Look for these symbols on the track and match with the short stories below.

1 **Desert Diversity**

Whilst the bare rock of the domes looks lifeless, it actually supports a vivid, short-lived rush of life prompted by tiny amounts of rainfall. Because the rain runs off the surface of the domes so rapidly, small pools of water quickly collect on the rocky valley floors. Even tiny pools of water will be home to a myriad of insects, including the interesting Waterpenny. Mosses, lichens and liverworts grow around the edges of the water and, if well shaded, will persist for quite some time. The secret to survival in central Australia is to find a niche where you can make most use of the limited rainfall.

2 **A Welcome Refuge**

After months of traipsing across desert sand dunes, shrouded with spinifex and devoid of water, Giles took refuge in the George Gill Range. With plenty of good feed for his horses, enough water to swim in and shady gorges bursting with ferns and cycads, the range was a delightful retreat from the harsh desert and crucial to the survival of Giles’ party.

3 **Water-soaked Rock**

The porous sandstone of the George Gill Range soaks up rainfall like a giant sponge. Water is held in the top layer of sandstone by a layer of impermeable shale immediately underlying the sandstone. Along the range are a number of places where the trapped water seeps out forming springs. Below the ragged, red domes lies Penny Springs, a maze of pools of water and shady gorges. The springs along the George Gill Range mean survival for many species of plants and animals that are poorly adapted to the harsh, dry conditions of arid Australia.

4 **Abundant Resources**

For many kilometres beyond the George Gill Range lie red, desert sand dunes. The sand country is enormously diverse and productive as long as there are good rains. With the abundance of water and the subsequent flourishing within the sand country, Aboriginal people would have made use of the abundant resources. However, there is no permanent surface water and little shelter from the harsh arid climate.

Given that rainfall is highly unpredictable, there may have been periods of many years during which time Aboriginal people would not have ventured into this sand country. Whilst it was within the range of Aboriginal people from surrounding areas it also separated Aboriginal groups, with the Luritja people retreating to the George Gill Range.
5 More than meets the eye

The bare, exposed domes appear to be very inhospitable places. However there is a variety of animal life inhabiting this rocky area. Small marsupials, such as the Red-eared Pseudantechinus, take shelter in the small nooks and crannies in the rock. The Ring-tailed Dragon may be seen sunbaking on the rocks but will quickly disappear into a tiny crack to escape the eagle’s eye. In larger overhangs, you will find droppings from rock-wallabies and Euros. Well used caves will be rubbed smooth and shiny by the animals’ fur.

6 Looking after the Land

Waterholes are sacred to Aboriginal people. Conserving waterholes meant survival in an arid environment, as even a short lived pool will provide increased food and water supplies. Quandongs, Fig trees, Native Plums and many other species of edible plants occur near good water supplies. Rock-wallabies, euros, goannas, pythons and a variety of bird life are also attracted to the waterholes for water and food. Aboriginal people camped well away from waterholes to ensure that the water stayed clean and that animals were not frightened away.

7 Plant life galore

A large area of sand dunes is found perched in the middle of the George Gill Range. Whilst these sand dunes are very similar in make up to their lowland mates, they are actually quite shallow, overlying a sandstone substrate. This forms an unusual diversity of plants; beautiful grevilleas and stately Desert Oaks, which grow in sandy country, and Hill Mulga and Witchetty Bush, not normally found in sand dunes. Hill Mulga in particular favours rocky areas.

8 Healthy Relationships

Fig trees, a valuable source of food for Aboriginal people, are quite fire-sensitive. Land snails only live under the canopy of Fig trees and are also highly fire-sensitive. In the nearby rocky gorge, fig trees and snails can survive as they are protected from fire. Here, on top of the range however, the Fig trees and snails have been burnt and whilst the fig trees have come back from seed the snails have not survived.

9 Bush Supermarket

Rough, grey shrubs and spiky spinifex - a seemingly barren hillside with nothing to offer those who are trying to survive this harsh environment. However, Aboriginal people found this hillside to be a well-stocked store!

An edible paste is made from the seeds of the Blue Mallee (Eucalyptus gamophylla - ‘opposite leaves’) and these seeds can remain in the nuts for up to six months, providing a valuable food source when other food is scarce. Witchetty Bush (Acacia kempeana) is also very important because of the large, tasty grubs found in its roots. In exceptional seasons as many as fifty can be obtained from one bush. The resin extracted from the abundant spinifex is significant for its use as a cementing agent as well as having medicinal uses.

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The flat, rocky plateau of the George Gill Range made for relatively easy travelling for Aboriginal people who used the range as a highway between the western deserts and the central ranges. Scattered across the range are many grinding stones, stone blades, stencilled art and petroglyphs, indicating extensive use of the plateau. Numerous creeks crossing the range from north to south provide well-watered, easy to follow, routes across the range enabling Aboriginal people to travel safely through the region.

