ALICE SPRINGS SCHOOL OF THE AIR

PROJECT ALICE SPRINGS
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compiled by

V. Whalan
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## CONTENTS

<table>
<thead>
<tr>
<th>Foreword &amp; Bibliography</th>
<th>iv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter I</td>
<td>The Alice Springs District Before 1869</td>
</tr>
<tr>
<td>Chapter II</td>
<td>The Aborigines</td>
</tr>
<tr>
<td>Chapter III</td>
<td>Explorers of the Inland of Australia</td>
</tr>
<tr>
<td>Chapter IV</td>
<td>John McDouall Stuart</td>
</tr>
<tr>
<td>Chapter V</td>
<td>The Overland Telegraph Line</td>
</tr>
<tr>
<td>Chapter VI</td>
<td>The Drovers</td>
</tr>
<tr>
<td>Chapter VII</td>
<td>Arltunga</td>
</tr>
<tr>
<td>Chapter VIII</td>
<td>Cattlemen &amp; Stations</td>
</tr>
<tr>
<td>Chapter IX</td>
<td>The Township</td>
</tr>
<tr>
<td>Chapter X</td>
<td>Water in Alice Springs</td>
</tr>
</tbody>
</table>

## MAPS

<table>
<thead>
<tr>
<th>Map A</th>
<th>Routes the Explorers Took</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map B</td>
<td>Southern Section of the O.T.L.</td>
<td>26</td>
</tr>
<tr>
<td>Map C</td>
<td>Central Section</td>
<td>27</td>
</tr>
<tr>
<td>Map D</td>
<td>Northern Section</td>
<td>29</td>
</tr>
<tr>
<td>Map E</td>
<td>Arltunga and White Range Area</td>
<td>35</td>
</tr>
<tr>
<td>Map F</td>
<td>Alice Springs Water Supply</td>
<td>40a</td>
</tr>
</tbody>
</table>
Dear Boys and Girls, 

I hope you enjoy reading about the early days in our district - early explorers, about the aborigines, water sources, geography, fauna and the vegetation of Central Australia.

I found it most interesting searching for the information, and hope that you will also be able to share in the knowledge of the bygone days.

Val Whalan.
Librarian,
Traeger Park Primary School.

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CHAPTER I.

THE ALICE SPRINGS DISTRICT BEFORE 1869

THE PHYSICAL FEATURES.

The land around Alice Springs is very old, like a great deal of Australia. In times before history, before plants, before animals, before man, while most of the rest of the world was still writhing and moving with earthquakes and volcanoes were rumbling and roaring, this continent had begun to settle down.

Scientists, with special processes and instruments are able to test rocks of different types to tell their ages. These are judged in millions of years. These periods of time are given special names which we won't explain here. To find out more about them you must look them up in an encyclopedia. We will look at several physical features and learn a little of their ancient history.

The MacDonnell Ranges.

The heights of the mountains range between about 700 feet and 2,500 feet above the surrounding plateau. The highest, Mt Zeil, is marked on the latest maps as 4,955 feet above sea level. They were formed about sixty million years ago. Originally, they were estimated to be some 10,000 feet high but even as the last movements were taking place, erosion had begun. Parts of these huge mountains were being worn away by wind and water and deposited somewhere else. Gradually, over millions of years, they were worn to their present shape. This erosion still goes on but it is not noticeable.

Anzac Hill.

This hill is made up of a type of rock called gneissic rock which is said to be 1,400 million years old. This means that the rocks were formed that long ago but does not necessarily mean that Anzac Hill is so old. The rocks may have come from somewhere else. This was in the Precambrian Period.

Ayers Rock.

The Arkose was formed in the Cambrian Period. But the beds of arkose were tipped on end later; it was this change which caused the interesting, unusual, weathered appearance of the rock. It is often called a monolith. Weathering, erosion and pieces breaking off have caused the rounded appearance of the "rock". During the Tertiary Period, Ayers Rock was an island in a very large lake.
Gorges and Gaps.

Most of these were formed by water erosion over a very long time. Water ate away and washed away all the softer parts of the ranges leaving behind the hard sides. These are still standing and form the gaps and gorges we know. The creeks and creek beds which are in all these spaces in the hills were once running streams at the top of the hills!
Most of the plants of Central Australia are xerophytes. This name, which comes from a Greek word, means that the plants have adapted themselves to dry conditions. They have developed ways of reflecting heat and their seeds are protected too. In many cases this protection is in the form of prickles which stick in the ground, in people, in animals and in other plants and also keep away animals which would eat them, too. Spinifex and bindi-eye are good examples.

