A plot-based analysis of the vegetation of the Northern Territory, Australia: a first assessment within the International Vegetation Classification framework

Running head: Northern Territory Vegetation Macrogroups

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Supplementary Material

IVC Hierarchy						
Division	**Macrogroup**	**High frequency diagnostic taxa listed by growth form in order of frequency**	**Northern Territory distribution**	**Global and national distribution**	**Composition and landscape position notes**	**Literature**
L.4. Australasian Dry Forest & Woodland						
	L.5 (MG1) Australasian & East Malesian Dry Forest					Partly based on Miles (2006) - Australasian and south-east Asia dry forests group (based entirely on geographic distribution and no species analysis).
		Trees: *Drypetes deplanchei, Litsea glutinosa, Exocarpos latifolius, Sterculia quadrifida, Sersalisia sericea, Strychnos lucida, Cupaniopsis anacardioidse, Acacia auricuiliformis, Terminalia microcarpa, Buchanania arborescens, Monoon australe, Micromelum minutum.* **Shrubs:** *Glycosmis trifoliata,* *Abrus precatorius, Breynia cernua, Celtis philippensis,austral, Ixora timorensis,* **Vines:** *Flagellaria indica, Smilax australis.*	The distribution extends from the Tiwi Islands as far south as Tennant Creek.	Australasia and south-east Asia.	Represents broad closed forest concepts, wet (associated with permanent creeks and springs) and dry (dry vine thicket and coastal vine thicket). The dry closed forests occur on a variety of substrates and geologies, such as limestone outcrop in the Katherine area on well drained soils. In wet closed forest, species are commonly evergreen, and in dry closed forest species are mostly deciduous or semi-deciduous.	
1.A.5.Wb Indo-West Pacific Mangrove						
	L.5 (MG2) West Pacific (East Melanesia, Micronesia, Polynesia) Mangrove (M208)					Based on Duke (1992) and Addicott (2020)
		Not included in the analysis	Existing IVC Division and Macrogroup			
L.4 Australian Tropical Savanna and Scleromorphic Woodland (D133; Muldavin et al. 2021)						

	L.5 (MG3) Australian Paperbark *Melaleuca viridiflora*–Long-fruited Bloodwood *Corymbia polycarpa* Forest and Woodland					
		Trees: *Melaleuca viridiflora, Grevillea pteridifolia, Corymbia polycarpa, Lophostemon lactifluus, Melaleuca nervosa, Corymbia bella.* **Shrubs:** *Banksia dentata, Planchonia careya, Petalostigma pubescens, Buchanania obovata,* V*erticordia cunninghamii.* **Palms:** *Livistonia humilis, Pandanus spiralis.* **Tussock grasses:** *Eriachne burkittii, Eriachne triseta, Themeda triandra, Alloteropsis semialata, Mnesithea rottboellioides, Ectrosia leporina, Heteropogon triticeus, Germainia grandiflora, Schizachyrium fragile, Eriachne obtusa, Pseudopogonatherum contortum.* **Forbs:** *Xyris complanata.* **Sedges:** *Dapsilanthus spathaceus.*	This macrogroup is extensive across the Top End of the Northern Territory and as far south as the Barkly Tablelands and Tanami Desert region.	Northern Australia and Papua New Guinea.	Includes *Melaleuca* dominated species and represents drainage depressions and alluvial plains sometimes dominated by species of *Corymbia* on the alluvial plains and levee systems. This macrogroup can be characteristically seasonally waterlogged.	
	L.5 (MG4) Australian Darwin Stringybark *Eucalyptus tetrodonta* Scleromorphic Woodland (M530; Muldavin et al. 2021)					

		Trees: *Eucalyptus tetrodonta, Eucalyptus miniata, Erythrophleum chlorostachys Terminalia ferdinandiana.* **Shrubs:** *Buchanania obovata, Planchonia careya, Persoonia falcata, Acacia lamprocarpa, Petalostigma quadriloculare, Petalostigma pubescens, Alphitonia excelsa.* **Palms:** *Livistonia humilis, Pandanus spiralis.* **Tussock grasses:** *, Heteropogon triticeus, Thaumastochloa major, Eriachne triseta, Schizachyrium fragile.* **Forbs:** *Hibbertia juncea, Lomandra tropica.*	This macrogroup is widely distributed across the Top End of the Northern Territory.	North-Western Australia, the Northern Territory and Queensland.	A shrub layer is generally present and the ground layer is characterised by perennial and annual tussock grasses. Generally, on plains and rises and soils are typically shallower and sandy than L.5 (MG3).	
	L.5 (MG5) Australian Darwin Box *Eucalyptus tectifica* Scleromorphic Woodland					

