

Supplementary material

***Chloris circumfontinalis* (Poaceae): a recently discovered species from the saline scalds surrounding artesian springs in north-eastern Australia**

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Table S1. Specimens examined as part of the study, showing taxon, collection location, whether morphological and molecular data were gathered, and GenBank accession numbers for molecular sequences

Taxon	Collection voucher	Latitude	Longitude	Morphology	ITS GenBank accession number	<i>rpl32-trnL</i> GenBank accession number	<i>rps16</i> GenBank accession number	<i>trnL-trnF</i> GenBank accession number
<i>C. barbata</i>	Thompson E.J. EJT239	-25.3922	153.0269	1	MH752513	MH793157	MH793192	MH793228
<i>C. circumfontinalis</i>	Thompson E.J. GAL63	-22.0936	146.2436	1	MH752537	MH793181	MH793217	MH793255
<i>C. circumfontinalis</i>	Fensham R.J. 6501	-22.0947	146.2497	1				
<i>C. circumfontinalis</i>	Dreis B. July 2015	-22.0965	146.2446	1				
<i>C. circumfontinalis</i>	Danielsen S.F. 1873	-22.0906	146.2452	1				
<i>C. circumfontinalis</i>	Fahey P.S. 7	-22.0800	146.2340	1	MH752528	MH793172	MH793208	MH793246
<i>C. circumfontinalis</i>	Fahey P.S. 8	-22.0798	146.2334	1				
<i>C. circumfontinalis</i>	Fahey P.S. 11	-22.0804	146.2339	1				
<i>C. circumfontinalis</i>	Fahey P.S. CL34	-22.0932	146.2492	0	MH752532	MH793176	MH793212	MH793250
<i>C. circumfontinalis</i>	Fahey P.S. 6	-22.0954	146.2493	1				
<i>C. circumfontinalis</i>	Fahey P.S. 9	-22.0909	146.2488	1				
<i>C. circumfontinalis</i>	Fahey P.S. CL43	-22.0956	146.2450	0	MH752533	MH793177	MH793213	MH793252
<i>C. circumfontinalis</i>	Fahey P.S. CL44	-22.0933	146.2449	0	MH752534	MH793178	MH793214	MH793253
<i>C. circumfontinalis</i>	Fensham R.J. 5906	-22.7200	145.4386	1	MH752535	MH793179	MH793215	MH793253
<i>C. circumfontinalis</i>	Silcock J.L. JLS792	-22.7314	145.4309	1	MH752536	MH793180	MH793216	MH793254
<i>C. circumfontinalis</i>	Thompson E.J. MUT405_1	-22.7206	145.4375	1	MH752538	MH793182	MH793218	MH793256
<i>C. circumfontinalis</i>	Thompson E.J. MUT405_2	-22.7206	145.4375	1	MH752539	MH793183	MH793219	MH793257
<i>C. circumfontinalis</i>	Thompson E.J. MUT405_3	-22.7206	145.4375	1				
<i>C. circumfontinalis</i>	Thompson E.J. MUT405_4	-22.7206	145.4375	1	MH752540	MH793184	MH793220	MH793258
<i>C. circumfontinalis</i>	Fahey P.S. CL1.2	-22.7203	145.4390	0	MH752529	MH793173	MH793209	MH793247
<i>C. circumfontinalis</i>	Fahey P.S. CL18	-22.7285	145.4292	0	MH752531	MH793175	MH793211	MH793249
<i>C. circumfontinalis</i>	Fahey P.S. CL7	-22.7314	145.4313	0	MH752530	MH793174	MH793210	MH793248
<i>C. circumfontinalis</i>	Fahey P.S. 4	-22.7204	145.4389	1				
<i>C. circumfontinalis</i>	Fahey P.S. 3	-22.7201	145.4388	1				
<i>C. circumfontinalis</i>	Fahey P.S. 2	-22.7300	145.4301	1				

