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Supplementary material

Australian Vegetation Classification and the International Vegetation Classification framework: an overview with case studies

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Characterising species for Australian Darwin Stringybark Scleromorphic Woodland Macrogroup (*Eucalyptus tetrodonta* Scleromorphic Woodland macrogroup), Groups and Alliances

Methods for determining Characterising species are outlined in the Methods section of the manuscript.

Table S1. Characterising species for Australian Darwin Stringybark Scleromorphic Woodland Macrogroup (*Eucalyptus tetrodonta* Scleromorphic Woodland Macrogroup) and for *Corymbia ferruginea* and *Eucalyptus tetrodonta* low open woodland

Asterisks (*) denote diagnostic species; TCV, Average Cover (Total Cover Value, Barkman 1989)

Eucalyptus tetrodonta Scleromorphic Woodland Macrogroup (M530)

Characterising species	Growth form	Constant species (>25% frequency)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	98	77	18.8
*Erythrophleum chlorostachys**	Tree	63	65	4.6
Heteropogon triticeus	Herb	47	80	2.9
Planchonia careya	Shrub	45	18	0.8
Persoonia falcata	Shrub	42	10	0.3
Buchanania obovata	Tree	41	0.1	0.7
Eucalyptus miniata	Tree	37	71	4
Sorghum plumosum	Herb	35	50	2.1
Livistona humilis	Tree	29	50	2
Petalostigma quadriloculare	Shrub	26	60	0.9
Schizachyrium spp.	Herb	25	48	2.5

Corymbia ferruginea and *Eucalyptus tetrodonta* low open woodland (not included in the *Eucalyptus tetrodonta* woodlands)

Characterising species	Growth form	Constant species (>25% frequency)	Maximum percentage cover	TCV
Eucalyptus tectifica	Tree	30	24	5.3
Corymbia ferruginea	Tree	50	20	6.3
Bossiaea bossiaeoides	Shrub	30	10	3.3
Acacia oncinocarpa	Shrub	67	20	5.8
Eucalyptus tetrodonta	Tree	100	8	6.2

Table S2. Characterising species for Groups

Asterisks (*) denote diagnostic species; TCV, Average Cover (Total Cover Value, Barkman 1989)

North-west Australian Darwin Stringybark-Woollybutt Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata* Sclerophyllous Woodland Group)

Characterising species	Growth Form	Constant species (>25% frequency)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	100	75	16.1
*Eucalyptus miniata**	Tree	55	71	6
Erythrophleum chlorostachys	Tree	61	65	4.1
Chrysopogon fallax	Herb	34	40	3.4
Livistona humilis	Tree	45	50	3
Heteropogon triticeus	Herb	42	80	2.8
Sorghum plumosum	Herb	28	50	1.9
Petalostigma quadriloculare	Shrub	39	60	1.4

North-eastern Australian Darwin Stringybark–Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia pocillum–Corymbia stockeri* Woodland Group)

Characterising species	Growth Form	Percentage frequency (>25%)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	95	77	24.1
*Schizachyrium**	Herb	70	48	7.4
Corymbia nesophila	Tree	32	80	6.6
Corymbia stockeri	Tree	43	65	5.9
Erythrophleum chlorostachys	Tree	69	50	5.4
Heteropogon triticeus	Herb	56	50	3.2
Sorghum plumosum	Herb	48	27	2.5
Thaumastochloa	Herb	38	43	1.9
Corymbia clarksoniana	Tree	26	48	1.9
Aristida	Herb	60	25	1.8
Acacia rothii	Shrub	41	30	1.6
Eriachne	Herb	49	25	1.2
Petalostigma banksii	Shrub	28	30	1.1
Melaleuca viridiflora	Shrub	28	29	1.1
Panicum	Herb	38	52	1
Petalostigma pubescens	Shrub	29	35	0.9

Table S3. Characterising species for Alliances

Asterisks (*) denote diagnostic species; TCV, Average Cover (Total Cover Value, Barkman 1989)

North-west Australian Darwin Stringybark–Woollybutt–Giant Speargrass Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata–Heteropogon triticeus* Woodland Alliance)