		Trees: *Erythrophleum chlorostachys*, *Terminalia ferdinandiana, Corymbia latifolia*, *Eucalyptus tintinnnans*, *Eucalyptus tectifica*, *Xanthostemon paradoxus, Eucalyptus tetrodonta.* **Shrubs:** *Petalostigma quadriloculare*, *Grevillea decurrens, Gardenia megasperma*, *Buchanania obovata*, *Terminalia pterocarya*, *Cochlospermum fraseri.* **Tussock grasses:** *Heteropogon triticeus*, *Mnesithea formosa*, *Eriachne avenacea*, *Themeda triandra*, *Eriachne ciliata*, *Schizachyrium fragile*, *Sorghum intrans*.	This macrogroup occurs across the Top End of the Northern Territory, very common across a number of bioregions, in particular, the Daly Basin.	North-Western Australia, Top End of the Northern Territory, and the Gulf of Carpentaria in Queensland.	Typically occurs on rises and low hills on shallow, gravelly soils. The woody composition can be quite variable.	
	L.5 (MG6) Australian Broad-leaved Bloodwood *Corymbia foelscheana* Scleromorphic Woodland					
		Trees: *Corymbia foelscheana*, *Eucalyptus tectifica*, *Erythrophleum chlorostachys*, *Corymbia confertiflora*, *Corymbia grandifolia*, *Brachychiton diversifolius.* **Shrubs:** *Planchonia careya*, *Grewia savannicola*, *Buchanania obovata*, *Hakea arborescens*, *Brachychiton megaphyllus*, *Ficus aculeata*. **Tussock grasses:** *Heteropogon contortus*, *Themeda triandra*, *Sehima nervosum*, *Chrysopogon latifolius*, *Heteropogon triticeus*, *Chrysopogon fallax*. **Forbs:** *Mesosphaerum suaveolens.*,	This macrogroup extends across the Top End of the Northern Territory from Darwin south to Katherine / Mataranka and also on Melville Island and other Northern Territory offshore islands.	North-Western Australia and the Northern Territory.	Abundant on plains, rises and in some situations foot slopes and low hills. It occurs on well drained to imperfectly drained soils that can be silty, sandy to gravelly.	
	L.5 (MG7) Australian Lancewood *Acacia shirleyi* Forest, Woodland and Shrubland					

		Trees: *Acacia shirleyi*, *Macropteranthes kekwickii.* **Shrubs:** *Hibiscus sturtii*, *Melhania oblongifolia*, *Capparis lasiantha*, *Terminalia volucris.* **Tussock grasses:** *Mnesithea formosa*, *Paspalidium rarum*, *Eriachne ciliata*, *Chrysopogon fallax*, *Eragrostis cumingii*,*Schizachyrium fragile*, *Panicum mindinaense*. **Forbs:** *Evolvulus alsinioides*, *Ptilotus fusiformis*, *Waltheria indica*, *Spermacoce stenophylla*, *Xenostegia tridentata*, *Cleome viscosa.* **Sedges:** *Bulbostylis barbata*.	This macrogroup occurs in a band across the Northern Territory, from the eastern edge of the Victoria River District to the Gulf of Carpentaria region, and between the Tanami Desert to the Barkly Tableland in the south. It extends as far north as the Katherine and Daly River area.	Semi-arid and temperate areas of inland north-eastern Australia (Northern Territory and Queensland).	Common on the edge of lateritic breakaways or slopes and crests of sandstone hills and low hills. Soils are well drained, gravelly, and generally skeletal.	
	L.5 (MG8) Australian Coolabah *Eucalyptus microtheca* Tropical Savanna Grassy Woodland and Tussock Grassland					
		Trees: *Eucalyptus microtheca*, *Bauhinia cunninghamii.* **Shrubs:** *Atalaya hemiglauca*. **Tussock grasses:** *Aristida latifolia*, *Brachyachne convergens*, *Iseilema vaginiflorum*, *Panicum decompositum*, *Chrysopogon fallax*, *Astrebla squarrosa*, *Astrebla pectinata*, *Astrebla elymoides*, *Dichanthium fecundum*, *Eulalia aurea*, *Eragrostis tenellula*, *Sorghum timorense*, *Dichanthium sericeum*, *Panicum laevinode.* **Forbs:**	This macrogroup occurs in the Victoria River District, northern Barkly Tablelands, southern Sturt Plateau, Gulf of Carpentaria and extending as far south as the northern Tanami Desert.	North-Western Australia, Northern Territory and Queensland.	Usually associated with the floodplains of water courses, fringing water courses and swamps which receive intermittent flooding. It occurs on a range of substrates, usually on light to heavy grey and brown clays. This macroroup incorporates a broader view of *Eucalyptus microtheca*. Other segregate taxa may include *E. cyanoclada*, *E. barklyensis*, *E. helenae* within it, currently	

