Supporting Information

				Chronosequence stage				
Nutrient	Units	Species	Family	1	2	3	4	5
C	mg g^{-1}	Acacia rostellifera	Fabaceae	459.7 (19.1)	441.9 (14.5)	429.2 (13.3)	438.7 (6.9)	
C	mg g^{-1}	Acacia spathulifolia	Fabaceae				403 (14.3)	
C	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		463.9 (5.6)	460 (5.3)		
C	mg g^{-1}	Banksia attenuata	Proteaceae					484.7 (4.1)
C	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				489.2 (4.4)	
C	mg g^{-1}	Banksia menziesii	Proteaceae					498 (8.6)
C	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				487.3 (4.6)	
C	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	448.5 (8.6)	454.5 (6.1)	452.5 (7)		
C	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	462 (29.1)				
C	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				446.8 (8.9)	447.3 (9.4)
C	mg g^{-1}	Jacksonia floribunda	Fabaceae					482 (2.3)
C	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		460.1 (2.8)	451.6 (7.2)		
C	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		484.9 (9.3)	476.4 (10.5)	483.9 (8.1)	
C	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					484.3 (6.3)
C	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				437.5 (4.9)	443.3 (4.6)
C	mg g^{-1}	Olearia axillaris	Asteraceae	479.1 (17.9)				
C	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	410.5 (10.7)				
C	mg g^{-1}	Spyridium globulosum	Rhamnaceae	482.8 (4)				
N	mg g^{-1}	Acacia rostellifera	Fabaceae	17 (2.7)	17.3 (1.7)	16.5 (1.7)	16 (1.9)	
N	mg g^{-1}	Acacia spathulifolia	Fabaceae				11.8 (1)	
N	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		15.8 (2.4)	17.3 (2.9)		
N	mg g^{-1}	Banksia attenuata	Proteaceae					6.7 (1.2)
N	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				9.5 (1.6)	
N	mg g^{-1}	Banksia menziesii	Proteaceae					7.6 (0.9)
N	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				7.2 (0.9)	
N	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	9.3 (2)	10.6 (1.9)	10.1 (1.3)		
N	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	20.7 (4.5)				
N	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				9.3 (0.8)	10 (1)
N	mg g^{-1}	Jacksonia floribunda	Fabaceae					14.2 (0.8)
N	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		8.3 (1.1)	8.8 (1.8)		
N	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		9.2 (1.2)	9.7 (1.4)	8.4 (1.5)	

N	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					8.4 (1.4)
N	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				6.5 (1.3)	7.8 (0.8)
N	mg g^{-1}	Olearia axillaris	Asteraceae	10.4 (2.2)				
N	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	13.6 (4.2)				
N	mg g^{-1}	Spyridium globulosum	Rhamnaceae	8.6 (0.9)				
P	µg g^{-1}	Acacia rostellifera	Fabaceae	1204.1 (641.4)	761.7 (250.8)	777.3 (216.9)	507.1 (115.6)	
P	µg g^{-1}	Acacia spathulifolia	Fabaceae				309.9 (57)	
P	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		1515.6 (702.1)	899.5 (236.2)		
P	µg g^{-1}	Banksia attenuata	Proteaceae					215.8 (36.5)
P	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				446.3 (68.4)	
P	µg g^{-1}	Banksia menziesii	Proteaceae					242.8 (22.7)
P	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				264.7 (34.2)	
P	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	467.4 (189)	414.5 (122.7)	342.4 (77.2)		
P	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	1098.7 (646.7)				
P	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				336.4 (27.8)	245.6 (36.4)
P	µg g^{-1}	Jacksonia floribunda	Fabaceae					270.8 (47.9)
P	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		360.2 (246)	269.4 (46.9)		
P	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		879.7 (359.7)	597.1 (148.9)	375.1 (67.8)	
P	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					259.7 (34.1)
P	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				127.3 (37.7)	103.4 (10.3)
P	µg g^{-1}	Olearia axillaris	Asteraceae	2939.3 (1234.8)				
P	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	2871.6 (1080.4)				
P	µg g^{-1}	Spyridium globulosum	Rhamnaceae	672 (185.6)				
K	mg g^{-1}	Acacia rostellifera	Fabaceae	6.7 (2.9)	6 (1.2)	5.3 (2)	5.8 (1.9)	
K	mg g^{-1}	Acacia spathulifolia	Fabaceae				6 (2.2)	
K	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		5.7 (1.4)	10.3 (1.4)		
K	mg g^{-1}	Banksia attenuata	Proteaceae					2.4 (1)
K	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				3.5 (1)	
K	mg g^{-1}	Banksia menziesii	Proteaceae					2.7 (0.7)
K	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				3.2 (0.8)	
K	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	6.8 (4.6)	6.4 (2.4)	8.1 (1.8)		
K	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	9.7 (8.6)				
K	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				4.3 (1.3)	5 (1.4)
K	mg g^{-1}	Jacksonia floribunda	Fabaceae					8.6 (1.3)
K	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		4.5 (1.4)	5.6 (1.5)		
K	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		3.5 (1)	4.8 (0.7)	4.3 (0.8)	

K	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					3.9 (0.8)
K	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				5.1 (0.9)	4 (1.2)
K	mg g^{-1}	Olearia axillaris	Asteraceae	5.6 (3.4)				
K	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	5 (3.4)				
K	mg g^{-1}	Spyridium globulosum	Rhamnaceae	7.3 (4.7)				
Ca	mg g^{-1}	Acacia rostellifera	Fabaceae	44.5 (17.7)	47.6 (8.4)	57.9 (9)	55 (5.4)	
Ca	mg g^{-1}	Acacia spathulifolia	Fabaceae				69.7 (5.4)	
Ca	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		17.8 (5.5)	16.2 (2.7)		
Ca	mg g^{-1}	Banksia attenuata	Proteaceae					6 (1.9)
Ca	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				4.9 (0.6)	
Ca	mg g^{-1}	Banksia menziesii	Proteaceae					5.7 (1.5)
Ca	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				4.2 (0.8)	
Ca	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	17.9 (8.2)	14.7 (4.8)	13.9 (1.9)		
Ca	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	35 (14)				
Ca	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				16 (2.8)	15.5 (3.8)
Ca	mg g^{-1}	Jacksonia floribunda	Fabaceae					10.2 (3.2)
Ca	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		4.5 (0.8)	8 (1.6)		
Ca	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		16 (3.8)	15.4 (3.7)	15.5 (2.5)	
Ca	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					13 (3.2)
Ca	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				3 (1.2)	3.5 (0.9)
Ca	mg g^{-1}	Olearia axillaris	Asteraceae	15.5 (9.5)				
Ca	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	55.1 (16.4)				
Ca	mg g^{-1}	Spyridium globulosum	Rhamnaceae	33.1 (8.9)				
Mg	mg g^{-1}	Acacia rostellifera	Fabaceae	5.5 (1.7)	3.9 (1)	4.8 (1.3)	2.4 (0.8)	
Mg	mg g^{-1}	Acacia spathulifolia	Fabaceae				4.7 (1)	
Mg	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		3.1 (1.2)	2.7 (0.7)		
Mg	mg g^{-1}	Banksia attenuata	Proteaceae					1.9 (0.3)
Mg	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1.8 (0.4)	
Mg	mg g^{-1}	Banksia menziesii	Proteaceae					2.9 (1)
Mg	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.5 (0.2)	
Mg	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	2.5 (1)	2.4 (0.4)	2 (0.4)		
Mg	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	9.8 (4.8)				
Mg	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				3.8 (0.4)	4.1 (0.9)
Mg	mg g^{-1}	Jacksonia floribunda	Fabaceae					2.2 (0.2)
Mg	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		1.4 (0.4)	0.8 (0.2)		
Mg	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		8.3 (2.3)	7.7 (1.8)	6.5 (1)	