Characterising species	Growth Form	Constant species (>40% frequency)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	100	75	17.1
Buchanania obovata	Tree	69	14	1.2
*Erythrophleum chlorostachys**	Tree	64	65	4.3
*Eucalyptus miniata**	Tree	63	71	6.9
Livistona humilis	Shrub	52	50	3.5
Planchonia careya	Shrub	51	18	1.1
Heteropogon triticeus	Herb	49	80	3.2
Petalostigma quadriloculare	Shrub	44	60	1.6
Persoonia falcata	Shrub	42	85	0.3

North-west Australian Darwin Stringybark–Ribbon Grass–Curly Spinifex Woodland (*Eucalyptus tetrodonta–Chrysopogon fallax–Triodia bitextura* Woodland Alliance)

Characterising species	Growth Form	Constant species (>40% frequency)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	100	60	10.3
*Chrysopogon fallax**	Herb	90	40	13.8
Triodia bitextura	Herb	43	40	4.8
Erythrophleum chlorostachys	Tree	40	23	2.9

North-east Darwin Stringybark–Melville Island Bloodwood–Blotchy Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia nesophila–Corymbia stockeri* Woodland Alliance)

Characterising species	Growth Form	Percentage frequency (>40%)	Maximum percentage cover	TCV
*Eucalyptus tetrodonta**	Tree	100	77	25.8
*Erythrophleum chlorostachys**	Tree	70	50	5.7
*Schizachyrium**	Herb	67	48	6.3
Grevillea glauca	Shrub	61	4	1.1
Heteropogon triticeus	Herb	60	50	3.5
Aristida	Herb	56	25	1.3
Persoonia falcata	Shrub	53	2	0.1
Phyllanthus	Herb	52	<0.1	<0.1
Planchonia careya	Shrub	51	5	0.2
Sorghum plumosum	Herb	50	27	2.6
Eriachne	Herb	49	25	1.3
Spermacoce	Herb	49	1	0.1
*Corymbia stockeri**	Tree	47	65	6.5
Acacia rothii	Shrub	45	30	1.8
Alphitonia pomaderroides	Shrub	44	4	0.2
Coelospermum reticulatum	Shrub	44	<0.1	<0.1
Grevillea parallela	Shrub	41	1	<0.1
Xylomelum scottianum	Shrub	41	<0.1	<0.1

North-east Paperbark Gum–Georgetown Bloodwood -–Stringybark Woodland (*Eucalyptus chartaboma–Corymbia pocillum–Eucalyptus tetrodonta* Woodland Alliance)

Characterising species	Growth Form	Percentage frequency (>40%)	Maximum percentage cover	TCV
*Schizachyrium**	Herb	100	48	18.3
*Aristida**	Herb	96	25	7.7
*Corymbia pocillum**	Tree	62	38	9.7
Erythrophleum chlorostachys	Tree	58	50	2.1
Petalostigma banksii	Shrub	54	24	4.7
Tephrosia	Herb	50	2	0.2
*Eucalyptus chartaboma**	Tree	46	14	13.4
Polygala	Herb	46	10	<0.1
Eucalyptus tetrodonta	Tree	42	77	6.9
Eriachne	Herb	42	25	0.4
Indigofera	Shrub	42	5	0.1

An example description of a macrogroup (Australian Darwin Stringybark Scleromorphic Woodland) following the template of the International Vegetation Classification

OVERVIEW

Hierarchy Level: Macrogroup

Placement in Hierarchy: 2.A.1 Australian Tropical Savanna and Scleromorphic Woodland (D133)

2. Shrub & Herb Vegetation

2.A. Tropical Grassland, Savanna & Shrubland

2.A.1 Tropical Lowland Grassland, Savanna & Shrubland

D133 Australian Tropical Savanna & Scleromorphic Woodland

Database Code: M530

Scientific Name: *Eucalyptus tetrodonta* Scleromorphic Woodland Macrogroup

Common (Translated Scientific) Name: Darwin Stringybark Scleromorphic Woodlands

Colloquial Name: Darwin Stringybark Woodlands

Type Concept Sentence: This macrogroup contains woodlands, and sometimes open forests* across northern Australia, dominated by *Eucalyptus tetrodonta* with a mix of co-dominant and subdominant *Corymbia* and *Eucalyptus* species.