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<i>C. circumfontinalis</i>	Fahey P.S. 1	–22.7285	145.4290	1				
<i>C. divaricata</i> var. <i>cynodontoides</i>	Koroiveibau 8479	Suva, Fiji	Suva, Fiji	1				
<i>C. divaricata</i> var. <i>cynodontoides</i>	Forster P.I. PIF35697	–25.9692	144.5692	1	MH752515	–	–	MH793231
<i>C. divaricata</i> var. <i>cynodontoides</i>	Fahey P.S. 10	–22.0827	146.2336	1	MH752514	MH793158	MH793193	MH793229
<i>C. divaricata</i> var. <i>divaricata</i>	Staples I.B. IBS5529	–17.1403	145.4258	1				
<i>C. divaricata</i> var. <i>divaricata</i>	Melzer R. RM1778	–24.5024	148.5105	1	MH752517	MH793160	MH793195	MH793232
<i>C. divaricata</i> var. <i>divaricata</i>	Forster P.I. PIF38025	–27.3391	150.1979	1	MH752516	MH793159	MH793194	MH793230
<i>C. gayana</i>	Fahey P.S. CV1	–25.6104	149.7669	0	MH752518	MH793161	MH793196	MH793233
<i>C. lobata</i>	Sharp D. 348	–17.8547	144.9442	1	MH752520	MH793164	MH793199	MH793236
<i>C. lobata</i>	Latz P.K. 15520	–23.6188	133.8761	1				
<i>C. lobata</i>	Fox I.D. IDF2870	–16.1643	142.7944	1	–	MH793162	MH793197	MH793234
<i>C. lobata</i>	McDonald K.R. KRM10927	–18.2611	142.1364	1	MH752519	MH793163	MH793198	MH793235
<i>C. lobata</i>	Thompson E.J. MUT554	–21.1517	145.1006	1	–	–	–	MH793237
<i>C. pectinata</i>	Hall T.J.	–17.7903	140.8926	1				
<i>C. pectinata</i>	Eddie C. RJMM06	–28.2663	146.7953	1	MH752521	MH793165	MH793200	MH793238
<i>C. pectinata</i>	Van Leeuwen S. 3902	–22.5931	118.7744	1				
<i>C. pectinata</i>	Jensen R. 2126	–27.9466	145.5397	1	MH752523	MH793167	MH793202	MH793240
<i>C. pectinata</i>	Waltz T. 1314	–23.3286	140.5843	1	–	MH793168	MH793203	MH793241
<i>C. pectinata</i>	Fensham R.J. 6003	–27.7303	140.5956	1	MH752522	MH793166	MH793201	MH793239
<i>C. pumilio</i>	Henderson R.J. H1728	–18.1569	143.8925	1				
<i>C. pumilio</i>	Winders C.W. 7241	–20.7486	139.4176	1				
<i>C. pumilio</i>	Hubbard C.E. 7524	–20.0819	144.5842	1				
<i>C. pumilio</i>	Turpin G.P. GPT35	–17.9869	142.2862	1	MH752526	–	MH793206	MH793244
<i>C. pumilio</i>	Cumming R.J. 13951	–19.3069	146.6425	1				

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<i>C. pumilio</i>	Mitchell A.A. PRP1773	−19.7303	120.8958	1	–	–	MH793204	–
<i>C. pumilio</i>	McDonald K.R. KRM13110	−15.6683	144.5831	1	MH752524	MH793269	–	MH793242
<i>C. pumilio</i>	Thompson E.J. MUT433	−22.7650	145.4247	1	MH752525	MH793170	MH793205	MH793243
<i>C. pycnothrix</i>	Simon B.K. 4497	−26.2764	27.9683	1	MH752527	MH793171	MH793207	MH793245
<i>C. truncata</i>	Casey, May 1961	−27.0819	151.0842	1				
<i>C. truncata</i>	Bick E.W. and White C.T., May 1916	−27.4985	153.5008	1				
<i>C. truncata</i>	Kahler J.P. October 1935	−24.2486	151.5842	1				
<i>C. truncata</i>	Everest S.L. 3492	−27.4152	146.9175	1				
<i>C. truncata</i>	Young G.E. No12	−30.1637	146.0174	1				
<i>C. truncata</i>	Boorman J.L. NSW121447	−32.5600	151.1785	1				
<i>C. truncata</i>	Coveny R. 823	−33.7442	150.6942	1				
<i>C. truncata</i>	Hubbard C.E. 8250	−29.0667	151.0667	1				
<i>C. truncata</i>	Coveny R. 11795	−33.7667	150.8583	1				
<i>C. truncata</i>	Johnson R.W. 1210	−27.4152	149.9175	1				
<i>C. truncata</i>	Brown A.J. 185	−37.8167	145.0333	1				
<i>C. truncata</i>	Hind P. Dec 1985	−34.0700	150.7800	1				
<i>C. truncata</i>	Palmer J. 291	−33.0833	144.5167	1				
<i>C. truncata</i>	Lyne A.M. 1776	−33.0333	144.9667	1				
<i>C. truncata</i>	Crawford I. 5409	−35.3750	149.2333	1	MH752541	MH793185	MH793221	MH793259
<i>C. truncata</i>	Halford D. Q7639	−28.5297	150.6520	1	MH752543	MH793187	MH793223	MH793261
<i>C. truncata</i>	Blake S.T. 10596	−28.5819	148.4175	1				
<i>C. truncata</i>	Blake S.T. 10453	−28.5819	150.7508	1				
<i>C. truncata</i>	Forster P.I. PIF33461	−25.9850	151.3883	1	MH752542	MH793186	MH793222	MH793260
<i>C. truncata</i>	Rich M. MR563	−25.1167	138.6570	1	MH752544	–	MH793224	–
<i>C. ventricosa</i>	Simon B.K. 2811	−24.9236	146.3759	1				
<i>C. ventricosa</i>	Everist S.L. 1596	−24.4152	145.4175	1				