Mg	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					5.4 (1.1)
Mg	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.6 (0.2)	0.6 (0.2)
Mg	mg g^{-1}	Olearia axillaris	Asteraceae	3 (1.7)				
Mg	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	6 (2.1)				
Mg	mg g^{-1}	Spyridium globulosum	Rhamnaceae	4.4 (1.5)				
S	mg g^{-1}	Acacia rostellifera	Fabaceae	7.9 (7.4)	16.3 (2.4)	16.5 (4)	13.1 (1.1)	
S	mg g^{-1}	Acacia spathulifolia	Fabaceae				15.6 (6.9)	
S	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		2.1 (0.3)	2.3 (0.3)		
S	mg g^{-1}	Banksia attenuata	Proteaceae					1 (0.2)
S	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1.7 (0.3)	
S	mg g^{-1}	Banksia menziesii	Proteaceae					1.3 (0.2)
S	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.7 (0.5)	
S	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	1.4 (0.4)	1.1 (0.2)	1.2 (0.2)		
S	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	1.6 (0.6)				
S	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				3 (0.7)	3 (0.4)
S	mg g^{-1}	Jacksonia floribunda	Fabaceae					1.2 (0.2)
S	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		1 (0.2)	1.1 (0.3)		
S	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		5.2 (1.4)	3.6 (0.7)	4.4 (0.9)	
S	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					2.8 (0.7)
S	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				1 (0.2)	1.1 (0.2)
S	mg g^{-1}	Olearia axillaris	Asteraceae	1.7 (0.6)				
S	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	12 (4.1)				
S	mg g^{-1}	Spyridium globulosum	Rhamnaceae	1.5 (0.4)				
Fe	µg g^{-1}	Acacia rostellifera	Fabaceae	74.9 (28.9)	70.4 (16)	154.7 (166.4)	252.1 (215.1)	
Fe	µg g^{-1}	Acacia spathulifolia	Fabaceae				117.4 (68)	
Fe	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		137.8 (32.9)	122.5 (33.7)		
Fe	µg g^{-1}	Banksia attenuata	Proteaceae					99.9 (32.2)
Fe	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				132.3 (34.5)	
Fe	µg g^{-1}	Banksia menziesii	Proteaceae					107.4 (28.9)
Fe	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				127.6 (38.2)	
Fe	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	99 (37.4)	99.2 (25)	104.3 (34.7)		
Fe	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	66.8 (10.9)				
Fe	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				116.1 (34.5)	130.7 (26.4)
Fe	µg g^{-1}	Jacksonia floribunda	Fabaceae					85.5 (37)
Fe	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		66.6 (107.4)	38 (18.3)		
Fe	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		94.7 (31.7)	96.5 (24.8)	94.3 (28.1)	

Fe	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					76 (27.3)
Fe	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				29.3 (11.8)	24.9 (3.2)
Fe	µg g^{-1}	Olearia axillaris	Asteraceae	210 (75)				
Fe	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	70.6 (28.8)				
Fe	µg g^{-1}	Spyridium globulosum	Rhamnaceae	101.3 (43.6)				
Mn	µg g^{-1}	Acacia rostellifera	Fabaceae	7.9 (6.6)	7.8 (4.6)	13.5 (19.8)	58.7 (53.3)	
Mn	µg g^{-1}	Acacia spathulifolia	Fabaceae				5.8 (2.1)	
Mn	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		8.4 (7.9)	7 (5.4)		
Mn	µg g^{-1}	Banksia attenuata	Proteaceae					157.9 (121.2)
Mn	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				102.2 (43.9)	
Mn	µg g^{-1}	Banksia menziesii	Proteaceae					167 (67.6)
Mn	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				116.7 (51.7)	
Mn	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	145 (183.6)	59.5 (39.5)	99.3 (63.6)		
Mn	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	50.6 (72.4)				
Mn	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				21.4 (6.1)	43.6 (20.1)
Mn	µg g^{-1}	Jacksonia floribunda	Fabaceae					26.1 (14.7)
Mn	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		22.6 (12.3)	93.6 (37.2)		
Mn	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		7.7 (4.5)	8.3 (4.3)	16.5 (6.7)	
Mn	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					26.5 (14.4)
Mn	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				20.5 (13.4)	54 (70.8)
Mn	µg g^{-1}	Olearia axillaris	Asteraceae	13.7 (7.3)				
Mn	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	19.4 (13.3)				
Mn	µg g^{-1}	Spyridium globulosum	Rhamnaceae	10.6 (5.2)				
Cu	µg g^{-1}	Acacia rostellifera	Fabaceae	1.5 (1.4)	0.9 (0.7)	1.4 (2.2)	1.6 (0.2)	
Cu	µg g^{-1}	Acacia spathulifolia	Fabaceae				1.3 (0.2)	
Cu	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		4.3 (7.8)	1.6 (1.8)		
Cu	µg g^{-1}	Banksia attenuata	Proteaceae					2.2 (0.5)
Cu	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1.8 (0.2)	
Cu	µg g^{-1}	Banksia menziesii	Proteaceae					2 (0.4)
Cu	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.2 (0.2)	
Cu	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	1.2 (0.7)	0.9 (0.4)	0.7 (0.2)		
Cu	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	3 (3.1)				
Cu	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				1.8 (0.6)	1.8 (0.7)
Cu	µg g^{-1}	Jacksonia floribunda	Fabaceae					2 (0.9)
Cu	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		2.6 (3.6)	0.9 (0.3)		
Cu	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		0.9 (0.7)	1.1 (0.9)	2.2 (0.9)	

Cu	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					2.4 (0.8)
Cu	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				1.3 (0.9)	0.6 (0.3)
Cu	µg g^{-1}	Olearia axillaris	Asteraceae	2.4 (2.4)				
Cu	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	1.9 (1.2)				
Cu	µg g^{-1}	Spyridium globulosum	Rhamnaceae	1.2 (0.5)				
Zn	µg g^{-1}	Acacia rostellifera	Fabaceae	4.2 (2.9)	2.5 (1.1)	3.4 (1.7)	3.3 (1.6)	
Zn	µg g^{-1}	Acacia spathulifolia	Fabaceae				4.4 (2)	
Zn	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		5.2 (4.9)	3.9 (0.7)		
Zn	µg g^{-1}	Banksia attenuata	Proteaceae					2.8 (1.6)
Zn	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				3.9 (1.5)	
Zn	µg g^{-1}	Banksia menziesii	Proteaceae					2.7 (0.7)
Zn	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				2.6 (1.5)	
Zn	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	3.5 (1.6)	3.3 (1.8)	2.7 (1.3)		
Zn	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	4.7 (4.3)				
Zn	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				3.7 (0.5)	6.1 (2.8)
Zn	µg g^{-1}	Jacksonia floribunda	Fabaceae					4.1 (1.8)
Zn	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		6.3 (8.3)	3.8 (2.3)		
Zn	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		3.2 (2.1)	4.9 (6.1)	4 (2.6)	
Zn	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					4.7 (1.7)
Zn	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				3.3 (1.5)	4.5 (1.4)
Zn	µg g^{-1}	Olearia axillaris	Asteraceae	6.1 (7.6)				
Zn	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	4.7 (2.3)				
Zn	µg g^{-1}	Spyridium globulosum	Rhamnaceae	2.9 (1.5)				
Mo	µg g^{-1}	Acacia rostellifera	Fabaceae	0.6 (0.6)	1.1 (0.9)	2.5 (6.4)	0.3 (0.2)	
Mo	µg g^{-1}	Acacia spathulifolia	Fabaceae				0.3 (0.3)	
Mo	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		0.4 (0.2)	0.6 (0.7)		
Mo	µg g^{-1}	Banksia attenuata	Proteaceae					0.2 (0.2)
Mo	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				0.3 (0.2)	
Mo	µg g^{-1}	Banksia menziesii	Proteaceae					0.1 (0.1)
Mo	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				0.3 (0.2)	
Mo	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	0.2 (0.2)	0.4 (0.3)	0.6 (0.8)		
Mo	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	0.1 (0.1)				
Mo	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				0.3 (0.2)	0.2 (0.2)
Mo	µg g^{-1}	Jacksonia floribunda	Fabaceae					0.1 (0.2)
Mo	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.5 (0.6)	0.6 (0.3)		
Mo	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		0.4 (0.3)	1.7 (4.5)	0.3 (0.2)	

Mo	μg g^{-1}	Melaleuca leuropoma	Myrtaceae					0.2 (0.1)
Mo	μg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.2 (0.3)	0.1 (0.1)
Mo	μg g^{-1}	Olearia axillaris	Asteraceae	1.2 (0.8)				
Mo	μg g^{-1}	Scaevola crassifolia	Goodeniaceae	0.6 (0.6)				
Mo	μg g^{-1}	Spyridium globulosum	Rhamnaceae	0.4 (0.3)				

Table S1 Nutrient concentrations of mature leaves for individual species with increasing chronosequence stage. Values are means per species for each chronosequence stage, with standard deviations in parentheses.