The following are a few examples of indigenous trees. Can you recognise them and name them when you are out bush?

River Red Gum. A large, quick growing eucalypt found along watercourses. Bark is smooth, ranging from grey-white to flaky-grey and red-brown. (These are the trees growing in the Todd River.)

Bloodwood. A medium brown eucalypt with scaly brown bark. It often has lumps of red-brown gum on the trunk. (There are two at least in the yard of Traeger Park School.)

Ghost Gum. Named for its pure white trunk which, some say, reminds them of ghosts of moonlight nights. Large trees are found on sandy river flats. Smaller ones cling as though they had claws, to the sides of steep cliff faces. It is a very slow growing tree.

Sooplejack. (pronounced "sooplejack.") This tree has trouble making up its mind. It begins with several stems which look like creepers or climbing plants. These change their minds and decide to become one tree by twining round one another. The large trees have several trunks which have grown together. Cattle like to eat the leaves. On the way past Jessie Gap travelling towards Undoolya Gap there is a group of these trees.
Mulga.

The most common tree in this area. It grows up to 25 feet high and is really a wattle. The wood you burn in your stove of fire is probably mulga. When cut, there is a yellow ring surrounding a dark brown centre, something like a sausage roll. (Several mulgas are growing along Railway Terrace.)

Palm Valley Palm.

In Palm Valley, near Hermannsburg grow the palms whose scientific name is Livistona mariae. Once these palms were found all over the area but ages of dry conditions wiped them out. Only a few are left in isolated spots such as Palm Valley. They are only found in this area and are a great Tourist attraction.

Cycad "Palms".

Scientific name Macrozamia Macdonnelli. Although this plant looks like a palm it isn't really one. It is found in rocky gorges and on hillsides and can grow to 12 feet high with fronds spreading up to 8 feet wide. There are male and female plants and the female plant produces a large seed shaped like an egg.
CHAPTER II.

THE ABORIGINES

The land around Alice Springs before 1860 was the country of the Arunta or Aranda people. The tribe or group was divided into totems, for example, emu totem, flying ant totem, kangaroo totem etc. Each totem had an area of land allotted to them and the immediate area of land where Alice Springs now stands was the land belonging to the witchetty grub totem. It included the rock paintings at Emily and Jessie Gaps. The area around Simpsons Gap and Temple Bar Gap was the totemic land of the big Lizard people.

Usually people of a particular totem did not eat the animal, bird or insect of their totem - it was sacred to them. Each totem had a churinga design for his particular group which was given to him at birth. The place of birth determined to which totem a baby would belong and the churinga had a secret design or carving on it. It was usually an oval, flat stone or piece of wood.

Daily Life.

The aborigines had no permanent camps until the coming of the white settlers. Before this time they moved as they felt the need to obtain food. Naturally, most camps were made near water holes if possible and on special occasions, near places of sacred interest.

Water.

Besides waterholes and springs, other sources of water were available to aborigines such as tree roots, hollow tree limbs (especially in bloodwood trees), soaks where a hole was dug in the sand of a dry creek bed and "native wells". The wells were usually in desert country and were sometimes no more than a foot wide at the top and no deeper than a man could reach with his arm. This type were called "one man wells". "Two man wells" and "three man wells" also existed. These needed the combined length of two or three men to reach the bottom. Then water was passed from hand to hand up the well probably with the use of a coolamun or pitchi.
Shelter.

Aborigines made no permanent houses. Shelters were made from a framework of 3 heavy branches, about 3" - 4" in diameter. Across these and against them were laid lighter branches from mulgas, dead finish bush, acacia bush or river gums, depending on what was available in the area.

Fire and Fire-making.

At the campsite a fire was always kept burning. It was not a roaring fire, just a smouldering pile of embers which could be renewed when it was needed. If, by chance, the fire were to go out, or a new fire was needed, then the following method was used by the aborigines of this area to start one.

A spear-thrower (which was made of hard wood) and a shield (which was made of soft bean-tree wood) were obtained and two men sat opposite each other. The soft wood shield was placed flat on the ground and one man held it in place with his foot. The hard-wood spear-thrower's edge was then "sawn" back and forth across the shield - each man holding one end. The groove thus made first began to smoke, then glow and finally burn. From this, light grass or bark was lit and the fire on the shield put out until next time.

