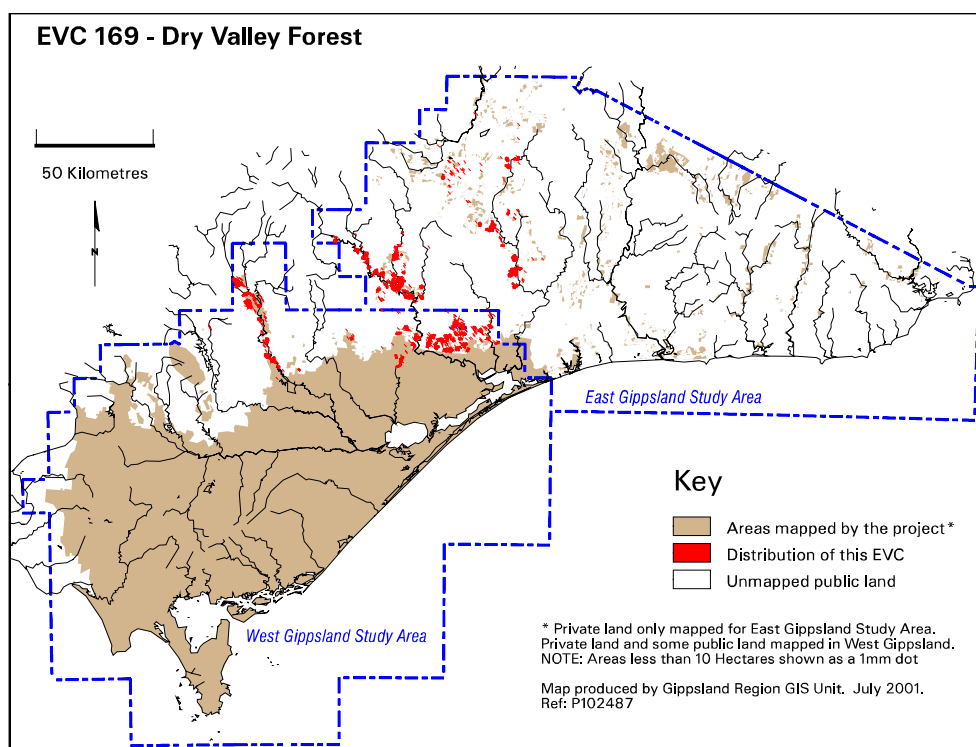


EVC 169 Dry Valley Forest

Dry Valley Forest occurs in minor gullies, along ephemeral streams or on river flats. Soils are colluvially or alluvially-derived fertile silts and silty clays. This EVC has affinities with Riparian Forest but occupies drier sites where water flow is ephemeral and drawn from the water table rather than from a stream. Remnants are often weed-invaded as much of the area surrounding the river flat areas of Dry Valley Forest has been cleared for agriculture.

Elevation (metres above sea level)	<700
Average rainfall p.a. (mm)	600-900. Rainshadow area
Topography	Protected slopes and gullies
Geology	Carboniferous quartzose and feldspathic sandstone and siltstone, Ordovician sandstone
Soils	Fertile stony loams and clay loams
Related/adjacent EVCs/FCs	Grassy Dry Forest on drier aspects, Damp Forest and Herb-rich Foothill Forest in moister areas
Present land use	Grazing, nature conservation, agriculture
Present distribution	Upper Macalister catchment, scattered occurrences around Swifts Creek and Dargo
Examples of sites/quadrats/lists	Cheynes Bridge area (U23903), Burwood Road and Dead Bird Spur Track intersection near Brookeville, Swifts Creek – Omeo Road at Cassilis
Total Area (ha)/ Number of polygons	5,404/512
Group analysis no.	Not identified by 40 group analysis



Vegetation: structure/floristics:

Contains a range of eucalypts indicative of drier habitats over scattered shrubs and a notably mossy herb-rich groundcover. Common eucalypts are White Stringybark *Eucalyptus globoidea*, Yellow Stringybark *Eucalyptus muelleriana*, Red Box *E. polyanthemos*, Red Stringybark *E. macrorhycha*, Narrow-leaf Peppermint *E. radiata* and But But *Eucalyptus bridgesiana*.

