	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_dichotoma	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_rara	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_pterygosperma_WA1	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_lanceolata	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_microcarya_WA1	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA CCA TCA
Fimb_nutans	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A ATA TCA TCA
Fimb_pterygosperma_NT	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_microcarya_WA2	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA CCA TCA
Fimb_laxiglumis	TAG AAA GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_polytrichoides	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_velata	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_sieberiana	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_cericea	CAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_ferruginea	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_tristachya	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_tetragona_WA	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_densa_NT	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_schultzii	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_tetragona_Qld	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Fimb_cymosa	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA
Actinischoenus_NT2	TAG AAT GGA C'C TCT CTT TAT T:: :CT CCT AGA C:: ::T GTG TCT TCA
Bulb_sp_nov_3	CAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA TTT AGA TTT TCA TCA
Bulb_sp_nov_2	CAG AAT GGA C'C TCT CTT TAT T:: :CT CCT TTA TTT AGA TTT TCA TCA

Fimb\_pterygosperma\_WA2 TAG AAT GGA CTC TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA  
 Fimb\_punctata\_NT2 TAG AAT GGA CTC TCT CTT TAT CCT CCT TTA A:: ::A TTA TCA TCA  
 Fimb\_punctata\_WA TAG AAT GGA CTC TCT CTT TAT T:: :CT CCT TTA A:: ::A TTA TCA TCA  
 Fimb\_punctata\_NT1 TAG AAT GGA CTC TCT CTT TAT CCT CCT TTA A:: ::A TTA TCA TCA

Eleocharis\_cylindrostachys TTT TTT CAA TCT AAA AAA CTA TAG AAT TTA GAA AAT ::: ::A A:: :::  
 Schoenoplectus\_littoralis TTT TTT CAA TCT AAC AAA CCC TAT AAT GAA TAG AAT ::: ::A TAG AAT  
 Bolboschoenus\_caldwellii TTT TTT CAA TCT AAC AAA CTC TAT AAT GAA TAT AAT ::: ::A GAT A::  
 Arthrostylis\_aphylla\_WA TTT TTT CAA TCT AAA AAA CTC TAT GAT TGA TAA AAT CAA TTA A:: :::  
 Arthrostylis\_aphylla\_NT TTT TTT CAA TCT AAA AAA CTC TAT GAT TGA TAA AAT CAA TTA A:: :::  
 Actinoschoenus\_NT1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TGA TAA AAT CAA TCA A:: :::  
 Actinoschoenus\_WA TTT TTT CAA TCT AAA AAA CTC TAT GAT TGA GAA AAT CAA TTA A:: :::  
 Abil\_cystachya TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TTC A:: :::  
 Abil\_vaginata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TTA A:: :::  
 Abil\_schoenoides TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TTC A:: :::  
 Abil\_pachptera TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Abil\_ovata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TTA A:: :::  
 Bulb\_barbata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Bulb\_densa TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Bulb\_striatella TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Bulb\_sp\_nov\_1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_littoralis TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Cross\_setifolia\_NT\_2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Cross\_setifolia\_NT3 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Cross\_setifolia\_NT1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_neilsonii TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_cephalophora TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_cinnamometorum\_NSW TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_arnhemensis TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_compacta TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_bisumbellata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_cinnamometorum\_WA TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_densa\_WA TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_dichotoma TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_rara TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_pterygosperma\_WA1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_lanceolata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_nicrocarya\_WA1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_nutans TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_pterygosperma\_NT TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_nicrocarya\_WA2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_laxiglumis TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_pelytrichoides TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_velata TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_sieberiana TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_cericea TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_ferruginea TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_tristachya TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_tetragona\_WA TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_dense\_NT TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_schultzii TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_tetragona\_Qld TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_cymosa TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Actinischcenus\_NT2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Bulb\_sp\_ncv\_3 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Bulb\_sp\_ncv\_2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_pterygosperma\_WA2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_punctata\_NT2 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_punctata\_WA TTT TTT CAA TCT AAA AAA CTC CAT GAT TAA TAA AAT CAA TCA A:: :::  
 Fimb\_punctata\_NT1 TTT TTT CAA TCT AAA AAA CTC TAT GAT TAA TAA AAT CAA TCA A:: :::

Eleocharis\_cylindrostachys :AT TCT ATT GAT TAC CTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Schoenoplectus\_littoralis TAT TCT ATT CTC TA: CTC AAA CTT GAG TTT TTT TCA TTG AAC :::  
 Bolboschoenus\_caldwellii TAT TCA ATT GAT TA: CTC AAA ATT GAG TTT TTT TCA TTG AAC :::  
 Arthrostylis\_aphylla\_WA :AT TCA ATT GAT TA: TTC AAA ATT GAA TTC :TT TTT TCA TTG AAC :::  
 Arthrostylis\_aphylla\_NT :AT TCA ATT GAT TA: TTC AAA ATT GAA TTC :TT TTT TCA TTG AAC :::  
 Actinoschoenus\_NT1 :AT TCC ATT GAT TA: TTC AAA ATT GAA TTC :TT TTT TCA TTG AAC :::  
 Actinoschoenus\_WA :AT TCA ATT GAT TA: TTC AAA ATT GAA TTC :TT TTT TCA TTG AAC :::  
 Abil\_cystachya :AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Abil\_vaginata :AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Abil\_schoenoides :AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Abil\_pachptera :AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Abil\_cvata :AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Bulb\_barbata :AT TCA ATT GAT TT: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
 Bulb\_densa :AT TCA ATT GAT TT: TTC AAA ATT GAG TTC :TG TTT TCA TTG AAC :::  
 Bulb\_striatella :AT TCA ATT GAT TT: TTC AAA ATT GAG TTC :TG TTT TCA TTG AAC :::  
 Bulb\_sp\_nov\_1 :AT TCA ATT GAT TT: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::

*Fimb\_littoralis* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Cross\_setifolia\_NT\_2* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Cross\_setifolia\_NT3* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Cross\_setifolia\_NT1* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_neilsonii* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_cephalophora* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC TGC  
*Fimb\_cinnamometorum\_NSW* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_arnhemensis* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_compacta* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_bisumbellata* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_cinnamometorum\_WA* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_densa\_WA* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_dichotoma* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_rara* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_pterygosperma\_WA1* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_lanceolata* ::::: AT TCA ATT GAT TA: TTC AAA ATT TAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_microcarya\_WA1* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_nutans* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_pterygosperma\_NT* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_microcarya\_WA2* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_laxiglumis* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_polytrichoides* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_velata* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_sieberiana* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_cerisea* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_ferruginea* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_tristachya* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_tetragona\_WA* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_densa\_NT* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_schultzii* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_tetragona\_Qld* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_cymosa* ::::: AT TCA ATT GAT TA: TTC AAA ATT TAG TTC :TT TTT TCA TTG AAC :::  
*Actinischoenus\_NT2* ::::: AT TCC ATT GAT TA: TTC AAA ATT GAA TTC :TT TTT TCA TTG AAC :::  
*Bulb\_sp\_nov\_3* ::::: AT TCA ATT GAT TT: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Bulb\_sp\_nov\_2* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_pterygosperma\_WA2* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_punctata\_NT2* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_punctata\_WA* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
*Fimb\_punctata\_NT1* ::::: AT TCA ATT GAT TA: TTC AAA ATT GAG TTC :TT TTT TCA TTG AAC :::  
  
*Eleocharis\_cylindrostachys* ::::: CTT CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Schoenoplectus\_littoralis* ::::: TT CAT ATT CGA ATG AAT TCA CCA ::::: ::::: :::::  
*Bolboschoenus\_caldwellii* ::::: TT CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Arthrostylis\_aphylla\_WA* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Arthrostylis\_aphylla\_NT* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Actinoschoenus\_NT1* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Actinoschoenus\_WA* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Abil\_oxystachya* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Abil\_vaginata* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Abil\_schoenoides* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Abil\_pachptera* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Abil\_ovata* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Bulb\_barbata* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Bulb\_densa* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Bulb\_striatella* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Bulb\_sp\_nov\_1* ::::: TG CAT ATT CGA ATC AAT TCA CCA ::::: ::::: :::::  
*Fimb\_littoralis* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Cross\_setifolia\_NT\_2* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Cross\_setifolia\_NT3* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Cross\_setifolia\_NT1* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_neilsonii* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_cephalophora* ::::: ATA TTT TTC ATT GAA CTG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_cinnamometorum\_NSW* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_arnhemensis* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_compacta* ::::: TG CAT ATT CGA ATC AAT TCA CCT TAC A::: :::::  
*Fimb\_bisumbellata* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_cinnamometorum\_WA* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_densa\_WA* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC G::: :::::  
*Fimb\_dichotoma* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_rara* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC ATA AAG :::::  
*Fimb\_pterygosperma\_WA1* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_lanceolata* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_microcarya\_WA1* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_nutans* ::::: TG CAT ATT CAA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_pterygosperma\_NT* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_microcarya\_WA2* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::  
*Fimb\_laxiglumis* ::::: TG CAT ATT CGA ATC AAT TCA CCA TAC A::: :::::

Fimb_polytrichoides	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_velata	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_sieberiana	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_cericea	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_ferruginea	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC ATA AAG
Fimb_tristachya	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_tetragona_WA	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_densa_NT	::: :::: :::: :::: :::: :TG CAT ATT TGA ATC AAT TCA CCA TAC G:: :::
Fimb_schultzii	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_tetragona_Qld	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_cymosa	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAT A:: :::
Actinischoenus_NT2	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA :::: :::: :::
Bulb_sp_nov_3	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA :::: :::: :::
Bulb_sp_nov_2	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA :::: :::: :::
Fimb_pterygosperma_WA2	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_punctata_NT2	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_punctata_WA	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Fimb_punctata_NT1	::: :::: :::: :::: :::: :TG CAT ATT CGA ATC AAT TCA CCA TAC A:: :::
Eleocharis_cylindrostachys	TAA AGG ATT CGT TAT TCT TTT TTA TAA ITT TTT GAA TTC ATT TAA ATT
Schoenoplectus_littoralis	TAA AGG ATT CCT TTT TTT TTA CAA AAT TTT ATT AAT TAT GTA ATT ATT
Bolboschoenus_caldwellii	TAA AGG ATT CAT TAT TTT TTG ACA TAA TTT TTT GAA TTC ATC AAA ATT
Arthrostylis_aphylla_WA	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Arthrostylis_aphylla_NT	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Actinoschoenus_NT1	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Actinoschoenus_WA	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Abil_pxystachya	TAA AGA ACG CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Abil_vaginata	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Abil_schoenoides	TAA AGA ATG CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Abil_pachptera	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Abil_ovata	TAA AGA ATT CAT TAT TTT TTG ATA GAA TTT TTT GAA TTC ATT AAA ATT
Bulb_barbata	TAA AGA ATT CAT TAT TTT TTG ATA TAA ATT TTT GAA TTC ATT AAA ATT
Bulb_densa	TAA AGA ATT CAT TAT TTT TTG ATG TAA ATT TTT GAA TTC ATT AAA ATT
Bulb_striatella	TAA AGA ATT CAT TAT TTT TTG ATG TAA ATT TTT GAA TTC ATT AAA ATT
Bulb_sp_nov_1	TAA AGA ATT CAT TAT TTT TTG ATA TAA ATT TTT GAA TTC ATT AAA ATT
Fimb_littoralis	TAA AGA ATT CAT TAT TTT TTG ATA TAA ATT TTT GAA TTC ATT AAA ATT
Cross_setifolia_NT_2	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Cross_setifolia_NT3	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Cross_setifolia_NT1	TAA AGA ATT CAT TAT ITT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_neilsonii	TAA AGA ATT CAT TAT ITT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_cephalophora	TAA AGA ATT CAT TAT ITT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_cinnamometorum_NSW	TAA AGA ATT CAT TAT CTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_arnhemensis	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_compacta	TAA AGA ACG CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_bisumbellata	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_cinnanomelorum_WA	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_densa_WA	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_dichotoma	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_rara	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_pterygosperma_WA1	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_lanceolata	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_microcarya_WA1	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_nutans	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_pterygosperma_NT	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_microcarya_WA2	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_laxiglumis	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_polytrichoides	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_velata	TAA AGA ATT CAT TAT TCT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_sieberiana	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_cericea	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_ferruginea	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_tristachya	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_tetragona_WA	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_densa_NT	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_schultzii	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_tetragona_Qld	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_cymosa	TAA AAA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Actinischoenus_NT2	TAA AGA ATT CAT TAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Bulb_sp_nov_3	TAA AGA ATT CAT TAT TTT TTG ATA TAA ATT TTT GAA TTC ATT AAA ATT
Bulb_sp_nov_2	TAA AGA ATT CAT TAT TTT TTG ATA TAA ATT TTT GAA TTC ATT AAA ATT
Fimb_pterygosperma_WA2	TAA AGA ATT CAT TTT TTG ATA GAA ATT TTT GAA TTC ATT AAA ATT
Fimb_punctata_NT2	TAA AGA ATT CAT TAT TTT TTG ATA AAA ATT TTT GAA TTC ATT AAA ATT
Fimb_punctata_WA	TAA AGA ATT CAT TAT TTT TTG ATA AAA ATT TTT GAA TTC ATT AAA ATT
Fimb_punctata_NT1	TAA AGA ATT CAT TAT TTT TTG ATA AAA ATT TTT GAA TTC ATT AAA ATT

Eleocharis\_cylindrostachys CAA :AA ACT TCC TAT TCC ATA :::: :::: ATC AAT A:: :::: :::: :::: :::G  
 Schoenoplectus\_littoralis TAA TAA ATT TAA TTA CAT TCC ATA AAT ATA AAA A:: :::: :::: :::: :::G





