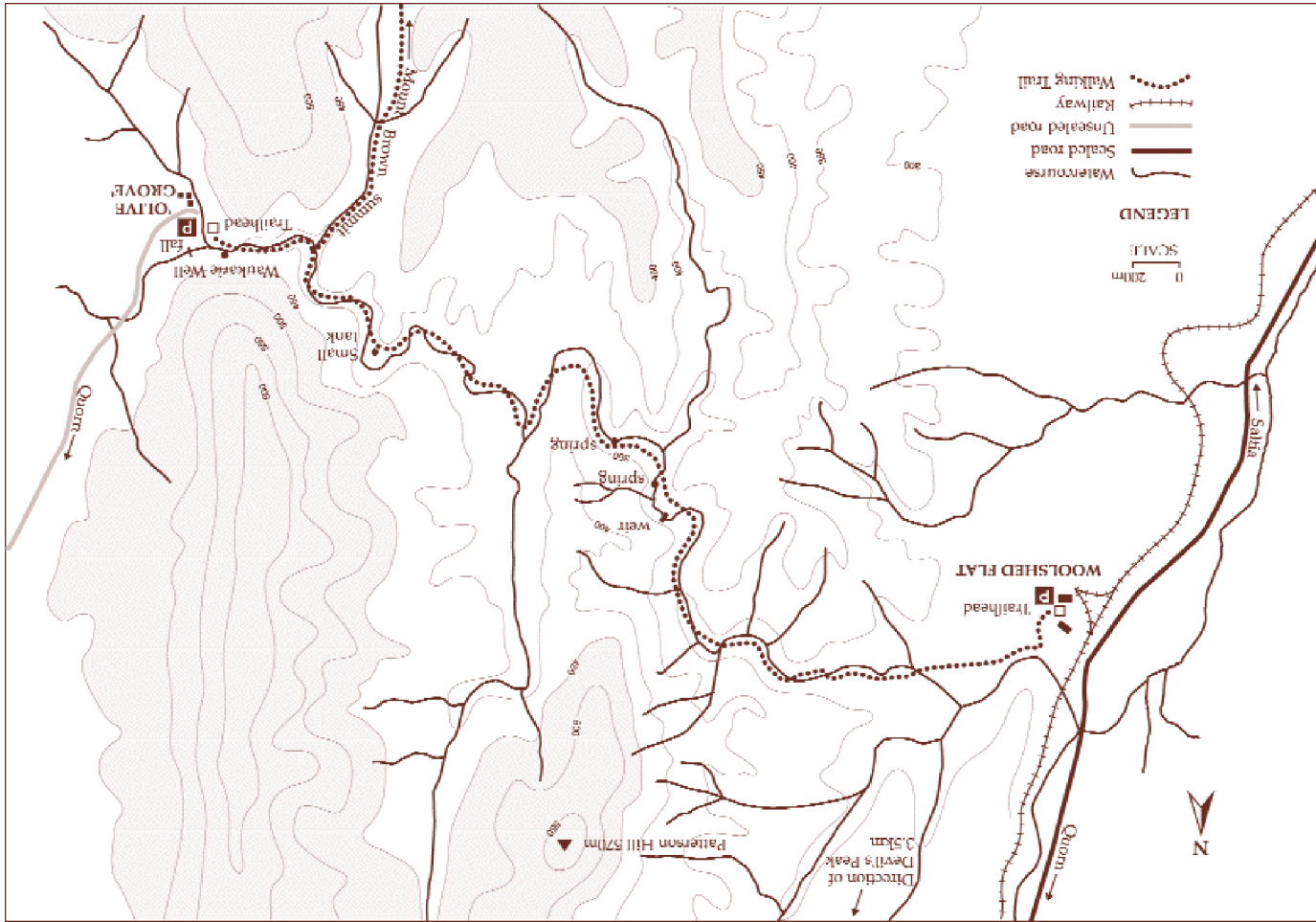




ACCESS: Olive Grove Trailhead can be reached from Quorn. From the Cross of Sacrifice turn left at the Mill junction and follow signs to Waukarie Fall and Richman Valley (a total distance of about 14 km to Olive Grove).
0.0 km Trailhead and Checkpoint 1 There are often pools of water in Waukarie Creek. Near the start an old tank and mill indicate the approximate site of a spring or well. Big Red Gum trees, sedges, rushes and cumbungi (bulrush) take advantage of the moisture in the creek bed. Along the banks of the creek is woodland typical of these quartzite hills—Northern Cypress-pine, Grey Box, Drooping Sheoaks, with shrubs of Christmas Bush, Narrow-leaved Hopbush and Sennas.