				Chronosequence stage				
Nutrient	Units	Species	Family	1	2	3	4	5
N	mg g-^{1}	Acacia rostellifera	Fabaceae	8.8 (1.5)	13.7 (2)	12.5 (2)	10.3 (1.3)	
N	mg g^{-1}	Acacia spathulifolia	Fabaceae				9.4 (1)	
N	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		13.5 (2.5)	11.8 (2.2)		
N	mg g^{-1}	Banksia attenuata	Proteaceae					3.2 (0.4)
N	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				4.3 (0.7)	
N	mg g^{-1}	Banksia menziesii	Proteaceae					3.4 (0.4)
N	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				4.8 (0.6)	
N	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	7.5 (1.4)	11.6 (3.5)	10.2 (1.8)		
N	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	8.8 (1.7)				
N	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				6.9 (1.1)	8.6 (1.3)
N	mg g^{-1}	Jacksonia floribunda	Fabaceae					11.2 (0.9)
N	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		6.9 (1.5)	5.7 (1.1)		
N	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		6.5 (1.8)	8.9 (2.6)	5.5 (1.7)	
N	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					5.8 (1.2)
N	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				5.3 (1.7)	4.5 (0.9)
N	mg g^{-1}	Olearia axillaris	Asteraceae	6.5 (2)				
N	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	5.9 (1.8)				
N	mg g-1	Spyridium globulosum	Rhamnaceae	4 (0.8)				
P	µg g^{-1}	Acacia rostellifera	Fabaceae	899.8 (977.6)	374.6 (232.8)	216.6 (70.2)	151.4 (24.4)	
P	µg g^{-1}	Acacia spathulifolia	Fabaceae				136.9 (41.5)	
P	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		1238.4 (663.1)	467.9 (138.5)		
P	µg g^{-1}	Banksia attenuata	Proteaceae					19.4 (10)
P	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				74.6 (22.8)	
P	µg g^{-1}	Banksia menziesii	Proteaceae					24 (9.3)
P	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				72.6 (26)	
P	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	207.9 (78.5)	198.1 (64.6)	152.7 (57.4)		
P	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	295.4 (171.8)				
P	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				87.9 (22.7)	90.6 (22.1)
P	µg g^{-1}	Jacksonia floribunda	Fabaceae					44.1 (23.1)
P	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		138.1 (47.2)	69 (34.7)		
P	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		883.9 (397.9)	386.9 (155.6)	133.5 (70.2)	
P	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					66.3 (11.3)

P	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				77.9 (45.2)	30.6 (11.4)
P	µg g^{-1}	Olearia axillaris	Asteraceae	5653.7 (2867.9)				
P	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	3748.7 (2418.5)				
P	µg g^{-1}	Spyridium globulosum	Rhamnaceae	505.2 (170.6)				
K	mg g^{-1}	Acacia rostellifera	Fabaceae	3.5 (1.7)	3.4 (2.1)	1.4 (0.6)	3 (1.4)	
K	mg g^{-1}	Acacia spathulifolia	Fabaceae				4.5 (1.7)	
K	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		1.1 (0.1)	1.8 (0.4)		
K	mg g^{-1}	Banksia attenuata	Proteaceae					0.7 (0.5)
K	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				0.8 (0.2)	
K	mg g^{-1}	Banksia menziesii	Proteaceae					1.2 (0.4)
K	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1 (0.4)	
K	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	0.8 (0.5)	0.6 (0.1)	0.8 (0.3)		
K	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	2.2 (2.1)				
K	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				0.9 (0.2)	0.9 (0.4)
K	mg g^{-1}	Jacksonia floribunda	Fabaceae					3.4 (1.4)
K	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.7 (0.5)	0.3 (0.2)		
K	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		1.1 (0.4)	1.2 (0.3)	1 (0.4)	
K	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					0.9 (0.3)
K	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.3 (0.2)	0.2 (0.1)
K	mg g^{-1}	Olearia axillaris	Asteraceae	2.4 (1.4)				
K	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	1 (0.6)				
K	mg g^{-1}	Spyridium globulosum	Rhamnaceae	2.3 (1.9)				
Ca	mg g^{-1}	Acacia rostellifera	Fabaceae	44.5 (11.2)	44.4 (5.7)	60.8 (8.9)	49.6 (8.1)	
Ca	mg g^{-1}	Acacia spathulifolia	Fabaceae				57.3 (14.6)	
Ca	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		18.5 (2.6)	18 (2.4)		
Ca	mg g^{-1}	Banksia attenuata	Proteaceae					10.5 (1.9)
Ca	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				6.8 (1.9)	
Ca	mg g^{-1}	Banksia menziesii	Proteaceae					9 (2.6)
Ca	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				6.5 (1.2)	
Ca	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	22.9 (6.7)	18.8 (4.6)	17.4 (2.4)		
Ca	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	46.8 (14.1)				
Ca	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				15.4 (1.4)	13.8 (1.4)
Ca	mg g^{-1}	Jacksonia floribunda	Fabaceae					14.6 (5.1)
Ca	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		4 (0.8)	5.1 (1.2)		
Ca	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		26.9 (7.3)	35.3 (10)	18.5 (4.7)	
Ca	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					13 (2.8)

Ca	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				1.7 (0.4)	1.6 (0.5)
Ca	mg g^{-1}	Olearia axillaris	Asteraceae	32.9 (19.7)				
Ca	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	47.7 (12.2)				
Ca	mg g^{-1}	Spyridium globulosum	Rhamnaceae	29.5 (7)				
Mg	mg g^{-1}	Acacia rostellifera	Fabaceae	5 (2)	2.5 (0.5)	3 (0.8)	1.8 (0.7)	
Mg	mg g^{-1}	Acacia spathulifolia	Fabaceae				2.8 (0.3)	
Mg	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		2.1 (0.4)	1.9 (0.4)		
Mg	mg g^{-1}	Banksia attenuata	Proteaceae					1.6 (0.3)
Mg	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1.1 (0.2)	
Mg	mg g^{-1}	Banksia menziesii	Proteaceae					1.9 (0.6)
Mg	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.2 (0.4)	
Mg	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	1.9 (0.5)	1.6 (0.4)	1.3 (0.3)		
Mg	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	9.6 (3)				
Mg	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				1.8 (0.2)	1.7 (0.3)
Mg	mg g^{-1}	Jacksonia floribunda	Fabaceae					2.1 (0.6)
Mg	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.7 (0.2)	0.4 (0.1)		
Mg	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		5.3 (1.1)	4 (1.1)	2.8 (0.6)	
Mg	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					2.6 (0.7)
Mg	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.3 (0.1)	0.2 (0)
Mg	mg g^{-1}	Olearia axillaris	Asteraceae	4.4 (1.4)				
Mg	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	3.4 (1.2)				
Mg	mg g^{-1}	Spyridium globulosum	Rhamnaceae	3.4 (1.2)				
S	mg g^{-1}	Acacia rostellifera	Fabaceae	7.3 (6)	15.1 (3.3)	17.9 (7.4)	13.8 (2.7)	
S	mg g^{-1}	Acacia spathulifolia	Fabaceae				12.9 (6.7)	
S	mg g^{-1}	Acanthocarpus preissii	Asparagaceae		2 (0.1)	1.8 (0.2)		
S	mg g^{-1}	Banksia attenuata	Proteaceae					1.1 (0.3)
S	mg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1 (0.1)	
S	mg g^{-1}	Banksia menziesii	Proteaceae					1.5 (0.3)
S	mg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.6 (0.3)	
S	mg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	1.1 (0.1)	1.2 (0.1)	1.2 (0.1)		
S	mg g^{-1}	Hardenbergia comptoniana	Fabaceae	0.9 (0.4)				
S	mg g^{-1}	Hibbertia hypericoides	Dilleniaceae				3 (1.3)	1.9 (0.5)
S	mg g^{-1}	Jacksonia floribunda	Fabaceae					1.6 (0.3)
S	mg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.8 (0.1)	0.8 (0.1)		
S	mg g^{-1}	Melaleuca aff. systena	Myrtaceae		4.7 (1.7)	3.2 (0.8)	3.2 (1.2)	
S	mg g^{-1}	Melaleuca leuropoma	Myrtaceae					2.5 (0.9)