Fimb_densa_NT	ATA TAT ATC ATG AA:	:A TGT TGG
Fimb_schultzii	ATA TAT ATG ATT AA:	:A TGT TGG
Fimb_tetragona_Qld	ATA TAT ATG ATT AA:	:A TGT TGG
Fimb_cymosa	ATA TAT ATG ATT AA:	:A TGT TGG
Actinischcenus_NT2	ATA TAT ATG ATT AA:	:A CGT TGG
Bulb_sp_ncv_3	ATA TAT ATT ATT AA:	:A TGT TGC
Bulb_sp_ncv_2	ATA TAT ATG ATA AA:	:A TGT TGG
Fimb_pterygosperma_WA2	ATA TAT ATG ATA AA:	:A TGT TGG
Fimb_punctata_NT2	ATA TAT ATG ATA AA:	:A TGT TGG
Fimb_punctata_WA	ATA TAT ATG ATA AA:	:A TGT TGG
Fimb_punctata_NT1	ATA TAT ATG ATA AA:	:A TGT TGG
Eleocharis_cylindrostachys	ATT CAT TCA GTA TAT ATC ::::: :A A:: :C A:T ACA TTT TTG GTA TAG	
Schoenoplectus_littoralis	ATT AA: TCA GTA TAA TCA ATT ATT A::: :G G:T ACG TCC TTG GTA TAG	
Bolboschoenus_caldwellii	ATT AA: TCA GTA TAT ATA ::::: :T A:: :C G:T ACG TCT TTC GTA TAG	
Arthrostylis_aphylla_WA	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Arthrostylis_aphylla_NT	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Actinoschcenus_NT1	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Actinoschcenus_WA	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Abil_oxytachya	ATT AA: TCA GTA TCC ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Abil_vaginata	ATT AA: TCA GTA TAT ATA ::::: :A ATA TAC G:T ACG TCT TTG GTA TAG	
Abil_schoenoides	ATT AA: TCA GTA TCC ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Abil_pachptera	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Abil_ovata	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Bulb_barbata	ATT AA: TCA GTA TGT ATA ::::: :A A:: :C T:T ACG TCT TTG GTA TAG	
Bulb_densa	ATT AA: TCA GTA TCT ATA ::::: :A T:: :C T:T ACG TCT TTG GTA TAG	
Bulb_striatella	ATT AA: TCA GTA TGT ATA ::::: :A T:: :C TAT ACG TCT TTG GTA TAG	
Bulb_sp_ncv_1	::::: :TA TGT ATA ::::: :A A:: :C T:T ACG TCT TTG GTA TAG	
Fimb_littoralis	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Cross_setifolia_NT_2	ATT AA: TCA GTA TAT ATA ::::: :A ATA AAC G:T ACG TCT TTG GTA TAG	
Cross_setifolia_NT3	ATT AA: TCA GTA TAT ATA ::::: :A ATA TAC G:T ACG TCT TTG GTA TAG	
Cross_setifolia_NT1	ATT AA: TCA GTA TAT ATA ::::: :A ATA TAC G:T ACG TCT TTG GTA TAG	
Fimb_neilschii	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_cephalophora	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_cinnamometorum_NSW	ATT AA: TCA GTA TAA CTA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_arnhemensis	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG ATA TAG	
Fimb_compacta	ATT AA: TCA GTA TCC ATA ::::: :A A:: :C G:T ATG TGT TTG GTA TAG	
Fimb_bisumbellata	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_cinnamometorum_WA	ATT AA: TCA GTA TAA CTA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_densa_WA	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_dichotoma	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_rara	ATT AA: TCA GTA TAT AGA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_pterygosperma_WA1	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_lanceolata	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_micrccarya_WA1	ATT AA: TTA GTA TAA CTA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_nutans	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_pterygosperma_NT	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_micrccarya_WA2	ATT AA: TTA GTA TAA CTA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_laxiglumis	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_polytrichoides	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_velata	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_sieberiana	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_cericea	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_ferruginea	ATT AA: TCA GTA TAT AGA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_tristachya	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_tetragona_WA	ATT AA: TCA GTA TAT AAA ::::: :A A:: :C C:T ACG TCT TTG GTA TAG	
Fimb_densa_NT	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_schultzii	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_tetragona_Qld	ATT AA: TCA GTA TAT AAA ::::: :A A:: :C C:T ACG TCT TTG GTA TAG	
Fimb_cymosa	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Actinischcenus_NT2	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Bulb_sp_ncv_3	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Bulb_sp_ncv_2	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_pterygosperma_WA2	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_punctata_NT2	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_punctata_WA	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Fimb_punctata_NT1	ATT AA: TCA GTA TAT ATA ::::: :A A:: :C G:T ACG TCT TTG GTA TAG	
Eleocharis_cylindrostachys	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TCG GGA GAT AAA TTC TAG CAA	
Schoenoplectus_littoralis	ACA GCT ATC CT: ::::: :TT CTC TTA :TC TCG AGA GAT AAA TTC TAG CAA	
Bolboschoenus_caldwellii	ACG GCT ATC CT: ::::: :TT CTC TTG :TC TCG AGA GAC AAA TTC TAG CAA	
Arthrostylis_aphylla_WA	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	
Arthrostylis_aphylla_NT	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	
Actinoschcenus_NT1	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	
Actinoschcenus_WA	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	
Abil_oxytachya	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	
Abil_vaginata	ACG GCT ATC CT: ::::: :TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA	

Abil\_schoenoides ACG GCT ATC CT: :: : TT ATC TTA :TC TTG ATA GAT AAA TTC TAT CAA  
 Abil\_pachptera ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Abil\_cvata ACG GCT ATT CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Bulb\_barbata ACG GCT ATC CT: :: : TT ATC TTA :TC TCC AGA GAT AAA TTC TAG CAA  
 Bulb\_densa ACG GCT ATC CT: :: : TT ATC TTA :TC TCG AGA GAT AAA TTC TAG CAA  
 Bulb\_striatella ACG GCT ATC CT: :: : TT ATC TTA :TC TCG AGA GAT AAA TTC TAG CAA  
 Bulb\_sp\_nov\_1 ACG GCT ATT CT: :: : TT ATC TTA :TC TCG AGA GAT AAA TTC TAG CAA  
 Fimb\_littoralis ACG GCT ATC CT: :: : TT ATC TTA :TT TTG AGA GAT AAA TTC TAG CAA  
 Cross\_setifolia\_NT2 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Cross\_setifolia\_NT3 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTG TAG CAA  
 Cross\_setifolia\_NT1 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_neilsonii ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cephalophora ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cinnamometorum\_NSW ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA GGA TAG CAA  
 Fimb\_arnhemensis ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_compacta ACG GCT ATC CT: :: : TT ATC TTA :TC TTG CTA GAT AAA TTC TAG CAA  
 Fimb\_bisumbellata ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cinnamometorum\_WA ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA GGA TAG CAA  
 Fimb\_censa\_WA ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cichotoma ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_rara ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_pterygosperma\_WA1 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_lanceolata ACG GCT ATC CT: :: : TT ATC TTA :TC TTG TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_microcarya\_WA1 ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTG TAG CAA  
 Fimb\_nutans ACG GCT ATC CTA TCC TTT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_pterygosperma\_NT ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_microcarya\_WA2 ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_laxiglumis ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_polytrichoides ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_velata ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_sieberiana ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cericea ACG GCT ATT CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_ferruginea ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_tristachya ACG GCT ATC CT: :: : TT ATC T:A :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_tetragona\_WA ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_densa\_NT ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_schultzii ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_tetragona\_Qld ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_cymosa ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Actinischoenus\_NT2 ACG GCT ATC CT: :: : TT ATC TTA :TC TTG AGA GAT AAA TTC AAG CAA  
 Bulb\_sp\_nov\_3 ACG GCT ATT CT: :: : TT ATC TTA :TC TCG AGA GAT AAA TTC TAG CAA  
 Bulb\_sp\_nov\_2 ACG GCT ATT CT: :: : TT ATC TTA :TC TCG AGA GAT AAA TTC TAG CAA  
 Fimb\_pterygosperma\_WA2 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_punctata\_NT2 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_punctata\_WA ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA  
 Fimb\_punctata\_NT1 ACG GCT ATC CT: :: : TT ATG TTA :TC TTG AGA GAT AAA TTC TAG CAA

Eleocharis\_cylindrostachys TGC AAC ATC ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Schoenoplectus\_littoralis TGC AAC ATA ATA AAC TCT T:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Bolboschoenus\_caldwellii TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Arthrcstylis\_aphylla\_WA TGC AAC ACA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Arthrcstylis\_aphylla\_NT TGC AAC ACA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Actinschoenus\_NT1 TGC AAC ACA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Actinschoenus\_WA TGC AAC ACA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Abil\_cvystachya TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Abil\_vaginata TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Abil\_schoenoides TGC AAC ATA AAA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Abil\_pachptera TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Abil\_cvata TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Bulb\_barbata TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Bulb\_densa TAC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Bulb\_striatella TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Bulb\_sp\_nov\_1 TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_littoralis TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Cross\_setifolia\_NT2 TGC AAC ATA ATA AAC TCT ATT CGA ATA AAC TCT ATT CCT TAG AAT AGC  
 Cross\_setifolia\_NT3 TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Cross\_setifolia\_NT1 TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_neilsonii TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_cephalophora TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_cinnamometorum\_NSW TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_arnhemensis TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_compacta TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_bisumbellata TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_cinnamometorum\_WA TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_densa\_WA TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_cichotoma TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC  
 Fimb\_rara TGC AAC ATA ATA AAC TCT A:: :: : :: : :: : :: : :: : TT CGT TAG AAT AGC

Fimb\_pterygosperma\_WA1 TGC AAC AGA ATA AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_lanceolata TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_microcarya\_WA1 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_nutans TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_pterygosperma\_NT TGC AAC AGA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_microcarya\_WA2 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_laxiglumis TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_polytrichoides TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_velata TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_sieberiana TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_cericea TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_ferruginea TGC AAC AAA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_tristachya TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_tetragona\_WA TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_densa\_NT TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_schultzii TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_tetragona\_Qld TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_cymosa TGC AAC ACA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Actinischcenus\_NT2 TGC AAC ACA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Bulb\_sp\_ncv\_3 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Bulb\_sp\_ncv\_2 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_pterygosperma\_WA2 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_punctata\_NT2 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_punctata\_WA TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC  
 Fimb\_punctata\_NT1 TGC AAC ATA AT<sub>A</sub> AAC TCT A:: :::: :::: :::: :TT CGT TAG AAT AGC

Eleocharis\_cylindrostachys TTC CAT CGA GTC TCT GCA CCT ATC CTT TTT AT: :::: :::: :::: :T ATA GAT  
 Schoenoplectus\_littoralis TTC CAT CGA GTC TCT GCA CCT ATC CTT TTT AT: :::: :::: :::: :T ATA AAA  
 Bolboschoenus\_caldwellii TTC CAT CGA GTC TCT GCA CCT ATC CTT TTT TG: :::: :::: :::: :T ATA GAA  
 Arthrostylis\_aphylla\_WA TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT C:::  
 Arthrostylis\_aphylla\_NT TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT C:::  
 Actinoschcenus\_NT1 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTG :::  
 Actinoschcenus\_WA TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTG :::  
 Abil\_oxystachya TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Abil\_vagirata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :A TTT :::  
 Abil\_schoenooides TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Abil\_pachptera TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Abil\_ovata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Bulb\_barbata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TGC ACC TAT CCT CTT :::  
 Bulb\_dense TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT TGC ACC TAT CCT CTT :::  
 Bulb\_striatella TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT TGC ACC TAT CCT CTT :::  
 Bulb\_sp\_ncv\_1 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT TGC ACC TAT CCT CTT :::  
 Fimb\_littoralis TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Cross\_setifolia\_NT\_2 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Cross\_setifolia\_NT3 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Cross\_setifolia\_NT1 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_neilsonii TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_cephalophora TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_cinnamometorum\_NSW TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_arnhemensis TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_compacta TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_bisumbellata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_cinnamometorum\_WA TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_densa\_WA TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_dichotoma TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_rara TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_pterygosperma\_WA1 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_lanceolata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_microcarya\_WA1 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_nutans TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_pterygosperma\_NT TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_microcarya\_WA2 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_laxiglumis TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_polytrichoides TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_velata TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_sieberiana TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_cericea TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_ferruginea TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_tristachya TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_tetragona\_WA TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_densa\_NT TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_schultzii TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_tetragona\_Qld TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTT :::  
 Fimb\_cymosa TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTG :::  
 Actinischcenus\_NT2 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT AT: :::: :::: :::: :T TTG :::  
 Bulb\_sp\_nov\_3 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT TGC ACC TAT CCT CTT :::  
 Bulb\_sp\_nov\_2 TTC CAT CGA GTC TCT GCA CCT ATC CTC TTT TGC ACC TAT CCT CTT :::



Fimb\_littoralis ::: ::: :TA TA: ::: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Cross\_setifolia\_NT\_2 ::: ::: :TA TA: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Cross\_setifolia\_NT3 ::: ::: :AA AAA AAA AAA TAT ATA TAT AAT TAT AAT TTT CCT :::  
 Cross\_setifolia\_NT1 ::: ::: :AA AAA AAA AAA TAT ATA TAT AAT TAT AAT TTT CCT :::  
 Fimb\_neilsonii ::: ::: :AA AAA TAT ATA TAT ATA TAT ATA TAT ATA A:T TTT TTT :::  
 Fimb\_cephalophora ::: :AT ATA TA: ::: ::: ::: ::: : TAA ::: :TT TTT TTC :::  
 Fimb\_cinnamometorum\_NSW ::: :A ATA TA: ::: ::: ::: ::: : TAT ATT ATT TTT TTT :::  
 Fimb\_arnhemensis ::: :A AAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_compacta ::: :TA TA: ::: ::: ::: ::: : TAT ::: A:T TTT TTT :::  
 Fimb\_bisumbellata ::: :A AAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_cinnamometorum\_WA ::: :A ATA TA: ::: ::: ::: ::: : TAT ATT ATT TTT TTT :::  
 Fimb\_densa\_WA ::: :AT ATA TA: ::: ::: ::: ::: : :T ATC ATT TTT TTT :::  
 Fimb\_dichotoma ::: :A AAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_rara ::: ::: ::: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Fimb\_pterygosperma\_WA1 ::: :TA TA: ::: ::: ::: ::: : TAT ::: C:A ATT TTT :::  
 Fimb\_lanceolata ::: :TA TA: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Fimb\_microcarya\_WA1 ::: :AA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_nutans ::: :A ATA TA: ::: ::: ::: ::: : TAT ATA G:T TTT TTT :::  
 Fimb\_pterygosperma\_NT ::: :TA TA: ::: ::: ::: ::: : TAT ::: C:A ATT TTT :::  
 Fimb\_microcarya\_WA2 ::: :AA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_laxiglumis ::: :A AAA AA: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Fimb\_polytrichoides ::: :T AAA AA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_velata ::: :A AAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_sieberiana ::: :A GAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_cericea ::: :AT ATA TA: ::: ::: ::: ::: : TAT AAT T:T TTT TTC :::  
 Fimb\_ferruginea ::: ::: ::: ::: ::: ::: ::: : TAT ATA A:T TTT TTT :::  
 Fimb\_tristachya ::: :A AGA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_tetragona\_WA ::: :TA TA: ::: ::: ::: ::: : TAT AAT T:T TTT TTC :::  
 Fimb\_densa\_NT ::: :AT ATA TA: ::: ::: ::: ::: : TAT ::: C ATT TTT TTT :::  
 Fimb\_schultzii ::: :A AAA TA: ::: ::: ::: ::: : TAT ATA ATT TTT TTT :::  
 Fimb\_tetragona\_Old ::: :TA TA: ::: ::: ::: ::: : TAT AAT T:T TTT TTC :::  
 Fimb\_cymosa ::: :AAA TA: ::: ::: ::: ::: : TA TAT ATA A:T TTT TTT :::  
 Actinisc Schoenus\_NT ::: :AT ATA TA: ::: ::: ::: ::: : TAT ::: A ATT TAT TTT :::  
 Bulb\_sp\_nov\_3 ::: :GA AA: ::: ::: ::: ::: : TAT AGA A:T TTT TTT :::  
 Bulb\_sp\_nov\_2 ::: :GA AA: ::: ::: ::: ::: : TAT AGA A:T TTT TTT :::  
 Fimb\_pterygosperma\_WA2 ::: :TA TA: ::: ::: ::: ::: : TAT ::: C:A ATT TTT :::  
 Fimb\_punctata\_NT2 ::: ::: ::: ::: ::: ::: ::: : AT TCT ATA T:A TAT TTT :::  
 Fimb\_punctata\_WA ::: ::: ::: ::: ::: ::: ::: : AT TCT ATA T:A TAT TTT :::  
 Fimb\_punctata\_NT1 ::: ::: ::: ::: ::: ::: ::: : AT TCT ATA T:A TAT TTT :::  
  
 Eleocharis\_cylindrostachys ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: : TCG TAT CTA  
 Schoenoplectus\_littoralis TAG AAA TAT ATA GAA TAG AAT ATA TAT ATA TAT AAT ATT TTT TTT  
 Bolboschoenus\_calidwellii ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Arthrcstylis\_aphylla\_WA ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Arthrcstylis\_aphylla\_NT ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Actinc Schoenus\_NT1 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Actinc Schoenus\_WA ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Abil\_cystachya ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Abil\_vaginata ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Abil\_schoencides ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Abil\_pachptera ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Abil\_ovata ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Bulb\_barbata ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Bulb\_densa ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Bulb\_striatella ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Bulb\_sp\_ncv\_1 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_litteralis ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Cross\_setifolia\_NT\_2 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Cross\_setifolia\_NT3 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Cross\_setifolia\_NT1 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_neilsonii ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_cephalophora ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_cinnamometorum\_NSW ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_arnhemensis ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_compacta ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_bisumbellata ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_cinnamometorum\_WA ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_densa\_WA ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_dichotoma ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_rara ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_pterygosperma\_WA1 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_lanceolata ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_microcarya\_WA1 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_nutans ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_pterygosperma\_NT ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_microcarya\_WA2 ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :  
 Fimb\_laxiglumis ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: ::: :