		Sida spinosa, *Neptunia dimorphantha*, *Flemingia pauciflora*, *Abelmoschus ficulneus*, *Sida fibulifera*.			accepted in the Northern Territory.	
	L.5 (MG9) Australian Tropical *Triodia bitextura–Triodia microstachya–Triodia bynoei* Hummock Grassland and Open Woodland (M531; Muldavin et al. 2021)					
		Hummock grasses: *Triodia bitextura, Triodia microstachya, Triodia bynoei, Triodia pungens.* **Tussock grasses:** *Chrysopogon fallax, Sorhgum plumosum, Eulalia aurea, Schizachyrium fragile, Sehima nervosum, Sorghum plumosum, Aristida hygrometrica, Eriachne ciliata, Eriachne obutsa.* **Sedges:** *Dapsilanthus spathaceus, Schoeneus sparteus, Dapsilanthus spathaceus,* **Shrubs:** *Petalostigma pubescens, Terminalia canescens, Acaica plectocarpa, Acacia lysiphloia, Bossiaea bossiaeoides, Calytrix exstipulata.* **Trees:** *Eucalyptus tetrodonta, Erythrophleum chlorostachys.*	This macrogroup is extensive across the Top End of the Northern Territory including offshore Islands such as Groote Eylandt.	North-Western Australia, Northern Territory and Queensland.	The most extensive tracts are on deep sandy or shallow skeletal soils usually with a very sparse tree layer dominated by *Eucalyptus* and or *Corymbia*. Other pockets are on restricted to rocky sandstone hills and outcrops and common in coastal areas with or without a sparse shrub layer.	
	L.5 (MG10) Australian Small-fruited Bloodwood *Corymbia dichromophloia*–Curley Spinifex *Triodia bitextura* Scleromorphic Woodland					
		Trees: *Corymbia dichromophloia*, *Erythrophleum chlorostachys*, *Corymbia ferruginea*. **Shrubs:** *Terminalia canescens, Petalostigma quadriloculare, Cochlospermum fraseri, Calytrix exstipulata, Dodonaea hispidula, Buchanania obovata.* **Hummock grasses:** *Triodia bitextura.*	This macrogroup extends in a band from the Victoria River District across the Sturt Plateau to the Gulf of Carpentaria.	North-Western Australia, Northern Territory and Queensland.	Large tracts occur on gently undulating plains and upland plains on well drained, shallow, gravelly, or sandy soils, sometimes on laterite.	

		Tussock grasses: *Eriachne ciliata*, *Eriachne obtusa*, *Schizachyrium fragile*, *Aristida hygrometrica.* **Forbs:** *Evolvulus alsinoides*. **Sedges:** *Bulbostylis barbata*.				
	L.5 (MG11) Australian Tropical Billy Goat Plum *Terminalia carpentariae*–Northern Spinifex *Triodia microstachya* Scleromorphic Woodland and Shrubland complex					
		Trees: *Terminalia carpentariae*, *Owenia vernicosa*, *Xanthostemon paradoxus*, *Corymbia arnhemensis.* **Shrubs:** *Buchanania obovata*, *Acacia latescens*, *Gompholobium subulatum*, *Gardenia fucata*, *Boronia lanuginosa*, *Dodonaea hispidula*, *Persoonia falcata*, *Acacia multisiliqua*, *Acacia gonocarpa.* **Hummock grasses:** *Triodia microstachya*. **Sedges:** *Actinoschoenus* sp. Sandstone. **Forbs:** *Gonocarpus leptothecus.*	This macrogroup is scattered across the Top End of the Northern Territory, including Keep River National Park, Nitmiluk National Park, Kakadu National Park, Limmen National Park and Groote Eylandt.	North-Western Australia and Northern Territory.	Characteristic of sandstone outcrop including pavement and heavily dissected sandstone such as the Arnhemland Plateau. This macrogroup represents vegetation types supporting biodiversity hotspots and areas of endemism in the Northern Territory. The Northern Territory's only Environment Protection and Biodiversity Conservation (EPBC Act) listed Threatened Ecological Community can be categorised within this macrogroup.	
	L.5 (MG12) Australian Bean Tree *Bauhinia cunninghamii* Tropical Savanna Tussock Grassy Woodland and Tussock Grassland					