Tools, Weapons and Personal Effects.

Spears - were usually made from light "spear wood". This is a special plant with long pliable stems. Some had barbed points; others were only sharpened at the end. The green wood was cut and the bark and leaves peeled off. Then it was dried and shaped to make it straight by passing the long shaft through a fire. When a barb was added, tiny pieces of very hard wood were attached to the end with resin and the whole was tied with an animal tendon.
Stone Knives. - The blade of the stone knife was often a hard sharp stone called quartzite which was chipped and flaked to shape it and to give it an edge. A handle was made of resin on the blunt end.

Spear thrower. - one of the most useful tools devised by the aborigines. Its main use was to give a longer reach when throwing a spear, but it was also used to make fire and as a dish with many uses in ordinary daily life as well as a receptacle for ceremonial paint and decorations. It was a straight piece of wood about 18 inches long, curved like a dish on each side; a handle of resin at one end and a hook to hold the spear at the other. The hook was made of wood and attached to the spear-thrower with resin, which also formed a handle. This was then tied with an animal tendon.

Boomerangs. - The sharply curved "returning" boomerang was not used by the aborigines of Central Australia. Instead a throwing boomerang with a slight curve was used. One side was flat while the other was rounded. The rounded side was decorated with fine grooves along the length and the whole was painted with red ochre. A hooked type was also used by some tribes for fighting.

Fighting Clubs. - Straight, rounded, very hard sticks, pointed at one end rounded at the other were used for fighting. Sometimes the men used these but more often it was the women who made best use of this weapon.

Coolamuns or Pitchis. - were dishes made of wood from the river red gum or the bean tree. They were either cut from a solid piece of wood (which meant a great deal of hard work) or cut from the surface curve of a limb of a tree. The dishes were usually grooved on the outside and covered with red ochre. They were used for many purposes; from carrying water to carrying babies. Some were almost flat with open ends while others were closed at the ends and had deep sides.

Wallets and Bags. - Made from string, woven in detailed patterns and from the skins of animals, these bags were used to carry personal possessions; ornaments for decoration, knives, "magic" articles and special knitted ones for pitchuri.
String. - was made from human hair (usually belonging to the women) mixed with the fur of animals. This is probably the reason that aboriginal women rarely had long hair!

Spindles. - were used to spin the hair and fur strings. Two slightly curved sticks were split in the centre, placed at right angles over a third slightly larger, rounded stick. The upright stick was rubbed up and down the thigh with one hand so that it twirled and the fur and hair material were fed through with the other hand until a string was formed.

Decorations. - The aborigines decorated themselves and special ceremonial objects for corroborees. The designs were very detailed and each had to be exactly right. Also each corroboree had a different set of decorations. Large head-dresses were made as well as amulets and leg bands, waist bands and body markings.

Resin. - We have mentioned the use of resin in several places. This resin is collected from the spinifex plant; a tiny drop from each stalk. This was heated until warm and moulded to the shape required. When dry it is hard.

Pituri. - This is sometimes called native tobacco, but there is more than one type. One type of pituri is a drug and was used to drug animals at waterholes. This type was really a poison because, used strongly enough, it could kill animals. The other type was gathered, dried with smoke, and powdered. Then it was mixed with ashes to be chewed by the grownups - a little like chewing gum in texture but nothing like it in taste.

Hunting and Food Gathering.

The men hunted for the larger animals and reptiles and were very good at stalking their quarry. Each tiny bush or tree could hide a hunter and sometimes they waited for many hours without moving. At times a fire was lit to drive out the very small animals from cover and a line of hunters would wait to kill them as the quarry ran out.

The aborigines had a special method of catching emus. Some leaves of the pitchuri plant were placed in a small waterhole and when the emus came to drink they found themselves drugged by the narcotic plant. The drug stupified them and made them easy to kill.
The women gathered various plants such as small bulbs (yelka). Pods from the acacia that were cooked and eaten like peas and small brown and black seeds that white people called munyeroo. These seeds were winnowed in a dish and the seeds left were ground between two stones. The "flour" was mixed with water to form a small quantity of dough and then baked in the ashes. Women also caught small reptiles and animals, gathered honey-ants, "sugar-bag", and wild honey.
CHAPTER III.