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<i>C. ventricosa</i>	White C.T. 7214	−26.2485	151.9175	1				
<i>C. ventricosa</i>	Lithgow M.G. 566	−26.2485	151.2508	1				
<i>C. ventricosa</i>	Thompson E.J. BIL249	−24.0833	150.9311	1				
<i>C. ventricosa</i>	Thompson E.J. GLA6	−23.9327	151.2336	1				
<i>C. ventricosa</i>	Thompson E.J. JER203	−23.4536	146.1203	1				
<i>C. ventricosa</i>	ABP1664	−25.0730	150.4389	1				
<i>C. ventricosa</i>	Bean A.R. 9728	−24.8569	151.1758	1				
<i>C. ventricosa</i>	Grimshaw P. PG2309	−25.7916	152.4163	1				
<i>C. ventricosa</i>	Clifford H.T. Feb 1962	−25.4986	148.5008	1				
<i>C. ventricosa</i>	Bean A.R. 19844	−24.9484	149.6149	1	MH752545	MH793188	–	MH793262
<i>C. ventricosa</i>	Thomas M.B. 2555	−26.2236	148.4758	1				
<i>C. ventricosa</i>	Bean A.R. 20297	−27.8222	153.2114	1	MH752546	MH793189	MH793225	MH793263
<i>C. ventricosa</i>	Foster P.I. PIF33543	−33.8494	150.6453	1	MH752547	MH793190	MH793226	MH793264
<i>C. ventricosa</i>	Pollock A.B. ABP2495	−27.4234	151.9507	1	MH752548	MH793191	MH793227	MH793265
<i>C. ventricosa</i>	Edginton M.A.	−27.6573	152.9077	1				
<i>C. virgata</i>	Greenway and Kanuri 13917	−7.6849	34.9214	1				
<i>C. virgata</i>	Blake S.T. 6681A	−24.0167	144.0500	1				
<i>C. virgata</i>	Bean A.R. 27350	−27.6314	152.1881	1				
<i>C. virgata</i>	Neldner V.J. VJN4866	−22.4361	150.2003	1				
<i>C. virgata</i>	Booth R. NWH6-2	−20.5317	138.6622	1				

Table S2. *Chloris* and outgroup sequences accessed on GenBank and included in phylogenetic analyses

Specimen numbers used in this study are matched to collection voucher numbers and GenBank accessions numbers where available. ITS, internal transcribed spacer; –, no sequence was available

Specimen	Collection voucher	ITS accession number	<i>rps16</i> accession number	<i>rpl32-trnL</i> accession number
<i>C. amethystea</i>	Archer 8650	KP873218	KP873968	KP973434
<i>C. andropogonoides</i>	Corey 52467	KP873219	–	KP973435
<i>C. andropogonoides</i>	Peterson 18839	KP873220	KP873969	KP973436
<i>C. andropogonoides</i>	Swallen 10091	KP873221	KP873970	KP973437
<i>C. andropogonoides</i>	Swallen 10232	KP873222	KP873971	–
<i>C. barbata</i>	Bentley 102	KP873223	KP873972	KP973438
<i>C. barbata</i>	Ernst 1507	KP873224	KP873973	KP973439
<i>C. barbata</i>	King 4038	KP873225	KP873974	KP973440
<i>C. barbata</i>	Peterson 23795	KP873226	KP873975	KP973441
<i>C. barbata</i>	Saarela 1740	KP873227	KP873976	KP973442
<i>C. barbata</i>	Saarela 1830	KP873228	KP873977	KP973443
<i>C. barbata</i>	Peterson 22255	GU359320	GU360435	GU359873
<i>C. barbata</i>	QL07035	–	GQ219661	–
<i>C. castilloniana</i>	Gallinal H. 5542	KP873232	KP873981	KP873446
<i>C. cruciata</i>	Correll 48667	KP873236	–	KP873450
<i>C. cruciata</i>	Correll 50431	KP873237	KP873983	KP873451
<i>C. cucullata</i>	Crutchfield 5475	KP873239	–	KP873453
<i>C. cucullata</i>	Isely 10647	KP873240	–	KP873454
<i>C. cucullata</i>	Columbus 2903	EF153030	–	–
<i>C. divaricata</i>	Swallen 10572	KP873242	–	KP873456
<i>C. divaricata</i>	Greenwood 226c	KP873241	–	KP873455
<i>C. ekmanii</i>	Liogier 12416	KP873243	–	KP873457
<i>C. ekmanii</i>	Liogier 15884	KP873244	–	KP873458
<i>C. flagellifera</i>	Gloves 48	KP890055	–	KP873628
<i>C. flagellifera</i>	Rechinger 29410	KP890056	KP874084	KP873629 2
<i>C. flagellifera</i>	USDA 154–57	KP890057	KP874085	KP873630