Compared with the moist, stable environments of the range country, the sandplains experience a continual cycle of boom and bust associated with rain and drought. After good rains, an astonishing array of plants flower and set seed. The abundance and variety of plants brings an increase in insect numbers. New plant growth and abundant small prey provide food for growing numbers of mammals, birds and reptiles. It is often difficult to believe this is a desert! With the inevitable onset of drought, plants will complete their seeding cycle and die or become dormant. Many of the animal populations will crash whilst others will migrate or retreat to the wet refuges along the range where they can survive until the next good rains.

Much of the fire sensitive Hill Mulga has been lost from the George Gill Range. Open, rocky areas such as Hill Mulga Creek provide a survival refuge, protecting the Hill Mulga from fire. You will often see Hill Mulga in cracks and crevices between the domes. It is protected from fire by the rocky surrounds. After good rains, the pools of water and the shady trees provide a bountiful habitat for birds - take a rest here and enjoy them!

Looking along the range you can see differences in the vegetation. Why are there some patches without trees? Originally much of the range would have been covered with fire-sensitive Hill Mulga, Euphorbia and grasses. Wildfires have swept up from the spinifex covered plains killing the fire sensitive trees and shrubs. Whilst some seed regeneration will occur, if a second fire burns the new generation before they have set seed then the species is lost and spinifex colonises the country. As eucalypts species such as the mallees are fire tolerant, they are commonly scattered amongst the spinifex.

Not only native animals use the range as a refuge from the desert, unfortunately, a variety of feral animals have also made it their home. When Ernest Giles first explored the George Gill Range he travelled with horses and later with camels. These species are now feral. To survive this harsh environment, camels, horses, rabbits and cats also rely on the special moist refuges. Of particular concern is the impact of feral animals trampling and eating rare and relict plants, fouling waterholes, competing with and preying upon native animals and forcing them to retreat to harsher country. You may see some camel tracks traversing the range.

Crucial to the survival strategy of the Native Pine and River Red Gum is the bare, rocky expanse of Wanga Creek (pronounced ‘Wan-ya’). Sand and water trapped deep between the rocks allows the trees to establish. The rocky nature of the creek prevents an abundance of grass growth, thus protecting the trees from fire and allowing them to survive in such a dry, fire-influenced habitat.
Kathleen Springs is a very special place in the hot, dry desert. Tall, rocky cliffs shading a spring-fed waterhole provide a cool, moist refuge for plants, animals, and people. Great River Red Gums and Native Pines thrive in the gorge. Fig trees and Quandongs provide a feast of bush food. Cascading around the waterhole is the fascinating Creeping Swamp Fern, a relict from a more tropical climate that can only survive in these moist refuges. Desert dwelling animals rely on sheltered waterholes to survive the harshest of droughts.

With its shady waterhole, lush vegetation, and many animals, Kathleen Springs was a valuable refuge for Aboriginal people. It is a sacred place for Aboriginal people - a key area for survival in the desert. A walk to the waterhole at the head of the gorge will reward the extra effort.

Ernest Giles was the first European to explore the country west of the Overland Telegraph Line. During his first expedition, Giles explored and named the George Gill Range. The abundant water along the Range provided a valuable refuge for Giles and his companions, Carmichael and Robinson.

In August 1872 Giles’ first expedition left Port Augusta travelling along the Telegraph Line to Chambers Pillar. From Chambers Pillar, Giles struck off along the Finke River exploring new country and searching for a well watered passage to the west.

Giles followed the Finke River to the western end of the MacDonnell Ranges where a tributary of the Finke led him to the west. Two attempts to head west failed to find water, forcing Giles to retreat. He deplored the lack of water which restricted his success.

‘How often we noted the facility with which other and more fortunate travellers dropped upon fine creeks and large rivers. We could only envy them their good fortune...’.

On his third attempt to head west, Giles found himself on the edge of the huge salt lake Lake Amadeus too treacherous to be traversed. Concerned about their dwindling supplies, Giles planned to send Robinson back to the Telegraph Line, allowing himself and Carmichael to continue. On return to his last camp Giles found the water supply quite diminished, so he headed for a range he had noticed to the south east, the George Gill Range.

Giles and his party camped near a waterhole on Kings Creek and explored the George Gill Range, describing it as:

‘...by far the most agreeable and pleasant country we had met.’.

After months of hardship, the Range was a delightful refuge for the explorers. Giles travelled along the southern face of the range finding many creeks and waterholes. The party rested at Stokes Gorge where Giles exclaimed:

‘How different to regions westward, where we could not get enough water to drink, let alone to swim in!’.

With abundant water and feed Giles spent some time at Kings Creek resting his horses before his next attempt to reach the west. However Carmichael declared his intention to return to the Telegraph Line with Robinson. As Giles could not continue alone his first expedition came to an end. Of the range in which he had taken refuge from the western deserts Giles spoke highly:

‘...could it be transported to any civilised land, its springs, glens, gorges, fens, Zamias, and flowers, would charm the eyes and hearts of toil-worn men who are condemned to live and die in crowded towns.’

In 1874 Giles again retreated to the waters of the George Gill Range as his second expedition also failed to penetrate the dry western country. On his fourth expedition, Giles successfully traversed the country from Port Augusta to Perth at a more southerly latitude than his earlier expeditions.