### Appendix 3

*Eleocharis\_cylindrostachys* AAT TCC AGG G\*T :: TCT CTG AAT TTG AG: AAG TAA CAC TTA GCG AGT  
*Schoenoplectus\_litoralis* AAT TCC AGG G\*T :: TCT CTG AAT :TT CGA AGT TAA CAC TTA GCA AGT

Bolboschoenus\_caldwellii AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Arthrostylis\_aphylla\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Arthrostylis\_aphylla\_NT AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Actinoschoenus\_NT1 AAT TCC AGG GAT GTG TCT CTG ATT :TG :::: :::: :::: :::: :::: :::  
 Actinoschoenus\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA :::: :::: :::: :::  
 Abil\_oxystachya AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GTA AGA  
 Abil\_vaginata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GTA AGA  
 Abil\_schoenoides AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GTA AGA  
 Abil\_pachptera AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Abil\_cvata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Bulb\_barbata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Bulb\_densa AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Bulb\_striatella AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Bulb\_sp\_nov\_1 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_littoralis AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Cross\_setifolia\_NT\_2 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Cross\_setifolia\_NT3 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Cross\_setifolia\_NT1 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_neilsonii AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_cephalophora AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_cinnamometorum\_NSW AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_arnhemensis AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_compacta AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_bisumbellata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_cinnamometorum\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_densa\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_dichotoma AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_rara AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_pterygosperma\_WA1 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_lanceolata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_microcarya\_WA1 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_nutans AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_pterygosperma\_NT AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_microcarya\_WA2 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_laxiglumis AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_polytrichoides AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_yelata AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_sieberiana AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_cericea AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_ferruginea AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_tristachya AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_tetragona\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_densa\_NT AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_shultzii AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_tetragona\_Old AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_cymosa AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Actinischoenus\_NT1 AAT TCC AGG GA: GTG TCT CTG ATT :TG :::: :::: :::: :::: :::  
 Bulb\_sp\_nov\_3 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Bulb\_sp\_nov\_2 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_pterygosperma\_WA2 AAT TCC AGG GTT :::: GCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_punctata\_NT2 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_punctata\_WA AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT  
 Fimb\_punctata\_NT1 AAT TCC AGG GTT :::: TCT CTG AAT :TT GGA AGT TAA CAC TTA GCA AGT

Eleocharis\_cylindrostachys ATT T:: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Schoenoplectus\_littoralis TTC CAT ACC AAG GCT CAA TTC AAT GTA AGT CCG TAG CGC CT: :::: :::  
 Bolboschoenus\_caldwellii TTC CAT ACC AAG GCT CAA TCC AAT GTA AGT CCG TAG CGT CT: ACC GAT  
 Arthrostylis\_aphylla\_WA TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGC :T: ACC GAT  
 Arthrostylis\_aphylla\_NT TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT  
 Actinischoenus\_NT1 :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Actinischoenus\_WA :::: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Abil\_cxystachya TT: :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Abil\_vaginata :::: :::: :::: :::: :::: :::: :::: :::: :::  
 Abil\_schoenoides TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT  
 Abil\_pachptera TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CCT ACC GAT  
 Abil\_cvata TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGC C: :::: :::  
 Bulb\_barbata TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT  
 Bulb\_densa TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CCC CTT ACC GAT  
 Bulb\_striatella TTC CAT ACC AAG GCT CA: :::: :::: :::: :::: :::  
 Bulb\_sp\_nov\_1 TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT  
 Fimb\_littoralis ITC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGC C: :::: :::  
 Cross\_setifolia\_NT\_2 PTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT  
 Cross\_setifolia\_NT3 PTC CAT ACC AAG GCT CAG CAG C: :::: :::: :::: :::: :::  
 Cross\_setifolia\_NT1 FCC ATC C: :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_neilsonii :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_cephalophora :::: :::: :::: :::: :::: :::: :::: :::  
 Fimb\_cinnamometorum\_NSW TTC CAT ACC AAG GCT CAA TGC AA: :::: :GT CCG TAG CGT CT: ACC GAT

### Appendix 3

Fimb\_arnhemensis  
 Fimb\_compacta  
 Fimb\_bisumbellata  
 Fimb\_cinnamometorum\_WA  
 Fimb\_densa\_WA  
 Fimb\_dichotoma  
 Fimb\_rara  
 Fimb\_pterygosperma\_WA1  
 Fimb\_lanceolata  
 Fimb\_microcarya\_WA1  
 Fimb\_nutans  
 Fimb\_pterygosperma\_NT  
 Fimb\_microcarya\_WA2  
 Fimb\_laxiglumis  
 Fimb\_polytrichoides  
 Fimb\_velata  
 Fimb\_sieberiana  
 Fimb\_cericea  
 Fimb\_ferruginea  
 Fimb\_tristachya  
 Fimb\_tetragona\_WA  
 Fimb\_densa\_NT  
 Fimb\_schultzii  
 Fimb\_tetragona\_Qld  
 Fimb\_cymosa  
 Actinischoenus\_NT2  
 Bulb\_sp\_nov\_3  
 Bulb\_sp\_nov\_2  
 Fimb\_pterygosperma\_WA2  
 Fimb\_punctata\_NT2  
 Fimb\_punctata\_WA  
 Fimb\_punctata\_NT1

Eleocharis\_cylindrostachys : : : : : : ) 010 000 010 110 000 000 111 001 000 110 000 001  
 Schoenoplectus\_litoralis : : : : : : ) 010 001 110 000 000 000 000 000 000 000 000 000  
 Bolboschoenus\_caldwellii TTC GA: : : : : ) 020 001 110 000 000 000 000 000 000 000 000 000  
 Arthrostylis\_aphylla\_WA TGG : : : : : ) 001 000 010 000 000 000 000 000 000 000 000 000  
 Arthrostylis\_aphylla\_NT TTC GA: : : : : ) 000 C00 010 000 000 000 000 000 000 000 000 000  
 Actinoschoenus\_NT1 : : : : : : ) 000 000 010 000 000 000 000 000 000 000 000 000  
 Actinoschoenus\_WA : : : : : : ) 000 000 010 000 000 000 000 000 000 000 000 000  
 Abil\_cystachya : : : : : : ) 000 000 000 101 000 100 110 101 100 111 000 000  
 Abil\_vaginata : : : : : : ) 000 000 000 110 000 000 111 001 001 110 010 000  
 Abil\_schoenoides : : : : : : ) 000 000 000 101 000 100 110 101 100 111 000 000  
 Abil\_pachptera : : : : : : ) 000 010 000 ?10 000 000 1?0 000 000 000 000 000  
 Abil\_cvata : : : : : : ) 000 000 000 110 000 000 111 001 001 110 010 000  
 Bulb\_barbata TTC GAC CAC CT) 000 000 000 000 000 000 000 000 000 000 000 000  
 Bulb\_densa TTC GA: : : : ) 000 000 010 000 000 000 000 000 000 000 000 000  
 Bulb\_striatella : : : : : : ) 000 000 110 000 000 000 000 000 000 000 000 000  
 Bulb\_sp\_ncv\_1 TTC GA: : : : ) 0 OCC 000 010 000 000 030 000 000 000 000 000  
 Fimb\_littoralis : : : : : : ) 0 000 000 000 010 000 000 100 000 000 000 000 000  
 Cross\_setifolia\_NT\_2 TTC GA: : : : ) C 000 000 000 110 000 000 111 001 001 110 000 000  
 Cross\_setifolia\_NT3 : : : : : : ) 1 000 000 000 110 000 000 111 001 001 110 010 000  
 Cross\_setifolia\_NT1 : : : : : : ) 1 000 000 000 110 000 000 111 001 001 110 010 000  
 Fimb\_neilsonii : : : : : : ) 0 000 000 000 110 000 000 110 000 000 000 000 000  
 Fimb\_cephalophora : : : : : : ) 0 000 000 000 110 000 010 110 011 001 110 000 100  
 Fimb\_cinnamometorum\_NSW TTC GA: : : : ) 0 000 000 000 100 100 000 110 000 000 000 000 000  
 Fimb\_arnhemensis : : : : : : ) 0 000 000 000 110 000 000 110 001 100 111 000 000  
 Fimb\_compacta : : : : : : ) 0 000 000 000 100 010 000 110 000 000 000 000 000  
 Fimb\_bisumbellata TTC GA: : : : ) 0 101 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_cinnamometorum\_WA TTC GA: : : : ) 0 000 000 000 100 100 000 110 000 000 000 000 000  
 Fimb\_densa\_WA TTC GG: : : : ) 0 010 000 000 100 001 000 111 001 001 110 010 001  
 Fimb\_dichotoma TTC GA: : : : ) 0 001 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_rara TTC GA: : : : ) 0 000 000 000 110 000 000 111 001 001 110 000 000  
 Fimb\_pterygosperma\_WA1 TTC GA: : : : ) 0 000 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_lanceolata : : : : : : ) 0 100 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_microcarya\_WA1 : : : : : : ) 0 000 000 000 110 000 000 110 011 001 110 000 000  
 Fimb\_nutans : : : : : : ) 0 000 000 000 110 000 000 111 0C1 100 111 000 000  
 Fimb\_pterygosperma\_NT TTC GCC: : : : ) 0 000 000 000 110 000 000 111 001 100 111 000 000  
 Fimb\_microcarya\_WA2 : : : : : : ) 0 000 000 001 100 100 000 110 011 001 110 001 000  
 Fimb\_laxiglumis TT: : : : : ) 0 000 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_polytrichoides TTC GA: : : : ) 0 000 100 000 100 000 000 110 011 001 110 001 000  
 Fimb\_velata : : : : : : ) 0 100 100 000 110 000 000 110 011 001 110 001 000  
 Fimb\_sieberiana TTC GA: : : : ) 0 101 000 000 110 000 000 110 011 001 110 001 000  
 Fimb\_cericea : : : : : : ) 0 000 000 000 110 000 000 110 011 001 110 000 100  
 Fimb\_ferruginea TTC GA: : : : ) 0 000 000 000 110 000 000 111 001 C10 110 000 000  
 Fimb\_tristachya TTC GA: : : : ) 0 000 000 000 110 000 000 111 001 C10 110 000 000  
 Fimb\_tetragona\_WA TTC GA: : : : ) 0 000 000 000 100 001 001 111 001 001 110 001 000

### Appendix 3

Fimb_densa_NT	::: :::: :::: ::0 C10 000 000 10C 001 000 111 001 001 110 000 001
Fimb_schultzii	::: :::: :::: ::0 000 010 000 110 000 000 120 000 000 000 000 000
Fimb_tetragona_Qld	TTC GAA T: ::0 000 000 000 100 001 001 111 001 100 110 100 000
Fimb_cymosa	::: :::: :::: ::0 000 000 000 110 000 010 110 011 001 110 000 000
Actinischoenus_NT2	::: :::: :::: ::0 000 000 010 000 000 000 000 000 000 000 000 000 000
Bulb_sp_nov_3	TTC GG: ::: ::0 000 000 010 000 000 000 000 000 000 000 000 000 000
Bulb_sp_nov_2	TTC GA: ::: ::0 000 000 010 000 000 000 000 000 000 000 000 000 000
Fimb_pterygosperma_WA2	TTC GA: ::: ::0 000 000 000 110 000 000 111 001 100 111 000 000 000
Fimb_punctata_NT2	TTC GAC ::: ::0 000 000 000 100 010 000 111 001 100 110 001 000 000
Fimb_punctata_WA	TTC GA: ::: ::0 000 000 000 100 010 000 110 000 000 000 000 000 000
Fimb_punctata_NT1	TTC GAC ::: ::0 000 000 000 100 010 000 111 001 100 110 001 000 000
 Eleocharis_cylindrostachys	100 000 000 000 000 000 000 000 001 000 001 010 001 010 000 000 000
Schoenoplectus_littoralis	001 010 101 000 000 000 000 000 100 001 000 001 010 000 000 000 100
Bolboschoenus_caldwellii	001 010 100 000 000 000 000 000 100 000 000 003 001 010 000 000 100
Arthrostylis_aphylla_WA	001 011 000 001 000 110 000 000 000 000 000 000 000 010 000 000 000
Arthrostylis_aphylla_NT	001 011 000 001 000 110 000 000 000 000 000 000 000 010 000 000 000
Actinoschoenus_NT1	000 000 000 030 000 000 000 000 000 000 000 000 100 010 000 000 000
Actinoschoenus_WA	001 011 000 001 000 110 000 000 000 000 000 000 000 010 000 000 000
Abil_oxystachya	100 000 000 000 000 000 000 000 100 000 000 000 000 000 000 000 000
Abil_vaginata	100 000 000 000 000 000 000 000 001 000 000 000 000 000 000 000 010
Abil_schoenooides	100 000 000 000 000 000 000 000 100 000 000 000 000 000 000 000 000
Abil_pachptera	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 001
Abil_cvata	100 000 000 000 000 000 000 000 001 000 000 000 000 000 000 000 100
Bulb_barbata	000 010 100 000 010 101 000 010 010 000 000 000 010 010 000 000 001
Bulb_densa	001 000 110 000 100 101 000 010 000 000 000 010 010 000 000 000 001
Bulb_striatella	001 010 110 000 100 101 000 000 010 000 000 010 010 000 000 000 001
Bulb_sp_nov_1	000 110 100 000 011 101 000 010 000 000 000 010 010 010 000 000 001
Fimb_littoralis	010 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 010
Cross_setifolia_NT_2	010 000 000 000 000 000 000 000 001 000 000 000 000 000 000 000 010
Cross_setifolia_NT3	000 000 000 001 000 000 000 000 001 000 000 000 000 000 000 000 010
Cross_setifolia_NT1	030 000 000 001 000 000 000 000 001 000 000 000 000 000 000 000 010
Fimb_neilsonii	030 000 000 000 000 000 000 000 000 000 000 000 100 000 000 000 000
Fimb_cephalophora	000 000 000 000 000 000 000 001 000 000 100 000 000 000 000 000 000
Fimb_cinnamometorum_NSW	000 000 001 100 000 000 001 000 000 000 000 000 100 000 000 000 000
Fimb_arnhemensis	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_compacta	100 000 000 000 000 000 000 000 100 000 000 000 000 000 000 000 000
Fimb_bisumbellata	000 000 000 010 100 000 100 000 000 000 000 000 000 000 000 000 000
Fimb_cinnamometorum_WA	000 000 000 001 100 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_densa_WA	000 000 000 000 000 000 000 000 010 000 000 010 110 000 000 000 000
Fimb_dichotoma	000 000 000 000 000 000 000 000 001 000 000 000 000 000 000 000 000
Fimb_zara	010 000 000 000 000 030 000 000 000 000 000 000 000 000 000 001 100
Fimb_pterygosperma_WA1	000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_lanceolata	000 000 000 000 000 000 000 001 000 000 000 000 000 000 000 000 000
Fimb_microcarya_WA1	100 000 000 000 000 000 000 001 000 000 000 000 000 000 000 000 000
Fimb_nutans	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_pterygosperma_NT	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_microcarya_WA2	100 000 000 000 000 000 000 001 000 000 000 000 000 000 000 000 000
Fimb_laxiglumis	000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_polytrichoides	000 000 000 010 000 000 100 000 000 000 000 000 000 000 000 000 000
Fimb_velata	000 000 000 000 000 100 000 000 000 000 000 000 000 000 000 000 000
Fimb_sieberiana	000 000 000 010 100 000 001 000 000 000 000 000 000 000 000 000 000
Fimb_cericea	000 000 000 000 000 000 000 001 000 000 100 000 000 000 000 000 100
Fimb_ferruginea	010 000 000 000 000 000 000 000 000 000 000 000 000 000 000 001 100
Fimb_tristachya	000 000 000 001 000 000 000 001 000 000 000 000 000 000 000 001 100
Fimb_tetragona_WA	010 000 000 000 000 000 000 000 000 000 000 000 000 000 001 000 000
Fimb_densa_NT	000 000 000 000 000 000 000 000 010 000 000 010 110 000 000 000 000
Fimb_schultzii	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_tetragona_Qld	010 000 000 000 000 000 000 000 000 000 000 000 001 000 000 000 000
Fimb_cymosa	000 000 000 030 000 000 000 000 000 000 010 000 000 000 000 000 000
Actinischoenus_NT?	001 011 000 000 000 100 000 000 000 000 000 000 100 010 000 000 000
Bulb_sp_nov_3	000 110 100 000 001 101 000 010 000 000 000 010 010 010 010 000 001
Bulb_sp_nov_2	000 110 100 000 001 101 000 010 000 000 000 010 010 010 010 000 001
Fimb_pterygosperma_WA2	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_punctata_NT2	000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_punctata_WA	100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
Fimb_punctata_NT1	000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000
 Eleocharis_cylindrostachys	110 010 000 000
Schoenoplectus_littoralis	111 000 000 010
Bolboschoenus_caldwellii	101 000 000 010
Arthrostylis_aphylla_WA	000 001 000 001
Arthrostylis_aphylla_NT	000 001 000 001
Actinoschoenus_NT1	000 001 000 100
Actinoschoenus_WA	000 000 000 001
Abil_oxystachya	000 000 000 000
Abil_vaginata	000 000 001 000