Specimen	Collection voucher	ITS accession number	<i>rps16</i> accession number	<i>rpl32-trnL</i> accession number
<i>C. gayana</i>	Balleza 1788	KP873252	–	KP873466
<i>C. gayana</i>	Batty 125	KP873253	–	KP873467
<i>C. gayana</i>	Peterson 23972	KP873254	KP873984	KP873468
<i>C. gayana</i>	Peterson 23997	KP873255	KP873985	KP873469
<i>C. gayana</i>	Peterson 24253	KP873256	KP873986	KP873470
' <i>C. gayana</i> '	ww18910	KX281066	–	–
' <i>C. gayana</i> '	ww18909	KX281080	–	–
' <i>C. gayana</i> '	ww18907	KX2801082	–	–
<i>C. halophila</i>	Peterson 13970	KP873258	–	KP873472
<i>C. halophila</i>	Laegaard 71450	KP873257	–	KP873471
<i>C. latisquamea</i>	Fleetwood s.n.	KP873259	–	KP873474
<i>C. latisquamea</i>	Stanford s.n.	KP873260	–	KP873475
<i>C. mossambicensis</i>	Peterson 23803	KP873261	KP873987	KP873476
<i>C. mossambicensis</i>	Peterson 24219	KP873262	KP873988	KP873477
' <i>C. mossambicensis</i> '	YBK 323 BOL	HM347036	–	–
<i>C. nutans</i>	Mwasumbi 14374	GU359151	GU360427	GU359980
<i>C. orthonoton</i>	Pedersen 5817	KP873264	–	KP873479
<i>C. orthonoton</i>	Harley 16629	KP873263	–	KP873478
<i>C. pectinata</i>	Saarela 1699	KP873265	KP873989	KP873480
<i>C. pilosa</i>	Allen s.n.	KP873266	–	KP873481
<i>C. pilosa</i>	Brenan 9601	KP873267	–	KP873482
<i>C. pilosa</i>	Peterson 23919	KP873268	KP873990	KP873483
<i>C. prieurii</i>	Laegaard 17061	KP873269	–	KP873484
<i>C. prieurii</i>	Laegaard 17863	KP873270	–	KP873485
<i>C. pycnothrix</i>	Peterson 24305	KP873280	KP873997	KP873495
<i>C. pycnothrix</i>	Pederson 6378	KP873273	–	KP873488
<i>C. pycnothrix</i>	Peterson 24262	KP873279	KP873996	KP873494
<i>C. pycnothrix</i>	Peterson 24184	KP873278	KP873995	KP873493
<i>C. pycnothrix</i>	Peterson 24172	KP873277	KP873994	KP873492
<i>C. pycnothrix</i>	Peterson 24070	KP873276	KP873993	KP873491
<i>C. pycnothrix</i>	Peterson 23974	KP873275	KP873992	KP873490

Specimen	Collection voucher	ITS accession number	<i>rps16</i> accession number	<i>rpl32-trnL</i> accession number
<i>C. pycnothrix</i>	Peterson 23949	KP873274	KP873991	KP873489
<i>C. pycnothrix</i>	Bidgood 3170	KP873271	–	KP873486
<i>C. pycnothrix</i>	Harley 17042	KP873272	–	KP873487
<i>C. pycnothrix</i>	Peterson 22278	GU359321	GU360434	GU359872
<i>C. rufescens</i>	McVaugh 19517	KP873284	–	KP873499
<i>C. sagraeana</i>	McKee 10539	KP873285	–	KP873500
<i>C. sagraeana</i>	Box 35	KP873238	–	KP873452
<i>C. submutica</i>	McGregor 706	KP873287	–	KP873502
<i>C. submutica</i>	Peterson 24560	KP873288	–	KP873503
<i>C. submutica</i>	Peterson 24842	KP873289	–	KP873504
<i>C. submutica</i>	Peterson 24939	KP873290	–	KP873505
<i>C. submutica</i>	Reeder 4845	KP873291	–	KP873506
<i>C. submutica</i>	Peterson 22393	GU359322	GU360471	GU359871
<i>C. texana</i>	Silvens 423	KP873292	–	KP873507
<i>C. truncata</i>	PI212389	GQ278931	GQ219663	–
<i>C. truncata</i>	SJ7198	AF019840	–	–
<i>C. truncata</i>	Columbus 3203	EF153032	–	–
<i>C. verticillata</i>	Reeder 5787	KP873293	–	KP873508
<i>C. virgata</i>	Peterson 21468	GU359324	GU360445	GU359869
<i>C. virgata</i>	Peterson 22179	GU359323	GU360443	GU359870
<i>C. virgata</i>	Peterson 24286	KP873294	–	KP873509
<i>C. virgata</i>	Peterson 24659	KP873295	–	KP873510
<i>C. virgata</i>	Peterson 24789	KP873296	–	KP873511
<i>C. virgata</i>	Peterson 24854	KP873297	–	KP873512
<i>C. virgata</i>	Peterson 24911	KP873298	–	KP873513
<i>C. virgata</i>	Peterson 24954	KP873299	–	KP873514
<i>C. virgata</i>	Columbus 2455	GQ219612	GQ219662	–
<i>C. virgata</i>	Wang, Y.H., Zhang, X.J. and Fan, S.J	KP711108	–	–
<i>C. virgata</i>	AMWF23	GQ470547	–	–
<i>C. virgata</i>	HCCN-PJ008548-PB-147	KP057006	–	–
<i>C. virgata</i>	HCCN-PJ008548-PB-331	KP057007	–	–

