



Photographer: Leah Mackinnon

SEMI-EVERGREEN VINE THICKET

INTRODUCTION

All part of a community

Ecological communities are groups of plants, animals and other organisms that naturally occur together. The structure and composition are determined by environmental factors such as climate, landscape position, soil, aspect and altitude.

While a particular ecological community will vary in structure and composition across its range, there are common elements that clearly identify one ecological community as distinct from another.

Ecological communities also exist in different condition 'states'; each with defining characteristics. States range from high quality to degraded with several in between.

Management affects the state of a community and depending on the type of management action, can cause a community to make a 'transition' to a better or worse state.

Semi-evergreen Vine Thicket

Semi-evergreen Vine Thicket is the name given to the threatened ecological community Semi-evergreen Vine Thickets of the Brigalow Belt (South) and Nandewar Bioregions. It is a semi-arid form of dry rainforest dominated by a diversity of non-eucalypt trees and shrubs such as Native olive (*Notelaea microcarpa*), Wilga (*Geijera parviflora*) and Peach bush (*Ehretia membranifolia*) with numerous vine species present.

Unfortunately large areas of this community have been cleared across our catchments and remaining fragments are listed as **endangered**. The community provides an essential home to many of our catchments' most threatened species.

Semi-evergreen Vine Thicket is listed as a threatened ecological community under both the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *NSW Threatened Species Conservation Act 1995* (TSC Act).

Where does the community occur?

Semi-evergreen Vine Thicket is found on both private and public land on the slopes and the eastern parts of the plains. It occurs on rocky hills and gullies, on light clays on hillsides and on sandy clay loams with gravel on low rises on the plains.



While predominantly a Queensland community, Semi-evergreen Vine Thicket occurs in northern NSW in the Border Rivers – Gwydir and Namoi catchments. Semi-evergreen Vine Thicket is common around Terry Hie Hie, Bingara and Yetman.

Managing and enhancing biodiversity on your land helps build a resilient landscape that balances production and conservation



Catchment Management
Authority
Border Rivers–Gwydir

Description

Identification

Semi-evergreen Vine Thicket has an uneven canopy which is 4-12 m high, dominated by a range of different species. Common dominant species in the catchment include Native olive, Wilga, Peach bush, Red olive plum (*Elaeodendron australe*) and Red ash (*Alphitonia excelsa*).

The community may also have emergent species such as Silver-leaved ironbark (*Eucalyptus melanophloia*), Belah (*Casuarina cristata*) or White cypress pine (*Callitris glaucophylla*). There is usually a high diversity of shrubs with sparse grasses and herbs. A range of vine species are usually present. Most patches of the community in NSW are less than 1 ha.

What is not Semi-evergreen Vine Thicket?

Semi-evergreen Vine Thicket does not occur on floodplains or on the tablelands. Many species occurring in Semi-evergreen Vine Thicket also occur as understorey in adjoining communities (such as Weeping Myall, Belah Forest and Brigalow).



Profile drawing of Semi-evergreen Vine Thicket community

Plants of Semi-evergreen Vine Thicket



DOMINANT CANOPY SPECIES

<i>Acacia salicina</i>	Cooba
<i>Alectryon oleifolius</i>	Western rosewood
<i>Alectryon subdentatus</i>	Holly-leaved birdseye
<i>Alphitonia excelsa</i>	Red ash
<i>Cadellia pentastylis</i> *	Ooline
<i>Casuarina cristata</i>	Belah
<i>Ehretia membranifolia</i>	Peach bush
<i>Elaeodendron australe</i>	Red olive plum
<i>Ficus rubiginos</i>	Port Jackson fig
<i>Geijera parviflora</i>	Wilga
<i>Notelaea microcarpa</i>	Native olive
<i>Pittosporum angustifolium</i>	Butter bush
<i>Pittosporum spinescens</i>	Wallaby apple
<i>Planchonella cotinifolia</i>	
<i>Psydrax oleifolium</i>	Wild lemon
<i>Ventilago viminalis</i>	Supple jack

ASSOCIATED CANOPY SPECIES

<i>Acacia harpophylla</i>	Brigalow
<i>Alstonia constricta</i>	Quinine bush
<i>Brachychiton populneus</i>	Kurrajong
<i>Callitris glaucophylla</i>	White cypress pine
<i>Eucalyptus albens</i>	White box
<i>Eucalyptus dealbata</i>	Tumbledown red gum
<i>Eucalyptus melanophloia</i>	Silver-leaf ironbark
<i>Eucalyptus populnea</i> subsp. <i>bimbil</i>	Poplar box