EXPLORERS OF THE INLAND OF AUSTRALIA.

1841  EDWARD JOHN EYRE.

A Waterless Coastline.

In 1840-41 John Eyre tried to find out about the centre of Australia. His party went north from Adelaide towards the Flinders Range, finding mainly salty bare plains and rocks. So he turned westward to the Great Australian Bight, planning to follow the coastline to Albany. It was a hard journey. Mile after mile of waterless, thinly scrubbed land faced the little party. Tormented by thirst they had to gaze on the ocean hour after hour. They had to dig for fresh water in the sand. Native wells and dew collected by the use of sponges barely kept them alive.

One night while Eyre was out watching the horses, he heard a shot. Rushing back to camp he found his mate Baxter murdered by two aborigines of his party. These two had escaped with most of the food. It was night-time. A fierce wind was blowing. "I was alone in the desert", he wrote. No wonder he almost despaired. But the third aborigine, Wylie, proved faithful. The two men, despite hunger, thirst, heat and fear of the two murderers who for some time lurked by, plodded on.

After seven terrible days they were amazed to sight a French whaler off the coast. Its crew gave the weary explorers food and shelter. Refreshed, they set out once more and by reaching Albany became the first Australians to cross the continent. But so close had they kept to the coast that they found out little about the inland.

1844 - 45  CHARLES STURT.

A Fiery Inland.

Charles Sturt was the explorer to solve the mystery of the western flowing rivers discovered by the early explorers who crossed the Blue Mountains from Sydney. Not content with his trip down the Murray, he set out to discover what inland Australia was like.

From Adelaide his party went to the Murray River, on past present-day Broken Hill, and then sheltered for six months at Rocky Glen Depot. It was a terrible summer, sometimes 132 degrees in the shade.

He found Coopers Creek and Eyre Creek. The country was hopeless. "A wall of sand suddenly rose before us, wrote Sturt, "Each succeeding sandhill assumed a steeper and more rugged character. The plain was without vegetation and its horizon was like that of the ocean...........we were as lonely as a ship at sea."

Finally the heat, lack of water, and the gibbers of Sturt's Stony Desert forced him back when three hundred miles from Australia's centre. Again and again the party escaped death but Sturt won through it all. He had penetrated deeply towards Australia's centre and brought back news of a waterless, fiery land.

1844 - 45  LUDWIG LEICHHARDT.

An Excellent Country.

During the fourteen months that Sturt was exploring, a young German botanist, Leichhardt, was discovering a very different kind of country.
Leichhardt’s party set out from the Darling Downs for Port Essington. Heading North, and keeping parallel to, but well in from, the coast, he found much good country. They reached the Gulf of Carpentaria. They turned south to follow the shores of the Gulf. Near a river they were attacked by aborigines whose hunting grounds had been crossed. One of Leichhardt’s party, Gilbert, was killed; the river was named after him. Their 3,000 mile journey came to an end at Port Essington.

But Leichhardt was not a good bushman. On another trip in 1848 he disappeared into the unknown wilds that he sought and was never seen again.

1858 - A. C. GREGORY.
Reducing the Unknown Inland.

Leichhardt disappeared in 1848. Gregory had done some exploring in Western Australia from present day Perth and had also explored in the north travelling across the northern area of Australia. In an attempt to find Leichhardt, Gregory travelled from the Dawson River in Queensland, across to the Barcoo and then south west to Adelaide. He found no sign of Leichhardt but he reduced the unknown inland of Australia:

1860 - BURKE & WILLS.
A Tragic Journey.

To help the work of exploration, the people of Victoria in 1860 raised a large sum of money to equip an expedition properly. It was to attempt the crossing of Australia from south to north. Camels were provided, and scientists planned to study the country as the party moved northwards from Victoria. Robert Burke and William Wills were in charge. Even before getting to unknown country the former showed his poor leadership. Without using his well equipped party to the best advantage, he decided to make a dash from Coopers Creek north to the Gulf of Carpentaria with Wills, King and Grey. Burke left a party under the command of Brahe at a depot with instructions to wait for three months for his return.

Burke’s party got close to the Gulf at Flinders River but did not reach the sea itself. The return journey was made wretched by lack of food and by quarrels. Four months after they had set out from the depot, they stumbled back to it. Brahe’s party had left a few hours earlier. The dejected men dug up food from under a marked tree and, without much hope, set out for stations in South Australia.

