

Land units preferred by the Grey Range Thick-billed Grasswren



Since 2019 the Environmental Trust has been funding on-ground works and surveys in the White Cliffs/Packsaddle area to improve the habitat for the Grey Range Thick-billed Grasswren. Through these surveys we have learnt some of the habitat requirements and ground conditions for this endangered species, plants like Bluebush and Spiny Saltbush seem to be the preferred vegetation. We have now gone one step closer to learn more about this elusive bird by looking at the land units that relate to sightings from our ground surveys. The following information describes in detail the land units desired.

Common features within different land units

The common feature in all land units where grasswrens are found is the presence of Black Bluebush (*Maireana pyramidata*) with the grasswren being found where the cover of Black Bluebush varies from 600 bushes/ha (about one bush per 15 sq metres) to 1400 bushes/ha (about one bush per 10 sq metres). This cover density of Black Bluebush is an average across the hectare and is considered a low to moderate density (a high density of Black Bluebush is more than 4500 bushes/ha).

The distribution of Black Bluebush varies across the area. The Bluebush grows in dense patches roughly

on the contour or sometimes in irregular patches interspersed with areas of no bush. The grasswrens are mostly sighted in Bluebushes or in very close proximity to bushes. Another common feature of sites where grasswrens have been found is the soil surface cover between patches of Black Bluebush.

In 83% of grasswren sightings, the soil surface has a covering of either:

- ironstone gravel/cobble,
- silcrete gravel/cobble; or
- shale and phyllite gravel covering.

These types of gravel/cobble coverings give the soil surface a dark colour compared to other types of gravel, for example white quartz gravel. Given the ground-dwelling behaviour of the grasswren, it appears that soil surface features play an important role in the grasswrens distribution, possibly assisting in camouflage.

In the remaining 17% of grasswren sightings, the soil surface cover is a quartz gravel, which is white in colour giving the soil surface a white covering. It appears that the lighter soil surface colour is not a preferred surface for the grasswren.

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Another common feature in all land units where grasswrens are found is the lack of tree and shrub cover. In all land units, tree and shrub cover is very sparse with only isolated, mostly senescent mulga (*Acacia aneura*) or cabbage-tree wattle (*Acacia cana*).



Gently undulating plains with quartz gravelly surfaces and no Gilgai supporting sparse cabbage wattle over black bluebush.



Gently undulating plains with ironstone gravel surfaces and Gilgai supporting sparse cabbage wattle over black bluebush.



Germination of black bluebush - 2 years after bank construction

This project has been assisted by the New South Wales Government through its Environmental Trust.