Shrubs often found are Burgan *Kunzea ericoides*, Shiny Cassinia *Cassinia longifolia*, Black Wattle *Acacia mearnsii* and Tree Violet *Hymenanthera dentata*. Other species present include Austral Bracken *Pteridium esculentum* and Small-leaf Bramble *Rubus parvifolius*.

The herb-rich ground cover includes Bidgee-widgee *Acaena novae-zelandiae*, Ivy-leaf Violet *Viola hederacea*, Wood-sorrel *Oxalis* sp, Kidney-weed *Dichondra repens*, Stinking Pennywort *Hydrocotyle laxiflora*, Trailing Speedwell *Veronica plebeia*, Necklace Fern *Asplenium flabellifolium*, Common Maidenhair *Adiantum aethiopicum*, Tussock-grass *Poa* spp, Weeping Grass *Microlaena stipoides* var. *stipoides*, Short-stem Sedge *Carex breviculmis*, Austral Bear's-ears *Cymbonotus preissianus*, Austral Carrot *Daucus glochidiatus*, Bedstraw *Galium* sp. This EVC contains the stronghold populations of the vulnerable Leafy Greenhood *Pterostylis cucullata*.

Around the Swifts Creek area Dry Valley Forest occurs on mid to lower slopes. The overstorey variably consists of Brittle Gum *E. mannifera*, Broad-leaved Peppermint *E. dives* with occasional Manna Gum *E. viminalis* present on the lower slopes adjacent to drainage lines. Shiny Cassinia *Cassinia longifolia*, Silver Wattle *Acacia dealbata* and Blackwood *A. melanoxylon* are present in the understorey with the occasional Hazel Pomaderris *Pomaderris aspera*. Understorey shrubs are well represented with Grey Guinea-flower *Hibbertia obtusifolia*, Daphne Heath *Brachyloma daphnoides*, Austral Indigo *Indigofera australis*, Cluster-flower Geebung *Persoonia confertiflora*, Victorian Christmas-bush *Prostanthera lasianthos* and Prickly Currant-bush *Coprosma quadrifida* present.

The herb-rich ground layer includes Austral Bear's-ears *Cymbonotus preissianus*, Honey-pots *Acrotriche serrulata*, Common Raspwort *Gonocarpus tetragynus*, Common Woodrush *Luzula meridionalis*, Buttercup *Ranunculus* sp., Showy Violet *Viola betonicifolia* ssp. *betonicifolia*, Ivy-leaf Violet *V. hederacea* s.l., Prickly Starwort *Stellaria pungens*, Kidney-weed *Dichondra repens*, Bidgee-widgee *Acaena novae-zelandiae*, Stinking Pennywort *Hydrocotyle laxiflora*, Cranesbill *Geranium* sp. and Woodruff *Asperula* sp. Grasses present include Kangaroo Grass *Themeda triandra*, Grey Tussock-grass *Poa sieberiana*, Common Tussock-grass *P. labillardierei*, Common Wheat-grass *Elymus scaber* var. *scaber*, Weeping Grass *Microlaena stipoides* var. *stipoides* and Wallaby-grass *Austrodanthonia* spp.

Apart from Austral Bracken *Pteridium esculentum* and a few occurrences of Rough Tree-fern *Cyathea australis*, ferns are poorly represented. Sedges present include Spiny-headed Mat-rush *Lomandra longifolia*, Short-stem Sedge *Carex breviculmis* and Tall Sedge *Carex appressa*.

Comments:

Dry Valley Forest is prone to blackberry invasion particularly on lower slopes where it merges into Riparian Forest along major river systems. Warm temperate elements such as Muttonwood *Rapanea howittiana* appear in the most topographically protected sites.

Floristic Community 169-01 River Flat Dry Valley Forest

Description below is from Gippsland RFA (Commonwealth of Australia and NRE, 1999) and additional information from East Gippsland study area mapping.