One camel became bogged, was shot, and the meat cut off where it lay. The second camel gave in, and was shot and the flesh dried. Wills wrote, "We are trying to live the best way we can, like the blacks." They made flour of nardoo seed. Finally all died save King who was helped by the blacks. A rescue party found him in rags, starving and near death.

Thus because of poor planning and bad leadership, a costly expedition added little to what was known of Australia

1860 - 62 JOHN McDOUALL STUART.
North Across the Centre.

Stuart had travelled with Sturt on his journeys of exploration. He did much exploring around Lake Eyre and Lake Torrens in South Australia. Although much of the land was barren, he also found much land suitable for grazing.
In 1860, with two other men and thirteen horses he travelled north naming Chambers Pillar, the Neale and Finke Rivers, the MacDonnell Range and Central Mount Stuart (Sturt). He was attacked at Attack Creek and returned to Adelaide.

Waterless, dense scrub stopped his second attempt the following year, but the next year he went north again, finding Daly Waters. He was the first man to cross Australia from south to north through the centre.

1873  P. E. WARBURTON.

He crossed from Alice Springs to the De Grey River, a journey through worst of the desert country, which nearly ended in disaster from lack of water.

1874  JOHN FORREST.

Forrest explored the country near the beginnings of the Murchison River, and then crossed to the Musgrave Ranges. He had earlier, in 1870, retraced from west to east the journey of Eyre, but he had a ship sail along the coast to accompany him.

1875 - 76  WILLIAM E. GILES.

Using camels as transport animals, he crossed from South Australia to Western Australia some distance north of the route taken by Eyre. He returned by a route four hundred miles farther north again. He was the only explorer to cross the worst of that desert country both ways. He found very little good land.

WHAT THE EXPLORERS OF THE INLAND FOUND.

1. They found that most of the land was desert. Over much of it were vast sand dunes covered with porcupine (spinifex) grass and great areas of smooth stones. There was also much scrub, mostly mulga. Without water, this area would remain 'the red centre' of our continent.

2. Around the hot, dry centre was a belt where the rainfall was from 10 to 20 inches per year. In rainy seasons this is excellent pastoral country and the scene of huge sheep and cattle stations.

3. The explorers were amazed to find that most of the country was a huge plateau over 1000 feet high and rising to over 5000 in the mountains. They were amazed at the rich colourings of these areas.

4. They found that the north had a summer wet followed by a dry period. This is due to the monsoons.

OFF TO WORK.

What can you find out for yourself about the following ............

1. The Cattle King - Sir Sidney Kidman.

2. The Rev John Flynn.

3. Lasseter.

4. The Dog Fence or Vermin Fence in South Australia.
KEY.

1. Eyre.
2. Sturt.
3. Leichhardt.
4. Gregory.
5. Burke & Wills.
7. Forrest.
8. Giles.
A small man, about 5 feet 6 inches tall who was no more than 9 stone in weight became the most famous of the Northern Territory explorers. It is possible that had the small Scotsman been bigger and more heavily built his career would have been in the Army, as his father's was, and all his enormous energies would have been used up in Military Service instead of exploration.

John McDouall Stuart, who was born in Fifeshire, Scotland, migrated to Australia in 1838. He received his first tastes of exploration when accompanying Captain Charles Sturt on his journey into the Central part of Australia in 1844-45. Later, he made several journeys into the country around the Port Augusta and Ceduna districts. His friend, William Finke, helped him to equip himself for this trip. Both Finke and John Chambers, another man who helped Stuart prepare the equipment for his travels, were interested in discovering good grazing land for their sheep and cattle, and in the possibility of discovering gold.

In 1859, Stuart made two trips into the northern part of South Australia. On the first trip he reached the district where Oodnadatta stands today. On the second he surveyed boundaries of pastoral runs west of Lake Eyre, a little south of the Macumba River.

In 1859, the South Australian Government, who were anxious to claim the country North of their boundary as part of their state, offered a reward of £2,000 for the first person to cross the continent "from the south to the Northern shores".

The First Attempt.

In 1860, John McDouall Stuart, with William Kekwick and a young stockman, Ben Head, and equipped by Finke and Chambers, they set out. Travelling over familiar country at first they soon crossed to where Oodnadatta is now situated. Here Stuart named The Neales, a creek near Oodnadatta. After resting for a few days, the party pushed on and found and named the beautiful Finke River and Chambers Pillar, a strangely-shaped column of sandstone, rising like a pillar.