MID-STORY SPECIES

<i>Beyeria viscosa</i>	Sticky Wallaby bush
<i>Breynia oblongifolia</i>	Coffee bush
<i>Capparis mitchellii</i>	Wild orange
<i>Carissa ovata</i>	Currant bush
<i>Dodonaea viscosa</i> subsp. <i>angustifolia</i>	Hop bush
<i>Maytenus cunninghamii</i>	Yellow-berry bush
<i>Myoporum montanum</i>	Western boobialla
<i>Olearia elliptica</i>	Sticky daisybush
<i>Phyllanthus subcrenulatus</i>	Phyllanthus
<i>Pimelea neo-anglica</i>	Poison pimelea
<i>Santalum lanceolatum</i>	Sandalwood
<i>Spartothamnella juncea</i>	Red bead bush

COMMON VINES

<i>Capparis lasiantha</i>	Nepine
<i>Cayratia clematidea</i>	Native grape
<i>Clematis microphylla</i>	Small-leaved clematis
<i>Glycine tabacina</i>	Native clover
<i>Jasminum lineare</i>	Desert jasmine
<i>Marsdenia pleiadenia</i>	Downy milk vine
<i>Marsdenia viridiflora</i>	Native pear
<i>Parsonsia eucalyptophylla</i>	Gargaloo
<i>Parsonsia lanceolata</i>	Rough silkpod
<i>Pandorea pandorana</i>	Wonga vine

GROUNDCOVER SPECIES

<i>Abutilon oxycarpum</i>	Lantern bush
<i>Aristida ramosa</i>	Purple wiregrass
<i>Austrostipa ramosissima</i>	Stout bamboo grass
<i>Austrostipa scabra</i>	Speargrass
<i>Austrostipa verticillata</i>	Slender bamboo grass
<i>Boerhavia dominii</i>	Tar vine
<i>Cheilanthes sieberi</i>	Rock fern
<i>Dichondra repens</i>	Kidney weed
<i>Desmodium brachypodum</i>	Large tick-trefoil
<i>Panicum effusum</i>	Hairy panic
<i>Einadia nutans</i>	Climbing saltbush
<i>Enchylaena tomentosa</i>	Ruby saltbush
<i>Leptochloa ciliolata</i>	Fine canegrass
<i>Rhagodia spinescens</i>	Thorny saltbush
<i>Solanum parvifolium</i>	Small-leaved nightshade
<i>Solanum prinophyllum</i>	Forest nightshade
<i>Thellungia advena</i>	Coolibah grass
<i>Wahlenbergia</i> spp.	Bluebells

*Listed as threatened under State and/or Commonwealth legislation



Photo Key:

- 1 Wild orange – Greg Steenbeeke
- 2 Wilga – Greg Steenbeeke
- 3 Currant bush – Leah Mackinnon
- 4 Gargaloo – Greg Steenbeeke
- 5 Butter bush – Greg Steenbeeke

Animals of Semi-evergreen Vine Thicket

BIRDS

Parrots

Red-winged parrot
Australian king-parrot
Turquoise parrot ●
Pale-headed rosella
Eastern rosella
Crimson rosella
Eastern ringneck ▲
Scaly-breasted lorikeet ^E
Rainbow Lorikeet ^E
Musk Lorikeet ▲ ^E
Little Lorikeet ● ^E

Cockatoos

Cockatiel
Little corella
Galah
Sulphur-crested cockatoo
Glossy black-cockatoo ●

Ground feeding and low nesting birds

Australian brush-turkey ● ^E
Bush stone-curlew ●
Emu
Pheasant coucal ▲ ^E
Spotted quail-thrush ▲
King quail
Stubble quail
Brown quail
Painted button-quail
Red-chested button-quail
Little button-quail
Tawny grassbird ▲

Ground feeding birds

Apostle bird
White-winged choughs
Diamond dove ▲
Crested pigeon
Bar-shouldered dove
Peaceful dove
Wonga pigeon ▲ ^E
Common bronzewing ▲
Grey-crowned babbler ●
White-browed babbler
Red-browed finch
Superb fairy-wren
Variegated fairy-wren

Aerial feeding birds

Dusky woodswallow ▲
White-breasted woodswallow ▲
White-browed woodswallow ▲
Masked woodswallow ▲
Black-faced woodswallow