Elevation (metres above sea level)	200 – 400
Average rainfall p.a. (mm)	850
Topography	Lower slopes and river flats above major rivers
Geology	Ordovician
Soils	Clay loams and silty clays
Related/adjacent EVCs/FCs	Valley Grassy Forest
Present land use	Agricultural, nature conservation
Present distribution	Dargo, Mitchell and Wonnangatta Rivers
Examples of sites/quadrats/lists	South of Dargo on the Lower Dargo Road above the Dargo River
Group analysis no.	Not available for East Gippsland Study Area

Vegetation: structure/floristics:

The overstorey is open and tall and a variety of eucalypts may be present though no single species dominates. Common species include Narrow-leaf Peppermint *Eucalyptus radiata* and Manna Gum *E. viminalis* in wetter sites and Yellow Box *E. melliodora*, Broad-leaved Peppermint *E. dives*, Red Stringybark *E. macrorhyncha* and Apple Box/But But *E. angophoroides/ bridgesiana* in drier sites. Common understorey trees include Silver Wattle *Acacia dealbata*, Blackwood *A. melanoxylon*, Black

Wattle *A. mearnsii* and Hazel Pomaderris *Pomaderris aspera*. Around the Dargo area, Kurrajong *Brachychiton populneus* ssp. *populneus* occurs on drier sites.

Shrubs line the stream bank and are typical of riverine environments including Shiny Cassinia *Cassinia longifolia*, Common Cassinia *C. aculeata*, Burgan *Kunzea ericoides*, Prickly Currant-bush *Coprosma quadrifida*, Tree Violet *Hymenanthera dentata*, Tree Everlasting *Ozothamnus ferrugineus*, Sweet Bursaria *Bursaria spinosa*, Victorian Christmas-bush *Prostanthera lasianthos* and River Lomatia *Lomatia myricoides*. On drier sites in the Dargo area Bitter Cryptandra *Cryptandra amara*, Grey Guinea-flower *Hibbertia obtusifolia*, Matted Bossiaea *Bossiaea buxifolia* and Austral Indigo *Indigofera australis* also occur.

A few ferns line the stream bank and the flats surrounding the river including Austral Bracken *Pteridium esculentum*, Common Maidenhair *Adiantum aethiopicum*, Green Rock Fern *Cheilanthes austrotenuifolia* and Necklace Fern *Asplenium flabellifolium*. This floristic community lacks the ferns associated with wetter riverine environments such as Riparian Forest.

Grasses contribute much to the biomass of this floristic community and include Tussock-grasses *Poa* spp., Common Hedgehog-grass *Echinopogon ovatus*, Silvery Hair-grass **Aira caryophyllea*, Stiped Wallaby-grass *Austrodanthonia racemosa* var. *racemosa*, Weeping Grass *Microlaena stipoides* var. *stipoides*, Short-hair Plume-grass *Dichelachne micrantha*, Common Wheat-grass *Elymus scaber* var. *scaber* and Long-hair Plume-grass *Dichelachne crinita*. Weedy grasses are infrequent.

River Flat Dry Valley Forest is rich in forbs, the most common including Cat's Ears **Hypochoeris radicata*, Creeping Wood-sorrel **Oxalis corniculata* s.s, Bidgee-widgee *Acaena novae-zelandiae*, Kidney-weed *Dichondra repens*, Creeping Cudweed *Euchiton gymnocephalus* s.s, Spear Thistle **Cirsium vulgare*, Slender Dock *Rumex brownii*, Branched Centaury **Centaureum tenuiflorum*, Hairy Pennywort *Hydrocotyle hirta*, Tall Fleabane **Conyza bonariensis* and Cinquefoil Geranium *Geranium potentilloides*.

Twining Glycine *Glycine clandestina*, Small-leaved Clematis *Clematis microphylla* and Mountain Clematis *C. aristata* are common climbers in River Flat Dry Valley Forest. Small-leaf Bramble *Rubus parvifolius*, Blackberry **Rubus fruticosus* spp. agg. and Sweet Briar **Rosa rubiginosa* are common along the stream bank.

Floristic Community 169-02 *Minor Gully Dry Valley Forest*

Description below is from Gippsland RFA (Commonwealth of Australia and NRE, 1999) and additional information from East Gippsland study area mapping.