Abil_schoenoides	000 000 000 000
Abil_pachptera	000 000 010 000
Abil_cvata	000 000 000 000
Bulb_barbata	000 000 000 000
Bulb_densa	000 000 100 000
Bulb_striatella	000 000 100 000
Bulb_sp_nov_1	000 000 100 000
Fimb_littoralis	000 000 000 000
Cross_setifolia_NT_2	000 000 000 000
Cross_setifolia_NT_3	000 000 001 001
Cross_setifolia_NT1	000 000 001 001
Fimb_neilsonii	000 000 001 000
Fimb_cephalophora	000 010 000 000
Fimb_cinnamometorum_NSW	000 000 001 000
Fimb_arnhemensis	000 000 010 000
Fimb_compacta	000 010 000 000
Fimb_bisumbellata	000 000 010 000
Fimb_cinnamometorum_WA	000 000 000 000
Fimb_densa_WA	000 001 000 000
Fimb_dichotoma	000 000 010 000
Fimb_rara	000 100 000 000
Fimb_pterygosperma_WA1	000 010 000 000
Fimb_lanceolata	000 000 000 000
Fimb_microcarya_WA1	000 000 000 000
Fimb_nutans	000 000 000 000
Fimb_pterygosperma_NT	000 010 000 000
Fimb_microcarya_WA2	000 000 000 000
Fimb_laxiglumis	000 000 010 000
Fimb_polytrichoides	000 000 001 000
Fimb_velata	000 000 010 000
Fimb_sieberiana	000 000 000 000
Fimb_cericea	000 000 000 000
Fimb_ferruginea	000 100 000 000
Fimb_tristachya	000 000 000 000
Fimb_tetragona_WA	000 000 000 000
Fimb_densa_NT	000 001 000 000
Fimb_schultzii	000 000 010 000
Fimb_tetragona_Qld	000 000 000 000
Fimb_cymosa	000 000 010 000
Actini_schoenus_NT2	000 001 000 100
Bulb_sp_nov_3	000 000 100 000
Bulb_sp_nov_2	000 000 100 000
Fimb_pterygosperma_WA2	000 010 000 000
Fimb_punctata_NT2	000 000 000 000
Fimb_punctata_WA	000 000 000 000
Fimb_punctata_NT1	000 000 000 000

#### **Appendix 4. Data set for phylogenetic analysis of ITS**

Nexus file format with 53 terminal taxa and 878 characters.

## Appendix 4

Fimb\_ferruginea GTA ACG CA: AAA CCG CT: GGG GAG G:A ATG TTC TCC TCG GCC C:: AAC  
 Fimb\_tristachya GTA ATG CA: AAG CTG CT: GAG TGG G:A ACG TTC TCC TCA GCC C:: AAC  
 Fimb\_tetragona\_WA GTA ATG CA: AAG CTG CT: GAG GAA G:A ACC TTC TCC TCA GCC C:: AAC  
 Fimb\_densa\_NT GTA ATG CA: ATG CCG CT: GAG GAG G:A ATG TTC TTC TCA GCC CCC AAC  
 Fimb\_schultzii GTA ATG CA: AAG CCG CT: GAG GAG G:A ATG TTC TCC TCA GCC C:: AAC  
 Fimb\_tetragona\_Qld GTA ATG CA: AAG CTG CT: GAG GAG G:A ACC TTC TCC TCA GCC C:: AAC  
 Fimb\_cymosa GTA ATG CA: AAG CTG CT: GAG GAG G:A ACG TTC TCC TCA GCC C:: AAC  
 Fimb\_acuminata GTA ATG CA: AAG CTG CT: GAG GAG G:A ATG TTC TCC TCA GCC C:: AAC  
 Fimb\_pauciflora GTA ATA CA: AAG TTG CT: GAG GAG G:A ATG TTC TCC TCG GCC C:: AAC  
 Fimb\_polytrichoides\_2 GTA ATG CA: AAA CTG CT: GAG GGG G:A ATG FTC TCC TCA GCC C:: TAC  
 Cross\_setifolia\_WA1 GTA ATG CA: AAG CTG CT: GAG TAG G:A ATG FTC TCC TCA GCC C:: AAC  
 Croos\_setifolia\_WA2 GTA ATG CA: AAG CTG CT: GAG TAG G:A ATG FTC TTC TCA GCC C:: AAC

Eleocharis\_cylindrostachys CGA CCC CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: GTG CTG GTC GTG  
 Schoenocleptus\_littoralis :GG CCC T: :::: :::: :::: :::: :::: :::: :::: :::: :::: GTG CTG GTC AT:  
 Bolboschoenus\_caldwellii :GG CCT T: :::: :::: :::: :::: :::: :::: :::: :::: :::: GTG CTG GTC AT:  
 Arthrostylis\_a\_WA CGG CCC CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG CTG GTC GCG  
 Arthrostylis\_aphylla\_NT CGG CCC CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG CTG GTC GTG  
 Actinoschoenus\_NT1 CGG CCT CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG CTG GTC GTG  
 Actinoschoenus\_WA CGG CCT CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG CTG GTC GTG  
 Abil\_oxytachya CGG CCT CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG TCG GTC GTG  
 Abil\_vaginata CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: :::: ATG ATG GTT GCG  
 Abil\_schoerooides CGG CCT CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG TCG GTC GTG  
 Abil\_pachptera CGT CCT CG: :::: :::: :::: :::: :::: :::: :::: :::: :::: ACG TTG GTC GTG  
 Abil\_cvata CGG CCT CRA CCT TCT GTG TCT TTT :::: :::: CGG C: ATG TYG GGT GTG  
 Bulb\_barbata CGG CCC CT: :::: :::: :::: :::: :::: :::: :::: :::: :::: ATG TCG GCT GTG  
 Bulb\_densa CG: CCC CGG :::: :::: :::: :::: :::: :::: :::: :::: ATG CTG GCC GCG  
 Bulb\_striatella CGG :CC CGG :::: :::: :::: :::: :::: :::: :::: :::: ATG CTG GCT GTG  
 Bulb\_sp\_nov\_1 CGC TCC CGG CCT THT ATG CTT CCG CAC AAG CGG CAT ACG TCG GCC GTG  
 Cross\_setifolia\_NT\_2 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: :::: ATG ATG GTT GCG  
 Fimb\_littoralis CGG :CC TCG :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Cross\_setifolia\_NT3 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG ATG GTT GCG  
 Cross\_setifolia\_NT1 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG ATG GTT GCG  
 Fimb\_neilsonii CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_cephalophora CGA GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_cinnamometorum\_NSW CGG ::T TG G C: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GGT  
 Fimb\_arnhemensis CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ACG TTG CTT GCG  
 Fimb\_compacta CGA GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_bisumbellata C:G GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTT  
 Fimb\_cinnamometorum\_WA CGG ::T TG G C: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GGT  
 Fimb\_densa\_WA CGA GCC TT: :::: :::: :::: :::: :::: :::: :::: :::: ATA TTG GTT ACG  
 Fimb\_dichotoma CGG G:C TCA :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTT  
 Fimb\_rara CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TGG GTT GTG  
 Fimb\_pterygosperma\_WA1 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_lanceolata CGA GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_microcarya\_WA1 CG: GTC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GGT  
 Fimb\_nutans CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GCG  
 Fimb\_pterygosperma\_NT CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_microcarya\_WA2 C:G GTC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GGT  
 Fimb\_laxiglumis C:G TCC TC: :::: :::: :::: :::: :::: :::: :::: :::: GTG TTG GTC GTG  
 Fimb\_polytrichoides CGG :CC TCA :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTC  
 Fimb\_velata CGG :CC TCA :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTT  
 Fimb\_sieberiana CGG :CC TCA :::: :::: :::: :::: :::: :::: :::: :::: GTG CTG GTT GTT  
 Fimb\_cericea CGG GCC TCA :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_ferruginea CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TGG GTT GTG  
 Fimb\_tristachya C:G GTC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTT  
 Fimb\_tetragona\_WA CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_densa\_NT CGG GCC TT: :::: :::: :::: :::: :::: :::: :::: :::: ATA TTG GT: ACG  
 Fimb\_schultzii CGG GCC TT: :::: :::: :::: :::: :::: :::: :::: :::: AGG TTG GTT GCG  
 Fimb\_tetragona\_Qld CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTG  
 Fimb\_cymosa CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ACG TTG GTT GTG  
 Fimb\_acuminata CGA GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GCA  
 Fimb\_pauciflora CGG GCC TT: :::: :::: :::: :::: :::: :::: :::: :::: ATG TCG GTT GCG  
 Fimb\_polytrichoides\_2 CGG :CC TCA :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GTC  
 Cross\_setifolia\_WA1 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GCG  
 Croos\_setifolia\_WA2 CGG GCC TC: :::: :::: :::: :::: :::: :::: :::: :::: ATG TTG GTT GCG

Eleocharis\_cylindrostachys :GT GTC GGA ACA :CG GCG TGG GTT GAC GCC AAG GAA :TA C:A TG: TTT  
 Schoenocleptus\_littoralis :GT GTC GGA ATA :CG GCG CAG GAT GAC GCC AAG GAA :CA C:A TA: TTT  
 Bolboschoenus\_caldwellii :GT GTC GGA ATA :CG GCG CAG GAT GAC GCC AAG GAA :CA C:A TA: TTT  
 Arthrostylis\_a\_WA :GT GTC GGA ATA :CG GCG CGG AAT GAC GCC AAG GAA :TA C:A GA: TTT  
 Arthrostylis\_aphylla\_NT :GC GTC GGA ATA :CG GCG CGG AAC GAC GCC AAG GAA :CA C:A GA: TT:  
 Actinoschoenus\_NT1 :CT GTC GGA ATA :CG GCG CGG AAT GAC GCC AAG GAA :TA C:A GA: TT:  
 Actinoschoenus\_WA :GT GTC GGA ATA :CG GCG CGG AAT GAC GCC AAG GAA :TA C:A GA: TT:  
 Abil\_oxytachya :GT ATC GGA ATA :CG GCG CGG ACT GTC GCC AAG GAA :CA TTA GA: TAT  
 Abil\_vaginata :GC ACC GGA ATA :CG GCG CGG ATT GTC GCC AAG GAA :TA TTA GA: CT:  
 Abil\_schoenooides :TGT ATC GGA ATA :CG GCG CGG ACT GTC GCC AAG GAA :CA TTA GA: TCT

