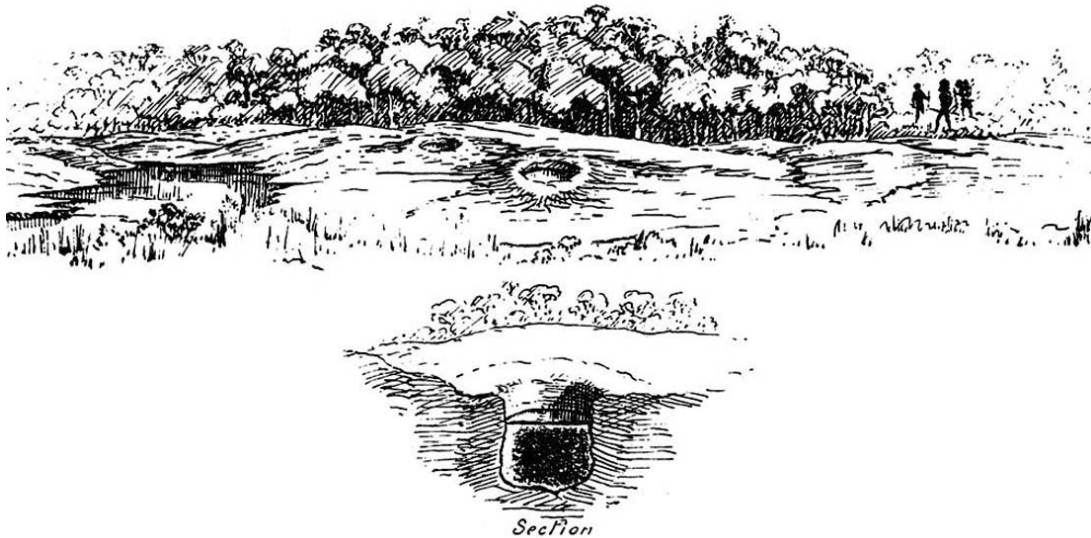


Gnamma hole (rock-hole), 1894



Description

This is a black-and-white sketch by S Göczel that appeared in the first annual report of the Western Australian Department of Mines in 1894. The sketch is in two parts. The top half shows a natural landscape with trees in the background and three Indigenous people approaching a large rock, in the centre of which is a depression containing water. The bottom half shows a cross-section of the depression, revealing it to be a deep hole capable of holding water.

Educational value

- The sketch illustrates the geological phenomenon of a rock-hole, known to the local Indigenous people as a gnamma. A gnamma is a deep narrow hole in a granite outcrop that acts like a natural water tank, holding water that is replenished from stores in underground decomposed rock and run-off. These cavities can be bowl- or funnel-shaped and vary in depth up to 3 m. The small surface area that is exposed, in relation to the amount of water stored, minimises evaporation.
- The drawing was included in a government report for the benefit of gold prospectors flocking to WA's eastern gold fields, which are situated in hot arid regions with low rainfall and without rivers. A gnamma was often a more important and welcome find to prospectors desperate for water than the sight of gold itself. Prospectors give first-hand accounts of spending more time looking for water than for the gold that brought them there.
- Local Indigenous people had a comprehensive knowledge of all water sources in WA's dry interior and their presence in the sketch acknowledges this. Indigenous people used gnammas to replenish their water supplies and looked after them carefully for thousands of years before the gold rush. For example, they prevented pollution of a gnamma by placing a branch at an incline in the hole, so any animals that fell in could climb out.
- The rock-holes provided water not only for Indigenous people but also for the animals they hunted, and the sketch shows people approaching the rock-hole



Categories: Early Water Supplies

with spears. In December 1897 the Kalgoorlie Miner quoted Tickebutt (an Indigenous man known as Fred McGill), 'Before the white men ... the blacks obtained water at the different rocks ... They got plenty of food, too, by watching at the rocks for kangaroo and emu, when they came to drink, and spearing them there'.

- Gnammas sustained local Indigenous lifestyles and cultures but this changed drastically with the arrival of the prospectors. Local people revealed the locations of and shared their precious water sources with the newcomers, sometimes voluntarily, sometimes by coercion. There are recorded instances of Indigenous people being fed salty meat so that in their desperation to quench their thirst they would lead prospectors to gnammas.
- With the coming of thousands of non-Indigenous people to the eastern gold fields, water in gnammas changed from being nurtured and used carefully to being traded for a profit. Indigenous people, who were not part of the market economy, suffered greatly. Clara Saunders, one of the first European women in Coolgardie, wrote in about 1894, 'the poor blacks are robbed of their water. It's cruel. Before the whites came here, they were healthy and had sufficient water and food, and now they seem starved and sick and miserable. It's a very bad state of affairs' (Clara Saunders, 'Reminiscences', 1950s).
- A gnamma similar to the one shown had a close connection with the gold town of Coolgardie. Legend has it that when Arthur Bayley and William Ford stopped at a gnamma to water their horses they found gold nuggets lying on the surface at what they called Fly Flat. Coolgardie, the name given to the town that grew up alongside, is said to be the gnamma's Indigenous name. The gnamma was destroyed when it was blown up by people who mistakenly thought the rock-hole would hold more water if it was larger. Until its usefulness was destroyed it could hold 18,200 L of water.
- Many prospectors and investors would have had no idea what a gnamma was and this illustration would have helped them find concealed sources of water on the gold fields. A report dated 10 October 1892 (soon after Bayley and Ford registered their gold claim at Coolgardie) lists watering places from the settlement of Southern Cross eastwards, such as wells, rock-holes and dams, and the distances between them.
- The inclusion of the sketch in the Department of Mines' first annual report in 1894 suggests that the importance of water was recognised within the Western Australian Government. The development of the gold fields was being hindered by water shortages. During his extensive tour of the gold fields at the end of 1895, Premier John Forrest found mines idle due to water shortages, a fact he reported to parliament in proposing a 350-mile (about 560 km) pipeline to carry fresh water from the Perth hills to solve the problem.
- The sketch was drawn by S Göczel, who described himself as a mining engineer and metallurgist and who worked for the Western Australian Government as an assistant field geologist at the time of the gold rush in WA.

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