Specimen	Collection voucher	ITS accession number	<i>rps16</i> accession number	<i>rpl32-trnL</i> accession number
<i>C. virgata</i>	HCCN-PJ008548-PB-399	KP057009	–	–
<i>C. virgata</i>	HCCN-PJ008548-PB-403	KP057008	–	–
<i>C. virgata</i>	NIBRVP0000397550	KP057005	–	–
<i>C. virgata</i>	Spies 6616	DQ655797	–	–
<i>C. virgata</i>	Spies 7498	DQ655798	–	–
<i>C. × subdolichostachya</i>	Trouart 17	KP873286	–	KP873501
<i>Tetrapogon roxburghiana</i>	Peterson 24225	KP873283	KP874000	KP873498

Table S3. The observed range of character states of *Chloris* species used in the morphometric analyses

Character	<i>Chloris truncata</i>	<i>C. sp.</i> (Edgbaston R.J.Fensham 5694)	<i>C. divaricata</i>	<i>C. pectinata</i>
Vegetative				
Stolons present	Present or absent	Absent	Present or absent	Absent
Culm branching present	Absent	Present or absent	Present or absent	Present or absent
Pilose hair present on adaxial surface of leaf sheath	Present or absent	Present at Doongmabulla springs, absent at Edgbaston springs	Present or absent	Present or absent
Hair present on leaves	Absent	Present or absent	Absent	Present or absent
Maximum height of culm (cm)	10–52	19–70	17–67	10–51
Number of nodes on culm	1–4	2–5	2–4	2–5
Maximum number of branches per inflorescence	5–12	3–6	3–6 (9)	4–8
Maximum length of inflorescence branches (cm)	4–20	4.5–14	3–14	3–8
Reproductive				
First-lemma apex shape	Truncate with apical cleft	Truncate with apical cleft	Divided into two lobes with acute apices	Divided into two lobes with acute apices
First lemma keeled	Yes	Yes	Yes	Yes
First-lemma margin indumentum	Glabrous or pubescent on upper half only (hairs <0.5 mm)	Pubescent on upper half only (hairs <0.5 mm)	Glabrous or pubescent on upper half only (hairs <0.5 mm) or pubescent (hairs <0.5 mm)	Pubescent on upper half only (hairs <0.5 mm)
First-lemma body indumentum	Glabrous or Pubescent (hairs <0.5 mm)	Glabrous	Glabrous or pubescent (hairs <0.5 mm)	Pubescent on upper half only (hairs <0.5 mm) or pubescent (hairs <0.5 mm)
First sterile-lemma apex shape	Truncate with apical cleft	Truncate with apical cleft	Acute and divided for part of length	Acute and divided for part of length
First sterile-lemma keeled	Yes	Yes	Yes	Yes
Spikelets per centimetre of inflorescence branch	5–17	5–10	8–13	7–11
First-glume length (mm)	1–1.75	1.25–2.5	1.75–2	1–1.75
Second-glume length (mm)	2.5–3.25	2–4	2.75–4	1.75–3.75
Degree of separation of florets in spikelet	3–4.5	(3.5) 4.5–5	4–4.5	3.5–4.5
	Second floret usually appressed to the first, sometimes complete separation between the florets achieved at full maturity	Second floret sometimes in loose contact with the first, although more commonly completely free, the third enclosed by second	Second floret usually in loose contact with the first, sometimes complete separation between the florets achieved at full maturity	Second floret usually in contact with the first, sometimes complete separation between the florets achieved at full maturity
Number of florets per spikelet	2	2 or 3	2	2
Number of awns on first lemma	1	1	1	1

Character	<i>Chloris truncata</i>	<i>C. sp.</i> (Edgbaston R.J.Fensham 5694)	<i>C. divaricata</i>	<i>C. pectinata</i>
Maximum length of the central awn of the first lemma (mm)	7–16.5	7–15	15–27	8.5–16
Maximum first-lemma length (mm)	2–3	2.5–5	3–4.5	3.5–7
Maximum length of the central awn on the first sterile lemma (mm)	3.2–11	4.5–12	7–12	3.5–9
Maximum first sterile-lemma length (mm)	1.2–1.8	1–2.8	2.2–2.5	1.5–2
Rachilla length to the first sterile floret (mm)	0.8–1.35	0.75–1.35	1.1–1.5	0.9–1.1

Table S3. (Cont.)