Little woodswallow
Satin flycatcher ■ ^E
Restless flycatcher
Leaden flycatcher
Grey fantail
Willie wagtail
Rufous fantail ■
Rainbow bee-eater ■
Dollarbird
Welcome swallow
Fairy martin
Tree martin
Fork-tailed swift ■
White-throated needletail ■

Medium to large bush birds

Laughing kookaburra
Sacred kingfisher
Grey butcherbird
Pied butcherbird
Australian raven
Pied currawong
Common koel ^E
Channel-billed cuckoo ^E
Fan-tailed cuckoo
Brush cuckoo ^E
Horsfield's bronze-cuckoo
Shining bronze-cuckoo ^E
Pallid cuckoo
Black-eared cuckoo ▲
Speckled warbler ● ^E
Eastern shrike-tit ▲
Brown treecreeper ^W
Brown treecreeper
(eastern subspecies) ● ^E
White-throated treecreeper ^E
Eastern spinebill ▲
Spiny-cheeked honeyeater
Red wattlebird ^E
Noisy miner
Little friarbird
Noisy friarbird
Black honeyeater ^W
Blue-faced honeyeater
Brown honeyeater
Yellow-faced honeyeater ^E
Fuscous honeyeater ^E
White-eared Honeyeater ^{E,H}
White-plumed honeyeater
Singing honeyeater
Lewin's honeyeater ▲ ^E
Brown-headed honeyeater
Black-chinned honeyeater ● ^E
White-naped honeyeater ^E
Painted honeyeater ● ^W



KEY:

● Species, population or community listed as vulnerable or endangered under the EPBC and/or TSC Act

■ Species listed as migratory under the EPBC Act

▲ Species identified as present or returning to vegetation communities in good condition

N, E, S, W = Regional extent – North, East, South, West of Border Rivers-Gwydir catchment area

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- Striped honeyeater
- Golden whistler ▲
- Rufous whistler
- Eastern yellow robin ▲
- Hooded robin ●
- Red-capped robin ^W
- Black-faced cuckoo-shrike
- White-bellied cuckoo-shrike
- Grey shrike-thrush
- White-winged triller
- Cicadabird ▲
- Olive-backed oriole ▲

Small bush birds

- Inland thornbill
- Striated thornbill ^E
- Yellow thornbill
- Yellow-rumped thornbill
- Brown thornbill ^E
- Buff-rumped thornbill
- Western gerygone
- White-throated gerygone ^E
- Spotted pardalote
- Striated pardalote
- White-browed scrubwren ^E
- Chestnut-rumped heathwren ^E
- Weebill
- Mistletoebird
- Varied sittella ●
- Silvereye

Birds of prey

- Collared sparrowhawk
- Brown goshawk ▲
- Wedge-tailed eagle
- Pacific baza
- Spotted harrier ●
- Black-shouldered kite
- Whistling kite
- Black kite
- Little eagle ●
- Square-tailed kite ●
- Brown falcon
- Nankeen kestrel
- Australian hobby
- Peregrine falcon
- Black falcon

Nocturnal birds

- Barn owl
- Southern boobook
- Barking owl ●
- Tawny frogmouth
- Australian owl-nightjar
- White-throated nightjar ^{EH}



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MAMMALS

Terrestrial (land dwelling)

- Yellow-footed antechinus ▲
- Common dunnart ▲
- Eastern grey kangaroo
- Common wallaroo
- Black-striped wallaby ●
- Brush-tailed rock-wallaby ● ^E
- Red-necked wallaby
- Swamp wallaby
- Spotted-tailed quoll ●
- Short-beaked echidna

Arboreal (tree dwelling)

- Koala ●
- Squirrel glider ●
- Feathertail glider ▲
- Sugar glider ▲
- Common brushtail possum ▲
- Common ringtail possum ▲

Bats

Microbats

- Large-eared pied bat ●
- Gould's wattled bat
- Chocolate wattled bat
- Little pied bat ●
- Eastern bent-wing bat ●
- Eastern horseshoe bat
- Lesser long-eared bat
- Gould's long-eared bat
- Greater long-eared bat ●
- Inland broad-nosed bat
- Little broad-nosed bat
- Eastern cave bat ●
- Little forest bat
- Hairy-nosed freetail bat ● ^N
- Southern freetail bat
- Inland freetail bat
- White-striped freetail-bat
- Yellow-bellied sheath-tail-bat ●

Megabats

- Grey-headed flying-fox ●
- Little red flying-fox

Introduced

- European cattle
- Goat
- Dingo
- Domestic dog
- Fox
- Deer
- Horse
- Cat
- Brown hare
- Rabbit
- House mouse
- Black rat
- Pig