S	mg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.8 (0.1)	1 (0.3)
S	mg g^{-1}	Olearia axillaris	Asteraceae	2.1 (0.5)				
S	mg g^{-1}	Scaevola crassifolia	Goodeniaceae	10.9 (4.1)				
S	mg g^{-1}	Spyridium globulosum	Rhamnaceae	1.3 (0.3)				
Fe	µg g^{-1}	Acacia rostellifera	Fabaceae	49.8 (16.5)	67.4 (12.7)	103.1 (91.1)	208.3 (141.8)	
Fe	µg g^{-1}	Acacia spathulifolia	Fabaceae				81.1 (26.5)	
Fe	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		237.8 (68.7)	149.5 (30.7)		
Fe	µg g^{-1}	Banksia attenuata	Proteaceae					123.7 (47.8)
Fe	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				149.9 (42.2)	
Fe	µg g^{-1}	Banksia menziesii	Proteaceae					110.7 (22.3)
Fe	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				158.2 (51.2)	
Fe	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	130.1 (34.4)	167.3 (40.9)	169.7 (52.2)		
Fe	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	52.5 (9.2)				
Fe	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				152.9 (42)	275.9 (95.1)
Fe	µg g^{-1}	Jacksonia floribunda	Fabaceae					73.6 (22.6)
Fe	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		44.7 (10.8)	51.4 (6.3)		
Fe	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		69.7 (26)	189.7 (72.7)	142 (127.2)	
Fe	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					111 (59.4)
Fe	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				58.9 (17.2)	57.4 (16.8)
Fe	µg g^{-1}	Olearia axillaris	Asteraceae	317.4 (128.1)				
Fe	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	66.3 (29.7)				
Fe	µg g^{-1}	Spyridium globulosum	Rhamnaceae	100.3 (37.8)				
Mn	µg g^{-1}	Acacia rostellifera	Fabaceae	5 (5.2)	5.5 (3.8)	9.5 (14.6)	57 (65.8)	
Mn	µg g^{-1}	Acacia spathulifolia	Fabaceae				8.6 (6.1)	
Mn	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		6 (3.3)	4.8 (3.5)		
Mn	µg g^{-1}	Banksia attenuata	Proteaceae					318.4 (270.4)
Mn	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				126.6 (60.5)	
Mn	µg g^{-1}	Banksia menziesii	Proteaceae					272.8 (107.5)
Mn	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				168.4 (84.6)	
Mn	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	71.9 (47.6)	48.5 (34)	90.9 (51.9)		
Mn	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	29.9 (39.4)				
Mn	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				21 (8.8)	40.2 (21)
Mn	µg g^{-1}	Jacksonia floribunda	Fabaceae					26.1 (30.3)
Mn	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		11.5 (3.3)	24.7 (7)		
Mn	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		4.9 (2.7)	9.7 (4.8)	15.1 (8.4)	
Mn	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					25 (10.7)

Mn	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				11 (2.9)	30 (46.4)
Mn	µg g^{-1}	Olearia axillaris	Asteraceae	18.4 (16)				
Mn	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	11.2 (16.8)				
Mn	µg g^{-1}	Spyridium globulosum	Rhamnaceae	6.4 (3.2)				
Cu	µg g^{-1}	Acacia rostellifera	Fabaceae	0.8 (0.6)	0.6 (0.5)	1.3 (2.9)	0.9 (0.2)	
Cu	µg g^{-1}	Acacia spathulifolia	Fabaceae				1.1 (0.5)	
Cu	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		1.4 (1.1)	1.2 (0.5)		
Cu	µg g^{-1}	Banksia attenuata	Proteaceae					0.7 (0.5)
Cu	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				1.2 (0.5)	
Cu	µg g^{-1}	Banksia menziesii	Proteaceae					0.6 (0.2)
Cu	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				1.3 (1.6)	
Cu	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	0.8 (0.4)	1.2 (1.7)	1.2 (1.2)		
Cu	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	2.1 (2.4)				
Cu	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				1.4 (0.4)	1.6 (0.4)
Cu	µg g^{-1}	Jacksonia floribunda	Fabaceae					0.7 (0.6)
Cu	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.7 (0.2)	0.4 (0.1)		
Cu	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		0.7 (0.4)	1.1 (0.7)	5.7 (11.6)	
Cu	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					1.3 (0.7)
Cu	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				1.2 (0.7)	0.8 (0.3)
Cu	µg g^{-1}	Olearia axillaris	Asteraceae	1.2 (1.4)				
Cu	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	1 (1.4)				
Cu	µg g^{-1}	Spyridium globulosum	Rhamnaceae	0.4 (0.1)				
Zn	µg g^{-1}	Acacia rostellifera	Fabaceae	0.8 (1.5)	0 (0)	0.9 (1.4)	2.8 (2.5)	
Zn	µg g^{-1}	Acacia spathulifolia	Fabaceae				3.5 (2.4)	
Zn	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		1.2 (2.3)	0.2 (0.4)		
Zn	µg g^{-1}	Banksia attenuata	Proteaceae					2 (0.7)
Zn	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				2.8 (0.7)	
Zn	µg g^{-1}	Banksia menziesii	Proteaceae					2.1 (0.8)
Zn	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				4.5 (2.1)	
Zn	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	1.7 (2.6)	2.1 (2.3)	1.5 (1.7)		
Zn	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	1.2 (1.2)				
Zn	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				3.2 (1.2)	3.9 (1.1)
Zn	µg g^{-1}	Jacksonia floribunda	Fabaceae					3.9 (2.3)
Zn	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		2.8 (1.5)	2.9 (2.8)		
Zn	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		0.2 (0.4)	0.7 (0.9)	5.8 (8.4)	
Zn	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					4.3 (1.6)

Zn	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				3.9 (1.6)	2.3 (0.4)
Zn	µg g^{-1}	Olearia axillaris	Asteraceae	2.2 (3.5)				
Zn	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	1.2 (1.1)				
Zn	µg g^{-1}	Spyridium globulosum	Rhamnaceae	0.2 (0.4)				
Mo	µg g^{-1}	Acacia rostellifera	Fabaceae	0.4 (0.3)	0.7 (1.2)	2.4 (6.5)	0.1 (0.1)	
Mo	µg g^{-1}	Acacia spathulifolia	Fabaceae				0.2 (0.3)	
Mo	µg g^{-1}	Acanthocarpus preissii	Asparagaceae		0.5 (0.1)	0.7 (0.6)		
Mo	µg g^{-1}	Banksia attenuata	Proteaceae					0.1 (0.1)
Mo	µg g^{-1}	Banksia leptophylla var. melletica	Proteaceae				0 (0)	
Mo	µg g^{-1}	Banksia menziesii	Proteaceae					0.1 (0.1)
Mo	µg g^{-1}	Banksia sessilis var. cygnorum	Proteaceae				0 (0)	
Mo	µg g^{-1}	Conostylis candicans ssp. calcicola	Haemodoraceae	0.2 (0.3)	0.6 (0.8)	0.8 (1.2)		
Mo	µg g^{-1}	Hardenbergia comptoniana	Fabaceae	0.1 (0.1)				
Mo	µg g^{-1}	Hibbertia hypericoides	Dilleniaceae				0.1 (NA)	0.1 (0.1)
Mo	µg g^{-1}	Jacksonia floribunda	Fabaceae					0.1 (0.1)
Mo	µg g^{-1}	Lepidosperma squamatum	Cyperaceae		0.3 (0.3)	0.2 (0.3)		
Mo	µg g^{-1}	Melaleuca aff. systena	Myrtaceae		0.3 (0.2)	2.1 (5.4)	0.5 (0.8)	
Mo	µg g^{-1}	Melaleuca leuropoma	Myrtaceae					0 (0)
Mo	µg g^{-1}	Mesomelaena pseudostygia	Cyperaceae				0.1 (0.1)	0.2 (0)
Mo	µg g^{-1}	Olearia axillaris	Asteraceae	0.9 (0.6)				
Mo	µg g^{-1}	Scaevola crassifolia	Goodeniaceae	0.7 (0.5)				
Mo	µg g^{-1}	Spyridium globulosum	Rhamnaceae	0.2 (0.2)				

Table S2 Nutrient concentrations of senesced leaves for individual species with increasing chronosequence stage. Values are means per species for each chronosequence stage, with standard deviations in parentheses.