		Trees: *Bauhinia cunninghamii, Corymbia terminalis, Eucalyptus pruinose.* **Shrubs:** *Carissa lanceolata, Hakea arborescens, Atalaya hemiglauca, Terminalia canescens, Grewia savannicola.* **Tussock grasses:** *Chrysopogon fallax, Sehima nervosum, Heteropogon contortus, Eulalia aurea, Eriachne obtusa, Brachyachne convergens, Aristida inaequiglumis, Sporobolus australasicus, Themda triandra, Aristida latifolia.* **Forbs:** *Cleome viscosa.*	This macrogroup is extensive across the semi-arid tropical Northern Territory (latitudes 14 to 18 degrees).	North-Western Australia, Northern Territory and Queensland.	Characterised by typical savanna vegetation, sparse tree layer with grassy understory. The dominant tree species are variable and dependent upon the underlain geology and substrate. This macrogroup also incorporates tussock grasslands both on cracking clay soils and silts.	
	L.5 (MG13) Eremaean Semi-arid Hummock Grassland and Low Open Woodland (M532; Muldavin et al. 2021)					
		Hummock grasses: *Triodia pungens, Triodia epactia, Triodia angusta, Triodia stenostachya, Triodia schinzii, Triodia microstachya.* **Tussock grasses:** *Eulalia aurea, Eriachne pulchella.*	This macrogroup is extensive across the semi-aridNorthern Territory from the north of the Barkley Tablelands south to the Burt Plain.	North-Western Australia, Northern Territory and Queensland.	Typically found on soils with more clay than macrogroup L.5 (MG16). A variety of *Eucalyptus* and *Acacia* species may form a sparse to open woodland above. Most common on plains but occasional on slopes of low hills and rises.	
L.4 Australian Tropical Grassland and Sedgeland						
	L.5 (MG14) Northern Australia Tropical Swamp Grass *Pseudoraphis spinescens*–Water Chestnut *Eleocharis dulcis*–Water Lily *Nymphaea violacea* Grassland and Sedgeland					

		Tussock grasses: *Pseudoraphis spinescens, Oryza rufipogon, Hymenachne acutigluma, Paspalum scrobiculatum, Leersia hexandra, Hydrophila angustifolia, Panicum trachyrhachis.* **Sedges:** *Eleocharis dulcis, Cyperus scariosus, Eleocharis sphacelata.* **Aquatic:** *Nymphaea violacea*. **Forbs:** *Melochia corchorifolia, Ipomoea aquatica, Ludwigia adscendens, Merremia gemelli, Aeschynomene indica, Ludwigia perennis, Cyanotis axillaris.* **Trees:** *Melaleuca viridiflora*.,	This macrogroup occurs across the Top End of the Northern Territory and as far south as the Barkly Tablelands.	North-Western Australia, Northern Territory and Queensland.	Representative of permanent or seasonally flooded coastal floodplains and freshwater wetlands. Hydrophytes are characteristic of the floristic composition. This macrogroup can exist as a waterbody, coastal floodplain, seasonally flooded alluvial plain or riparian system with the presence or absence of woody species including the genera *Melaleuca* and *Lophostemon*.	
L.4 Australian Arid and Semi-arid Grasslands and Sedgelands						
	L.5 (MG15) Australian Ephemeral Arid and Semi-arid wetlands					
		Forbs: *Ammannia multiflora, Alternanthera angustifolia, Pterocaulon sphacelatum, Cullen cinereum, Pluchea rubelliflora, Centipeda minima, Alternanthera nodiflora, Bergia trimera, Glinus lotoides, Schenkia australis, Sphaeromorphaea littoralis, Bergia henshallii, Wahlenbergia tumidifructa.* **Tussock grasses:** *Eulalia aurea, Eragrostis tenellula, Eragrostis dielsii, Eragrostis setifolia, Eragrostis elongata, Eragrostis falcata, Eragrostis cumingii, Aristida holathera, Eragrostis australasica*. **Shrubs:** *Duma florulenta.* **Chenopod shrubs:** *Chenopodium auricomum.* **Ferns:** *Marsilea exarata.*	This macrogroup is widespread across the arid and semi-arid regions of the Northern Territory.	Inland arid and semi-arid Australia.	Includes a diverse array of wetland types, including permanent, temporary, saline, and freshwater wetlands. Most arid Northern Territory wetlands are episodic, filling occasionally and with water derived from rainfall within the region. Isolated in vast dry surrounding landscapes, these wetlands have a significant biological, economic and visual impact when inundated.	