Type Concept: This macrogroup contains open woodlands, woodlands, and sometimes open forests*, dominated by *Eucalyptus tetrodonta* and with a mix of other *Corymbia* and *Eucalyptus* species in the main canopy. It occurs across northern Australia from the west to the east coast. Trees in the canopy stratum of individual stands range from 8 to 30 m tall. Stands often have several structural levels including a subcanopy stratum, dominated by trees, and a shrub stratum, dominated by shrubs and saplings. The density of these strata varies considerably and is often determined by fire history. The ground stratum is dominated by grasses which range from dense perennial and/or annual tussock grasses to, occasionally, sparse hummock grasses. In drier climates and on poorer soils the height, structural complexity and cover of stands decreases. It is widespread across tropical Australia, occurring on shallow to deep sandy soils formed from a variety of substrates but predominantly sandstone.

Diagnostic Characteristics: Open woodlands, woodlands and open forests* with a canopy stratum of *Eucalyptus tetrodonta* with either *Eucalyptus miniata* or *Corymbia dichromophloia* in the west, or combinations of *Corymbia pocillum*, *Corymbia stockeri*, *Corymbia clarksoniana*, *Corymbia nesophila* or *Eucalyptus chartaboma* in the east. Several structural strata may be present including a subcanopy stratum dominated by the trees *Erythrophleum chlorostachys*, *Planchonia careya*, *Buchanania obovata* and juveniles of the canopy species. The shrub stratum is dominated by shrubs, with *Acacia* species, *Petalostigma* species and *Melaleuca* species frequent, although saplings of the canopy species may be frequent. The herb stratum ranges in density with the tussock grasses

Chrysopogon fallax, *Heteropogon triticeus*, *Sorghum plumosum* forming a dense stratum on deeper soils. Smaller, often annual grasses such as S*chizachyrium* species and *Aristida* species often form a sparse herb stratum on shallower soils.

*stands with <20% canopy cover are categorized as open woodlands, 20–50% woodlands, 50–80% as open forests (Executive Steering Committee for Australian Vegetation Information 2003)

Classification Comments: This type is divided at the group level into eastern and western types. The species *Eucalyptus miniata* and *Corymbia dichromophloia* only occur in the west, whereas *Corymbia pocillum*, *Corymbia stockeri*, *Corymbia clarksoniana* and *Eucalyptus chartaboma* only occur in the east.

Similar IVC Types [if applicable]

Elcode	Scientific or colloquial name	Note

Similar IVC Types General Comments [optional]

VEGETATION

Physiognomy and Structure Summary: Physiognomies of stands in this macrogroup vary from <20% up to 80% cover and 8 m to >30 m in height depending on soil depth. The subcanopy also varies in density from absent to 80% cover and can reach a height of >20 m in tall stands. The shrub stratum ranges from absent to 70% cover and 0.5–3 m tall and is dependent on soil type and fire frequency. The herb stratum is graminoid dominated and varies in density between 5 and 80% cover and from 10 cm high in stands with annual grasses to 1.5 m high in stands with perennial grasses.

Physiognomy and Structure Table [optional]

Physiognomy-structure category	Prevailing height (m)	Height range (opt.)	Mean percentage cover	Cover range (opt.)

Floristics Summary: *Eucalyptus tetrodonta* is the diagnostic species of these woodlands. It is generally dominant, but always present across the range. In the west, the tree species *Eucalyptus miniata* or *Corymbia dichromophloia* are diagnostic and indicate alliances within this macrogroup. *Buchanania obovata* is also common in western stands. *Corymbia nesophila*, *Corymbia stockeri* and *Corymbia clarksoniana* are diagnostic trees, indicating alliances, in the north-east whereas *Eucalyptus chartaboma*, *Corymbia pocillum* and *Corymbia polycarpa* are diagnostic trees indicating alliances in the south-east. A subcanopy may be present in more dense stands and is most often made up of juveniles of the canopy species. The shrub stratum varies from almost absent to dense, with *Acacia difficilis*, *Livistona humilis* and *Petalostigma quadriloculare* locally common in the west and *Acacia rothii*, *Melaleuca viridiflora Petalostigma banksii* and *Petalostigma pubescens* locally common in the east. The grasses *Chrysopogon fallax*, *Heteropogon triticeus*, *Sorghum plumosum* and members of the genera *Aristida* and

S*chizachyrium* occur across the range. The hummock grass *Triodia bitextura* may be locally common in the west. A variety of herbs occur in low densities across the range.