By now they were in the area of the present S.A./N.T. border. It was here that Stuart began to suffer again from the eye troubles which are such a curse in desert areas. (This trouble was to remain with him and in later years he became almost completely blind.)

As he travelled onward Stuart named the James Range and the Hugh River in honour of Chambers' two sons and Stuart reached the MacDonnell Ranges, which he named in honour of the then Governor of South Australia. The approach to these ranges was along a westerly branch of the Hugh River. They crossed the ranges between Brinkley's Bluff and Paisley's Bluff, some 30 miles west of the present site of the township of Alice Springs. Moving out of the ranges they then crossed the plain and on northwards.

By his observations on 21st April, 1860, Stuart found himself at the geological centre of Australia. Here he camped and next morning, with Kekwick, he climbed a high hill nearby. They planted the Union Jack in a cairn of stones which covered a bottle containing a message with their names etc. on it. They then gave three cheers. Stuart named the hill Central Mount Sturt, after Captain Charles Sturt, but the name was later changed. It is not certain how the change came about, it may have been a printer's error or perhaps it was changed by the Government at that time.
Whatever the reason, Central Mount Stuart is the name by which we know it today. In 1960, a plaque was unveiled on the Stuart Highway commemorating the 100th Anniversary of Stuart's naming the mountain and it can be seen today, 26 miles south of Barrow Creek.

From Central Mount Stuart the little party journeyed northward still, naming Tennant Creek for John Tennant of Port Lincoln, Bishop Creek and Kekwick Ponds. By now they were in rough country and late one afternoon, as the three men were making camp, they suddenly found themselves surrounded by a party of armed aborigines. The aborigines made it quite clear that they intended to attack the exploring party and as Stuart himself wrote - "every bush seemed to produce a man....they commenced jumping, dancing, yelling and showing their arms....like so many fiends, and setting fire to the grass. I felt unwilling to fire upon them and tried to make them understand that we wished them no harm; they now came within forty yards of us, and charged throwing their boomerangs, which came whistling and whizzing past our ears. One spear struck my horse. I then gave the order to fire, which stayed their mad career a little."

The party retreated, driving their horses before them and they were followed by a fearful mass of warriors who outnumbered them, 10 to 1. They outdistanced their pursuers but kept travelling in the darkness until they reached their camp of the previous day. The site of the attack by aborigines John McDouall Stuart named Attack Creek.

This incident, together with fatigue and illness and the shortage of provisions, made Stuart decide to return to Adelaide. Leaving the area on, or about, the 9th July, 1860 the tired little party made good time on the return trip and arrived in Adelaide on the 7th October, 1860.

Second Attempt, 1861.

January 1st, 1861 saw another, larger party headed by John McDouall Stuart moving out of Chambers Creek Station in the mid-north of South Australia, just south of Lake Eyre. William Kekwick, Stuart's faithful follower, was again among the party of twelve men, who, with 39 horses and provision for 30 weeks followed the same route north as they had done in the previous year. From Attack Creek to Newcastle Waters is a distance of 130 miles. The party, hampered by scarcity of water, took 4 weeks to cover this distance. Stuart was now in the area of the "Murranji Track" stockroute. Before this route was equipped with Government Bores to water the stock it was the "horror stretch" of drovers. Heavy Lancewood scrub and Bulwaddie scrub covers the area and the Cooktown Ironwood (poisonous to stock) grows there, too. At times the thick scrub becomes impenetrable.

The party found the area impenetrable, too, and Stuart wrote - "we are nearly all naked. The scrub has been so severe on our clothes. Our boots are also gone. The men are showing the effects of short rations. It is with great reluctance that I am forced to return." Sadly, the party retreated south once more and Stuart, using sea transport from Port Augusta to Port Adelaide, arrived in Adelaide on 23rd September, 1861.

But he was by no means beaten and began his preparations for the third attempt as soon as he reached the city.

The Third Attempt.