Character	<i>C. pumilio</i>	<i>C. lobata</i>	<i>C. ventricosa</i>	<i>C. virgata</i>
Vegetative				
Stolons present	Present or absent	Present or absent	Present or absent	Present or absent
Culm branching present	Present or absent	Present or absent	Present or absent	Present or absent
Pilose hair present on adaxial surface of leaf sheath	Present	Present or absent	Present or absent	Present
Hair present on leaves	Present or absent	Absent	Present or absent	Present or absent
Maximum height of culm (cm)	29–59	11–56	24–80	22–66
Median number of nodes on culm	3–5.5	2.5–5.5	3–6	3–6
Maximum number of branches per inflorescence	4–8	4–6	3–7	7–12
Maximum length of inflorescence branches (cm)	(2.5) 5–8	3–5	4.5–12	3.5–8
Reproductive				
First-lemma apex shape	Divided into two lobes with acute apices	Divided into two lobes with acute apices	Truncate with apical cleft	Truncate entire
First lemma keeled	Yes	Yes	No to indistinctly yes	Yes
First-lemma margin indumentum	Pilose on upper half only (hairs >0.5 mm)	Pilose on upper half only (hairs >0.5 mm)	Glabrous or pubescent on upper half only (hairs <0.5 mm) or pubescent apart from in-turned margins (hairs <0.5 mm)	Pilose on upper half only (hairs >0.5 mm) or pilose (hairs >0.5 mm)
First-lemma body indumentum	Glabrous or pilose (hairs >0.5 mm)	Glabrous or pubescent (hairs <0.5 mm)	Glabrous or pubescent on upper half only (hairs <0.5 mm)	Glabrous or pubescent on mid-nerve only (hairs <0.5 mm)
First sterile-lemma apex shape	Acute and divided for part of length	Acute and divided to base	Truncate with apical cleft	Truncate entire or truncate with apical cleft
First sterile lemma keeled	Yes	–	No to indistinctly yes	Yes
Spikelets per centimetre of inflorescence branch	8–13	9–13	5–9	9–16
First-glume length (mm)	1.25–2.75	2.25–3	1.2–2.2	1.75–2
Second-glume length (mm)	2.25–5	3.5–5	2.25–3.75	3–3.75
Degree of separation of florets in spikelet	2.5–4.5	4–5	1.5–3.5	1–2.5
Number of florets per spikelet	Second floret usually in contact with the first, sometimes complete separation between the florets achieved at full maturity	Second floret usually in contact with the first, sometimes complete separation between the florets achieved at full maturity	Second floret usually clasped by margins of the first, and never achieving a complete lack of contact	Second floret usually contained by, or at least clasped by, the margins of the first, and never achieving a complete lack of contact
Number of awns on the first lemma	2 or 3	2	2	2 or 3
Maximum length of the central awn of the first lemma (mm)	1 or 3	3	1	1
Maximum first-lemma length (mm)	(6)10–31	7–9	3.2–10	6–12
Maximum length of the central awn on the first sterile lemma (mm)	4.5–7	4–7	3–5.2	2.5–4
Maximum length of the central awn on the first sterile lemma (mm)	5–24	6–8	1.2–6.5	4.5–11

Character	<i>C. pumilio</i>	<i>C. lobata</i>	<i>C. ventricosa</i>	<i>C. virgata</i>
Maximum first sterile-lemma length (mm)	2.5–5	3–5.5	1.8–3	1.8–2.5
Rachilla length to the first sterile floret (mm)	1–1.35	1.1–1.65	0.65–1.3	0.5–0.8