Abil\_pachptera :GT ATC GGA AAA :CG GCG CGG ACT GTC GCC AAG GAA :CA TTA GA: TCT  
 Abil\_ovata :GT TTC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAA :CA TTA GA: TWT  
 Bulb\_barbata :GT GTC GGA ATA :CG GCG CGG GAT GAC GCC AAG GAA :TA C:A GA: TTT  
 Bulb\_densa :GT GTC GGA ATA :CG GCG CGG GAT GAC GCC AAG GAA :TA C:A TAA TTT  
 Bulb\_striatella :GT GTC GGA ACA :CG GCG CGG GAT TGC GCC AAG GAA :TA C:A GAA TTT  
 Bulb\_sp\_nov\_1 :GV GTC GGA ACA :CG GCV CAG GAT GGC GCC AAG GAA :TA C:G GAA CTT  
 Fimb\_littoralis :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAA :TT TTA GA: TC:  
 Cross\_setifolia\_NT\_2 :GC ACC GGA AAA :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: CT:  
 Cross\_setifolia\_NT3 :GC ACC GGA AAA :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: CT:  
 Cross\_setifolia\_NT1 :GC ACC GGA AAA :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: CT:  
 Fimb\_neilsonii :GC ATC GGA AAA ACG GCG CGG AAT GTC GCC AAG GAA :TA TTA GA: TC:  
 Fimb\_cephalophora :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAM :TA TCA AAA TT:  
 Fimb\_cinnamometorum\_NSW :GG ATC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAA :TA TTA GA: TT:  
 Fimb\_arnhemensis :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAA :TA TTA GA: TT:  
 Fimb\_ccmpacta :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAG GAA :TA TTA GA: TT:  
 Fimb\_bisumbellata :GC ATC GGA AAA :CG GCG CGG GAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_cinnamometorum\_WA :GG ATC GGA AAA :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_densa\_WA :GC ATC GGA ATA :CG GCG CGG AAT GTC GCC AAC GAA :TA CCA GA: TC:  
 Fimb\_dichotoma :GC ATC GGA AAA :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: TC:  
 Fimb\_rara :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_pterygosperma\_WA1 :GC ATC GGA AAA :CG GCG CGG ATT GTC GCC AAC GAA :TA TCA AA: TT:  
 Fimb\_lanceolata :GC ATC GGA AAA :CG GCG CGG AAT GTC SCC AAC GAC :TA TCA AA: TT:  
 Fimb\_microcarya\_WA1 :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAC GAA :TA TTT GGA TA:  
 Fimb\_nutans :GC TTC GGG AAP :CG GCG CGG AAT GTC GCC AAC GAA :TA TAA CA: TA:  
 Fimb\_pterygosperma\_NT :GC ATC GGA AAP :CG GCG CGG ATT GTC GCC AAC GAA :TA TCA GA: TTT  
 Fimb\_microcarya\_WA2 :GC ATC GGA AAA :CG GCG CGG AAT GTC GCC AAC GAA :TA TTT GGA TA:  
 Fimb\_laxiglumis :GC ATC GGG AAA :CG GCG CGG GAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_polytrichoides :GC AAC GGA AAP :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: TC:  
 Fimb\_veilata :GC ATC GGA AAF :CG GCG CGG ATG :GC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_sieberiana :GC TTC GGA AAF :CG GCG CGG GAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_cericea :GC ATC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: TC:  
 Fimb\_ferruginea :GC ATC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: TT:  
 Fimb\_tristachya :GT ATC GGA AAI :CG GCG CGG GAT GTC GCC AAC GAA :TA TTA GA: TTT  
 Fimb\_tetragona\_WA :GT ATC GGA AAI :CG GCA CGG AAT GTC GCC AAC GAA ATA TCA GA: TT:  
 Fimb\_densa\_NT :GC ATC GGA ATI :CG GCG CGG AAT GTC GCC AAC GAA :TA CCA GA: TC:  
 Fimb\_schultzii :GC ATC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAG :TA TTA GA: TC:  
 Fimb\_tetragona\_Old :GT ATC GGA AAI :CG GCA CGG AAT GTC GCC AAC GAA ATA TCA GA: TT:  
 Fimb\_cymosa :GC ATC GGA AAI :ACG GCG CGG AAT GTC GCC AAC GAA :TA ATA CA: TC:  
 Fimb\_acuminata :GC ATC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTG GA: AA:  
 Fimb\_pauciflora :GC TTC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA CA: TT:  
 Fimb\_polytrichoides\_2 :GC ATC GGA AAI :CG GCG CGG ATT GTC GCC AAC GAA :TA TTA GA: TC:  
 Cross\_setifolia\_WA1 :GC ACC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: CT:  
 Croos\_setifolia\_WA2 :GC ACC GGA AAI :CG GCG CGG AAT GTC GCC AAC GAA :TA TTA GA: CT:  
 Eleocharis\_cylindrostachys GCT GAG GCG GA: GAC GAT :::: GC: TTC GGC GTC GCC G:: :::: :::: :AT  
 Schoenoplectus\_littoralis GCT GAG GCA GA: GGC GAT :::: :CC :::C ACG CTC GGG TGT CGC GT: CGG  
 Bolboschoenus\_caldwellii GCT GAG GCA GA: GGC GAT :::: :CC :::C ACG CTC GGG TGT CGC GT: CGG  
 Arthrcstylis\_a\_WA :GCC GAG GCG GA: GAC GAT :::: GC: :::: :G CGC TCG CGP CGC GT: CGT  
 Arthrcstylis\_aphylla\_NT :GTC GAG GCG GA: GGC GAT :::: GC: :::: :G CGC TTG CCC TGC GT: CGT  
 Actincschoenus\_NT1 :GCC GAG GCG AA: GAC GAT :::: GC: :::: :G TGC TTG CGT TGT GT: TGT  
 Actincschoenus\_WA :GCC GAG GCG AA: GAC GAT :::: GC: :::: :G TGC TTG CGT TGT GT: TGT  
 Abil\_cxystachya :GCT GAG GCA GAT GAC GA: :::: GCC :::: :G CA: AGG TAT TTT GT: CGT  
 Abil\_vaginata :GCC GAG GCA GAT GAC :::: TT: GTC :::: :G CA: ATG CGT TGG GT: TAT  
 Abil\_schoenoides :GCT GAG GCG GAT GAC GA: :::: GCC :::: :G CA: AGG TAT TTC GT: CGT  
 Abil\_pachptera :GCT GAG GCG GAT GAC GA: :::: GCC :::: :G CA: AGG TAT TTC GT: CGT  
 Abil\_ovata :GCT GAG GCA RAT GAC GA: :::: GCC :::: :G CA: AGG TWT TGC GT: CTT  
 Bulb\_barbata :GCT GAG GCA GAT GAC GAT :::: :CC :::: :G CAC GAG CGT TGC GT: TGT  
 Bulb\_densa :GCC GAG GCA GAT GAC GA: :::: CCC :::: :G CTC TAG CGT TCC GTT TGT  
 Bulb\_striatella :GCT GAG GCA GAT GAC GA: :::: :CC T: :::G CGC AAG CGT CCC GTT TGT  
 Bulb\_sp\_nov\_1 :GCC GAG GCA GAT GAC GA: :::: ACC :::: :G CAC AAG CGC CGC GT: CGT  
 Fimb\_littoralis :GCT GAG GCA GAT GAC :::: :TA GCT :::: :G CA: AGG TTT TGC AT: CGT  
 Cross\_setifolia\_NT\_2 :GCC GAG GCA GAT GAC :::: TT: GTC :::: :G CA: ATG CGT TGG GT: TAT  
 Cross\_setifolia\_NT3 :GCC GAG GCA GAT GAC :::: TT: GTC :::: :G CA: ATG CGT TGG GT: TAT  
 Cross\_setifolia\_NT1 :GCC GAG GCA GAT GAC :::: TT: GTC :::: :G CA: ATG CGT TGG GT: TAT  
 Fimb\_neilsonii :GCT GAG GCA GAT GAT :::: :GT GCC :::: :G CA: AGG TGT TGC GT: CTT  
 Fimb\_cephalophora :GTC GAG GCA GAT GAC :::: :TA GCC :::: :G CA: AGG TGT TGT :::: CTT  
 Fimb\_cinnamometorum\_NSW :GCT GAG GCA GAT GAC :::: :TA GCC TT: :G AA: AGG TGC TGT GT: CAT  
 Fimb\_arnhemensis :GTC GAG GCA GAT GAC :::: :TA CCC :::: :G CA: AGG TGT TGT GT: CGT  
 Fimb\_ccmpacta :GTC GAG GCA GAT GAC :::: :TA GCC :::: :G CA: AGG TGT TGT :::: CTT  
 Fimb\_bisumbellata :GCC GAG GCA GAT GAC GAT :TA GCC :::: :G CA: AGG TGT TGC GT: TGT  
 Fimb\_cinnamometorum\_WA :GCT GAG GCA GAT GAC :::: :TA GCC TC: :::G AA: TGG TGC TGT GT: CAT  
 Fimb\_densa\_WA :GCT GAT GCA GAT GAC :::: :TA GCC :::: :G CG: AGG TGT TGC GT: CGT  
 Fimb\_dichotoma :GCT GAG GCA GAT GAC GAC :TA GCC :::: :G CA: AGG TGT TGC GT: TGT  
 Fimb\_rara :GCC GAG GCA GAT GAT :::: :TG GCC :::: :G CA: GCG TGC TGC GC: CGT  
 Fimb\_pterygosperma\_WA1 :GCC CAG GCA GAT GAC :::: :TA GCC :::: :CG CA: AGG TGT TGC GT: CGT  
 Fimb\_lanceolata :GTC GAG GCA GAT GAC :::: :TA GCC :::: :G CA: AGG TGT TGT TGT :::: CTT  
 Fimb\_microcarya\_WA1 :GCT GAG GCA GAT GAC :::: :TA GCC :::: :G CA: AGG TGT TTC GT: CGT

Fimb_nutans	GCT GAG GCA GAC GAT ::::: ::::: ::::: ::::: ::::: CAT TGT GT: CGT
Fimb_pterygosperma_NT	GCC CAG GCA GAT GAC ::::: :TA GCC ::::: :CG CA: AGG TGT TGC GT: CGT
Fimb_microcarya_WA2	GCT GAA GCA GAT GAC ::::: :TA GCC ::::: ::G CA: AGG TGT TTT GT: CGT
Fimb_laxiglumis	GCT GAG GCA GAT GAC ::::: :TA GCC ::::: ::G CA: AGG CAT TAT GT: CAT
Fimb_polytrichoides	GCT GAG GTA GAC GAC GAA :TA GCT ::::: ::G TA: AGG TGT TGC GT: TGT
Fimb_velata	GCT GAG GTA GAT GAC GAC :TA GCC ::::: ::G TA: AGG TGT TGC GT: TGT
Fimb_sieberiana	GCT GAG GCA GAT GAC GAC :TA GCC ::::: ::G CA: AGG TGT TGC GT: TGT
Fimb_cericea	GCT GAG GCA GAT GAT ::::: :GT GCC ::::: ::G CA: AGG TGT TGC GT: CTT
Fimb_ferruginea	GCC GAG GCA GAT GAT ::::: :TG GCC ::::: ::G CA: CGC TGC TGC GC: CGT
Fimb_tristachya	GCT GAT GCA GAT GAC GAC TTA GCC ::::: ::G CA: AGG TTT TGC GT: TGT
Fimb_tetragona_WA	GTC CAG GCA GAT GAC ::::: :AA GCC ::::: ::G CA: AGG TCT TGT GT: CTT
Fimb_densa_NT	GCT GAT GCA GAT GAC ::::: :TA GCC ::::: ::G CG: AGG TGT TGC GT: CGT
Fimb_schultzii	GCT GAG GCA GAT GAC ::::: :TA GCC ::::: ::G CA: AGA TGT TGC GT: CGT
Fimb_tetragona_Qld	GTC CAG GCA GAT GAC ::::: :AA GCC ::::: ::G CA: AGG TCT TGT GT: CTT
Fimb_cymosa	GCT GAG GCA GAT GAT ::::: :GC GCC ::::: ::G CA: AGG TAT TGC GT: CGT
Fimb_acuminata	GCT GAG GCA GAT GAT ::::: :TA GCC ::::: ::G CA: AGG TGT CGT GT: TGT
Fimb_pauciflora	GCT GAG GCA GAT GAC GAT :TA GTC ::::: ::G CA: AGG CAT TG: TTT CGT
Fimb_polytrichoides_2	GCT GAG GTA GAT GAC GAC :TA GCT ::::: ::G TA: AGG TGT TGC GT: TGT
Cross_setifolia_WA1	GCT GAG GCA GAT GAC ::::: TT: GTC ::::: ::G CA: ATG CGT TGG GT: TAT
Croos_setifolia_WA2	GCT GAG GCA GAT GAC ::::: TT: GTC ::::: ::G CA: ATG CGT TCG GT: TAT
 Eleocharis_cylindrostachys	 CCG TC: GAG GCC AAA GT: AAT AAA ATG AGA TGA CTC CCG GCA ACG GAT
Schoenocleptus_littoralis	CTG TC: GAG GCT :::C GGA NAA AGG AAA ATA TGA CTC TCG GCA ACG GAN
Bolboschoenus_caldwellii	CTG TC: GAG GCT :::C GG: AAA AGG AAA ATA TGA CTC TCG GCA ACG GAT
Arthrostylis_a_WA	CCG TC: GAG GCC GAA AC: ::: AAA ACG AGA TGA CTC CCG GCA ACG GAT
Arthrostylis_aphyllia_NT	C'TG TT: GAG GCC GAA GC: ::: AAA AAG AGA TGA CTC CCG GCA ACG GAT
Actinschoenus_NT1	CCG TC: GAG GCT GAA GC: :::A AAA ACG AGA TGA CTC CCG GCA ACG GAT
Actinschoenus_WA	CCG TC: GAG GCT GAA GC: :::A AAA ACG AGA TGA CTC CCG GCA ACG GAT
Abil_cystostachya	CTG TTT GAG GCT AAA CG: ::AA AAA ACC AGA TGA CTC CCG GCA ACG GAT
Abil_vaginata	CTG TT: GAG GCC AAA :::T AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Abil_schoencides	CTG TTT GAG GCT AAA GG: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Abil_pachptera	CTG TTT GAG GCT AAA GG: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Abil_ovata	CTG TTT GAG GCT AAA :::A AAA AAA ACC AGA TGA CTC CCG GCA ACG GAT
Bulb_barbata	CTG CT: GAG GCC AAA GT: ::AA GAA ATG AGA TGA CTC CCG GCA ACG GAT
Bulb_densa	CTG TC: GAG CCC CGA GT: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Bulb_striatella	CTG TC: GAG CCC CAA GT: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Bulb_sp_nov_1	CTG CC: RAA GCC CAA GT: AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_littoralis	CTG TT: AAG GCC AAA GCA AAA AAA ATG AGA TGA CTC CCG GCA ACG GAT
Cross_setifolia_NT_2	CTG TT: GAG GCC AAA :::T AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Cross_setifolia_NT3	CTG TT: GAG GCC AAA :::T AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Cross_setifolia_NT1	CTG TT: GAG GCC AAA :::T AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_neilsonii	CTG TT: GAG GCC AAA GC: ::AA TAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_cephalophora	CTG TTT :AG GCC AAA GCA AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_cinnamometorum_NSW	TTG CT: GAG GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_arnhemensis	CTG TT: GAG GCC AAA GC: ::AA AAA ATG AGA TGA CTC CCG GCA ACG GAT
Fimb_compacta	CTG TTT :AG GCC AAA GCA AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_bisumbellata	TTG CT: GAG GCC AAA AC: ::AT AAA ACC AGA TGA CTC CCG GCA ACG GAT
Fimb_cinnamometorum_WA	TTG CT: GAG GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_densa_WA	CTG TT: GAT GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_dichotoma	CTG CT: GAG GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_rara	CTG CC: GAA GCC AAA GC: AAC AAA ACG AGA TGA CTC CCG GCA ACC GAT
Fimb_pterygosperma_WA1	CTG TT: GAG GCC AAA AC: ::AA ATA ACC AGA TGA CTC CCG GCA ACG GAT
Fimb_lanceolata	CTG TTT :AG GCC AAA GCA AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_microcarya_WA1	CTG CT: GAG GCC AAA GT: ::AA AAA ATG AGA TGA CTC CCG GCA ACG GAT
Fimb_nitans	CTG TTT :AG GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_pterygosperma_NT	CTG TT: GAG GCC AAA AC: ::AA ATA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_microcarya_WA2	CTG CT: GAG GCC AAA GT: ::AA AAA ATG AGA TGA CTC CCG GCA ACG GAT
Fimb_laxiglumis	ATG TT: GAG GCC AAA GA: ::AA AAA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_polytrichoides	CTG CT: GAG GCC AAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_velata	CTG CT: AAG GCC AAA GT: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_sieberiana	CTG CT: GAG GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_cericea	CTG TT: GAG GC: ::AA TAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_ferruginea	CTG CC: GAA GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_tristachya	CTG CT: GAG GC: ::AT AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_tetragona_WA	CTG TC: GAG GC: ::AA TAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_densa_NT	CTG TT: GAT GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_schultzii	CTG CT: GAT GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_tetragona_Qld	CTG TC: GAG GC: ::AA TAA ACG AGA CGA CTC CCG GCA ACG GAT
Fimb_cymosa	CTG TT: GAG GC: ::A AAA AAG AGA TGA CTC CCG GCA ACG GAT
Fimb_acuminata	CTG CTT :AG GCC AAA GT: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_pauciflora	CTG TT: GAG GC: ::AA ATA ACG AGA TGA CTC CCG GCA ACG GAT
Fimb_polytrichoides_2	CTG CT: GAG GC: :::T AAA AAA GCG AGA TGA CTC CCG GCA ACG GAT
Cross_setifolia_WA1	CTG CT: GAG GC: ::AA AAA ACG AGA TGA CTC CCG GCA ACG GAT
Croos_setifolia_WA2	CTG CT: GAG GC: :::T AAA AAA GCG AGA TGA CTC CCG GCA ACG GAT
 Eleocharis_cylindrostachys	 ATC TCG GCT CT: GCA TCG ATG AAG AAC GTA CGG AAA TGC GAT ACA TGG
Schoeroplectus_littoralis	ATC TCG GCT CT: GCA TCG ATG AAG AAC GTA CGG AAA TGC GAT ACG TGG