			Chronosequence stage				
Nutrient	Species	Family	1	2	3	4	5
N	Acacia rostellifera	Fabaceae	48 (6.6)	20.1 (13.9)	23.7 (13.3)	35.3 (7.6)	
N	Acacia spathulifolia	Fabaceae				19.4 (11.3)	
N	Acanthocarpus preissii	Asparagaceae		13.2 (15.8)	31.4 (11.6)		
N	Banksia attenuata	Proteaceae					51.7 (7.8)
N	Banksia leptophylla var. melletica	Proteaceae				53.8 (7.5)	
N	Banksia menziesii	Proteaceae					54.9 (6.2)
N	Banksia sessilis var. cygnorum	Proteaceae				33 (11.4)	
N	Conostylis candicans ssp. calcicola	Haemodoraceae	18.3 (13.8)	-9.2 (25.8)	-2.3 (19)		
N	Hardenbergia comptoniana	Fabaceae	56 (10.5)				
N	Hibbertia hypericoides	Dilleniaceae				25.4 (8.4)	13.6 (9.1)
N	Jacksonia floribunda	Fabaceae					20.6 (9.6)
N	Lepidosperma squamatum	Cyperaceae		16.4 (14.5)	32.2 (21.4)		
N	Melaleuca aff. systena	Myrtaceae		30.1 (14.4)	8 (23)	35 (10.6)	
N	Melaleuca leuropoma	Myrtaceae					30.2 (11.5)
N	Mesomelaena pseudostygia	Cyperaceae				17.1 (26.7)	43.2 (8.5)
N	Olearia axillaris	Asteraceae	38.1 (12.6)				
N	Scaevola crassifolia	Goodeniaceae	56.1 (8.5)				
N	Spyridium globulosum	Rhamnaceae	52.9 (8)				
P	Acacia rostellifera	Fabaceae	17.1 (101)	52.5 (18.4)	70.6 (12.2)	69.6 (4.5)	
P	Acacia spathulifolia	Fabaceae				55.2 (13)	
P	Acanthocarpus preissii	Asparagaceae		19.8 (17.5)	47.5 (11.4)		
P	Banksia attenuata	Proteaceae					90.8 (4.9)
P	Banksia leptophylla var. melletica	Proteaceae				83.2 (5.3)	
P	Banksia menziesii	Proteaceae					90.2 (3.2)
P	Banksia sessilis var. cygnorum	Proteaceae				72.7 (8.9)	
P	Conostylis candicans ssp. calcicola	Haemodoraceae	53 (16.5)	51.7 (9.8)	56.2 (9.9)		
P	Hardenbergia comptoniana	Fabaceae	65.2 (25.9)				
P	Hibbertia hypericoides	Dilleniaceae				74.1 (5.4)	62.7 (10)
P	Jacksonia floribunda	Fabaceae					83 (10.3)
P	Lepidosperma squamatum	Cyperaceae		56.1 (13.6)	74.8 (8.6)		
P	Melaleuca aff. systena	Myrtaceae		-10.8 (63.4)	35.1 (23.4)	63.6 (20)	
P	Melaleuca leuropoma	Myrtaceae					74.1 (4.9)
P	Mesomelaena pseudostygia	Cyperaceae				38 (36.6)	71 (8.5)
P	Olearia axillaris	Asteraceae	-106.5 (94.6)				
P	Scaevola crassifolia	Goodeniaceae	-22.6 (46.9)				
P	Spyridium globulosum	Rhamnaceae	20.7 (29.1)				
K	Acacia rostellifera	Fabaceae	43.6 (26.4)	44.9 (30.9)	71 (12.1)	49.7 (9.4)	

K	Acacia spathulifolia	Fabaceae				22.5 (27.9)	
K	Acanthocarpus preissii	Asparagaceae		80.5 (5.2)	82.5 (4.7)		
K	Banksia attenuata	Proteaceae					69.9 (10.2)
K	Banksia leptophylla var. melletica	Proteaceae				74.5 (9.2)	
K	Banksia menziesii	Proteaceae					52.1 (22.3)
K	Banksia sessilis var. cygnorum	Proteaceae				66.3 (15.6)	
K	Conostylis candicans ssp. calcicola	Haemodoraceae	87.6 (7)	88.7 (8.5)	90.5 (3.1)		
K	Hardenbergia comptoniana	Fabaceae	71.8 (21.7)				
K	Hibbertia hypericoides	Dilleniaceae				76 (10.4)	80.5 (7.7)
K	Jacksonia floribunda	Fabaceae					60 (18.2)
K	Lepidosperma squamatum	Cyperaceae		83.9 (11.3)	93.8 (5.2)		
K	Melaleuca aff. systena	Myrtaceae		66.5 (15.1)	74 (6.2)	76.4 (12)	
K	Melaleuca leuropoma	Myrtaceae					76.1 (7.6)
K	Mesomelaena pseudostygia	Cyperaceae				93.5 (3.5)	95.8 (1.5)
K	Olearia axillaris	Asteraceae	49.3 (29.1)				
K	Scaevola crassifolia	Goodeniaceae	76.2 (13.8)				
K	Spyridium globulosum	Rhamnaceae	69.3 (16.8)				
Ca	Acacia rostellifera	Fabaceae	-13.1 (48)	2.2 (31.9)	-5.9 (13.4)	9.7 (11.4)	
Ca	Acacia spathulifolia	Fabaceae				16.6 (25.4)	
Ca	Acanthocarpus preissii	Asparagaceae		-10.6 (26.6)	-12.5 (18.3)		
Ca	Banksia attenuata	Proteaceae					-82 (35.3)
Ca	Banksia leptophylla var. melletica	Proteaceae				-40.3 (38.2)	
Ca	Banksia menziesii	Proteaceae					-66 (55.5)
Ca	Banksia sessilis var. cygnorum	Proteaceae				-60 (33.8)	
Ca	Conostylis candicans ssp. calcicola	Haemodoraceae	-50.9 (89.9)	-37 (40.4)	-27 (24.5)		
Ca	Hardenbergia comptoniana	Fabaceae	-48.2 (59.7)				
Ca	Hibbertia hypericoides	Dilleniaceae				1.9 (12.5)	5.7 (24.2)
Ca	Jacksonia floribunda	Fabaceae					-42.8 (29.2)
Ca	Lepidosperma squamatum	Cyperaceae		9.9 (12.2)	36 (11.3)		
Ca	Melaleuca aff. systena	Myrtaceae		-68.3 (22.6)	-136.3 (77.2)	-19.8 (26.9)	
Ca	Melaleuca leuropoma	Myrtaceae					-1.8 (16.3)
Ca	Mesomelaena pseudostygia	Cyperaceae				32.2 (37.5)	51.1 (14.7)
Ca	Olearia axillaris	Asteraceae	-123.4 (66.6)				
Ca	Scaevola crassifolia	Goodeniaceae	9 (25.8)				
Ca	Spyridium globulosum	Rhamnaceae	5.8 (29.8)				
Mg	Acacia rostellifera	Fabaceae	6.1 (32.1)	34.4 (17.6)	35.4 (14.1)	28.3 (11.5)	
Mg	Acacia spathulifolia	Fabaceae				38.2 (13.3)	
Mg	Acanthocarpus preissii	Asparagaceae		27.1 (24.6)	26.8 (16.9)		
Mg	Banksia attenuata	Proteaceae					14.9 (10)
Mg	Banksia leptophylla var. melletica	Proteaceae				37.4 (17)	
Mg	Banksia menziesii	Proteaceae					35.3 (10.6)
Mg	Banksia sessilis var. cygnorum	Proteaceae				20.7 (17.4)	

Mg	Conostylis candicans ssp. calcicola	Haemodoraceae	19.3 (26.5)	32.5 (14.9)	36.4 (15.1)		
Mg	Hardenbergia comptoniana	Fabaceae	-13 (42.5)				
Mg	Hibbertia hypericoides	Dilleniaceae				53 (4.8)	57.9 (6.2)
Mg	Jacksonia floribunda	Fabaceae					5.7 (23.9)
Mg	Lepidosperma squamatum	Cyperaceae		46.6 (18.1)	50.4 (9)		
Mg	Melaleuca aff. systena	Myrtaceae		33.8 (14.4)	47 (12.9)	55.5 (10.4)	
Mg	Melaleuca leuropoma	Myrtaceae					52.4 (8.8)
Mg	Mesomelaena pseudostygia	Cyperaceae				46 (16.2)	58.5 (11.1)
Mg	Olearia axillaris	Asteraceae	-63.3 (47.6)				
Mg	Scaevola crassifolia	Goodeniaceae	37.8 (27.2)				
Mg	Spyridium globulosum	Rhamnaceae	18.7 (29.1)				
S	Acacia rostellifera	Fabaceae	-1.7 (39.2)	6.1 (20)	-5.6 (20.4)	-4.9 (12.5)	
S	Acacia spathulifolia	Fabaceae				16.3 (21)	
S	Acanthocarpus preissii	Asparagaceae		2 (19)	17.2 (13.3)		
S	Banksia attenuata	Proteaceae					-8.3 (34.2)
S	Banksia leptophylla var. melletica	Proteaceae				37.8 (7.9)	
S	Banksia menziesii	Proteaceae					-11.6 (16.4)
S	Banksia sessilis var. cygnorum	Proteaceae				3.8 (25.4)	
S	Conostylis candicans ssp. calcicola	Haemodoraceae	19.8 (28.4)	-9.1 (20.7)	-2.2 (18.5)		
S	Hardenbergia comptoniana	Fabaceae	39.9 (13.9)				
S	Hibbertia hypericoides	Dilleniaceae				2.5 (29.3)	36 (14)
S	Jacksonia floribunda	Fabaceae					-31.3 (25.7)
S	Lepidosperma squamatum	Cyperaceae		10.2 (22.5)	28.9 (15.3)		
S	Melaleuca aff. systena	Myrtaceae		6.9 (22)	7.2 (32.3)	26 (25)	
S	Melaleuca leuropoma	Myrtaceae					7.8 (27.6)
S	Mesomelaena pseudostygia	Cyperaceae				22.4 (20.8)	11 (28.1)
S	Olearia axillaris	Asteraceae	-24.5 (26.3)				
S	Scaevola crassifolia	Goodeniaceae	4.4 (33.7)				
S	Spyridium globulosum	Rhamnaceae	15.1 (14)				
Fe	Acacia rostellifera	Fabaceae	25.3 (31.9)	-0.7 (30.6)	20.9 (33.5)	9.1 (41)	
Fe	Acacia spathulifolia	Fabaceae				17 (31.3)	
Fe	Acanthocarpus preissii	Asparagaceae		-77.2 (55.8)	-27.3 (30.8)		
Fe	Banksia attenuata	Proteaceae					-27.6 (42.4)
Fe	Banksia leptophylla var. melletica	Proteaceae				-15.5 (26.6)	
Fe	Banksia menziesii	Proteaceae					-7.5 (25.2)
Fe	Banksia sessilis var. cygnorum	Proteaceae				-29 (45.6)	
Fe	Conostylis candicans ssp. calcicola	Haemodoraceae	-44.5 (51)	-75 (46.3)	-71.8 (51.3)		
Fe	Hardenbergia comptoniana	Fabaceae	19.6 (19.2)				
Fe	Hibbertia hypericoides	Dilleniaceae				-39.6 (53.5)	-115.9 (72.2)
Fe	Jacksonia floribunda	Fabaceae					9.9 (14.9)
Fe	Lepidosperma squamatum	Cyperaceae		-39.1 (60.2)	-52.4 (42.9)		
Fe	Melaleuca aff. systena	Myrtaceae		20.4 (33.2)	-106.7 (85.1)	-67.2 (183.9)	