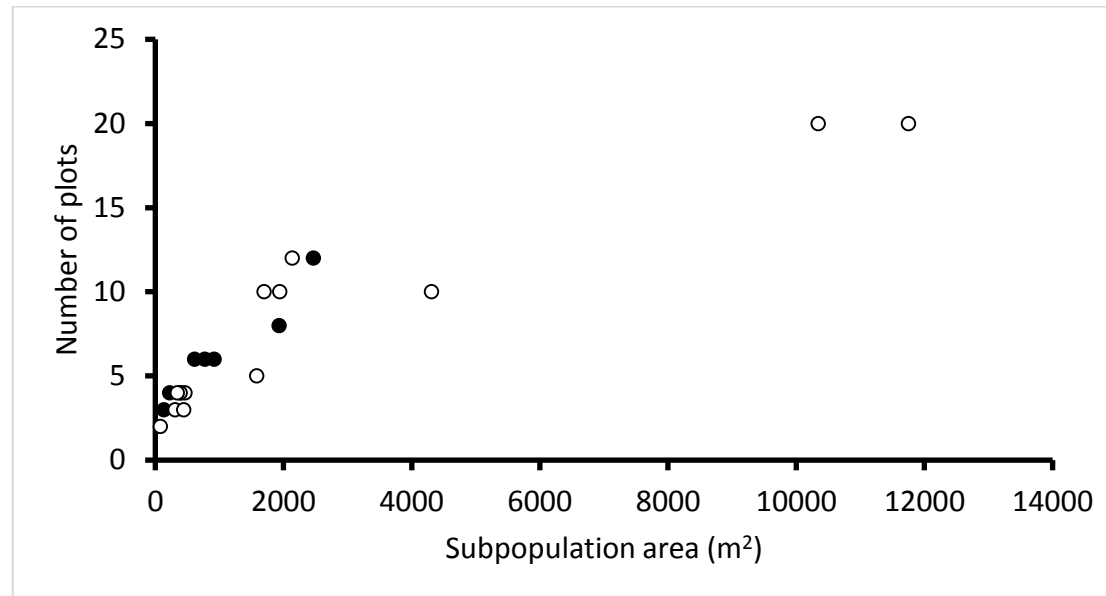


Fig. S1. The number of 2-m-diameter plots taken in subpopulations of different areas (m²) at Doongmabulla (open circles) and Edgbaston (closed circles) spring complexes.

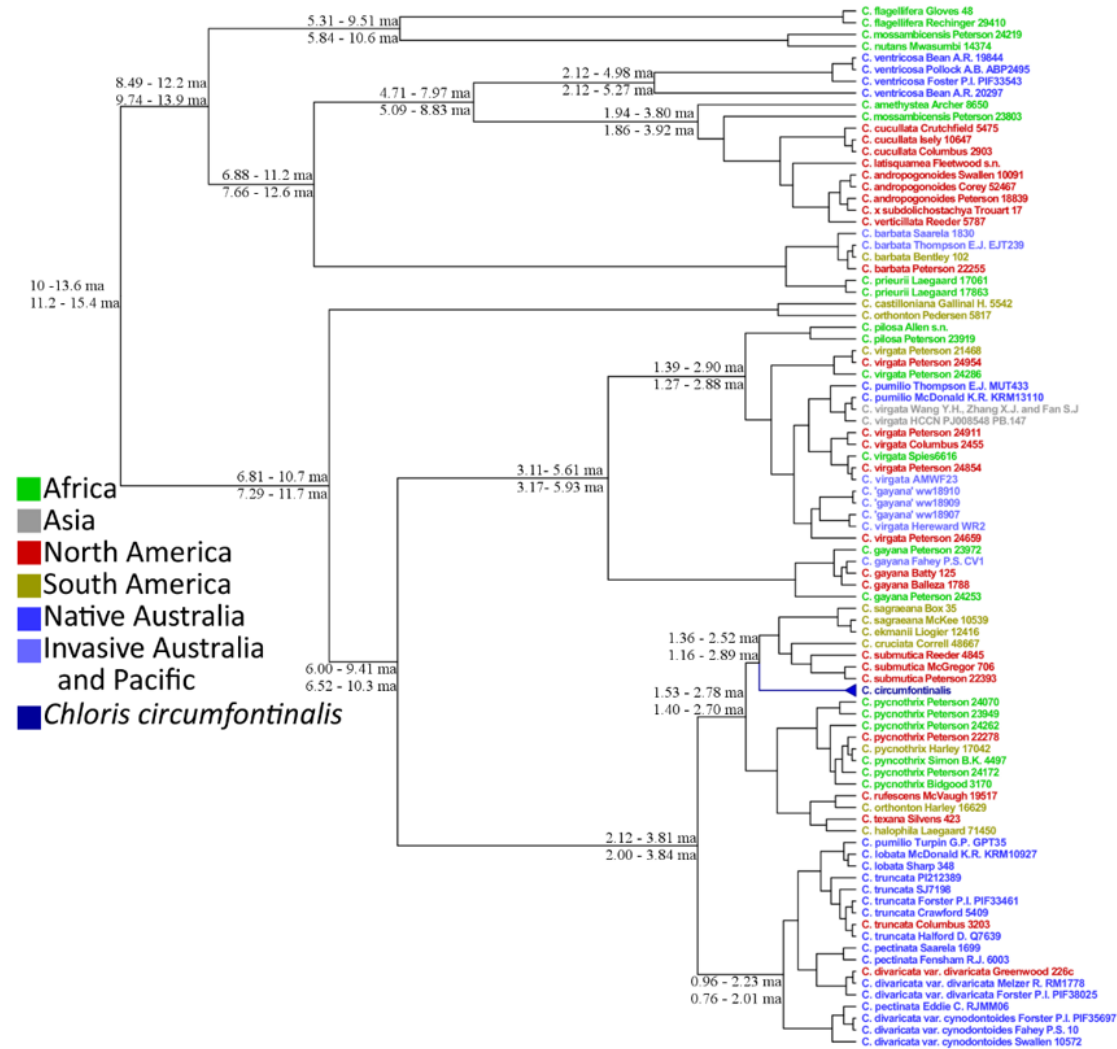


Fig. S2. Dated *Chloris* internal transcribed-spacer (ITS) phylogeny based on constant substitution rate as per Verboom *et al.* (2003). Select nodes with posterior parsimony support show the estimated date of divergence from Yule (top range) and birth–death (bottom) models applied in BEAST phylogenetic software.