Bolboschoenus\_caldwellii ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Arthrostylis\_a\_WA ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Arthrostylis\_aphylla\_NT ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Actinoschoenus\_NT1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Actinoschoenus\_WA ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Abil\_oxystachya ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Abil\_vaginata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Abil\_schoenoides ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Abil\_pachptera ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Abil\_ovata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Bulb\_barbata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Bulb\_densa ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Bulb\_striatella ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Bulb\_sp\_nov\_1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_littoralis ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Cross\_setifolia\_NT\_2 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Cross\_setifolia\_NT3 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Cross\_setifolia\_NT1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_neilsonii ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_cephalophora ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_cinnamometorum\_NSW ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_arnhemensis ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_ccmpacta ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_bisumbellata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_cinnamometorum\_WA ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_densa\_WA ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_dichotoma ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_rara ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_pterygosperma\_WA1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_lanceolata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_microcarya\_WA1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_nutans ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_pterygosperma\_NT ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_microcarya\_WA2 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_laxiglumis ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_polytrichoides ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_velata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_sieberiana ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_cericea ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_ferruginea ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_tristachya ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_tetragona\_WA ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_densa\_NT ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_schultzii ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_tetragona\_Qld ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_cymosa ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_acuminata ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_pauciflora ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Fimb\_polytrichoides\_2 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Cross\_setifolia\_WA1 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Cross\_setifolia\_WA2 ATC TCG GCT CTC GCA TCG ATG AAG AAC GTA GCG AAA TGC GAT ACG TGG  
 Eleocharis\_cylindrostachys TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Schoenoplectus\_littoralis TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Bolboschoenus\_caldwellii TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Arthrostylis\_a\_WA TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Arthrostylis\_aphylla\_NT TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Actinoschoenus\_NT1 TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Actinoschoenus\_WA TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Abil\_cystachya TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Abil\_vaginata TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Abil\_schoenoides TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Abil\_pachptera TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Abil\_cvata TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Bulb\_barbata TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Bulb\_densa TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Bulb\_striatella TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Bulb\_sp\_nov\_1 TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_littoralis TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Cross\_setifolia\_NT\_2 TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Cross\_setifolia\_NT3 TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Cross\_setifolia\_NT1 TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_neilsonii TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_cephalophora TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_cinnamometorum\_NSW TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_arnhemensis TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG  
 Fimb\_ccmpacta TGT GAA TTG CA; AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG

## Appendix 4

Fimb_bisumbellata	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_cinnamometorum_WA	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_densa_WA	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_dichotoma	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_rara	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_pterygosperma_WA1	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_lanceolata	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_microcarya_WA1	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_nutans	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_pterygosperma_NT	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_microcarya_WA1	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_laxiglumis	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_polytrichoides	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_velata	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_sieberiana	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_cericea	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_ferruginea	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_tristachya	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_tetragona_WA	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_densa_NT	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_schultzii	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_tetragona_Qld	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_cymosa	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_acuminata	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_pauciflora	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Fimb_polytrichoides_2	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Cross_setifolia_WA1	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Croos_setifolia_WA2	TGT GAA TTG CAG AAT CCC GTG AAC CAT CGA GTC TTT GAA CGC AAG TTG
Eleocharis_cylindrostachys	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTT AGA
Schoenoplectus_littoralis	CGC CCG AGG GAT CCC TCC CGA GGG CAC GCC TGC CTC ATG GGC GTT AGA
Bolboschoenus_caldwellii	CGC CCG AGG GA: CCC TCC CGA GGG CAC GCC TGC CTC ATG GGC GTT AGA
Arthrostylis_a_WA	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTT AGA
Arthrostylis_aphylla_NT	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTG AGA
Actincschoenus_NT1	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Actincschoenus_WA	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Abil_oxystachya	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Abil_vaginata	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Abil_schoenooides	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Abil_pachptera	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AGA
Abil_ovata	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Bulb_barbata	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Bulb_densa	CGC CCG AGG GAT CCA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA ATA
Bulb_striatella	CGC CCG AGG GA: CCA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Bulb_sp_nov_1	CGC CCG AGG GA: :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_littoralis	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA ARA
Cross_setifolia_NT_2	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AAA
Cross_setifolia_NT3	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ACC GGC GTA AAA
Cross_setifolia_NT1	CGC CCG AGG GAT :CA TCC CAA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_neilsonii	CGC CCG AGG GAT :CA TCC TGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_cephalophora	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_cinnamometorum_NSW	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA ATA
Fimb_arnhemensis	CGC CCG AGG AA' :CT TTC TGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_compacta	CGC CCG AGG GA' :CA TCC TGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_bisumbellata	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_cinnamometorum_WA	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA ATA
Fimb_densa_WA	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_dichotoma	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_rara	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_pterygosperma_WA1	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_lanceolata	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_microcarya_WA1	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_nutans	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_pterygosperma_NT	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_microcarya_WA2	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_laxiglumis	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_polytrichoides	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_velata	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_sieberiana	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_cericea	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_ferruginea	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_tristachya	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_tetragona_WA	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_densa_NT	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_schultzii	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_tetragona_Qld	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_cymosa	CGC CCG AGG GA' :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AGA

Fimb_acuminata	CGC CCG AGG GAT :CA TCC CAA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_pauciflora	CGC CCG AGG GAT TCA TCC CAA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Fimb_polytrichoides_2	CGC CCG AGG GAT TCA TCC TGA GGG CAC GCC TGC CTC ATG GGC GTA AGA
Cross_setifolia_WA1	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AAA
Croos_setifolia_WA2	CGC CCG AGG GAT :CA TCC CGA GGG CAC GCC TGC CTC ATG GGC GTA AAA
Eleocharis_cylindrostachys	AGC CCA TCC ACG CTC GGT GCA CGT GCC TCG :: TAG GCC :TG CCC GAT
Schoenoplectus_littoralis	AGC CCA TCC ACG CTC GG: :::: :AT GCC TTG CCT CGT GCA TTG CT: GAT
Bolboschoenus_caldwellii	AGC CCA TCC ACG CTC GG: :::: :AT GCC TTG CCT CGT GCA TTG CCT GAT
Arthrostylis_a_WA	AGC CCA TGC ACG CTC GG: :::: :GT GCC TCA ::: AAG GCT TT: CCC GAC
Arthrostylis_aphylla_NT	AGC CCA CGC ACG CTC GG: :::: :GA GCC TCA ::: AAG GCT TT: CCC GAC
Actinoschoenus_NT1	AGC CCA TGC ACG CTC GG: :::: :GT GCC TCA ::: AAG GCT TT: CTC GAT
Actinoschoenus_WA	AGC CCA TGC ACG CTC GG: :::: :GT GCC TCA ::: AAG GCT TT: CTC GAT
Abil_oxystachya	AGC CCA TCC ACG CTC AG: :::: :GC GCT TTA ::: CGA GCG TT: CTT GAT
Abil_vaginata	AGC CCA TCC ACG CTC TG: :::: :GC GCC TTA ::: CAG GTG TT: CCT GAC
Abil_schoenooides	AGC CCA TCC ACG CTC AG: :::: :GC GCC TTA ::: CAA GCG TT: CTT GAT
Abil_pachptera	AGC CCA TCC ACG CTC AG: :::: :GC GCC TTA ::: CGA GCG TT: CTT GAT
Abil_ovata	AGC CCA TCC ACG CTC AG: :::: :GC GCC ATA ::: CAG GCG TT: ACT GAT
Bulb_barbata	AGC CCA TCC ACG CTC GG: :::: :GT GCY GTG ::: CGG GCA AT: CCT GAT
Bulb_densa	AGC CCA TCC ACG CTC GG: :::: :GT GCC CCG G: :: TGG GCA CT: TCC GAT
Bulb_striatella	AGC CCA TCC ACG CTC GG: :::: :GT GCC ATG ::: TGG GCA CT: ATT GAT
Bulb_sp_nov_1	AGC CCA TCC ACG CTC GG: :::: :GT GCC CCA ::: AGG GCA CT: WCC GAT
Fimb_littoralis	AGC CCA TCC ACG CTC AG: :::: :GC GCC TTT ::: CCG GTG TT: CCT GAT
Cross_setifolia_NT_2	AGC CCA TCC ACG CTC TG: :::: :GC GCC TTA ::: CAG GTG TT: CCT GAC
Cross_setifolia_NT_3	AGC CCA TCC ACG CTC TG: :::: :GC GCC TTA ::: CAG GTG TT: CCT GAC
Cross_setifolia_NT1	AGC CCA TCC ACG CTT AG: :::: :GC GCC TTT ::: TAG GTG TT: CCT GAT
Fimb_neilsonii	AGC CCA TCC ATG CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: ATT GAT
Fimb_cephalophora	AGC CCA TCC ACG CTC AG: :::: :GT GCA TTC ::: TAG GTG TT: TCT GAT
Fimb_cinnamometorum_NSW	AGC CCA TTC ACG CTA AG: :::: :GT GCC TTA ::: TAG GTG TT: CCT CAT
Fimb_arnhemensis	AGC CCA TCC ATG CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: ATT GAT
Fimb_compacta	AGC CCA TCC ACC CTC AG: :::: :GT GCA TTT ::: TAG GTG TT: CCT GAT
Fimb_bisumbellata	AGC CCA TCC ACC CTC AG: :::: :GT GCA TTT ::: TAG GTG TT: CCT GAT
Fimb_cinnamometorum_WA	AGC CCA TCC ACC CTC AG: :::: :GT GCA TTT ::: TAG GTG TT: TCT GAT
Fimb_densa_WA	AGC CCA ACC AAC CTC GG: :::: :GC GCC TTG ::: CAG GTG TT: CCT GAT
Fimb_dichotoma	AGC CCA TCC ACG CTC AG: :::: :GT GCA TTA ::: TAG GTG TT: CCT GAT
Fimb_rara	AGC CCA TCC ACG CTC AG: :::: :GC GCC TTA ::: CAG GTG TT: TCT GAT
Fimb_pterygosperma_WA1	AGC CCA TTC ACG CTC AG: :::: :GC GCC TTA ::: CGT GCG TT: TCT GAT
Fimb_lanceolata	AGC CCA TCC ATG CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: ATT GAT
Fimb_microcarya_WA1	AGC CCA TCC ACC CTC AG: :::: :GC GCC TTT ::: TAG GTG TT: CCT GAT
Fimb_rutans	AGC CCA TTC ACC CTC GG: :::: :GC GCC TTA ::: CAG STG TT: CCT GAT
Fimb_pterygosperma_NT	AGC CCA TTC ACC CTC AG: :::: :GC GCC TTA ::: CGT GCG TT: TCT GAT
Fimb_microcarya_WA2	AGC CCA TCC ACC CTC AG: :::: :GC GCC TTT ::: TAG GTG TT: CCT GAT
Fimb_laxiglumis	AGC CCA TCC ACC CTC AG: :::: :GT GCC TTT ::: TAG GTG TT: CCT GAT
Fimb_polytrichoides	AGC CCA TCC ACC CTC AG: :::: :GT ACA TTC ::: TAC GTG TT: CCT GAT
Fimb_velata	AGC CCA TCC ACC CTC AG: :::: :GT GCA TTA ::: TAG GTG TT: CCT GAT
Fimb_sieberiana	AGC CCA TCC ACC CTC AG: :::: :GC GCA TTT ::: TAG GTG TT: CCT GAT
Fimb_cericea	AGC CCA TCC ACC CTT AG: :::: :GC GCC TTT ::: TAG GTG TT: CCT GAT
Fimb_ferruginea	AGC CCA TCC ACC CTC AG: :::: :GC GCC TTA ::: CAG GTG TT: TCT GAT
Fimb_tristachya	AGC CCA TCC ACC CTC AG: :::: :GA GCA TTC ::: TAC GTG TT: CCT GAT
Fimb_tetracona_WA	AGC CCA TTC ACC CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: CTT GAT
Fimb_densa_NT	AGC CCA ACC AAC CTC GG: :::: :GC GCC TTG ::: CAG GTG TT: CCT GAT
Fimb_schultzii	AGC CCA TCA ACC CTC AG: :::: :GA ACC TTA ::: CAG GTG TT: CTT GAT
Fimb_tetracona_Qld	AGC CCA TTC ACC CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: CTT GAT
Fimb_cymosa	AGC CCA TCC ACC CTC AG: :::: :GC ACC TTC ::: CGG GTG TT: CCC GAT
Fimb_acumirata	AGC CCA TTC ACC CTC AG: :::: :GC GCC TTA ::: CAG GTG TT: TCT GAT
Fimb_pauciflora	AGC CCA TCC ACC CTC AG: :::: :GC GCC TTG ::: TAG GTG TT: CTT GAT
Fimb_polytrichoides_2	AGC CCA TCC ACC CTC AG: :::: :GT GCA TTC ::: TAC GTG TT: CCT GAT
Cross_setifolia_WA1	AGC CCA TCC ATC CTC TG: :::: :GC GCC TTA ::: TAG GTG TT: CCA GAC
Croos_setifolia_WA2	AGC CCA TCC ATC CTC TG: :::: :GC GCC TTA ::: TAG GTG TT: CCA GAC
Eleocharis_cylindrostachys	GCG GAC AAT GGC CC: TCC GAG CCG CGA GGC ::: GCG ACG GGC A:C AAG
Schoenoplectus_littoralis	GCG GAC GCT GGC CC: TCC GAG TCG CGA GGA T: GCG GTG GGC T:G AAG
Bolboschoenus_caldwellii	GCG GAC GCT GGC CC: TCC GAG TCG CGA GAT ::: GCG GTG GGC T:G AAG
Arthrostylis_a_WA	GCG GAC ATT GGC CCT TC: GAG CCG CGA GGC ::: GCG ACG GGC T:C AAG
Arthrostylis_aphylla_NT	GCG GAC ATT GGC CCT TC: GAG CCG CGA GGC ::: GCG ACG GGC T:C AAG
Actinoschoenus_NT1	GCG GAC ATT GGC CCT TC: GAG CCG CGA GGC ::: GCG ACG GGC T:C AAG
Actinoschoenus_WA	GCG GAC ATT GGC CCT TC: GAG CCG CGA GGC ::: GCG ACG GGC T:C AAG
Abil_oxystachya	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T: GCG AAG GGC T:C AAG
Abil_vaginata	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T: GCG ACG GGC C:C AAG
Abil_schoenooides	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T: GCG AAG GGC T:C AAG
Abil_pachptera	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T: GCG AAG GGC T:C AAG
Abil_ovata	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGC T: GCG AAG GGC T:C AAG
Bulb_barbata	GCG GAA ATT GGC CC: TCC GAG CTG CGA GGC ::: GCG AAG GGC T:T AAG
Bulb_densa	GCG GAC ATT GGC CCT TC: GAG CCG GGA GGC T: GCG ATG GGC T:T AAG
Bulb_striatella	GCG GAC ATT GGC CCT TC: GAG CCG GGA GGC ::: GCG ATG GGC T:T AAG
Bulb_sp_nov_1	GCG GAC ATT GGC CCT TC: GAG CCG CGA GGC ::: GCG ACN GGC T:T AAG
Fimb_littoralis	GCG GAC AAT GGC CC: TCC GAG CCG CAA GGC T: GCG ACG GGC T:C AAG