Fe	Melaleuca leuropoma	Myrtaceae					-69.3 (137.8)
Fe	Mesomelaena pseudostygia	Cyperaceae				-126.5 (98.8)	-133.4 (76.1)
Fe	Olearia axillaris	Asteraceae	-49.4 (27)				
Fe	Scaevola crassifolia	Goodeniaceae	4 (28.4)				
Fe	Spyridium globulosum	Rhamnaceae	-6.7 (41.5)				
Mn	Acacia rostellifera	Fabaceae	39.2 (15.4)	28 (20.8)	38.2 (17.9)	14 (33.7)	
Mn	Acacia spathulifolia	Fabaceae				-37.3 (55.6)	
Mn	Acanthocarpus preissii	Asparagaceae		5.6 (41.6)	27.8 (11.6)		
Mn	Banksia attenuata	Proteaceae					-108.8 (118.6)
Mn	Banksia leptophylla var. melletica	Proteaceae				-28.1 (51.6)	
Mn	Banksia menziesii	Proteaceae					-89.4 (120.2)
Mn	Banksia sessilis var. cygnorum	Proteaceae				-48.7 (45.2)	
Mn	Conostylis candicans ssp. calcicola	Haemodoraceae	1 (81.8)	11.8 (39.7)	-4.8 (41.3)		
Mn	Hardenbergia comptoniana	Fabaceae	36.9 (30)				
Mn	Hibbertia hypericoides	Dilleniaceae				4.5 (15.1)	1.3 (33.9)
Mn	Jacksonia floribunda	Fabaceae					16.6 (48.3)
Mn	Lepidosperma squamatum	Cyperaceae		42.3 (21.3)	70.4 (14.4)		
Mn	Melaleuca aff. systena	Myrtaceae		31.5 (21.5)	-18.9 (32.6)	9.7 (32.7)	
Mn	Melaleuca leuropoma	Myrtaceae					-10.6 (61)
Mn	Mesomelaena pseudostygia	Cyperaceae				23.9 (46.7)	49.6 (16.9)
Mn	Olearia axillaris	Asteraceae	-24.2 (51.3)				
Mn	Scaevola crassifolia	Goodeniaceae	53.4 (32.6)				
Mn	Spyridium globulosum	Rhamnaceae	37.6 (20.4)				
Cu	Acacia rostellifera	Fabaceae	39.1 (29.9)	27.3 (32)	23.7 (37.5)	45 (16.8)	
Cu	Acacia spathulifolia	Fabaceae				11.6 (36.1)	
Cu	Acanthocarpus preissii	Asparagaceae		20.1 (43.2)	-6.8 (60.7)		
Cu	Banksia attenuata	Proteaceae					62.4 (31)
Cu	Banksia leptophylla var. melletica	Proteaceae				34.6 (23.5)	
Cu	Banksia menziesii	Proteaceae					69.7 (10.9)
Cu	Banksia sessilis var. cygnorum	Proteaceae				-5.3 (126.6)	
Cu	Conostylis candicans ssp. calcicola	Haemodoraceae	24.2 (22.4)	-117.8 (431.2)	-64.4 (108.1)		
Cu	Hardenbergia comptoniana	Fabaceae	23 (95)				
Cu	Hibbertia hypericoides	Dilleniaceae				14.8 (41.4)	8.7 (23.9)
Cu	Jacksonia floribunda	Fabaceae					60.3 (47.6)
Cu	Lepidosperma squamatum	Cyperaceae		20 (72.2)	47 (19.6)		
Cu	Melaleuca aff. systena	Myrtaceae		-1.7 (82)	-19.2 (80)	-174 (543.3)	
Cu	Melaleuca leuropoma	Myrtaceae					37.7 (49.5)
Cu	Mesomelaena pseudostygia	Cyperaceae				-30 (95)	-53.7 (82.8)
Cu	Olearia axillaris	Asteraceae	42.3 (31.4)				
Cu	Scaevola crassifolia	Goodeniaceae	53.9 (52.5)				
Cu	Spyridium globulosum	Rhamnaceae	65.4 (20)				
Zn	Acacia rostellifera	Fabaceae	81.8 (33.3)	100 (0)	77.2 (34.4)	5.6 (117.5)	

Zn	Acacia spathulifolia	Fabaceae				9.4 (66.1)	
Zn	Acanthocarpus preissii	Asparagaceae		68.2 (57.9)	95.1 (9.6)		
Zn	Banksia attenuata	Proteaceae					-13.8 (115.6)
Zn	Banksia leptophylla var. melletica	Proteaceae				19.3 (30.9)	
Zn	Banksia menziesii	Proteaceae					11.3 (56.6)
Zn	Banksia sessilis var. cygnorum	Proteaceae				-141.7 (210.7)	
Zn	Conostylis candicans ssp. calcicola	Haemodoraceae	59.4 (53.4)	30 (83.5)	23.6 (80.2)		
Zn	Hardenbergia comptoniana	Fabaceae	44.5 (51.8)				
Zn	Hibbertia hypericoides	Dilleniaceae				11.1 (37)	25.6 (33.9)
Zn	Jacksonia floribunda	Fabaceae					-0.3 (55.6)
Zn	Lepidosperma squamatum	Cyperaceae		-21.6 (172)	-4.9 (138.9)		
Zn	Melaleuca aff. systena	Myrtaceae		94.7 (11.4)	82.2 (25)	-87.5 (290.1)	
Zn	Melaleuca leuropoma	Myrtaceae					1.6 (46.2)
Zn	Mesomelaena pseudostygia	Cyperaceae				-74.1 (171.3)	43.7 (17.4)
Zn	Olearia axillaris	Asteraceae	70.7 (37.9)				
Zn	Scaevola crassifolia	Goodeniaceae	72.8 (26.6)				
Zn	Spyridium globulosum	Rhamnaceae	96.3 (9.6)				
Mo	Acacia rostellifera	Fabaceae				62	
Mo	Acacia spathulifolia	Fabaceae				44.2 (73.7)	
Mo	Acanthocarpus preissii	Asparagaceae			-150.3 (379.5)		
Mo	Banksia attenuata	Proteaceae					
Mo	Banksia leptophylla var. melletica	Proteaceae				79.3 (24)	
Mo	Banksia menziesii	Proteaceae					
Mo	Banksia sessilis var. cygnorum	Proteaceae				94 (8.6)	
Mo	Conostylis candicans ssp. calcicola	Haemodoraceae		-52.8 (183.6)	15.8 (43.4)		
Mo	Hardenbergia comptoniana	Fabaceae					
Mo	Hibbertia hypericoides	Dilleniaceae					
Mo	Jacksonia floribunda	Fabaceae					
Mo	Lepidosperma squamatum	Cyperaceae			67.9 (21.7)		
Mo	Melaleuca aff. systena	Myrtaceae				-121 (196)	
Mo	Melaleuca leuropoma	Myrtaceae					93.1 (13.8)
Mo	Mesomelaena pseudostygia	Cyperaceae				-12.6 (122)	-327.1 (448.9)
Mo	Olearia axillaris	Asteraceae	21.9 (34.5)				
Mo	Scaevola crassifolia	Goodeniaceae					
Mo	Spyridium globulosum	Rhamnaceae					

Table S3 Leaf nutrient-resorption efficiency (%) for individual species with increasing chronosequence stage. Values are means per species for each chronosequence stage, with

standard deviations in parentheses. Negative values indicate that senesced leaves had higher nutrient concentrations than mature leaves.