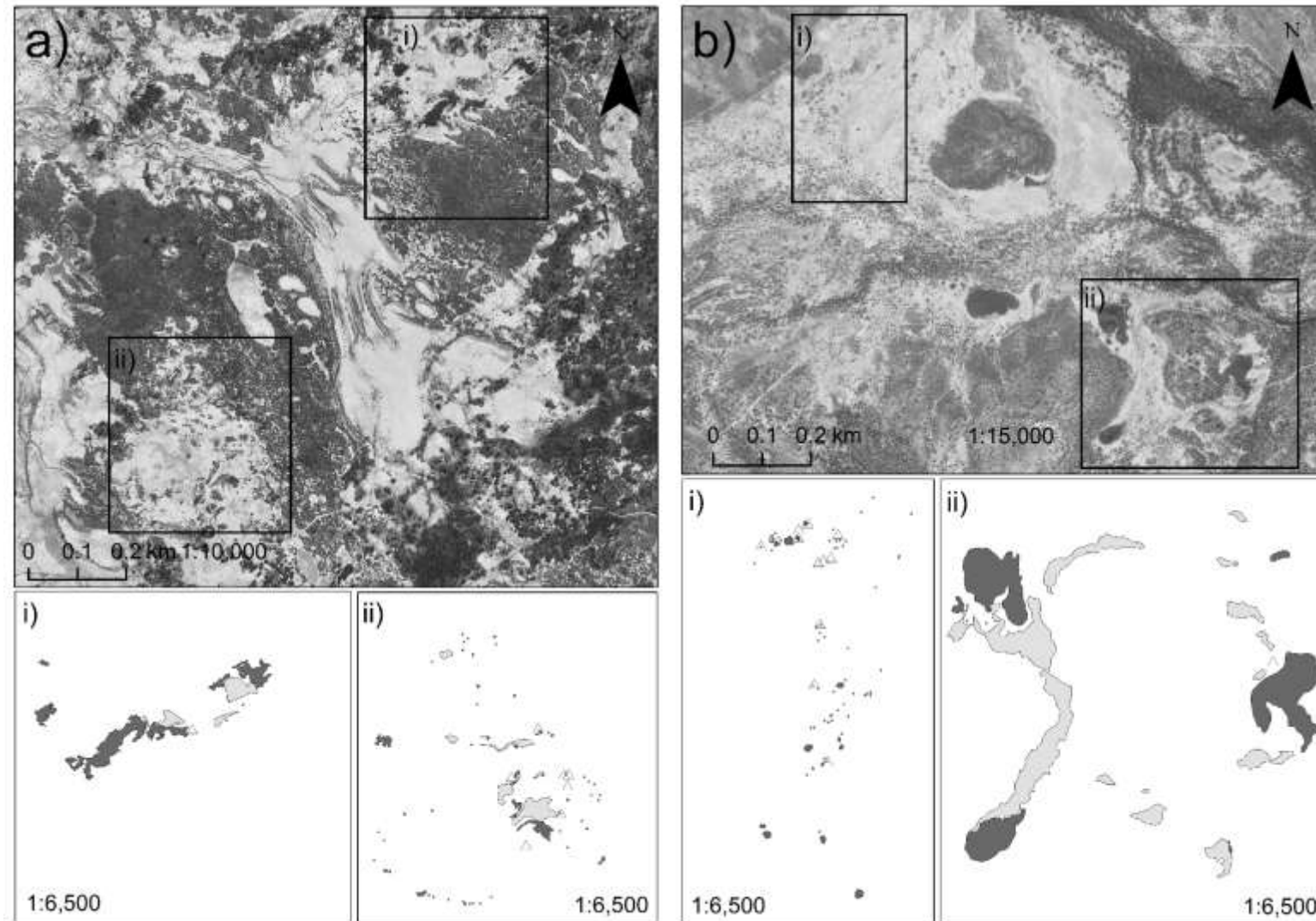


Fig. S3. Satellite imagery of all known subpopulations of *Chloris circumfontinalis*, showing the close association of subpopulations with spring wetlands. A. Edgbaston spring complex. B. Doongmabulla spring complex. Insets show the spring wetlands in dark grey, with light grey areas representing *C. circumfontinalis* subpopulations, and triangles are observations of scattered individuals.

References

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