Less than a month after his return to Adelaide, Stuart was off again, this time with nine men and Kekwick as second-in-command. Again using the same route they arrived at Newcastle Waters on 14 April, 1862 and were as far north as they had been on the previous trip.
Through the rough scrub country north to Howell's Ponds, Frew Ponds they pushed, and via a series of waterholes to Daly Waters which was named after another Governor of South Australia, Governor Daly. A north-easterly route brought them to the Strangways River which, they found, emptied into the Roper River. Crossing this and following the Chambers River, they then headed north-west, crossing the Katherine River and reaching the Mary River. These last two rivers were named for the daughters of Mr. James and Mr. John Chambers.

They followed the Mary River, plagued by mosquitoes, sandflies and green ants, and the heavy, tropical conditions. While the men cut a passage through the last belt of thick vines, Stuart, Kekwick and Thring pushed ahead. Thring, who was riding slightly in front of the others shouted, "The Sea!" Stuart had reached the goal that he had sought for so long. It was 24 July, 1862. A flag was raised on the beach.

Stuart had his initials cut into a tree about three miles inland from the spot where the explorers had reached the sea. A paper recording the event, signed by the whole party, was buried in an airtight tin case nearby. The bay was named Chambers Bay, and it is some forty miles to the east of the Adelaide River.

The return journey, begun on 26 July, 1862, was a nightmare. The party was tired, the horses weak, much equipment had to be left behind and worst of all, Stuart's eyesight was failing. He had scurvy very badly and could eat very little. Despite their weakened condition the party pushed south as speedily as possible.

At the campsite in the MacDonnell Ranges, Stuart found that he could no longer ride his horse and a litter was rigged for him between two horses. Short of food, the party ate the weakest of the horses because they had no strength to stalk and catch wild game. They struggled on and it was a very sorry party that reached Mt. Mary Station in South Australia some weeks later.

Today, nothing remains of the tree marked with Stuart's initials. The tree was destroyed by a scrub fire some years ago. However, a lonely monument has been erected nearby and the highway between Alice Springs and Darwin bears the name of someone who was a really great "traveller", the Stuart Highway.
Camel loaded with wares

Aboriginal baby in cradle.
CHAPTER V.

THE OVERLAND TELEGRAPH LINE.

The building of the Overland Telegraph line was probably the biggest factor in opening up the country of the centre and north of Australia. The land had gone back to its peaceful dreaming after the passing of Stuart’s small exploring forces and had remained that way for some years.

However, the outside world was progressing and the Telegraph which had been invented by Morse in 1838 was revolutionizing communications all over the world. For some time long cables had been working their way across the lands and seas from England to many places and people began to think that it was time Australia began to be part of this great network of communications.

Each state had different ideas of where the cable should come ashore from Java but it was finally decided that the line overland should come straight through the centre of Australia from Darwin to Adelaide. Following this, the South Australian Government authorised a loan of £120,000 for the construction of an overland telegraph line and a contract was drawn up with the British Australian Telegraph Co., saying that the line should be completed by 1st January, 1872. This meant that the line had to cross approximately 2,000 miles of almost unexplored country, through tropical jungle, across swamps and rivers, over mountain ranges where no tracks had been found and across deserts where nothing grew and little water could be found. There were no towns for supplies and no one lived in this area so everything had to be transported overland for the work. And there was only 18 months left to complete the agreement. It was a gigantic task to plan such a huge piece of work but the job was taken on by a small, energetic, dark-haired and black-bearded man who wore glasses. His name was Charles Todd.

Charles Todd.

Charles Todd was born in Islington, England on 7th July, 1826 and went to school at Greenwich. When he was fifteen he went to work at the big Royal Observatory at Greenwich where he stayed for six years. Then he went to work at the Cambridge Observatory for another seven years. He was good at Maths and very interested in electricity and it was this interest that led to his going back to the Royal Observatory at Greenwich in May, 1854. Here he worked in the Galvanic Department which specialised in studying electrical phenomena and electric telegraph.

In February, 1855 he accepted the post of Government Astronomer and Superintendent of Telegraphs in the little colony of South Australia, and taking his new wife, Alice Gillam Bell of Cambridge, he left for his new post. He arrived in Adelaide on Guy Fawkes Day, 5th November, 1855.

As Superintendent of Telegraphs in the colony of South Australia, Todd found that there was not one telegraph line in the whole colony but he soon put that to rights. He had brought all the equipment needed with him as well as an assistant, E.C. Cracknell. Through their efforts a line was put through from Adelaide to Port Adelaide in 1856. Later a bigger job was undertaken; to construct the South Australian side of a Telegraph Line to Melbourne. This line, the first inter-colonial one in Australia was sending messages in July, 1858.

