

NSW Vegetation Classification - Vegetation ID

Vegetation Community ID 156

Common Name: Bladder Saltbush shrubland on stony plains and downs of the arid zone

Scientific Name: *Atriplex vesicaria sens lat.* / *Enneapogon avenaceus* - *Eragrostis setifolia* - *Rhodanthe floribunda*

Veg. Comm. ID.: 156 **Original Entry:** John Benson 31/12/2005

Photo 1: ID156a_img201pc.jpg *Atriplex vesicaria* Chenopod Shrubland, near Corona, (AGD66) 31°21'20.9" 141°37'00.7"; 24/10/01; J.Plaza.



Photo 2: ID156b_img202pc.jpg *Atriplex vesicaria* Open Shrubland, East of Broken Hill, (AGD66) 31°47'40.6" 142°10'17.8"; 25/10/01; J.Plaza.



Photo 3: ID156c_dsc_2071.jpg Bladder Saltbush (*Atriplex vesicaria*) on stony downs, Gairdners Creek, Barrier Range, approx. 55km north of Broken Hill, (AGD66) 31°30'26"S 141°40'19"E; 21/8/03; J. Plaza.



Characteristic Vegetation: (Qualitative Estimate)

Trees: *Casuarina pauper*.

Shrubs/Vines/Epiphytes: *Atriplex vesicaria* subsp. *caleocloa*; *Atriplex vesicaria* subsp. *macrocystidia*; *Maireana pyramidata*; *Maireana astrotricha*; *Sclerostegia tenuis*; *Acacia aneura*; *Senna form taxon 'filifolia'*.

Ground Cover: *Astrelba lappacea*; *Enneapogon avenaceus*; *Eragrostis setifolia*; *Enneapogon polyphyllus*; *Sporobolus actinocladius*; *Dichanthium sericeum* subsp. *sericeum*; *Triraphis mollis*; *Sclerolaena brachyptera*; *Sclerolaena divaricata*; *Sclerolaena limbata*; *Sclerolaena obliquicuspis*; *Sclerolaena longicuspis*; *Sclerolaena ericantha*; *Sclerolaena ventricosa*; *Scleroleana brachyptera*; *Atriplex holocarpa*; *Swainsona swainsonioides*; *Dissocarpus biflorus* var. *biflorus*; *Erodium cygnorum* subsp. *glandulosum*; *Tripogon loliiformis*; *Rhodanthe floribunda*; *Angianthus brachypappus*; *Austrostipa scabra* subsp. *falcata*; *Austrodanthonia caespitosa*; *Ptilotus obovatus* var. *obovatus*; *Enteropogon acicularis*; *Sida cunninghamii*; *Calotis scabiosifolia* var. *scabiosifolia*; *Plantago drummondii*; *Rhodanthe floribunda*; *Austrostipa nitida*; *Gnephosis arachnoidea*; *Minuria cunninghamii*; *Ptilotus nobilis*; *Sclerolaena longicuspis*; *Zygophyllum iodocarpum*; *Plantago drummondii*; *Panicum laevinode*; *Swainsona swainsonioides*; *Brachyscome ciliaris* var. *lanuginosa*.

Weed Species: *Schismus barbatus*; *Sonchus oleraceus*; *Carrichtera annua*.

Weediness: Low (<5%) with <10 % cover.

Threatened Plants: *Sarcostemma australe*; *Acacia notabilis*; *Brachycome papillosa*; *Euphorbia sarcostemmae*; *Swainsona flavicarinata*; *Swainsona murrayana*; *Swainsona viridis*.

Threatened Fauna: Kultarr; Australian Bustard; Woma; Red-tailed Black-Cockatoo; Pied Honeyeater; Little Pied Bat; Tawny Crevic-Drum; Wedgesnout Ctenotus; Marble-faced Delma; Collared Whip Snake; Centralian Ranges Rock-skink; Grey Falcon; Forest's Mouse; Stimson's Python; Square-tailed Kite; Yellow-footed Rock Wallaby; Flock Bronzewing; Sandy Inland Mouse; Ringed Brown Snake; Long-haired Rat; Yellow-bellied Sheathtail-bat; Stripe-faced Dunnart.

Mean Species Richness: Not assessed.

Rainforest Structure (Webb): Not applicable.

Structure (WH): Chenopod Shrubland; Open Chenopod Shrubland.

Height Class (WH): Mid-High; Tall.