SELF-GUIDED WALK: A 5.8 km linear walk from Olive Grove Trailhead to Woolshed Flat Railway Station. Either walk back along the creek to your car or arrange for a car at each end, or best of all, arrange transport so that you are dropped off at Olive Grove and return to Quorn on the train (you will need to book). Allow 3 hours for the walk.

The walk follows the Heyesen Trail but leaves it as you climb out of the creek.

For geologists, the limestone sediments in the creek are of particular interest, as Waukarie Creek contains evidence of a kilometre-deep submarine canyon formed here some 600 million years ago. The canyon cuts down into the coarse, heavy-mineral layered sandstones of the ABC Range Quartzite. Sediments of the Wonoka Formation (sand, silt, limestone, shale and calcareous siltstone) fill the canyon and extend beyond forming the ground surface crossed by the walk. Evidence of similar canyons occurs elsewhere in the Flinders Ranges.

In the 1850s John Richman took flocks of sheep from his station at Itali Itali (on the Wilmington road) along this route in order to get them to Port Augusta. A number of springs in the creek would have made this possible. At that time Pichi Richi was only just beginning to be used for access from the northern sheep runs to southern areas. Quorn township was not proclaimed until 1878 and the railway reached Woolshed Flat in 1879. By this time the large sheep holdings in the southern Flinders Ranges had been broken up and John Richman had moved his sheep enterprises west of Port Augusta.

Waukarie is an Aboriginal name meaning 'crooked gully'. The origins of the name 'Pichi Richi' are uncertain. In the 1850s John Richman took flocks of sheep from his station at Itali Itali (on the Wilmington road) along this route in order to get them to Port Augusta. A number of springs in the creek would have made this possible. At that time Pichi Richi was only just beginning to be used for access from the northern sheep runs to southern areas. Quorn township was not proclaimed until 1878 and the railway reached Woolshed Flat in 1879. By this time the large sheep holdings in the southern Flinders Ranges had been broken up and John Richman had moved his sheep enterprises west of Port Augusta.

WAUKARIE CREEK

FLINDERS WALKS

Plants seen on the Walk

RUSHES, GRASSES ETC.

Bulrush or Cumbungi *Typha domingensis* rush to 2m brown cylindrical flowerheads; provides good habitat for Clamorous Reed-Warblers
 Flat-sedge *Cyperus vaginatus* flowers most of the year, rusty flower spikes surrounded by leafy bracts
 Sharp Rush *Juncus acutus* an introduced rush, with sharp points and compact rust-coloured heads of fruits
 Kangaroo Grass *Themeda triandra* grows and flowers throughout the year when conditions permit
 Lemon-scented Grass *Cymbopogon ambiguus* grows and flowers throughout the year when conditions permit

SHRUBS

Christmas bush *Bursaria spinosa* white flower sprays in December
 Dryland Teatree *Melaleuca lanceolata* tall shrub or small tree, dense canopy, white 'bottlebrush' flowers in summer
 Elegant Wattle *Acacia victoriae* thorny banches, blue-green foliage, lemon coloured flowerheads in September-October
 Lilac Hibiscus *Alyogyne huegelii* striking mauve flowers in spring
 Narrow-leaved Hopbush *Dodonaea viscosa var angustissima* bronze/purple hops in spring
 Sennas, varieties of *Senna artemisioides* bright yellow buttercup flowers in spring
 Thorny Lawrencia *Lawrencia squamata* small yellowish flowers in winter and spring
 Wallowa *Acacia calamifolia* globular yellow flowerheads in spring

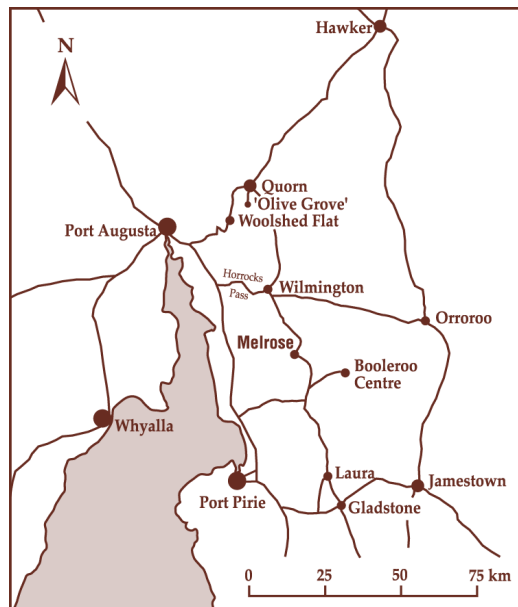
TREES

Drooping Sheoaks *Allocasuarina verticillata* tree to 9m dark green branchlets often pendulous, with minute leaves in whorls
 Dryland Teatree *Melaleuca lanceolata* dense dark green canopy, white 'bottlebrush' flowers in summer.
 Grey Box *Eucalyptus microcarpa* large tree with grey fibrous bark
 Northern (or White) Cypress-pine *Callitris glaucophylla* cypress-like tree to 15m
 Red Mallee *Eucalyptus socialis* multi-stemmed tree to 10m smooth pale-grey bark
 River Red Gums *Eucalyptus camaldulensis* large tree to 20m in creek beds, dappled white and grey bark