Cross_setifolia_NT_2	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T:: GCG ACG GGC C:C AAG
Cross_setifolia_NT3	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T:: GCG ACG GGC C:C AAG
Cross_setifolia_NT1	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T:: GCG ACG GGC C:C AAG
Fimb_neilsonii	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T:: GCG ATG GGC T:C AAG
Fimb_cephalophora	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: ACG AAG GGC T:T AAG
Fimb_cinnamometorum_NSW	GCG GAC ATT GGC CCT TC: GAG CTG CAA GGT T:: CCG ATG GGC T:C AAG
Fimb_arnhemensis	GCG GAA ATT GGC CCT TC: GAG CCG TAA GGT T:: ACG ATG GGC T:C AAG
Fimb_compacta	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: ACG ACG GGC T:T AAG
Fimb_bisumbellata	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_cinnamometorum_WA	GCG GAC ATT GGC CCT TC: GAG CTG CAA GGT T:: CCG ATG GGC T:C AAG
Fimb_densa_WA	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_dichotoma	GCG GA: ATT GGC CC: TCC GAG CCG TAA GGT T:: GCG ACG GGC C:G AAG
Fimb_rara	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T:: GTG ACG GGC T:C AAG
Fimb_pterygosperma_WA1	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: ACG ACG GGC T:T AAG
Fimb_lanceolata	GCG GAG ATT GGC CCT TC: GAG CTG CAA GGT T:: GCG ATG GGC C:C AAG
Fimb_microcarya_WA1	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_nutans	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_pterygosperma_NT	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T:: GTG ACG GGC T:C AAG
Fimb_microcarya_WA1	GCG GAG ATT GGC CCT TC: GAG CTG CAA GGT T:: GCG ATG GGC C:C AAG
Fimb_laxiglumis	GCG GAC ATT GGC CCT TC: GAG CCG TAA GGT T:: GCG ACG GGC T:C AAG
Fimb_polytrichoides	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_velata	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_sieberiana	GCG GAC ATT GGC CCT TC: GCG ACG GGC T:C AAG
Fimb_cericea	GCG GAC ATT GGC CCT TC: GCG ACG GGC T:C AAG
Fimb_ferruginea	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC C:G AAG
Fimb_tristachya	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_tetragona_WA	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_densa_NT	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_schultzii	GCG GAC ATT GGC CCT TC: GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_tetragyna_Qld	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC C:C AAG
Fimb_cymosa	GCG GAC ATT GG: CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_acuminata	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_pauciflora	GCG GAC ATT GGC CC: TCC GAG CCG CAA GGT T:: GCG ACG GGC T:C AAG
Fimb_polytrichoides_2	GCG GAC ATT GGC CC: TCC GAG CCA CAA GGT T:: GCG ACG GGC T:C AAG
Cross_setifolia_WA1	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T:: GCG ACG GGC C:C AAG
Cross_setifolia_WA2	GCG GAT ATT GGC CC: TCC GAG CCG AAA GGT T:: GCG ACG GGC C:C AAG
Eleocharis_cylindrostachys	TTC :AT GG: :TC GTC GGT T:G AGG CCG G:G AGC GGC GAG TGG TGG GCT
Schoenoplectus_littoralis	TGT :AC GG: :CC GTC GGA T:G GGG CTG G:G AGC GGC GAG TGG TGG GCT
Bolboschoenus_caldwellii	TGT :AC GG: :CC GTC GGA T:G GGG CTG G:G AGC GGC GAG TGG TGG GCT
Arthrostylis_a_WA	CGG AAC GG: :TC GTC GGC T:G AGG CCG G:G AAC AAC GAG TGG TGG GCC
Arthrostylis_aphylla_NT	CGG AAC GG: :CC GGC GGC T:G AGG CCG G:G AGC GAC GAG TGG TGG GCC
Actinoschoenus_NT1	CGG AAC GG: :TC GTC GGT T:G AGG CCG G:G AGC GAC GAG TGG TGG GCC
Actinoschoenus_WA	CGG AAC GG: :TC GTC GGT T:G AGG CCG G:G AGC GAC GAG TGG TGG GCC
Abil_oxystachya	TAA AAT AG: :CA ATT GGC T:G AGG TCA G:G AGC GAC GAG TGG TGG GCT
Abil_vaginata	TAC AAT GG: :C' ATC GGA T:G AGT TCA G:G AGC GAC GAG TGG TGA GCT
Abil_schoenoides	TAA AAT GG: :CA ATT GGC T:G AGG TCA G:G AGC GAC GAG TGG TGG GCT
Abil_pachypiera	TAA AAT GG: :CA ATT GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Abil_ovata	TAA AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAT GAG TGG TGC GCT
Bulb_barbata	TGT AAC GG: :TC GTT GGC T:A AGG CCG G:G AGC GAC GAG TGG TGG GCT
Bulb_densa	TGT AAC GG: :TC GTT GGC T:G AGG CCG G:G AGC GAC GAG TGG TGG GCT
Bulb_striatella	TGT AAC GG: :TC GTT GGC T:G AGG CCG G:G AGC GAC GAG TGG TGG GCT
Bulb_sp_nov_1	TGC AAT GG: :TC GTC GGT T:G AGG CCG G:G AGC GAC GAG TGG TGG GCT
Fimb_littoralis	TAT AAC GG: :C' GTC GGA T:G AGG TCT G:G AGC GAC GAG TGG TGG GCT
Cross_setifolia_NT_2	TAC AAT GG: :C' ACT GGA T:G AGT TCA G:G AGC GAC GAG TGG TGA GCT
Cross_setifolia_NT3	TAC AAT GG: :C' ACT GGA T:G AGT TCA G:G AGC GAC GAG TGG TGA GCT
Cross_setifolia_NT1	TAC AAT GG: :C' ACT GGA T:G AGT TCA G:G AGC GAC GAG TGG TGA GCT
Fimb_neilsonii	TAT AAC GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_cephalophora	TAT AAT GG: :C' ATT GAC T:A AGG TCG G:G AGC GAC GAG TGG TGA GCT
Fimb_cinnamometorum_NSW	TAC AAT GG: :C' GTT GGC T:G AGG TCG G:G AGC GAT GAG TGG TGG GCT
Fimb_arnhemensis	TAT AGT GG: :C' ATC GGC T:G AGG TCG G:G AGC AAT GAG TGG TGG GCT
Fimb_compacta	TAT AAT GG: :C' ATT GAC T:A AGG TCG G:G AGC GAC GAG TGG TGA GCT
Fimb_bisumbellata	TAT AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAT GAG TGG TGG GCT
Fimb_cinnamometorum_WA	TAC AAT GG: :C' GTT GGC T:G AGG TCG G:G AGC GAT GAG TGG TGG GCT
Fimb_densa_WA	TAT AAT GG: :C' ATT CGT T:G AGG TCG G:G AGC GAT GAG TGG TGG GCT
Fimb_dichotoma	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_rara	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_pterygosperma_WA1	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GGC GAG TGG TGG GCT
Fimb_lanceolata	TAC AAT GG: :C' ATT GAC T:A AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_microcarya_WA1	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_nutans	TAC AAT GG: :C' ACT GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_pterygosperma_NT	TAC AAT GG: :C' ACT GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_microcarya_WA2	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_laxiglumis	TAC AAC GG: :C' ATC GAC T:G AGG TTG G:G AGC AAC GAG TGG TGG GCT
Fimb_polytrichoides	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_velata	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT
Fimb_sieberiana	TAC AAT GG: :C' ATC GGC T:G AGG TCG G:G AGC GAC GAG TGG TGG GCT

Fimb_cericea	TAT AAC GG: :CT ATC GGC T:G AGG TCG G:G ACG GAC GAG TGG TGG GCT
Fimb_ferruginea	TAC AAT GG: :CT GTC GAC T:G AGG TCG G:G GGC GGC GAG TGG TGG GCT
Fimb_tristachya	TAC AAT GG: :CT GTC GGC T:G AGG TCG G:G ACG GAC GAG TGG TGG GCT
Fimb_tetragona_WA	TAT AAT GG: :CT ATC GAC TAG AGG TCG G:G ACG GAC GAG TGG TGG GCT
Fimb_densa_NT	TAT AAT GG: :CT AAT CGT T:G AGG TCG G:G ACG GAT GAG TGG TGG GCT
Fimb_schultzii	TAT AAC GG: :CT ATC GAT T:G AGG TCG G:G ACG GAC GAG TGG TGG GTT
Fimb_tetragona_Qld	TAT AAT GG: :CT ATC GAC TAG AGG TCG G:G ACG GAC GAG TGG TGG GCT
Fimb_cymosa	TAT AAC GG: :CT ATC GAC T:G AGG TCG G:G ACG GGC GAG TGG TGG GCT
Fimb_acuminata	TAT AAT GG: :CT ACT GGC T:G AGG TCA G:G ACG GAC GAG TGG TGG GCT
Fimb_pauciflora	TAT TAT GG: :CT ATC GGC T:G AGG TCG G:G ACG GAC GAG TGG TGG GCT
Fimb_polytrichoides_2	TAC AAT GG: :CT ATC GGC T:G AGG TCG G:G ACG GAC GAG TGG TGG GCT
Cross_setifolia_WA1	TAC AAT GGC GCT ACT GGA T:G AGT TCA G:G ACG GAC GAG TGG TGA GCT
Croos_setifolia_WA2	TAC AAT GGC GCT ACT GGA T:G AGT TCA G:G ACG GAC GAG TGG TGA GCT
 Eleocharis_cylindrostachys	:: :AA CT: GCG CAC G:: :: : :CT GCC TCC GAA ::C CTC ATT TCG ACA
Schoenoplectus_littoralis	:: :G CT: GCG CAC G:: :: : :TC GCC CCC GAC ::C CCC ATG TCG GCG
Bolboschoenus_caldwellii	:: :G CT: GCG CAC G:: :: : :TC GCC CCC GAC ::C CCC ATG TCG GCG
Arthrostylis_aphylla_NT	:: :A CTA GCG CGC G:: :: : :TT GCC CCG GAA ::C TCT GTG CCG GCG
Arthrostylis_a_WA	:: :A CTG GCG CGC G:: :: : :TT GTC CCG GAA ::C TCT GTG CCG GCG
Actinoschoenus_NT1	:: :A CTA GCC CGC G:: :: : :TT GCC TCG GAA ::C TTT GTG CCG GCG
Actinoschoenus_WA	:: :A CTA GCC CGC G:: :: : :TT GCC TCG GAA ::C TTT GTG CCG GCG
Abil_oxystachya	:: :A CGA GCT AGC G:: :TTC GTC GCC TCT GTG ::C CTC ACG TTG ATG
Abil_vaginata	:: :A CAA GCT AGC G:: :TTC GTC CCT GAA ::C CTC ACG ATG ACG
Abil_schoenoides	:: :A CGA GCT AGC G:: :TTC GTC GCC CCT GCG ::C CTC ACG TTG ATG
Abil_pachptera	:: :A CGA GCT AGC G:: :TTC GTC GCC CTC GTG ::C CTC ACG TTG ATT
Abil_ovata	:: :A CGA GCT AGC G:: :TTC GTC GCT CCT GTA C:C CTC ACG TTG ATG
Bulb_barbata	:: :A CTA CCC CGA G:: :TC AT: :CC CT: GAG ::T CTT ATG CCG TAA
Bulb_densa	:T ANN CTA CCC CGA G:: :TC GT: :CC CC: GAG ::T CTC ACG TCG ACG
Bulb_striatella	:: :A CTA CCC CGA G:: :TC GT: :CC CC: GAG ::C CTC ATG TTG ACG
Bulb_sp_nov_1	:: AT: CTA CCC CGA G:: :TC GTT :CC CC: GAG :: : : : : : :
Fimb_littoralis	:: :A CAA GCT AGC G:: :TCC GTC GCT CCT GAA ::C CTC ACA ATG ATT
Cross_setifolia_NT_2	:: :A CAA GCT AGC G:: :TTC GTT GCC CCT GAA ::C CTC ACG ATG ACG
Cross_setifolia_NT_3	:: :A CAA GCT AGC G:: :TTC GTT GCC CCT GAA ::C CTC ACG ATG ACG
Cross_setifolia_NT1	:: :A CAA GCT AGC G:: :TTC GTT GCC CCT GAA ::C CTC ACG ATG ACG
Fimb_neilsonii	:: :A CAA GCT AGC G:: :TTC GTC GCC CCT AA: ::C CTC ACA ATG ATG
Fimb_cephalophora	:: ATG AAA GCT AGC G:: :TTC GTT GCT CCT AAA ::C CTT ATG ATA ATG
Fimb_cinnamometorum_NSW	:: :A CAA GCT AGC G:: :TTT GTC GCT CCT GAA ::C CTC ACG :TG ACG
Fimb_arthremensis	:: :A CAA GCT AGT A: :TTC ATT GCC CCT GTC ::C CTC ACG ATG ATG
Fimb_compacta	:: ATG AAA GCT AGC G:: :TTC GTT GCT CCT AAA ::C CTT ATG ATA ATG
Fimb_bisumbellata	:: :A CAA GCT AGC G:: :TTC GTC ACC CCC GAA ::C CTC ACC :TG ATG
Fimb_cinnamometorum_WA	:: :A CAA GCT AGC G:: :TTT GTC GCT CCT GAA ::C CTC ACG :TG ACG
Fimb_densa_WA	:: :A AAA GCT AGT G:: :TTC GTT GCC CCT AGA ::C CTC ATG ACG ATG
Fimb_dichotoma	:: :A CAA GC' AG: :TTC GTC GCC CCT CAA A:C CTC ACG :TG ATG
Fimb_rara	:: :A AAA TC' AGC G:: :TTC ATC GCC CCT GAA T:C CTT ACG ACG ACG
Fimb_pterygosperma_WA1	:: :G CAA GC' AGC G:: :TTC GTC GCT CCT GAA ::C CTT ATG ACG ATG
Fimb_lanceolata	:: ATG AAA GC' AGC G:: :TTC GTT GCT CCT AAA ::C CTT ATG ATA ATG
Fimb_microcarya_WA1	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT GAA ::C CTC ACG :TG ATG
Fimb_nutans	:: :A CAA GC' AG: :G TTC GTC GCC CCT GAT ::A CTT ACG ATG ATG
Fimb_pterygosperma_NT	:: :G CAA GC' AGC G:: :TTC GTC GCT CCT GAA ::C CTT ATG ACG ATG
Fimb_microcarya_WA2	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT GAA ::C CTC ACG :TG ATG
Fimb_laxiglumis	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT GAA ::C CTC ACG ATG ATG
Fimb_polytrichoides	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT CAA ::C CTC ACG :TG ATG
Fimb_velata	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT CAA ::C CTC ACG :TG ATG
Fimb_sieberiana	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT GAA ::C CTC ACG :TG ATG
Fimb_cericea	:: :A CAA GC' AGC G:: :TTN GTC GCC CCT AA: ::C CTC AT: :CA ATC
Fimb_ferruginea	:: :A AAA TC' AGC G:: :TTC ATC GCC CCT GAA T:C CTT ACG ACG ACG
Fimb_tristachya	:: :A CAA GC' AGC G:: :TTC GTC GCC CCT GAA ::C CTC ATG :TG ATG
Fimb_tetragona_WA	:: :ACA AAA GC' AGC G:: :TTC GTC GCT CGT GAA ::C CTT ATG ATG ATG
Fimb_densa_NT	:: :A AAA GC' AGT G:: :TTC GTT GCC CCT AGA ::C CTC ATG ACG ATG
Fimb_schultzii	:: :A CAA GC' AGC G:: :TTC GTC GCT CCT GAA :: : : : : :TG ATG
Fimb_tetragona_Qld	:: :ACA AAA GC' AGC G:: :TTC GTC GCT CGT GAA ::C CTT ATG ATG ATG
Fimb_cymosa	:TT ACA CAA GC' AGC G:: :TTC GTC GCC CCC AA: ::C CTC ACG ATT ATG
Fimb_acuminata	:: :A CAA GC' AGC GCG TTC GTC GCC CCT GAA ::C CTC ACG ATG ATG
Fimb_pauciflora	:: :A CAA ACT AGC G:: :TTC GTC GTC CCT GAA ::C CTT ACG ATG ATG
Fimb_polytrichoides_2	:: :A CAA GCT AGC G:: :TTC GTC GCC CCT CAA ::C CTC ACG :TG ATG
Cross_setifolia_WA1	:: :A CAA GCT AGC G:: :TTC GTT GCC CCT GAA ::C CTC AT: :CG ACG
Croos_setifolia_WA2	:: :A CAA GCT AGC G:: :TTC GTT GCC CCT GAA ::C CTC AT: :CG ACG
 Eleocharis_cylindrostachys	CAA GGC CT: :: : : :AG TTG :: : :GA :: : : :CC: ::T CGA AAC GAG
Schoeroplectus_littoralis	TAT GGT T: :: : : :TG TTG GTT TGA ::A C: CCC ::T AAC GAG GAG
Bolboschoenus_caldwellii	TAT GGT T: :: : : :TG TTG GTT TGA ::A C: CCC ::T AAC GAG GAG
Arthrostylis_a_WA	GAG GGC TT: :: : : :GT TTG G: :: : :A C: CCC ::G GGA GAG GAC
Arthrostylis_aphylla_NT	GAG GGC CT: :: : : :GT TTG G: :: : :A C: CCC ::G AGA AAG GAC
Actinoschoenus_NT1	GAG GGC CT: :: : : :AT TTG G: :: : :A C: CCC ::G AGA AAG GAC
Actinoschoenus_WA	GAG GGC CT: :: : : :AT TTG G: :: : :A C: CCC ::G AGA AAG GAC
Abil_oxystachya	GAT :GC TIT :: : : :TG TTG :: : : :A C: CCC ::G AAC GAG GAT
Abil_vaginata	GAT :GC CIT :: : : :TA :: : :A CGA :: :CCC ::G AAC GAG CAT