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Photo Key:

- 1 Bush turkey
Rosie Nicolai
- 2 Square-tailed kite
Photographer: Iestyn Taylor
- 3 Brown falcon
Photographer: Iestyn Taylor
- 4 Striated pardalote
Photographer: Iestyn Taylor
- 5 Brushtail possum
Photographer: Phil Spark
- 6 Yellow footed antechinus
Photographer: Phil Spark
- 7 Greater long eared bat
Photographer: Phil Spark

REPTILES

Dragons

- Jacky lashtail ^E
- Nobbi lashtail ^E
- Burn's dragon
- Eastern bearded dragon

Turtles

- Eastern snake-necked turtle

Snakes

- Eastern small-blotched python ▲ ^N
- Murray/Darling carpet python ▲
- Green tree snake ▲ ^E
- Southern death adder ▲ ^E
- Yellow-faced whip snake ▲
- Red-naped snake
- Pale-headed snake ●
- Spotted black snake
- Red-bellied black snake
- Eastern brown snake
- Eastern shovel-nosed snake ▲
- Variable black-naped snake
- Curl snake
- Eastern bandy-bandy ▲

Blind Snakes

- Prong-snouted blind snake
- Blackish blind snake ^E
- Proximus blind snake ^E
- Brown-snouted blind snake

Geckos

- Eastern stone gecko
- Eastern spiny-tailed gecko ▲
- Dubious dtella
- Varied dtella ^W
- Prickly gecko
- Zigzag velvet gecko ● ^E
- Robust velvet gecko
- Southern spotted velvet gecko ^E
- Thick-tailed gecko
- Border thick-tailed gecko ● ^E

Legless lizards

- Burton's snake-lizard

Skinks

- Two-clawed worm-skink
- Southern rainbow-skink ^E
- Tussock rainbow-skink ^E
- Shiny-palmed shinning-skink ^W
- Cream-striped shinning-skink ^E
- Robust ctenotus
- Cunningham's spiny-tailed skink ▲ ^N ^E
- Tree-crevice skink



- Eastern water-skink
- Bar sided forest-skink
- South-eastern slider ^E
- Wood mulch-slider
- Eastern robust slider
- Tree-base litter-skink ^E
- Common dwarf skink
- South eastern morethia skink
- Common bluetongue
- Shingleback lizard

Goannas

- Lace monitor

AMPHIBIANS

Ephemeral dams, ponds, wetlands

Frogs & froglets

- Rough frog
- Green tree frog
- Broad-palmed frog
- Peron's tree frog
- Desert tree frog
- Eastern sign-bearing froglet
- Common eastern froglet
- Bullfrog
- Long-thumbed frog
- Ornate burrowing frog
- Spotted marsh frog
- Northern banjo frog ▲
- Painted burrowing frog

Toads & toadlets

- Bibron's toadlet ▲
- Smooth toadlet
- Wrinkled toadlet

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Photo Key:

- 8 Pale headed snake
- 9 Eastern bandy bandy
- 10 Eastern spiny tailed gecko
- 11 Green tree and Desert tree frog
- 12 Broad palmed frog

Photographer of all photos on this page: Phil Spark

Threats and Management

Photographer: Greg Steenbéeke

Threats

Semi-evergreen Vine Thicket is threatened with extinction or continued decline from a number of historical and current sources.

Clearing – broad scale clearing was the major threat to this community in the past but it has ceased to be a threat in NSW with the introduction of the *Native Vegetation Act*.

However, removal of small fragments, clearing along fencelines, tracks and roadsides, and clearing for mining development and exploration remains a significant threat.

Fire – semi-evergreen Vine Thicket is naturally resistant to fire when in good condition, but in heavily grazed or weedy patches the threat from fire is greatly increased. It is slow to regenerate from fire, and may not recover if invaded by weeds after a fire. Exotic pastures adjacent to thickets can increase the intensity of fires.

Grazing – domestic stock will affect the composition of the understorey in Semi-evergreen Vine Thicket, although the impact is likely to be greatest in degraded patches or small fragments. Sheep, cattle and horses can also prevent seed regeneration by eating new seedlings. Goats, horses and other browsing animals will cause more damage than sheep or cattle by eating a wider range of species. Feral pigs may also cause damage by grazing and trampling ground layer plants. Disturbance by grazing animals will increase the likelihood of invasion by weeds.