Sources:

Babbage J and Barrington R (1984) *The History of Pichi Richi Railway*
 Barker S *Field notes 8-10 January, 2004*
 Dept of Environment & Natural Resources (1995) *Flinders Ranges Heritage Survey Vol 3 Kanyaka/Quorn*
 Henderson J *Searches of Lands Titles and diagram books, February 2004*

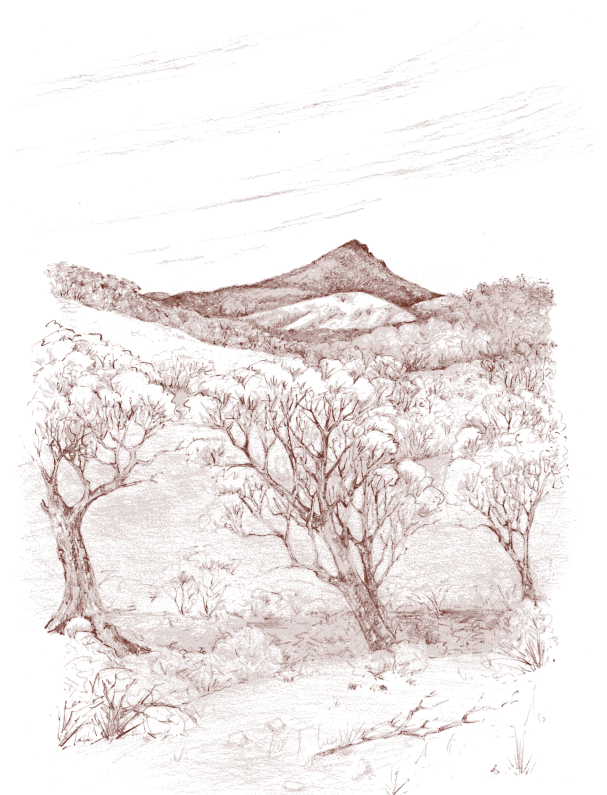
Illustrations: Chris Bigwood



Prepare for your walk

- Wear comfortable shoes, hat and sunscreen
- Wear cool clothing in summer
- Take a drink of water
- Please keep to the formed pathway
- For wildlife's sake, leave pets behind and ...
- Look after habitat - do not remove plants or dead wood, which are home to many creatures

WAUKARIE CREEK



Devil's Peak seen across Waukarie Creek from Woolshed Flat

For information about other walks contact
 Flinders Ranges Information Centre Seventh Street Quorn
 Ph/Fax (08) 8648 6419



**The
 Flinders
 Ranges
 Council**

0.4 - 0.8 km Pass **Checkpoint 2** Ignore turn-off to Mt Brown. Despite a history of sheep grazing, native Kangaroo Grass still occurs on these slopes, with Lemon Grass on creek flats.



Narrow-leaved Hopbush

Wonoka Limestone (sediments of the submarine canyon) gives light-coloured soils. Shrubs and mallees grow on them and the wattle known as Wallowa is most common. Just beyond 0.8 km there are some shallow diggings on the right, under the mallee.



Wallowa

1.0 km Near here is a small tank to supply water for walkers using the Heysen Trail. Notice the changes in the gorge walls as the trail wanders between outcrops of pale limestone and dark-weathered quartzite.

1.3 km As you leave the creek Wonoka limestone on the left is very thinly bedded, displaying 'bookleaf weathering', like pages on the edge of a book.

1.8 km River Red Gums in the creek look unhealthy and this may be due to seasonal influences, either short or long term. Nearby Red Mallee is quite healthy as is Dryland Tea Tree. Look out for Lilac Hibiscus (*Alyogyne huegelii*) which has striking blue-mauve flowers in spring.



Dryland Teatree

2.6 km Just beyond this point are some abandoned cast-iron pipes which undoubtedly date from about 1879 when supplies of water were needed for the railway. The railway reserve at Woolshed Flat extended up Waukarie Creek to about this point, to secure the water supply. A nearby spring is indicated by rushes and cumbungi and at 3.0 km there are pools of water. Sheep, goats and Euros shelter under the trees and drink at the spring. The walking trail now follows a vehicle track.