Elevation (metres above sea level)	100 – 700
Average rainfall p.a. (mm)	700
Topography	Mid-slopes and gullies above major rivers
Geology	Various
Soils	Clay loams and sandy clays
Related/adjacent EVCs/FCs	Valley Grassy Forest
Present land use	Agriculture, nature conservation, grazing
Present distribution	Scattered and isolated occurrences north and east of Bairnsdale; around Dargo and through to Swifts Creek
Examples of sites/quadrats/lists	Wonnangatta Road south-west of Dargo, Sheep Station Creek Road at Doctors Flat south of Swifts Creek, Fiddlers Boundary Track at Sarsfield
Group analysis no.	Not available for East Gippsland Study Area

Vegetation: structure/floristics:

The tree layer consists of species normally found in both wet and dry situations. Mountain Grey Gum *Eucalyptus cypellocarpa*, Apple Box *E. angophoroides*, White Stringybark *E. globoidea*, Broad-leaved Stringybark *E. dives* and Red Box *E. polyanthemos* ssp. *vestita* form a tall, open overstorey. Associated eucalypt species vary with the moisture levels. Manna Gum *E. viminalis* occurs in wetter situations where this EVC abuts Riparian Forest and Yellow Box *E. melliodora* occurs where this EVC

abuts Grassy Dry Forest. Silver Wattle *Acacia dealbata* and Blackwood *A. melanoxylon* are common sub-dominants usually growing as scattered individuals or in small clumps but may form almost a dense layer in wetter sites.

The shrub layer, like the overstorey is a mixture of plants from drier and wetter sites. Shiny Cassinia *Cassinia longifolia*, Burgan *Kunzea ericoides*, Hazel Pomaderris *Pomaderris aspera*, Snow Daisy-bush *Olearia lirata* and Common Cassinia *Cassinia aculeata* are the most common species. Many other species may be present and locally abundant such as Prickly Currant-bush *Coprosma quadrifida*, Bootlace Bush *Pimelea axiflora*, Tree Hakea *Hakea eriantha*, Hop Goodenia *Goodenia ovata* and Tree Violet *Hymenanthera dentata*.

The ground layer is distinctive. A diversity of microhabitats occurs within a site due to the ephemeral nature of the water flows. Ferns such as Common Maidenhair *Adiantum aethiopicum*, Common Ground-fern *Calochlaena dubia*, Necklace Fern *Asplenium flabellifolium* and Fishbone Water-fern *Blechnum nudum* may be abundant in the damper areas and Austral Bracken *Pteridium esculentum* in drier sites.

The graminoids are structurally conspicuous. They include Sword Tussock-grass *Poa ensiformis*, Common Tussock-grass *P. labillardierei*, Soft Tussock Grass *P. morrisii*, Grey Tussock Grass *P. sieberiana* and occasionally in the wettest sites Slender Tussock-grass *P. tenera*. Long-leaf Wallaby-grass *Notodanthonia longifolia*, Slender Wallaby-grass *Austrodanthonia penicillata*, Stiped Wallaby-grass *Austrodanthonia racemosa* var. *racemosa*, Forest Wire-grass *Tetrarrhena juncea*, Kangaroo Grass *Themeda triandra* and Common Hedgehog-grass *Echinopogon ovatus* are also present in sites around Dargo, Bairnsdale and Swifts Creek. Other large tussock-forming graminoids include Spiny-headed Mat-rush *Lomandra longifolia*, Variable Sword Sedge *Lepidosperma laterale* and Tasman Flax-lily *Dianella tasmanica* and may form large swards up to a metre high. Weeping Grass *Microlaena stipoides* var. *stipoides* and Thatch Saw-sedge *Gahnia radula* grow in the inter-tussock spaces, also occasionally forming dense swards. Weeping Grass is often grazed by native herbivores.

The herbaceous flora is diverse. Ivy-leaf Violet *Viola hederacea*, Trailing Speedwell *Veronica plebeia*, Yellow Wood-sorrel *Oxalis corniculata* s.l, Kidney-weed *Dichondra repens* and Cinquefoil Cranesbill *Geranium potentilloides* are most common, whilst a large diversity of other species are less conspicuous. Fireweed Groundsel *Senecio linearifolius*, normally a member of wetter vegetation, is a common component of this floristic community.

Climbers are also a conspicuous component of this vegetation. The native Mountain Clematis *Clematis aristata* and Common Apple-berry *Billardiera scandens* are commonly present with the introduced Blackberry **Rubus fruticosus* spp. agg. Other climbers include Twining Glycine *Glycine clandestina*, Small-leaved Clematis *Clematis microphylla*, Wonga Vine *Pandorea pandorana* and Love Creeper *Comesperma volubile*.