		Trees: *Melaleuca glomerata.*				
L.4 Australian semi-desert scrub and grassland (D330; Muldavin et al. 2021)						
	L.5 (MG16) Australian Desert Hummock Grassland (M535; Muldavin et al. 2021)					
		Hummock grasses: *Triodia basedowii, Triodia brizoides, Triodia melvillei, Triodia irritans, Triodia schinzii.* **Tussock grasses:** *Aristida holathera, Eragrostis eriopoda, Paraneurachne muelleri, Yakirra australiensis, Eriachne helmsii.* **Forbs:** *Aluta maisonneuvei,,* *Boerhavia spp, Leptosema chambersii, Chrysocephalum eremaeum.* **Shrubs:** *Scaevola parvifolia, Senna pleurocarpa, Scaevola basedowii.*	This macrogroup occurs across the arid zone of the Northern Territory from the south of the Burt Plain to the Northern Territory /South Australia border.	Inland arid Australia.	Found on a range of habitats from deep sands to rocky hill slopes. Will at times have a sparse heathland or shrubland above but very rarely a woodland.	
	L.5 (MG17) Australian Desert and Semi-arid Mulga *Acacia aneura* Woodland & Shrubland					
		Shrubs: *Acacia aneura, Atalaya hemiglauca, Acacia kempeana, Eremophila latrobei, Senna artemisioides* subsp. *filifolia, Acacia tetragonophylla,* **Trees:** *Acacia estrophiolata*. **Tussock grasses:** *Eragrostis eriopoda, Enneapogon polyphyllus, Aristida contorta, Aristida holathera, Aristida inaequiglumis, Tripogon loliiformis.* **Hummock grasses:**	This macrogroup is the most widely distributed in arid and semi-arid Northern Territory and widespread in all mainland Australian States except Victoria.	Southern inland arid and semi-arid Australia except Victoria.	Incorporates a broader view of the *Acacia aneura* complex. Other species may include *A. aptaneura, A. incurvaneura, A. mulganeura and A. pteraneura.*	

		Triodia basedowii. **Sedges:** *Fimbristylis dichotoma*. **Chenopod shrubs:** *Salsola australis.*				
	L.5 (MG18) Australian Desert and Semi-arid Victoria Wattle *Acacia victoriae*–Emu Bush *Eremophila longifolia*–Ironwood *Acacia estrophiolata* Shrubland					
		Shrubs: *Acacia victoriae, Acacia tetragonophylla, Acacia estrophiolata, Acacia kempeana, Senna artemisioides* subsp. *filifolia, Eremophila longifolia.* **Chenopod shrubs:** *Salsola australis, Sclerolaena convexula, Enchylaena tomentosa, Rhagodia eremaea, Einadia nutans* subsp. e*remaea.* **Tussock grasses:** *Enneapogon avenaceus, Cenchrus ciliaris**, *Enneapogon polyphyllus, Aristida contorta, Tripogon loliiformis, Triraphis mollis, Eragrostis eriopoda.* **Forbs:** *Sida fibulifera, Brachyscome ciliaris, Portulaca oleracea, Tribulus eichlerianus.*	This macrogroup is widely distributed in arid areas of southern Northern Territory, as far north as Wilora and extends south to the South Australian border and west into Western Australia.	Southern inland arid and semi-arid Australia except Victoria.	Grows in a variety of habitats, but often near watercourses or in mulga communities on red earths. This community is one of the more affected by the changes in fire regimes associated with introduced grasses, particularly *Cenchrus ciliaris*.*	
	L.5 (MG19) Australian Desert and Semi-arid Witchetty Bush *Acacia kempeana* Shrubland					

		Shrubs: *Acacia kempeana*, *Senna artemisioides* subsp. *artemisioides*, *Eremophila freelingii*, *Psydrax latifolia*, *Acacia macdonnellensis* subsp. *macdonnellensis*, *Eremophila latrobei* subsp. *latrobei*, *Dodonaea viscosa* subsp. *mucronata*. **Tussock grasses:** *Eriachne mucronata*, *Digitaria brownii*. **Hummock grasses:** *Triodia brizoides*. **Forbs:** *Sida filiformis, Leiocarpa semicalva* subsp. *semicalva.* **Trees:** *Callitris glaucophylla*. **Ferns:** *Cheilanthes lasiophylla*, *Cheilanthes sieberi* subsp. *sieberi*.	This macrogroup is widely distributed in arid areas of the Northern Territory, as far north as Ali Curung and extends south to the South Australian border and west into Western Australia.	Southern inland arid and semi-arid Australia except Victoria and New South Wales.	Commonly occurs on rocky skeletal hillsides or in coarse textured alluvial soils. It is often abundant in mulga woodlands on red sandy loam plains. Differs from macrogroup L.5 (MG21) in its' preference for flatter slope and aspect and marginally deeper soils.	
	L.5 (MG20) Australian Desert and Semi-arid Bloodwood *Corymbia opaca* Woodland					
		Trees: *Corymbia opaca.* **Hummock grasses:** *Triodia schinzii*, *Triodia pungens.* **Tussock grasses:** *Aristida holathera*, *Aristida inaequiglumis*, *Eragrostis eriopoda*, *Yakirra australiensis.* **Shrubs:** *Acacia sericophylla*, *Scaevola parvifolia*, *Eremophila latrobei*, *Petalostigma cassioides*, *Acacia adsurgens*, *Acacia melliodora*, *Senna artemisioides*, *Scaevola ovalifolia.* **Forbs:**	This macrogroup occurs from the Barkly Tablelands, south to the west MacDonnell Ranges.	Northern inland arid and semi-arid Australia.	Occupies areas on slightly elevated, gently undulating peneplain south of the Barkly Tablelands. The macrogroup also extends to rugged sandstone and quartzite ranges on shallow, gravelly, sandy soils in areas such as the west MacDonnell Ranges. *Corymbia opaca* is here treated as distinct from *C. terminalis sensu stricto*, but this is at variance with the	