Lilac Hibiscus

Canyon Country

From Saltia to the vicinity of Olive Grove, Waukarie Creek follows the centreline of a large fossil canyon structure, which is contained in the late Precambrian sedimentary rocks forming major parts of the Flinders Ranges. The canyon structure began to form between 600 and 580 million years ago and is filled with grey limestones, siltstones and some sandstones now recognised as Wonoka formation. This is a widespread rock body extending through much of the Flinders Ranges and generally about 500-900 metres thick.

Above the Wonoka Formation is the Pound Subgroup (which comprises most of the Wilpena Pound structure) of which the Bonney Sandstone and Rawnsley Quartzite of Devils Peak is a remnant. Below the Wonoka Formation is another quartzite showing cross bedding with layers of iron minerals, known as ABC Range quartzite. Above this is a 400m layer of mauve or brownish siltstone – the Bunyeroo Formation.

ABC Range Quartzite forms the N – S trending ridges round about, including Mount Brown, but excluding Devil's Peak. These sediments were deposited in shallow water in beach, or nearshore waters. The Bunyeroo Formation was deposited as silt in deep quiet water. About 600 million years ago, following a long period of deposition the sea floor began to flex under compression throwing the Bunyeroo Formation and ABC Range Quartzite into N – S trending folds.

At about this time, either through emergence or due to slumping of unconsolidated sediments, an E – W trending valley or incision cut down through the Bunyeroo and ABC. Where folded anticlines bulged up, the Bunyeroo was eroded (cut) away. Where there were synclines (depressions), there are remnants of Bunyeroo Formation several 100 metres thick. The canyon reached 1 km depth and the sloping shoulders extended some 3 km either side of the centreline.

The E – W axis of the canyon extends 15 km and the flanking incisions are well-exposed at Woolshed Flat in the whitish NW slopes of Mt Brown. The extreme deepest notch crops out just at the railway bridge 1 km east of Saltia. Stopping at the railway bridge and looking N and S, one can see where the sloping flanks of the canyon have cut through now steeply dipping ABC Range Quartzite which locally is 600-800 metres thick. The canyon has cut down so far that only 150 m of ABC Range Quartzite still remains at Saltia (compared with about 800 metres at Mount Brown). From the railway bridge, the general lie of the canyon can be seen by looking east.

From here the axis of the canyon curves NE and then runs more or less due east between Woolshed Flat and the vicinity of Olive Grove. One kilometre south of Woolshed Flat, to the west of the main road, several rounded hills preserve the original fill of the canyon notch. This fill consists of large and small broken slabs of the Wonoka Formation transported along the canyon and uncommon blocks of reddish granite-like fragments similar to some now known from Eyre Peninsula. This suggests that flow down the canyon from the continental mainland (lying to the west) was from W to E. The canyon was filled by Wonoka Formation sediments by approx 580 million years ago and sands, which gave rise to Pound Subgroup rocks, were laid over them.

contributed by R.J.F. JENKINS

3.4 km A small weir, 20m upstream from this marker, ponds the water of a second spring and the vegetation here is lush. It was part of the railway water supply system. The trail continues between pine clad ABC Range Quartzite and barish slopes of the Wonoka Formation, which here carries a low twiggy bush called Thorny Lawrencia.



Elegant Wattle

4.4 km The creek has at some time in a flood period cut down into its sediments, showing distinct layers of pebbles and sand.

4.8 - 5.6 km The quartzite has now been left behind and the walk continues through scattered Elegant Wattles across the pale lime-rich sediments eroded from much higher ranges—ancestors of Patterson Hill and Mt Brown—by an ancient creek, more or less following the route of today's Waukarie Creek. Waukarie Creek has cut down into these 15m-deep layers and which you climb at 5.6 km.

5.8 km Woolshed Flat and the Trailhead. The name of this locality probably derives from the 1850s when Pichi Richi Pass was used as a droving route for sheep, and sheep stations were establishing in the hills round about. A row of attached stone cottages with casement windows was built for railway maintenance crews

in 1881-82 and they look much the same today as they did then. A school was opened in the end room in 1905, so that local children did not have to walk the five or so kilometres to Saltia. Additional railway accommodation was built some time later from cement and cinder (which was plentiful from the locomotive fire boxes) and these have sash windows. Small parcels of land were made available for families in the area and water was supplied from the Waukarie Creek Railway Reserve, which became a Waterworks Reserve in 1895. A stone ruin nearby was probably occupied by William Steer's family as he worked as a ganger at Woolshed Flat around 1905. A hundred years ago, excursion trains would bring passengers from Quorn to Woolshed Flat for a picnic—much the same happens today.



Lemon-scented Grass