

Adaptations

Climate and geology form the main components of the physical habitats of plants. Our plants come from sites across Australia - from the south of Western Australia across the Centre to North Queensland - from a great variety of habitats.

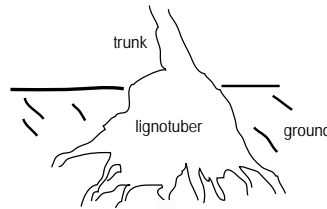
Each plant has its own special way of coping with the conditions where it lives naturally. Biologists call these characteristics '**adaptations**'.

Adaptations don't happen as an immediate response to adverse conditions. In fact they are part of each plant's genetic makeup, built up over a very long time.

Tough thick leaves help some species cope with dry periods or long hours of hot sun. Other plants are exposed to swamps, strong winds or browsing animals and they need characteristics that help them survive these conditions.



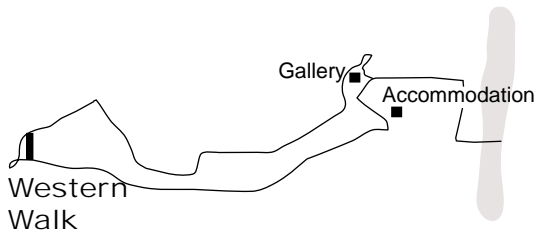
To grow successfully **here** a plant's adaptations must also suit **this** habitat. Some plants that are featured along this Walk have such adaptations e.g., thick fire-proof coverings for their seeds; or prickly or toxic leaves so they are not eaten; or lignotubers which provide food and a source of new buds if the plant is devastated above ground.



These are often some of the features that make them unique and beautiful. Look for vibrant flowers, unusual fruits, elegant trunks and stunted or sprawling shrubs.

Not all plants will be suited to the habitat in **your** garden - to its soil, rainfall and temperature range.

Would your favourite plant on the Western Walk suit **your** garden conditions?



Western Walk

Like a plant magazine in real life, this part of the Garden features a wide variety of plant species from across Australia. How can they all survive here?



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From the carpark, walk east past the Western Walk sign to the Golden Candles sign on the next corner down the Loop Road.

1. ***Banksia ashbyi*** (Golden candles)
 - * May develop a lignotuber (adaptation to dry and fire)
 - * Golden yellow flowers autumn to spring
 - * Occurs naturally on sand plains in central coast area of Western Australia
2. ***Eucalyptus grossa*** (Coarse-leaved mallee)
 - * Develops a lignotuber
 - * Rough bark on trunk
 - * Seven flowers per group with thick short stalks
 - * Gumnuts (fruit) are cylindrical
 - * Endemic to Western Australia from the south eastern wheat belt to the southern goldfields
3. ***Grevillea glauca*** (Bushman's clothespegs)
 - * Large woody fruits (see common name) protect the seeds from temperature extremes
 - * Simple leaf, pale and velvety to reflect heat
 - * New leaves have brown tips
 - * North Queensland
4. ***Eucalyptus griffithii*** (Griffith's gum)
 - * Forms a lignotuber
 - * Fibrous bark at base, smooth above
 - * Cream flowers, buds in 3s have flat, fluted caps
 - * Gumnuts have 2 long ridges continuous with the stalk
 - * Goldfields area of Western Australia
5. ***Eucalyptus stricklandii*** (Strickland's gum)
 - * Wonderful grey flaky bark reveals tan new bark in summer
 - * Yellow flowers (November-December) on flattened stalks
 - * Popular in cultivation in dryland Australia
 - * Goldfields area of Western Australia

Rare = Not in danger in the foreseeable future but population in the wild is small

6. ***Geijera parviflora*** (Wilga)

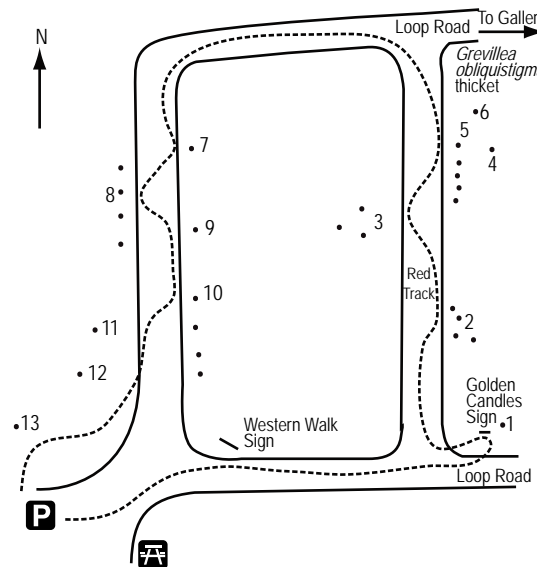
- * Narrow pendulous leaves avoid overheating and water loss
- * 2 forms, one very palatable to stock, the other not
- * Larvae of Orchard Swallowtail butterfly feeds on leaves
- * Local species

On the right hand side at the corner of the Loop Road is a patch of *Grevillea obliquistigma* – its honey-fragrant blossoms make a great habitat for little birds.

Turn left and follow the Loop Road along and round the next corner, heading back towards the carpark.

7. ***Melaleuca depressa***

- * Leaves crowd towards the ends of branchlets to reduce water loss
- * Terminal yellow flower-heads have large yellow anthers
- * Urn-shaped fruit, usually in clusters around stem. New growth starts from here.
- * Northern sand heaths of Western Australia (Geraldton-Kalbarri-Mullewa)



8. ***Acacia paraneura*** (Graceful wattle, Weeping mulga)
 - * Foliage hangs down to avoid the heat of direct sunlight
 - * Flower spikes 10 - 25 mm long
 - * Flat pods up to 60 mm long
 - * Endemic to Pilbara (Western Australia) through Central Australia to Queensland.

9. ***Babingtonia jucunda***

- * Formerly *Baeckea jucunda*
- * Will regrow after bushfires
- * Plants form dense communities in sandy heath where soils retain moisture in the wet but bake hard in the dry
- * Found in southern and central Queensland west of the Great Dividing Range

10. ***Banksia blechnifolia***

- * A prostrate banksia
- * Tiny bottlebrush-like roots search out nutrients where leaf litter and soil meet
- * Flowers occur in September-November on perimeter of plant
- * New growth velvety, reddish and fragile
- * South west Western Australia

Cross the road to:

11. ***Grevillea insignis***

Rare

- * 'insignis' = extraordinary
- * Seeds are protected from fire by thick leathery capsules
- * Prickles (beware!) and chemical-laced leaves keep insects and larger animals at bay
- * Waxy leaves conserve moisture
- * South west Western Australia

12. ***Kunzea pulchella*** (Granite kunzea)

- * Tough leaves resist desiccation
- * Brilliant red flowers in spring and summer
- * Found on granite outcrops in central south Western Australia

13. ***Hakea bucculenta*** (Red pokers)

- * Self-mulching – look at collection of dead leaves beneath plant
- * Downward-sloping branches direct water to roots
- * Carnarvon and Geraldton sandplains of Western Australia