		Goodenia armitiana, Dicrastylis exuccosa.			broad concept of *C. terminalis.*	
	L.5 (MG21) Australian Desert and Semi-arid Rock Fuchsia Bush *Eremophila freelingii*–Witchetty Bush *Acacia kempeana* Shrubland					
		Shrubs: *Acacia kempeana*, *Acacia tetragonophylla*, *Senna artemisioides* subsp. *artemisioides*, *Atalaya hemiglauca*, *Eremophila freelingii*. **Tussock grasses:** *Enneapogon polyphyllus*, *Digitaria brownii*, *Tripogon loliiformis*, *Eriachne mucronata*, *Enneapogon avenaceus.* **Chenopod shrubs:** *Rhagodia eremaea*, *Enchylaena tomentosa*, *Sclerolaena convexula*, *Salsola australis.* **Hummock grasses:** *Triodia brizoides.* **Forbs:** *Solanum quadriloculatum*, *Hybanthus aurantiacus.* **Ferns:** *Cheilanthes lasiophylla*.	This macrogroup has a patchy but widespread distribution across the arid areas of the Northern Territory	Rocky ranges and rises across the arid Northern Territory, Western Australia, Queensland, New South Wales and South Australia.	Occurs on rocky or gravelly ranges, hills or rises composed of neutral, acidic or basic rocks and breakaways, occasionally extending on to flat well-drained country immediately below. It differs from macro group L.5 (MG19) in its' preference for rockier, often north facing slopes with very skeletal soils.	
L.4 Australian Tropical Aquatic Vegetation						
		Not included in the analysis				
L.4 Australian Desert and Semi-arid Aquatic Vegetation						
		Not included in the analysis				

Supplementary materia B

Synoptic table of the most important species (highest constancy in at least one alliance) of macrogroups within the Northern Territory of Eastern Australia. Values in columns are percentage constancies. Refer to table 2 of the manuscript for names and description of macrogroups. *Triodia* Hummock Grassland maccrogroups (MG10, MG15 & MG16) previously defined by Muldavin et al. (2021) are not included within this synoptic table.

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Number of Plots		2068	1215	3830	3689	2883	870	2137	637	1337	898	2477	464	5318	2731	741	692	730	787
Macrogroup M1																			
Pseudoraphis spinescens	2	40			3														
Oryza rufipogon	2	33																	
Eleocharis dulcis	1	24																	
Melochia corchorifolia	1	19																	
Ipomoea aquatica	1	19																	
Ludwigia adscendens	1	16																	
Melaleuca viridiflora	6	16			60		10	4				3	2	5					
Hymenachne acutigluma	1	14																	
Nymphaea violacea	1	14																	
Paspalum scrobiculatum	1	13			4														
Cyperus scariosus	1	13																	
Eleocharis sphacelata	1	13																	
Merremia gemella	1	13																	
Aeschynomene indica	1	12								8									
Ludwigia perennis	1	12			3					8									
Cyanotis axillaris	1	11																	
Macrogroup M2																			
Flagellaria indica	1		17																
Smilax australis	1		16																
Drypetes deplanchei	1		15	1															

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Litsea glutinosa	1		14																
Sterculia quadrifida	1		13																
Exocarpos latifolius	1		13	1															
Canarium australianum	1		13	1				5											
Opilia amentacea	1		12																
Ixora timorensis	1		12																
Sersalisia sericea	1		12										2						
Micromelum minutum	1		12																
Strychnos lucida	1		12			7			4										
Cupaniopsis anacardioides	1		12																
Acacia auriculiformis	1		12	6	7														
Glycosmis trifoliata	1		11																
Abrus precatorius subsp. *precatorius*	1		11			4													
Macrogroup M3																			
Eucalyptus tetrodonta	9			93	7		28	12			11	7	4						
Eucalyptus miniata	6			73			17	10			7	7	2						
Erythrophleum chlorostachys	12			31	4	13	90	37	5		9	15	4	7					
Corymbia bleeseri	2			28			10				6		1						
Livistona humilis	4			28	12		10	12			4								
Corymbia nesophila	1			22															
Buchanania obovata	7			15	10		46	32	2		9	8	6						
Planchonia careya	5			14	12		17	35			7								
Corymbia porrecta	1			12															
Pandanus spiralis	3			11	32			6											
Heteropogon triticeus	5			10	9		46	22			3								
Macrogroup M4																			
Grevillea pteridifolia	2			4	32						2	4	2						
Corymbia polycarpa	2			4	25			5						3					