Term	**β**	**σ**	**t**	**P**
Intercept	1.7671	0.3335	5.299	<0.0001
pH ($CaCl_2$)	0.0005	0.0617	0.008	0.994
Total soil [P]	-0.0015	0.0004	-3.438	0.0013
Total soil [Mn]	0.0075	0.0074	1.001	0.3221

Table S4 Results of linear mixed-effect model testing the effect of soil pH, total phosphorus (P) and total manganese (Mn) concentrations on (log-transformed) cover-weighted mature leaf [Mn]. β = unstandardised regression coefficient.

Term	**β**	**σ**	**t**	**P**
Intercept	3.793	1.045	3.630	0.0006
pH ($CaCl_2$)	-0.274	0.132	-2.084	0.042
Total soil [P]	-0.0019	0.0005	-4.130	<0.0001
Total soil [Mn]	0.0187	0.0099	1.882	0.065

Table S5 Results of linear mixed-effect model testing the effect of soil pH, total phosphorus (P) and total manganese (Mn) concentrations on (log-transformed) mature leaf [Mn] of the three non-mycorrhizal species that occurred across at least two chronosequence stages. β = unstandardised regression coefficient. Random intercepts per species were specified in the model.

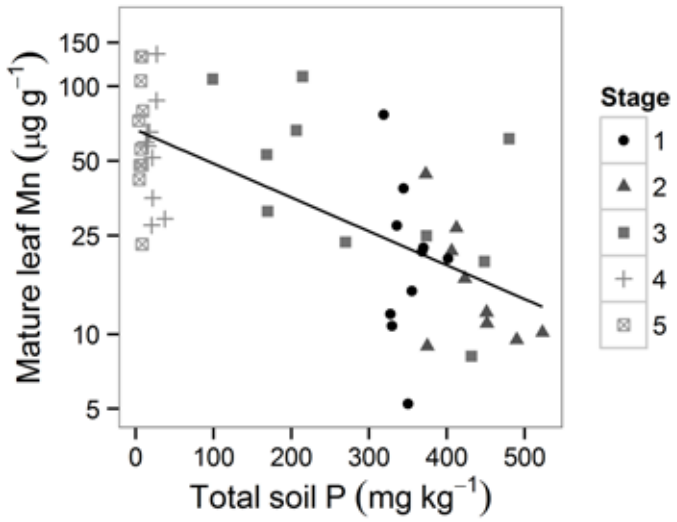

Fig. S1 Effect of total soil phosphorus (P) concentration on cover-weighted leaf manganese (Mn) concentration. The black line is the line of best fit. The y-axis is on a logarithmic scale.

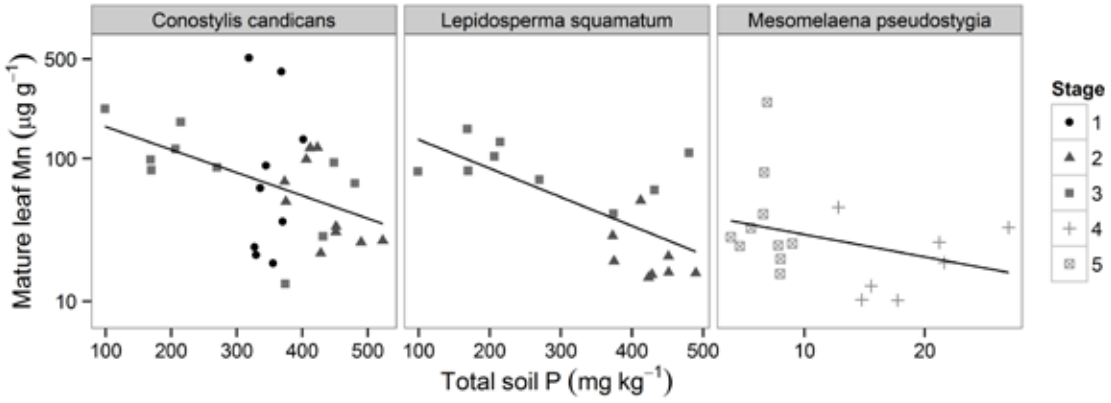

Fig. S2 Effect of total soil phsphorus (P) concentration on mature leaf manganese (Mn) concentration for the three non-mycorrhizal species that occurred across at least two chronosequence stages. Black lines are lines of best fit from simple linear regressions for each individual species. The y-axis is on a logarithmic scale.

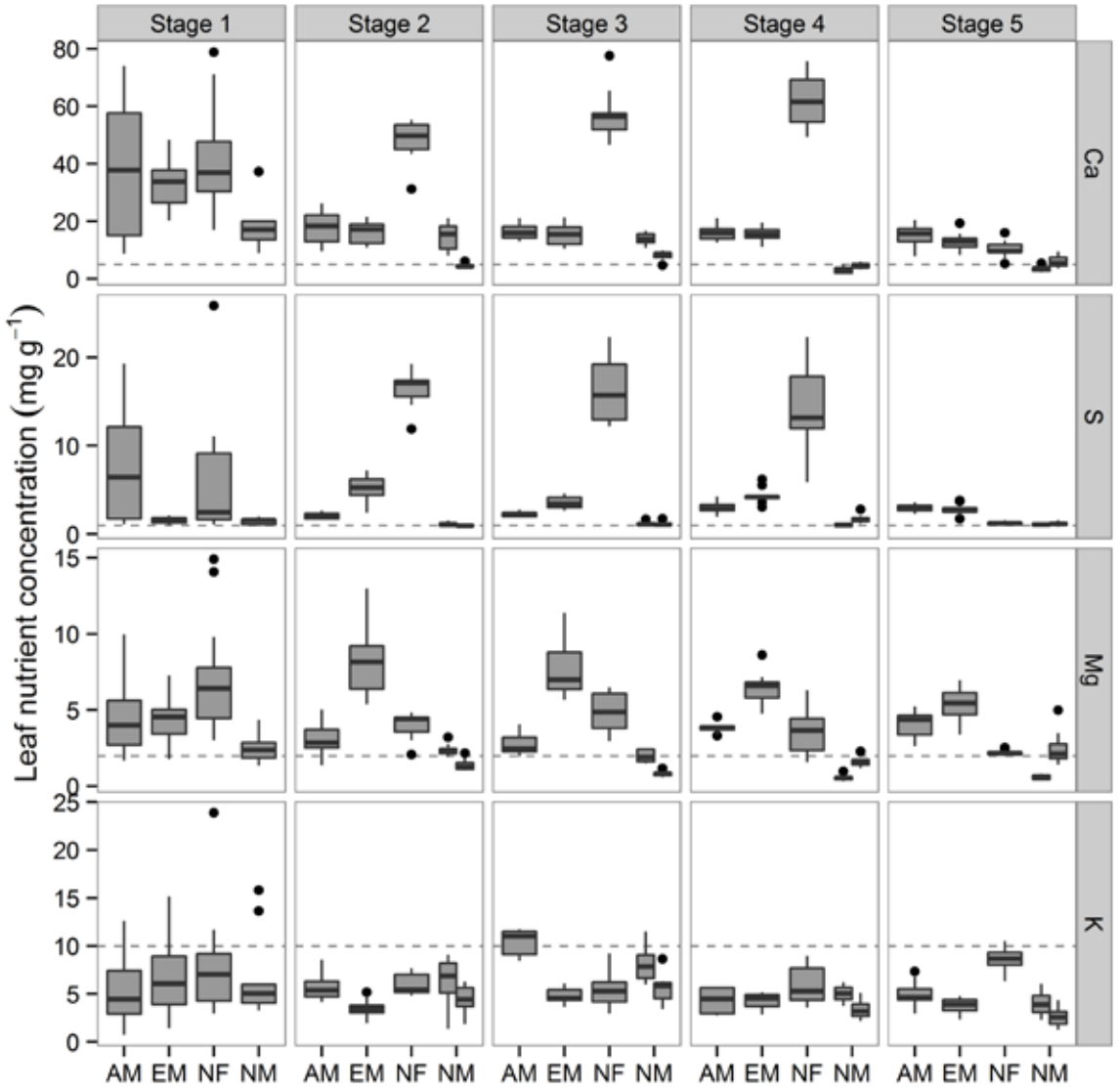

Fig. S3 Boxplots showing mature leaf concentrations of different macronutrients (calcium [Ca], sulfur [S], magnesium [Mg] and potassium [K]) across the five chronosequence stages for plants of contrasting nutrient-acquisition strategies: AM (arbuscular mycorrhizal), EM (ectomycorrhizal), NF (N_2-fixing) and NM (non-mycorrhizal). The central vertical bar in each box shows the median, the box represents the interquartile range (IQR), the whiskers show the location of the most extreme data points that are still within a factor of 1.5 of the upper

or lower quartiles, and the black points are values that fall outside the whiskers. Specific non-mycorrhizal types in stages 2 to 5 are separated in different boxes. In stages 2 and 3, the left box represents the sand-binding strategy, whereas in stages 4 and 5, the left box represents the cluster-root strategy; in both cases the right box represents the dauciform strategy. Grey dashed lines represent the leaf nutrient concentrations considered adequate for crop growth (Epstein & Bloom 2005).