*Floristics Table [Med–High Confidence]: **Medium**

***Number of Plots:** 859

Physiognomy-structure category	Taxon name	Specific growth form (opt.)	Constancy	Mean percentage cover	Cover range (opt.)	Differential	Diagnostic combination

Dynamics: The structure and species composition of this macrogroup is dependent on soil type and fire history (Beadle 1981; Williams *et al*. 2017: Fox *et al*. 2001). In areas with shallow soils stands will be short and open with low species richness. In areas with deep soils overlying impermeable subsoil layers stands will be tall and dense with higher structural and species diversity (Addicott *et al*. 2018). The structure of the shrub and ground strata is fire and soil dependent (Williams *et al*. 2017).

ENVIRONMENT

Environmental Description: This macrogroup occurs in the humid to subhumid tropics of Australia between 10 and 19°S with a pronounced seasonal rainfall from 100 to 200 cm year^{-1}, most falling between December and April. The high rainfall months coincide with the warmest months. It occurs across a variety of landforms and geomorphological land types including large areas of sandplains, deeply weathered sediments (often overlying lateritic profiles rich in minerals such as bauxite) and sandstone plateaus. It is less commonly found on Mesozoic to Proterozoic igneous and metamorphic rocks. It occurs across a variety of soil types including Kandosols, Tenosols, Ferrosols and Rudosols (Isbell 1996).

DISTRIBUTION

Geographic Range: This macrogroup is found across northern Australia from the east to west coast. The eastern and western occurrences are separated by the Gulf Plains bioregion, an expanse of clay soils.

Nations: AU (Australia)

States/Provinces: Qld (Queensland), NT (Northern Territory), WA (Western Australia)

Australian Bioregions (Thackway & Cresswell 1995): CYP, GUP, EIU, VB, TEC, PCA, GFU, DAB, GUC, OVP, STU, NK, CK

PLOT SAMPLING AND ANALYSIS

Plot Analysis Summary [Med–High Confidence]: Eight hundred and fifty-nine vegetation data plots were extracted from two government databases, the Queensland government 'CORVEG' database and the Northern Territory government vegetation Site Database 'NTVSD'. Only plots that contained a cover measure were used, resulting in some alliances in this macrogroup known from qualitative literature not being recognised. Species

percentage cover was summed across strata in each plot to give a total percentage cover for each species. Groups of co-occurring species (forming vegetation types) were recognised using agglomerative hierarchical clustering from data that was square-root transformed and put into a similarity matrix using the Bray–Curtis coefficient. Cluster divisions were determined using the SIMPROF algorithm, highlighting clusters significantly different to each other. Typical and discriminating species of each vegetation type were determined using the SIMPER algorithm. Common taxa were identified using percentage frequency (>25%), maximum percentage cover (>10 or >20% where there was numerous species) and average cover (Total Cover Value; Barkman 1989). We assessed the cluster divisions at the 4 and 6 cluster levels to determine the vegetation types to fit the macrogroup level of the IVC hierarchy.

Plots Used to Define the Type [Med–High Confidence]:

CONFIDENCE LEVEL

IVC Confidence Level: Moderate

IVC Confidence Comments [optional]:

HIERARCHY

*Lower Level IVC Types:

Elcode	Scientific or colloquial name
G940	North-western Australian Darwin Stringybark-Woollybutt Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata* Sclerophyllous Woodland Group)
A4686	North-western Australian Darwin Stringybark–Woollybutt–Giant Speargrass Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata–Heteropogon triticeus* Woodland Alliance)
A4687	North-western Australian Darwin Stringybark–Ribbon Grass–Curly Spinifex Woodland (*Eucalyptus tetrodonta–Chrysopogon fallax–Triodia bitextura* Woodland Alliance)
G941	North-eastern Australian Darwin Stringybark–Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia pocillum–Corymbia stockeri* Woodland Group)
A4688	North-western Darwin Stringybark–Melville Island Bloodwood–Blotchy Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia nesophila–Corymbia stockeri* Woodland Alliance)
A4689	North-eastern Paperbark Gum–Georgetown Bloodwood -–Stringybark Woodland (*Eucalyptus chartaboma–Corymbia pocillum–Eucalyptus tetrodonta* Woodland Alliance)