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Lophostemon lactifluus	1			2	22														
Melaleuca nervosa	1	2		1	21														
Eriachne burkittii	1				20														
Eriachne triseta	1			2	18								2						
Xyris complanata	1				17														
Dapsilanthus spathaceus	1				13								2						
Banksia dentata	1				13														
Themeda triandra	11			2	12		31	38	12			2		13		19	16	49	
Alloteropsis semialata	3			2	11		22	8			8	3							
Mnesithea rottboellioides	1			3	11			12											
Petalostigma pubescens	3			7	10	6	16	11				7		4					
Ectrosia leporina	1				10														
Macrogroup M5																			
Acacia shirleyi	5					88													
Evolvulus alsinoides	10					66	13	6	4	17	3	9		10	7			13	36
Mnesithea formosa	6					59	37	10			2	3		4					
Paspalidium rarum	3					58													
Macropteranthes kekwickii	3					50													
Bulbostylis barbata	4					49	8			5	4	9	2	4					
Ptilotus fusiformis	4					47			3			3		6					9
Eriachne ciliata	7			2		44	29		2		7	27	2	7					
Waltheria indica	5			1	3	43	12	14	4			4		6					4
Chrysopogon fallax	12			5	4	40	23	22	20	39		7		47		10			
Eragrostis cumingii	3	2			4	38	5	5				2							
Spermacoce stenophylla	2					37													
Macrogroup M6																			
Petalostigma quadriloculare	6			7			72	4			13	14	4						
Terminalia ferdinandiana	5			6	5		58	14			3								
Grevillea decurrens	4			3			53	3			4								

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Gardenia megasperma	4			3			50	9			4	3	4						
Terminalia pterocarya	2						36	4											
Eriachne obtusa	6			1	8	7	36	9	11		5	17		15					
Corymbia dichromophloia	4			2		12	36				2	22	2	5					
Eriachne avenacea	3			3	4		35				5	5	2						
Eucalyptus tintinnans	2						35												
Macrogroup M7																			
Corymbia foelscheana	4			3			17	48											
Heteropogon contortus	6					4	7	45	32			3		24					
Eucalyptus tectifica	6			2			35	39	13			3		10					
Grewia savannicola	4					9	5	33	16			2		13					
Sehima nervosum	7			2		4	13	30	33	11		2		26					
Corymbia confertiflora	3			5	3		9	27	9					7					
Hakea arborescens	4			1	5			25	28					20					
Mesosphaerum suaveolens	1							25											
Chrysopogon latifolius	2			3			8	24	4										
Corymbia grandifolia	2				4		8	19	3			2		3					
Brachychiton diversifolius subsp. *diversifolius*	2			3				19	5			2		5					
Brachychiton megaphyllus	3			1			24	19	2										
Ficus aculeata	1							15	3										
Macrogroup M8																			
Bauhinia cunninghamii	6					7		11	44	19				28					
Carissa lanceolata	6					15			34	16		3		31	4				4
Corymbia terminalis	4								33	7				25	5				6
Eucalyptus pruinosa	2								21			2		18					
Atalaya hemiglauca	13					15			18	19				16	12	36	40	82	
Brachyachne convergens	5							4	18	55				15					
Terminalia arostrata	2								18	10				11					

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Macrogroup M9																			
Aristida latifolia	5								11	61				11					
Iseilema vaginiflorum	3								4	47				4					
Panicum decompositum	5	3				5			5	46				7		18			
Rhynchosia minima	4					19			5	36				7					
Neptunia dimorphantha	2									36				3					
Sida spinosa	2									36				3					
Astrebla pectinata	2									33									
Flemingia pauciflora	2									32									
Astrebla elymoides	2									30									
Astrebla squarrosa	2									27									
Dichanthium fecundum	3							5	13	25				12					4
Eulalia aurea	5					12			11	25		3		18	7	18			5
Abelmoschus ficulneus	1									25									
Macrogroup M11																			
Cartonema spicatum	2				3		23				11	3	2						
Persoonia falcata	3			4	6		20	4			10	7	5						
Stackhousia intermedia	1						9				8	7							
Triodia bitextura	6			4	4	13	23		6		8	49		8					
Thaumastochloa major	1			1			6				7	3							
Schizachyrium fragile	7			4	8	35	29	9	3		7	17		6					5
Murdannia graminea	2				4	5	19				6	3							
Lomandra tropica	0			2							6								
Mitrasacme connata	1						14				6	4							
Macrogroup M12																			
Terminalia canescens	4					19	5		15			17		13					
Corymbia ferruginea	2			5			6				3	13							
Calytrix exstipulata	2			3	4	8	9				4	12	4						
Dodonaea hispidula	1			2			6				3	11	5						