Abil_schoenoides	GAT :GC CTT ::::: :TG TTG ::::: ::A C:: CCC ::G AAC GAG GAT
Abil_pachptera	GAT :GC CTT ::::: :TG TTG ::::: ::A C:: CCC ::G AAC GAG GAT
Abil_ovata	GAT :GC TTT ::::: :TG TTG ::::: ::A C:: CCT ::G AAC GAG GAT
Bulb_barbata	GAA GGC C:: ::::: :TG ::: TT CGA ::A ::: CCC ::T AAT TGA GTT
Bulb_densa	GAT GGC C:: ::::: :TG ::: CA CGG ::A ::: CCC ::C AAA TGA GAT
Bulb_striatella	GAT GGC C:: ::::: :TG ::: CA CGG ::A ::: CCC ::C AAA TGA GAT
Bulb_sp_nov_1	::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::
Fimb_littoralis	GTC :CC TTT ::::: :AT ::: TG CGA ::C:: CCC ::G AAC GAG CAT
Cross_setifolia_NT_2	GAT :GC CT: ::::: :TT ::: AA CGA ::C:: CCC ::G AAC GAG CAT
Cross_setifolia_NT3	GAT :GC CT: ::::: :TT ::: AA CGA ::C:: CCC ::G AAC GAG CAT
Cross_setifolia_NT1	GAT :GC CT: ::::: :TT ::: AA CGA ::C:: CCC ::G AAC GAG CAT
Fimb_neilsonii	GAT :GC CT: ::::: :TT ::: AT TGA ::C:: CCC TCC AAC GAG CAT
Fimb_cephalophora	GTC :GC CT: ::::: :TT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_cinnamometorum_NSW	TAT :GC CT: ::::: :AT ::: AT CGA ::C:: CCT ::G AAC GAG CAT
Fimb_arnhemensis	GAT :GC CT: ::::: :CT ::: AA TGA ::T C:: CCC ::G AAC GAG CAT
Fimb_compacta	GTC :GC CT: ::::: :TT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_bisumbellata	TAT :GC CT: ::::: :AC ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Fimb_cinnamometorum_WA	TAT :GC CT: ::::: :AT ::: AT CGA ::C:: CCT ::G AAC GAG CAT
Fimb_densa_WA	GAT :GC CT: ::::: :TC ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_dichotoma	TAT :GC CT: ::::: :TT ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Fimb_rara	GAT :GC CT: ::::: :CT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_pterygosperma_WA1	CAT :GC TT: ::::: :CC ::: AA TGA ::C:: TCC ::A GAC GAA CAT
Fimb_lanceolata	GTC :GC CT: ::::: :TT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_microcarya_WA1	TAT :GC CTT ::::: :TT ::: AT TGA ::C:: CCT ::G AAC GAG CAT
Fimb_nutans	GAT :GC CT: ::::: :CT ::: AA TGA ::A C:: CCC ::G AAC GAG CAT
Fimb_pterygosperma_NT	CAT :GC TT: ::::: :CC ::: AA TGA ::C:: TCC ::A GAC GAA CAT
Fimb_microcarya_WA2	TAT :GC CTT ::::: :TT ::: AT TGA ::C:: CCT ::G AAC GAG CAT
Fimb_laxiglumis	TAT :GC CT: ::::: :CT ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Fimb_pclytrichoides	TAT :GC CT: ::::: :TT ::: AT TGA ::C:: CCT ::T AAC GAG GAC
Fimb_velata	TAT :GC CT: ::::: :TT ::: AA TGA ::C:: CCT ::T AAC GAG CAT
Fimb_sieberiana	TAT :GC CT: ::::: :TT ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Fimb_cericea	GAT GGA TGC ::::: :TC TTT :AT TGA ::C:: CCT CCC AAC GAG CAT
Fimb_ferruginea	GAT :GC CT: ::::: :CT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_tristachya	TAT :GC CT: ::::: :TC ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Fimb_tetragona_WA	GTC :GC CT: ::::: :CT ::: AA TGA :GA C:: CCC ::G GAC AAG CAT
Fimb_densa_NT	GAT :GC CT: ::::: :TC ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_schultzii	GAT :GC CT: ::::: :CT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_tetragona_Qld	GTC :GC CT: ::::: :CT ::: AA TGA :GA C:: CCC ::G GAC AAG CAT
Fimb_cymosa	GAT :GC CTT ::::: :TA TTG ::T TGA ::C:: CCC TCG AAC GAG CAT
Fimb_acuminata	GAT :GC CT: ::::: :TT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_pauciflora	GAT :GC CT: ::::: :CT ::: AA TGA ::C:: CCC ::G AAC GAG CAT
Fimb_polytrichoides_2	TAT :GC CT: ::::: :TT ::: AT TGA ::C:: CCT ::T AAC GAG CAT
Cross_setifolia_WA1	GAT :GC CT: ::::: :CT ::: AA CGA ::C:: CCC ::G AAC GAG CAT
Cross_setifolia_WA2	GAT :GC CT: ::::: :CT ::: AA CGA ::C:: CCC ::G AAC GAG CAT
Eleocharis_cylindrostachys	TAG CGC G:T CGC ::::: CTA ::: ::G CGC GGC AGC CTC GGA CCG A::
Schoenoplectus_littoralis	TTT GCT G:T CGC GGC A:: TTA C:G TCG TGT GGC ATC TTC GGA CCG ATA
Bolboschoenus_caldwellii	TTT GCT G:T CGC GGC A:: TTA C:G TCG TGT GGC ATC TTC GGA CCG ATA
Arthrostylis_a_WA	GAT GCC G:C TGC GGC G:: TGA A:G TCG TCC GGC GCG TTC G:: :::::
Arthrostylis_aphylla_NT	GTC GTY G:T TGC GGC G:: CGA A:G TCG TCC GAC GCG GTC GGA CCG ATA
Actinoschoenus_NT1	GAT GTC G:T TGC GGC G:: TGA A:G TCN TGC GGC GCG TTC GGA C:: :::
Actinoschoenus_WA	GAT GTC G:T TGC GGC G:: TGA A:G TCN TGC GGC GCG TTC GGA C:: :::
Abil_oxystachya	CAT GTC G:C TG: AGC G:: TTA C:G TTG TGA GAC ATG TAC GGA C:: :::
Abil_vaginata	CAC GTC G:C TG: AAT ATT TTA T:G TTG CTC GGC ATG TTC GGA CTG :::
Abil_schoenoides	CAT GTC G:C TG: AGC G:: TTA C:G TTG TGC GAC ATA TAC GGA CCA ATA
Abil_pachptera	CAT GTC G:C TG: AGC G:: TTA C:G TTG TGC GAC ATG TAC GGA CCA ATA
Abil_ovata	C:: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
Bulb_barbata	CAT GTC ATT TG: AGC A:: TGA C:G TTG TGC GAC ATG ACC GGA :::::
Bulb_densa	CGC GTC GCT CG: AGC T:: TGA A:G TTG CTC GGC ATG ATC GGA CTG ATA
Bulb_striatella	TGC GCC GTT CG: AGC G:: AGA C:G TTG CGC GGC ATG ATC GGA CTG AT:
Bulb_sp_nov_1	::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
Fimb_littoralis	TAT GTC G:C TG: AAC G:: TTG C:G TTG TGC GGC ATG TTC GGA CTG ATA
Cross_setifolia_NT_2	CAC GTC G:C TG: AAT ATT TTA T:G TTG CTC GGC ATG TTC GGA CTG :::
Cross_setifolia_NT3	CAC GTC G:C TG: AAT ATT TTA T:G TTG CTC GGC ATG TTC GGA CTG :::
Cross_setifolia_NT1	CAC GTC G:C TG: AAT ATT TTA T:G TTG CTC GGC ATG TTC GGA :::::
Fimb_neilsonii	CAC ACC G:C TG: ACT G:: TTA T:G TTG CGC GGC ATG TTC GGA CTG ATA
Fimb_cephalophora	CG: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
Fimb_cinnamometorum_NSW	TAT GTT G:C TGC ATT G:: TTA T:G TTG TG: :GC ATG TTC ::::: :::::
Fimb_arnhemensis	CAC GGC G:C TGC AGC ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
Fimb_compacta	CGT GCT G:T TCC AGC GTT TTA T:G TTG TG: :GG CAT CTC GCG :::::
Fimb_bisumbellata	CAC GTT G:C AGC AGC G:: TTA T:G TTG TGC GAC ATG TTC GGA CTG ATA
Fimb_cinnamometorum_WA	TAT GTT G:C TCC ATT G:: TTA T:G TTG TG: :GC ATG TTC GGA CTG ATA
Fimb_densa_WA	CAC :CT G:C TIC AGC GTT TTA T:G TTG TGC TGC ATG TTC GGA CTG ATA
Fimb_dichotoma	CAC GTC G:T GCC AGC G:: TTA T:G TTG TGC GGC ATG TTC GGA :::::
Fimb_rara	CAC GCC G:C TCC AGC GCT CTA T:G TTG TGC GGC ATG TTC GGA CTG ATA
Fimb_pterygosperma_WA1	CAC GCT G:T TCC AGT GTT TTA T:G CTG TGC GGC ATG TTC GGA CTG ATA
Fimb_lanceolata	CG: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::

## Appendix 4

## Appendix 4

Fimb_compacta	000 000 000 010 10
Fimb_bisumbellata	000 001 000 000 00
Fimb_cinnamometorum_WA	000 000 000 000 01
Fimb_densa_WA	000 000 000 010 10
Fimb_dichotoma	000 001 000 000 00
Fimb_rara	000 000 000 011 00
Fimb_pterygosperma_WA1	000 000 000 010 10
Fimb_lanceolata	000 000 000 0?? ?0
Fimb_microcarya_WA1	000 001 000 000 00
Fimb_nutans	000 000 010 010 10
Fimb_pterygosperma_NT	000 000 000 010 10
Fimb_microcarya_WA?	000 001 000 000 00
Fimb_laxiglumis	000 001 000 000 00
Fimb_polytrichoides	000 001 000 000 00
Fimb_velata	000 000 000 000 00
Fimb_sieberiana	000 001 000 000 00
Fimb_cericea	100 001 001 0?0 00
Fimb_ferruginea	000 000 000 011 00
Fimb_tristachya	000 001 000 000 00
Fimb_tetragona_WA	000 000 100 010 10
Fimb_densa_NT	000 000 000 010 10
Fimb_schultzii	000 000 000 010 10
Fimb_tetragona_Qld	000 000 100 010 10
Fimb_cymosa	100 000 001 110 10
Fimb_acuminata	000 000 000 010 10
Fimb_pauciflora	000 000 000 010 10
Fimb_polytrichoides_2	000 001 000 000 00
Crcss_setifolia_WA1	000 000 000 010 10
Crcss_setifolia_WA?	000 000 000 010 10

**Appendix 5. DNA isolation method used in this study (Dellaporta *et al.* 1983) modified by A. Marchant (pers. comm.)**

1. The material was ground to a fine powder in a mortar with about half a teaspoon of sand. Liquid nitrogen was added as the silica gel material was ground.
2. The powder was transferred to a 50 ml centrifuge tube containing 40 ml ice-cold rinse buffer (50 mM Tris, 100 mM EDTA, 100 mM NaCl, 1% PVP, pH 7.5), then mixed and stored in refrigerator at 4°C for at least 30 min.
3. The mixture was centrifuged in a cooled centrifuge (Sigma 4K-10 centrifuge, rotor#11140) (5°C, 10 min at 5000 rpm = 4400% g), and the supernatant was discarded.
4. 10 ml preheated (65°C) digestion buffer (50 mM Tris, 100 mM NaCl, 100 mM EDTA, 0.5% SDS, pH 7.5) was added to the sediment, and mixed, and then incubated at 65°C for 30 min, with gentle shaking at 5 min intervals.
5. 3 ml of 3 M potassium acetate was added.
6. The mixture was then stored in ice/water for half an hour.
7. The mixture was centrifuged at 5°C at 5000 rpm for 15 min.
8. The supernatant was transferred to a new 50 ml tube, to which twice the supernatant volume of cold 95% ethanol (-20°C) was added. Usually an obvious nucleic acid precipitate should appear, but for my material it did not, so the sample was placed in a freezer (-20°C) overnight (up to three days for older material), then centrifuged at room temperature at 5000 rpm for 30 min.
9. The supernatant was discarded.
10. The pellet was washed with 70% ethanol: 10 ml of 70% ethanol added, and left for 10 min, after which it was centrifuged at room temperature for seven min at 5000 rpm.
11. The supernatant was discarded, and putting the tube upside down on a paper hand towel until all visible traces of ethanol had gone, dried the pellet. The DNA was dissolved in 500 µl of Tris-EDTA buffer (TE: 10 mM Tris, 1 mM EDTA, pH 7.6).

**Appendix 6. DNA purification method (modified dicalite by A. Marchant [pers. Comm.] used in this study**

1. 1500 µl of binding buffer (50 mM Tris, 6 mM NaClO<sub>4</sub>, 1 mM EDTA, pH 7.5, warmed to room temperature before use) was added to DNA solution, mixed and allowed to stand for 20 min.
2. 300 µl of diatomite (Diatomaceous earth from Sigma #D-3877, suspended in water, according to the protocol of Gilmore et al. 1993) was added, and the contents were mixed for 20–30 min by regular gentle inversion to allow the DNA to bind to the diatomite.
3. The mixture was centrifuged at room temperature at 3000 rpm (= 1600 % g) for five min, the supernatant was discarded, and the tube was put upside down on a paper hand towel.
4. 1.5 ml of wash buffer 1 (3 volumes binding, 1 volume water, warmed to room temperature before use) was added and shaken. The mixture was centrifuged at room temperature at 3000 rpm for five min. The supernatant was discarded, and the tube was putted upside down on a paper hand towel.
5. 1.5 ml of wash buffer 2 (1 volume 40 mM Tris, 4 mM EDTA, 0.8 M NaCl, 1 volume 95% ethanol, warmed to room temperature before use) was added and shaken. The mixture was centrifuged at room temperature at 3000 rpm for five min. The supernatant was discarded, and the tube was putted upside down on a paper hand towel. This step was repeated once in most of the samples or twice in a few samples that were difficult in giving a sufficient amount of DNA in earlier stages.
6. 300 µl TE buffer (10 mM Tris, pH 8.0, 1 mM EDTA) was added and shaken, then the mixture was incubated, with regular inversion, at 40–50°C for 20–30 min.
7. The mixture was centrifuged at 3000 rpm for five min, and the supernatant was collected into a 2 ml microfuge tube.
8. 200 µl TE buffer was added to the pellet, shaken, and then centrifuged at 3000 rpm for five min. All of the supernatant was collected into the same 2 ml microfuge tube.
9. 5 µl of the sample (i.e. the supernatant) was run on the gel and the sample was stored in the freezer (-20°C).