DISCUSSION

Discussion [optional]: This vegetation type has been recognised qualitatively by several authors before our analysis (Beadle 1981; Fox *et al*. 2001; Williams *et al*. 2017). Plot data from two states of Australia, Queensland and the Northern Territory, and quantitative analysis confirm this as a macrogroup within the IVC hierarchy. Although it has also been recognised in Western Australia by the above authors, data from Western Australia were not available at the time of analysis. Groups and alliances within this macrogroup have also been identified using the current data; however, these will be refined when data from Western Australia are included in an analysis. Characteristic, constant and frequent species may also change with the inclusion of more data.

CONCEPT HISTORY

Recent Concept Lineage [if applicable]:

Date	Predecessor	Note

RELATED CONCEPTS

Supporting Concepts [optional]:

Relationship to NVC	Supporting concept name	Short citation	Note
?	*Eucalyptus tetrodonta–Eucalyptus miniata–Eucalyptus polycarpa* alliance	Beadle 1981	
?	Monsoon woodlands and open-woodlands dominated by *Eucalyptus tetrodonta* and *E. miniata* group	Fox *et al*. 2001	

AUTHORSHIP

Primary Concept Source [if applicable]:

Relationship to IVC	Name used in source	Short citation	Note

Author of Description:

E. Addicott, D. Lewis

Acknowledgments [optional]:

References [Required if used in text]:

Addicott E, Newton M, Laurance S, Neldner J, Laidlaw M, Butler D (2018) A new classification of savanna plant communities on the igneous rock lowlands and Tertiary sandy plain landscapes of Cape York Peninsula bioregion. *Cuninghamia* **18**, 29–72.

Barkman JJ (1989) Fidelity and character-species, a critical evaluation. *Vegetatio* **85**, 105–116. doi:10.1007/BF00042260

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Thackway R, Cresswell ID (1995) An interim biogeographic regionalisation for Australia: a framework for establishing the national system of reserves, Version 4.0. Australian Nature Conservation Agency, Canberra, ACT, Australia.

Williams RJ, Cook GD, Liedloff AC, Bond WJ (2017) Australia's tropical savannas: vast, ancient and rich landscapes. In 'Australian Vegetation'. (Ed. DA Keith) pp. 368–388. (Cambridge University Press)

A comparison of vegetation types of *Eucalyptus tetrodonta* woodlands in northern Australian classification systems equated to the provisional IVC hierarchy of the *E. tetrodonta* woodlands

Vegetation types from different jurisdictions that are equivalent to the IVC Association level are not included.

Table S4. Vegetation types of *Eucalyptus tetrodonta* woodlands in classification systems extending across northern Australia equated to the IVC hierarchy of the *E. tetrodonta* woodlands in this study

'*Eucalyptus'* has been abbreviated to '*E.*' throughout. Blank cells indicate there is no equivalent IVC level. Taxonomic name changes since publication of equivalent vegetation units have not been updated. Common names have been used where they are part of the formal name