Vegetation Description: Mid-high shrubland mainly 50 cm high, dominated by Bladder Saltbush (*Atriplex vesicaria* sens lat) often with Black Bluebush (*Maireana pyramidata*) and many copperburr species including *Sclerolaena obliquicuspis*, *Sclerolaena brachyptera*, *Scleroleana divaricata* and *Sclerolaena ericantha*. Curly Mitchell Grass (*Astrelba lappacea*), Common Bottlewasher (*Enneapogon avenaceus*) and Queensland Bluegrass (*Dichanthium sericeum* subsp. *sericeum*) are commonly present along with ephemeral daisies and other forbs. Occurs on brown loams, gilgaid brown clays or red clays often strewn with silcrete gibbers, derived from siliceous fine-grained sedimentary rocks. The landforms are undulating stony plains and flats, plateaux or stony ranges. Common on the Barrier Range north of Broken Hill, Mutawintji region and around White Cliffs. Generally confined to the arid zone. Many of the eastern-most areas have been heavily grazed eliminating Bladder Saltbush leaving derived grasslands, copperburrs or bluebush shrublands. Dieback may also affect Bladder Saltbush in this community as it does in the Riverina. Large areas remain on the Barrier Range and other stony ranges. Grades into Mitchell Grass grasslands, Bluebush shrublands, Black Oak and Mulga communities. Degrades into a derived *Chloris truncata* grassland near White Cliffs (ID183).

Level of Classification: Association.

Classification Confidence Level: Medium.

Formation Group: Chenopod (Halophytic) Shrublands of the Inland.

State Veg Map (Keith 2004): Gibber Chenopod Shrublands.

State Landscape (Mitchell 2002): Not Assessed.

NVIS Major Veg Sub-Groups: Chenopod shrublands.

Forest Type (RN 17): 226 - Saltbush (P).

Authority(s): (Expert Opinion). Section 19.2.1.3.2 in Beadle (1981). Map unit 34 in Pickard & Norris (1994). Community 1 in Milthorpe (1972) and described in Milthorpe (1991). Floristic survey and analysis may divide this community into more groups although observations suggest species composition is reasonably consistent (J Benson pers. obs.). Grades into ID225 in dunefields to the north-west.

Interstate Equivalent(s): South Australia: Overlaps in composition with ID222 that includes floristic group 32 in Playfair and Robinson (1997).

Mapped/Modelled: Pre-European mapped/modelled.

Plot Sampling: None.

Mapping Info: Pre-European extent mapped as map unit 34 in Pickard & Norris (1994). No site data in NSW as of July 2003.

Climate Zone: Semi-arid: hot (persistently dry); Arid: hot (persistently dry).

IBRA Bioregion (v6): Broken Hill Complex (30-70%); Channel Country (1-30%); Mulga Lands (1-30%); Murray-Darling Depression (1-30%); Simpson-Strzelecki Dunefields (1-30%).

IBRA Sub-Region: Barrier Range (30-70%); Barrier Range Outwash, Fans and Plains (1-30%); Bulloo Dunefields (1-30%); Bulloo Overflow (1-30%); Central Depression (1-30%); Mootwingee Downs (1-30%); Paroo Overflow (1-30%); Scopes Range (1-30%); South Olay Plain, Murray Basin Sands (1-30%); Strzelecki Desert, Western Dunefields (1-30%); Urisino Sandplains (1-30%); White Cliffs Plateau (30-70%).

Botanical Division: North Far Western Plains (NFWP) (>70%); South Far Western Plains (SFWP) (1-30%).

Local Govt. Areas: Broken Hill (1-30%); Central Darling (1-30%); Unincorporated (30-70%).

CMAs: Lower Murray/Darling (1-30%); Western (30-70%).

MD Basin: No.

Substrate Mass: Ferricrete; Metamorphic rocks; Sedimentary rocks; Sheet flow deposit; Silcrete.

Lithology: Shale; Silcrete.

Great Soil Group: Brown clay; Brown earth.

Soil Texture: Clay loam; Loam; Medium clay.

Landform Patterns: Plain; Plateau; Rises.

Landform Elements: Fan; Hillcrest; Hillslope; Plain; Scarp.

Land Use: Grazing.

Impacts of European Settlement: Dieback due to disease or senescence; Major alteration of species composition; Minor reduction (<30%) in extent and/or range.

Pre-European Extent: 1000000 ha \pm 30%. Estimated from pre-European map: full range.

Pre-European Extent Comments: Based on extent of map unit 34 in Pickard & Norris (1994).

Current Extent: 500000 ha \pm 30% or 50% \pm 60% of pre-European extent remaining.