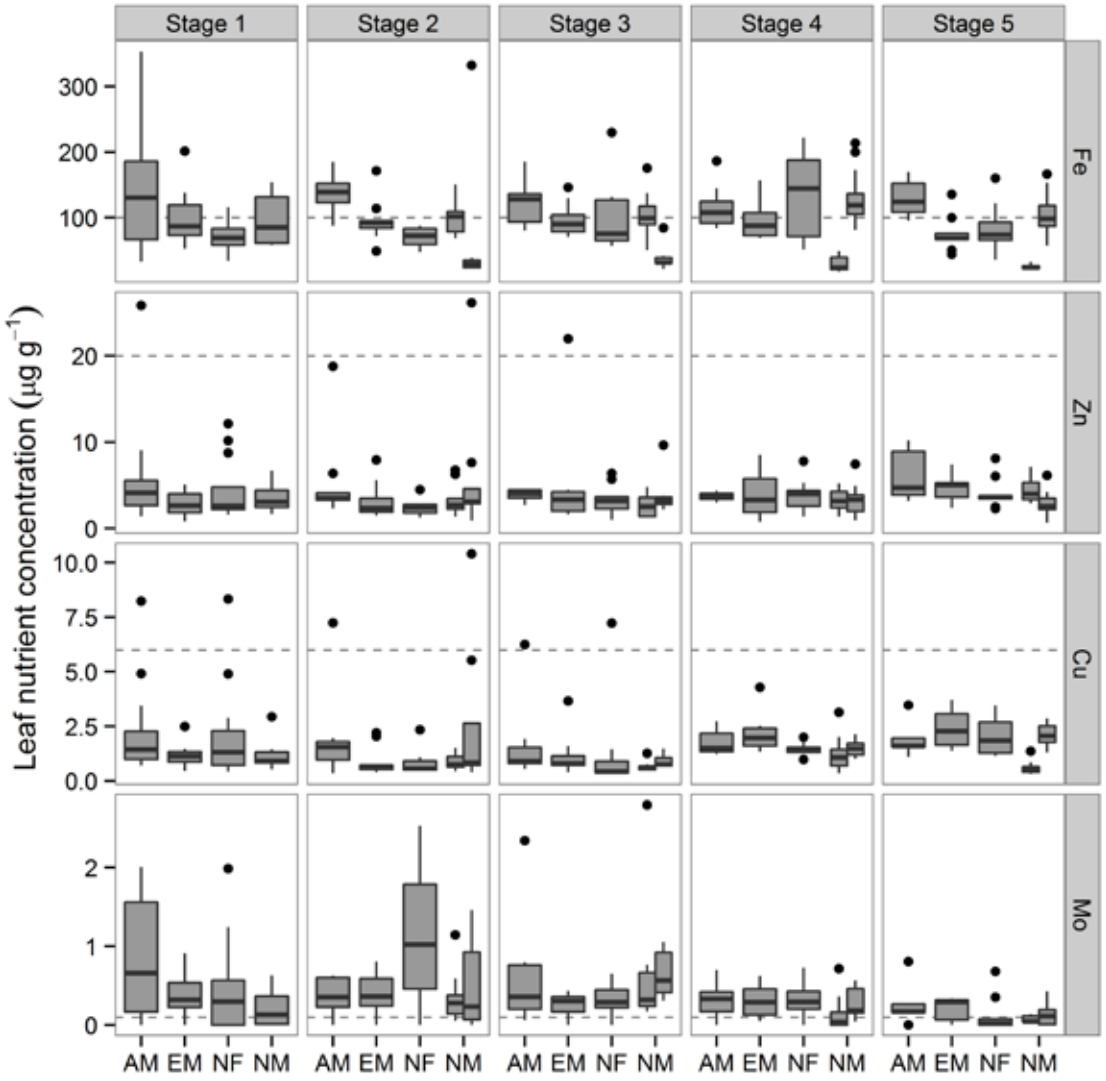

Fig. S4 Boxplots showing mature leaf concentrations of different micronutrients (iron [Fe], zinc [Zn], copper [Cu] and molybdenum [Mo]) across the five chronosequence stages for plants of contrasting nutrient-acquisition strategies: AM (arbuscular mycorrhizal), EM (ectomycorrhizal), NF (N_2-fixing) and NM (non-mycorrhizal). The central vertical bar in each box shows the median, the box represents the interquartile range (IQR), the whiskers show

the location of the most extreme data points that are still within a factor of 1.5 of the upper or lower quartiles, and the black points are values that fall outside the whiskers. Specific non-mycorrhizal types in stages 2 to 5 are separated in different boxes. In stages 2 and 3, the left box represents the sand-binding strategy, whereas in stages 4 and 5, the left box represents the cluster-root strategy; in both cases the right box represents the dauciform strategy. Grey dashed lines represent the leaf nutrient concentrations considered adequate for crop growth (Epstein & Bloom 2005).

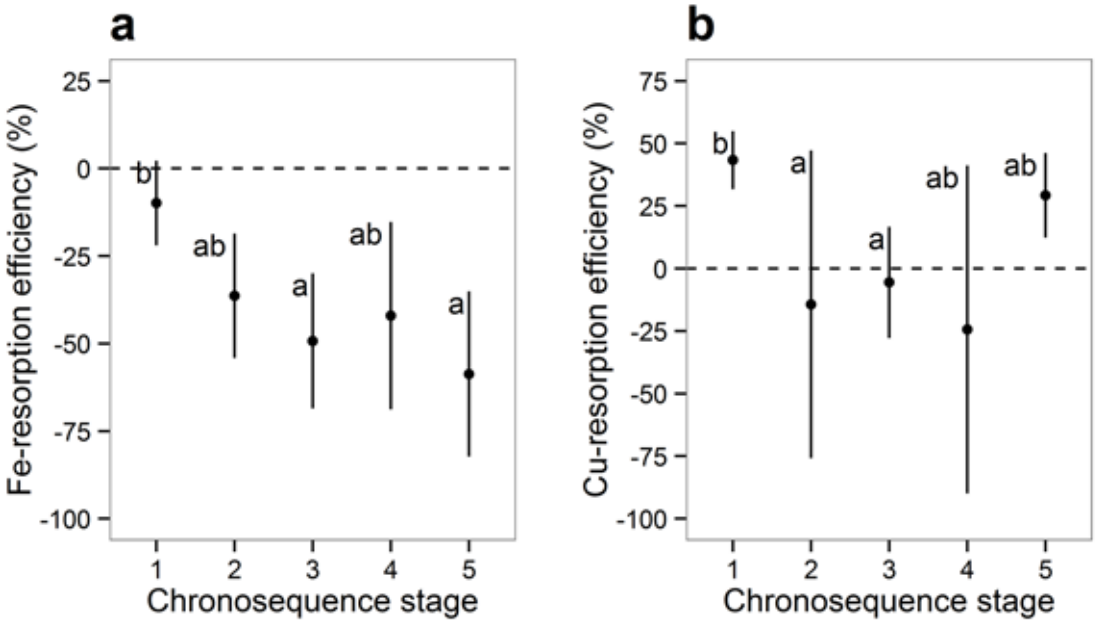

Fig. S5 Community-level, cover-weighted (**a**) leaf iron (Fe) and (**b**) copper (Cu) resorption efficiencies across the five chronosequence stages. Points indicate means and bars show 95% confidence intervals (CI). *n* = 10. Different letters indicate significant differences between chronosequence stages based on 95% CI.