IVC hierarchy **D**ivision **M**acrogroup **G**roup **A**lliance	**Northern Australian vegetation classification systems** Vegetation of Australia (Beadle 1981)	The Vegetation of the Australian Tropical Savannas (Fox *et al*. 2001) BVG, Broad Vegetation Group Bold types refer to map units	National Vegetation Information System (NVIS) (National Land and Water Resources Audit 2001) MVG, Major Vegetation group MVS, Major vegetation subgroup
D: Australian Tropical Savanna & Scleromorphic Woodland Division	Eucalyptus communities of the Tropics The Natural Grasslands and Savannahs		**MVG 12:** Tropical eucalypt woodlands with annual grasses taller than 2 m **MVS 7:** Tropical *Eucalyptus* forests and woodlands with an annual tussock grass understorey **MVG 3:** Eucalypt Open Forest generally with a shrubby understorey which is low to moderate in height. **MVS 5:** *Eucalyptus* open forest with a grassy understorey **MVG 11:** Eucalypt Open Woodlands **MVS 18:** *Eucalyptus* low open woodlands with hummock grass **MVS 48:** *Eucalyptus* open woodlands with a grassy understorey
M: Australian Darwin Stringybark Scleromorphic Woodland (*Eucalyptus tetrodonta* Scleromorphic Woodland) **G:** North-western Australian Darwin Stringybark-Woollybutt Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata* Sclerophyllous Woodland Group)	*E. tetrodonta–E. miniata–E. polycarpa** Alliance. *(synonym: *Corymbia polycarpa*) *E. tetrodonta–E. miniata* suballiance	**BVG 5**: Monsoon woodlands and open-woodlands dominated by *E. tetrodonta* and *E. miniata.*	
Division Macrogroup Group Alliance	Vegetation of Australia (Beadle 1981)	The Vegetation of the Australian Tropical Savannas (Fox *et al*. 2001) BVG, Broad Vegetation Group Bold types refer to map units	National Vegetation Information System (NVIS) (National Land and Water Resources Audit 2001) MVG, Major Vegetation group MVS, Major vegetation subgroup
A: North-western Australian Darwin Stringybark–Woollybutt–Giant Speargrass Woodland (*Eucalyptus tetrodonta–*		**D4**: *E. miniata* and *E. tetrodonta* ± *Corymbia nesophila* open-forest with *Sorghum* spp. tussock grasses. **D14:** *E. tetrodonta* and/or *E. miniata* ± *Corymbia*	

Eucalyptus miniata–Heteropogon triticeus Woodland Alliance)		spp. ± *Livistona* spp. woodland with a ground layer of tussock grasses and *Triodia bitextura*. **H6:** *E. tetrodonta* and *E. miniata* ± *Corymbia bleeseri* woodland with *Sorghum* spp. tallgrasses.
A: North-western Australian Darwin Stringybark–Ribbon Grass–Curly Spinifex Woodland (*Eucalyptus tetrodonta–Chrysopogon fallax–Triodia bitextura* Woodland Alliance)		**D13 (in part)***: E. tetrodonta* and/or *Melaleuca viridiflora* (broad-leaved teatree) ± *Callitris intratropica* woodland with *Triodia bitextura* hummock grasses.
G: North-eastern Australian Darwin Stringybark–Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia pocillum–Corymbia stockeri* Woodland Group)	*E. tetrodonta–E. polycarpa* (synonym *Corymbia polycarpa*) suballiance.	**D15 (in part):** *E. tetrodonta* and/or *Corymbia* spp. ± *E. phoenicea* woodland with sparse *Schizachyrium* spp. tussock grasses.
A: North-eastern Darwin Stringybark–Melville Island Bloodwood–Blotchy Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia nesophila–Corymbia stockeri* Woodland Alliance)		**H5:** *Eucalyptus tetrodonta* ± *Corymbia nesophila* ± *Corymbia hylandii* subsp. *peninsularis* ± *Eucalyptus cullenii* woodland ± *Asteromyrtus brassii* subcanopy and heath species. **H7 (in part):** *Eucalyptus similis* and/or *Eucalyptus tetrodonta* and/or *Corymbia stockeri* woodland with tussock grasses or *Triodia* spp. **K3:** *Corymbia nesophila* and/or *Eucalyptus tetrodonta* and/or *Corymbia hylandii subsp. peninsularis* woodland with *Themeda triandra* or *Imperata cylindrica* tussock grass understorey.
A: North-eastern Paperbark Gum–Georgetown Bloodwood–Stringybark Woodland (*Eucalyptus chartaboma–Corymbia pocillum–Eucalyptus tetrodonta* Woodland Alliance)		**H7 (in part)**: *Eucalyptus similis* and/or *Eucalyptus tetrodonta* and/or *Corymbia stockeri* woodland with tussock grasses or *Triodia* spp.