Weeds – grassy weeds such as Buffel grass (*Cenchrus ciliaris*), Coolatai grass (*Hyparrhenia hirta*) and Green panic (*Megathyrsus maximus* var *pubiglumis*) pose a threat to Semi-evergreen Vine Thicket by increasing the risk of fire and by displacing other ground layer species. These species will normally be a problem in damaged or sparse patches but are capable of invading undisturbed patches. Other weeds of significance in the catchment include Prickly pear (*Opuntia stricta* var *stricta*) and African boxthorn (*Lycium ferocissimum*).

Climate change – is likely to have an effect on distribution and composition of Semi-evergreen Vine Thicket and increase the impact of other threats, particularly fire and weeds.

Management

The aim of management of Semi-evergreen Vine Thicket is to maintain or increase the **extent** and condition of the **community**.

Maintain large areas with buffers to prevent fire. Brigalow community makes a good buffer as it is more fire resistant and does not include a lot of grass. Mow, spray or plough fire breaks around edges adjacent to eucalypt or grass communities. Develop a fire management plan to strategically reduce the risk of fire reaching patches.

Retain all remaining patches and where possible change fence lines and road alignment to prevent new clearing. Avoid tidying up around the edges of existing patches. Where possible, leave a buffer around the edge of existing patches to encourage regeneration and expansion of the patch.

Provide long-term protection for Semi-evergreen Vine Thicket through Agreements with the CMA or Conservation Agreements with the Office of Environment and Heritage or the Nature Conservation Trust.

Establish new stands of Semi-evergreen Vine Thicket through revegetation and assisted regeneration or reconnect existing stands. Many species will re-establish by seed distributed by birds, so use easily established compatible species such as Cooba (*Acacia salicina*) to establish a canopy. Select species to match the type of Semi-evergreen Vine Thicket that you have. Look at existing patches to pick suitable species. Collect seed locally and use within one year after storing in a cool environment. Seek advice from the CMA for revegetation.

Manage grazing to prevent damage to existing plants and to allow flowering, seed set and germination. Fence patches to control the access grazing animals have to patches, particularly goats and horses.

Control feral pigs and goats in patches through baiting, shooting or trapping.

Control weeds in and around Semi-evergreen Vine Thicket patches, particularly exotic pasture species. Maintain a grass free buffer around existing patches. Act quickly to identify and control new outbreaks of weeds in and around patches.





ECOSYSTEM FUNCTION: HOW HEALTHY RAINFORESTS WORK FOR YOU

Healthy Semi-evergreen Vine Thickets provide a wide range of benefits that are often called 'ecosystem services'. These include services such as:

- financial benefits
- soil formation and cycling
- nutrient cycling
- water capture, filtration and delivery to water bodies
- pollination
- pest management (e.g. reducing pest pressure on crops)
- regional climate buffering
- shade and shelter (e.g. for livestock)
- breakdown and absorption of wastes
- a sense of place
- scenery

FURTHER INFORMATION

Look for "Semi-evergreen vine thickets" on the EPBC Species Profiles and Threats database (SPRAT) at

<http://www.environment.gov.au/biodiversity/threatened/index.html>.

National recovery plan for semi-evergreen vine thickets of the Nandewar and Brigalow Belt (South and North) bioregions

<http://www.environment.gov.au/biodiversity/threatened/publications/recovery/pubs/semi-evergreen-vine-thickets.pdf>

The listing for this community under the NSW Threatened Species Conservation Act can be found at

<http://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10749>

Contact the Border Rivers-Gwydir Catchment Management Authority at 02 6728 8020 or visit our website at

<http://www.brg.cma.nsw.gov.au>



Photographer: Greg Steenbeeke



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**Catchment Management
Authority**
Border Rivers-Gwydir



CARING
FOR
OUR
COUNTRY



www.brg.cma.nsw.gov.au
brg@cma.nsw.gov.au

Inverell

15 Vivian Street
PO Box 411 Inverell
NSW 2360

T: 02 6728 8020

F: 02 6728 8098

Moree

66-68 Frome Street
PO Box 569 Moree
NSW 2400

T: 02 6757 2550

F: 02 6757 2570

Glen Innes

68 Church Street
PO Box 380 Glen Innes
NSW 2370

T: 02 6732 2992

F: 02 6732 5995

Armidale

UNE Trevenna Road
PO Box U245 Armidale
NSW 2351

T: 02 6773 5269

F: 02 6773 5288

Goondiwindi

Waggamba Square,
Brook Street
Goondiwindi QLD 4390

T: 07 4671 4302

F: 07 4671 5072