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Aristida hygrometrica	3			1		17		5	7			10		8					
Corchorus sidoides	2					10			3			9	2	4					9
Cochlospermum fraseri	4			1			32	13	8			9	2	5					
Grevillea prasina	1										3	8							
Acacia lycopodiifolia	0											7							
Grevillea refracta	0											7	2						
Owenia vernicosa	3			4			19	7			5	7	6						
Sorghum plumosum	3			4	7		10	13	9			7		8					
Macrogroup M13																			
Triodia microstachya	1			2	3		6					2	11						
Terminalia carpentariae	1			4			9				2		7						
Gompholobium subulatum	1			1							5		6						
Actinoschoenus sp. sandstone	0												6						
Xanthostemon paradoxus	3			6	4		29				3	3	6						
Acacia latescens	1			1	4						2		6						
Corymbia arnhemensis	0												6						
Boronia lanuginosa	0			1									5						
Gonocarpus leptothecus	1										4	3	5						
Acacia multisiliqua	0												5						
Gardenia fucata	0												5						
Macrogroup M14																			
Aristida inaequiglumis	8								9			3		14	11	11			90
Cleome viscosa	8					32			10	14		3		14	5	16	12	34	4
Sporobolus australasicus	4					28			9	18				13					
Aristida holathera	11			1	5	9	21		6		5	6		12	13	32			92
Gossypium australe	2								4					11					16
Flueggea virosa subsp. *melanthesoides*	4		8			19		13	12			2		10					

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Indigofera linifolia	3					6	7	9	6	9		4		9					
Terminalia volucris	3					20			13	17				9					
Eucalyptus brevifolia	1								4			6		9					
Acacia lysiphloia	2					7			4			2		9					9
Macrogroup M17																			
Acacia aneura	6														41	27		18	16
Triodia basedowii	3														25	13			7
Acacia kempeana	14														25	57	64	96	17
Eragrostis eriopoda	11														23	51	29	23	65
Enneapogon polyphyllus	13								6	6				8	20	74	28	86	4
Aristida contorta	7					5								3	16	59		35	
Macrogroup M18																			
Salsola australis	9									6				3	12	95		55	
Enchylaena tomentosa	12														9	89	43	78	
Rhagodia eremaea	13														7	81	41	100	
Cenchrus ciliaris	10														10	75	10	58	32
Enneapogon avenaceus	6														9	75		25	
Sclerolaena convexula	9														5	73		78	
Acacia tetragonophylla	12														13	72	35	90	
Sida fibulifera	10									22				5	6	66	13	43	31
Triraphis mollis	5														3	66		18	
Macrogroup M19																			
Eriachne mucronata	10											2	1		3		100	66	
Cheilanthes lasiophylla	10																86	92	
Senna artemisioides subsp. artemisioides	12														7	37	83	80	8
Sida filiformis	7					6											81	43	
Triodia brizoides	8														3	17	78	50	
Digitaria brownii	11					12									6	38	70	82	

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Cheilanthes sieberi subsp. *sieberi*	6																66	36	
Callitris glaucophylla	4																63	17	
Eremophila freelingii	9														9	12	61	86	
Psydrax latifolia	5														3		57	16	8
Acacia macdonnellensis subsp. *macdonnellensis*	3																55		
Macrogroup M20																			
Senna artemisioides subsp. helmsii	6														5		22	67	6
Solanum quadriloculatum	9														6	45	42	65	
Tripogon loliiformis	10														10	57	43	63	
Abutilon fraseri subsp. *fraseri*	6															28	11	61	
Hybanthus aurantiacus	6																33	61	6
Eremophila latrobei subsp. *latrobei*	7															12	52	60	
Ptilotus obovatus var. *obovatus*	6														5	13	47	53	
Evolvulus alsinoides var. *villosicalyx*	6															21	28	52	
Melhania oblongifolia	6					33			4					4		14		50	
Euphorbia tannensis subsp. *eremophila*	6														4	33	27	48	3
Macrogroup M21																			
Triodia schinzii	6														3				100
Acacia sericophylla	5													3	4				92
Corymbia opaca	9														6	19	22	45	77
Scaevola parvifolia	4																		63
Dicrastylis exsuccosa	3																		62

	Mean	MG1	MG2	MG3	MG4	MG5	MG6	MG7	MG8	MG9	MG11	MG12	MG13	MG14	MG17	MG18	MG19	MG20	MG21
Triodia pungens	4											2		8	8				61
Eremophila latrobei	5														14			13	60
Petalostylis cassioides	4																12		59
Acacia adsurgens	3																		57
Acacia melleodora	5														4	11	25		55
Yakirra australiensis	3																		48
Goodenia armitiana	2																		42
Senna artemisioides	3														8				41
Paraneurachne muelleri	3																11	11	37