Table S5. Vegetation types of *Eucalyptus tetrodonta* woodlands in State and Territory classification systems equated to the IVC hierarchy of the *E. tetrodonta* woodlands in this study

'Eucalyptus' has been abbreviated to '*E.*' throughout. Blank cells indicate there is no equivalent IVC level. Taxonomic name changes since publication of equivalent vegetation units have not been updated. Common names have been used where they are part of the formal name

IVC Hierarchy **D**ivision **M**acrogroup **G**roup **A**lliance	**State and Territory classification systems** Queensland (Neldner *et al*. 2019) BVG, Broad Vegetation Group	Northern Territory (NVIS levels) (National Land and Water Resources Audit 2001)	Western Australia (Payne and Schoknecht 2011) (LS, Land systems; LU, Land unit)	Western Australia (Beard *et al*. 2013) (VT, Vegetation Type)
D: Australian Tropical Savanna & Scleromorphic Woodland Division		**L3:** *Eucalyptus* mid woodland **L3:** *Eucalyptus* mid open forest	**Buldiva LS, LU 1 and 4:** Forests and woodlands: *E. tetrodonta–Corymbia opaca* alliance **(no equivalent)**	**VT 24:** High grass savanna woodland on sandstone **VT 4 (in part):** Woodland–Tropical–messmate (*E. tetrodonta*), woollybutt (*E. miniata*)
M: Australian Darwin Stringybark Scleromorphic Woodland (*Eucalyptus tetrodonta* Scleromorphic Woodland)				
G: North-eastern Australian Darwin Stringybark–Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia pocillum–Corymbia stockeri* Woodland Group)	**BVG 14 (in part)**: Woodlands and tall woodlands dominated by *Eucalyptus tetrodonta* (or *E. megasepala*), and/or *Corymbia nesophila* and/or *E. phoenicea*			
A: North-eastern Darwin Stringybark–Melville Island Bloodwood–Blotchy Bloodwood Woodland (*Eucalyptus tetrodonta–Corymbia nesophila–Corymbia stockeri* Woodland Alliance)	**BVG 14a:** Woodlands and tall woodlands dominated by *E. tetrodonta* (or *E. megasepala*), with *Corymbia nesophila*. Occasionally *E. chartaboma* (or *E. miniata*), on deeply weathered plateaus and remnants			
A: North-eastern Paperbark Gum–Georgetown Bloodwood–Stringybark Woodland (*Eucalyptus chartaboma–Corymbia pocillum–Eucalyptus tetrodonta* Woodland Alliance)	**BVG 14b:** Woodlands dominated by *E. tetrodonta* (or *E. megasepala*) or *E. chartaboma* or *E. miniata*, with *Corymbia clarksoniana* on erosional surfaces, residual sands and occasionally alluvial plains			
G: North-western Australian Darwin Stringybark-Woollybutt Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata* Sclerophyllous Woodland Group)				
Division **M**acrogroup **G**roup **A**lliance	Queensland (Neldner *et al*. 2019) BVG, Broad Vegetation Group	Northern Territory (NVIS levels) (National Land and Water Resources Audit 2001)	Western Australia (Payne and Schoknecht 2011) (LS, Land systems; LUm Land unit)	Western Australia (Beard *et al*. 2013) (VTm Vegetation Type)
A: North-western Australian Darwin Stringybark–Woollybutt–Giant Speargrass Woodland (*Eucalyptus tetrodonta–Eucalyptus miniata–Heteropogon triticeus* Woodland Alliance)			**Cockatoo LS, LU 2 and 4 in part:** Stringybark–bloodwood woodland, *E. tetrodonta*, *E. miniata*, *C. dichromophloia* with upland tall grass (*Sorghum stipoideum*, *Triodia bitextura*); **Foster LS, LU 1:** Woodlands and	

A: North-western Australian Darwin Stringybark–Ribbon Grass–Curly Spinifex Woodland (*Eucalyptus tetrodonta–Chrysopogon fallax–Triodia bitextura* Woodland Alliance)	forests, *E. tetrodonta* and *C. dichromophloia* **Kennedy LS, LU 1 and 2:** Woodland and forests, *E. tetrodonta* suballiance **Pago LS, LU 1, 2 and 3:** Forests and woodlands, *E. tetrodonta*, *E. miniata* alliances **Pinkerton LS, LU 1,2,3,4, and5:** Stringybark-bloodwood woodland, *E. tetrodonta*, *C. dichromophloia*, *E. miniata*, *E. phoenicea* with upland tall grass (*Sorghum stipoideum*, *Triodia bitextura*) **Weaber LS, LU 2:** Stringybark–bloodwood woodlands, *E. tetrodonta*, *E. miniata*, *C. dichromophloia* or frontage woodlands.... both with upland tall grass (*Sorghum stipoideum*, *Triodia bitextura*, *Aristida* spp.)

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