Current Extent Comments: (Estimated from mapped extant vegetation: full range). Large areas mapped by Pickard & Norris (1994) as Bladder Saltbush have lost the key species Bladder Saltbush due to overgrazing. These areas have become derived communities dominated by grasses, copperburr or bluebush. Accurate mapping required to delineate existing Bladder Saltbush-dominated areas.

Conservation Reserves: Mutawintji NP 6300 (E2).

Reserves Total Area: 6300 ha.

No. Representatives in Reserves: 1

Protected Area Explanation: Mutawintji NP estimate is 25% of the area in this reserve mapped as the chenopod community 5 in Porteners (2003a). The proportional division of community 5 is from Porteners (pers comm) with about 75% being Black Bluebush (ID155). Also occurs on Fowlers Gap Research Station on the Barrier Range but this is not a reserve.

Secure Property Agreements: None.

Secure PAs Total Area: 0 ha.

No. Representatives in Secure Property Agreements: 0

Protected Current Extent: 1.26% 6300 ha \pm 30%.

No. Representatives in Protected Areas: 1

Protected Pre-European Extent: 0.63% which is inadequately protected across distribution.

Common in 1750: Code 5a: <1% of pre-European extent in protected areas (>10,000 ha).

Key Sites for Protection: The Barrier Range north of Broken Hill may represent the best place to protect stands of this Bladder Saltbush community in good condition.

Degree of Fragmentation: Contiguous stands with high connectivity with >60% extent remaining and low edge to area ratio.

Recoverability: Moderate health as structure and/or composition altered. Likely to recover considerably if causal factors and secondary impacts removed.

Variation & Disturbance: Heavy grazing has major impacts on the species composition of this community and can eliminate Bladder Saltbush degrading it to a grassland-copperburr shrubland with intensive grazing (e.g. ID183).

Fire Regime: Rarely burnt. Intense fires would kill saltbush.

Adjoining Communities: This community grades into bluebush shrubland (ID155), Bottleshrub grassland, Mitchell Grass grassland, Mulga-Dead Finish (ID123) and Black Oak (ID60) low open woodland. There are some similarities with ID61 - Mitchell Grass grassland that occurs in the Sturt NP region, however, this Barrier Range community contains a dense cover of Bladder Saltbush. Grades into ID222 near South Australian border and into another Bladder Saltbush community ID225 in the swales of dunefields to the north-west.

Threatening Processes: Overgrazing is the key threat to this community. Bladder Saltbush is eliminated if over grazed. Goats may physically damage the brittle shrubs and prevent recruitment through applying severe grazing pressure. Intense fire may kill saltbush. Dieback caused by a number of factors affects Bladder Saltbush on alluvial plains in the Riverina (ID157) and may also affect this community. Continued over-grazing or dieback of saltbush could render this community as being vulnerable.

Threatening Process List: Age class of woody vegetation; Climate change; Disease and/or dieback (abnormal); Inappropriate fire regimes; Unsustainable grazing and trampling by stock; Unsustainable grazing by feral animals.

Threat Category: Near Threatened.

Threat/Protected Area Code: NT/5a

Threat Criteria: 3; 4; 1.

Planning Controls: None.

Planning and Management: Management of grazing is vital to the continued existence of this community as much of it has been lost through heavy grazing in the past.

Listed Under Legislation: None.

Recovery Plan: Doesn't exist and not required.

Reference List: (3; 220; 137; 68; 27; 295). Beadle, N.C.W. (1981) The vegetation of Australia. (Cambridge University Press: Cambridge); Milthorpe, P. (1972) Vegetation of the Fowlers Gap - Calindary area. Chapter VII in Lands of the Fowlers Gap m- Calindary Area New South Wales. Fowlers Gap Research Station Research Report No. 4. (The University of New South Wales: Sydney); Milthorpe, P.L. (1991) Vegetation. In: Lands of the North-West Corner of NSW. Technical Report No.12. (Soil Conservation Service of NSW: Dubbo); Peasley, B. (2000) East Walgett vegetation mapping extant vegetation. Unpublished GIS vegetation map. (DLWC: Sydney, Inverell); Pickard, J. & Norris, E.H. (1994) The natural vegetation of north-western New South Wales: notes to accompany the 1:1 000 000 vegetation map sheet. Cunninghamia 3(3): 423-464; Playfair, R.M. & Robinson, A.C. (1997) (eds.) A biological survey of the North Olary Plains, South Australia 1995-1997. (Natural Resources Group, Department of Environment and Natural Resources: South Australia).