By far his biggest job was now waiting. He had to organise and plan the huge task of spanning the whole continent with a line of poles, joined by a magic wire - the Overland Telegraph.
Planning.

The plan was to divide the area to be covered into 3 sections, Southern, Central and Northern. Two of these sections, the Southern and Northern, were to be built by contractors who would be supervised by Government overseers, two to each section. The Central Section was to be constructed by the Government parties under Lands Office Surveyors.

Some 2,000 miles of wire, 36,000 insulators and 36,000 insulator pins for 36,000 poles would be needed. These were ordered from England because there was nowhere in Australia to get them in those days, and they were supplied to the contractors by the Government.

Poles had to be cut along the route. Instructions said - "there would be 20 poles to the mile, of hardwood, 20 feet long and 4 feet in the ground. Wooden poles were to be straight rough saplings, stripped of bark, 9 to 10 inches in diameter at the base and 5 to 6 inches at the top." A lightning conductor was to be placed on every second pole. Besides these items, hundreds of horses, bullocks, wagons and men had to be obtained for the use of the parties and private contractors had to be found for the hundreds of tons of freight to be taken northward to the parties when they were working.

The Southern Section.

The contract for the Southern Section went to Mr. E. M. Bagot of Adelaide. This section covered the area from Port Augusta to the Alberga Creek (Latitude 27° South). Bagot used sea transport to carry men, goods and materials from Port Adelaide to Port Augusta. Stock was driven overland from many centres by drovers.

The first week in October, saw the first pole erected at Stirling, 5 miles east of Port Augusta. This would join up with the line from Adelaide which already came through Horrocks' Pass to Saltia Creek on the western side of the range, about 205 miles from Adelaide.

The Southern Section then moved from Stirling, keeping to the western side of the Flinders Range, for 45 miles to Mount Eyre. Then, missing the rough, scrubby, country of Pitchi Richi Pass, in the Flinders Ranges, Bagot's section crossed the range through Hookina Creek Pass using an already established wagon track. This track had been opened up by settlers who used to transport wool through to Port Augusta by this route and to bring back supplies to their stations and farms.

Continuing north from Hookina, to Beltana, Leigh Creek and Hergott Springs (now called Maree), the line turned west around the bottom of Lake Eyre, then on to Strangways Springs, Mount Margaret and the Neales. This was 431 miles from the start at Stirling. The whole way poles had to be cut for the line, but in places iron poles were used. This was necessary in very arid desert areas because of the lack of suitable trees. The slow rate of travel was a great delay.

Wagons took 2 months to make the journey from Port Augusta to Peake Station, on the Neales and the same time to return. Each wagon, with 12 horses or bullocks could only haul 10 tons of gear and equipment and therefore dozens of wagons had to be used to get the freight up to the line in reasonable time to keep it moving steadily northward.

Bagot's section had to go about 100 miles farther north from the Neales. W. H. Babbage, Surveyor and Overseer of Works for the Southern Section, explored and found the route needed.

Peake Station was a depot for Bagot's section and also the starting depot for the Government Parties under John Ross. These parties of the Central Section were to build the line from Latitude 27° South to Latitude 19° South. It must have been a very busy place at the time.
The first German style wagon, drawn by horses, arrived there on 28 August, 1870 and a depot was established on the bank of the Neales. Harley Bacon and William Blood, the Government Storekeepers had the big job of checking all the equipment as it arrived to see if anything was missing. Sir Thomas Elder's string of 100 camels came plodding in and caused quite a stir, too, with their Indian and Afghan cameleers.

The Central Section.

Because this section was the most remote and most difficult, it was to be constructed in 5 sub-sections as follows-

Sub-section A. - R.R. Knuckey in charge from Latitude 27° South to Latitude 25½° South.
Sub-section B. - Gilbert McMinn, in charge from Latitude 25½° South to Latitude 24° South.
Sub-section C. - W. W. Mills, in charge from Latitude 24° South to Latitude 22½° South.
Sub-section D. - A. T. Woods, in charge from Latitude from 22½° South to Latitude 21° South.
Sub-section E. - E. W. Harvey, in charge from Latitude 21° South to Latitude 19½° South.

The whole of the Central Section was from Macumba Creek to Tennant Creek, 1,140 miles from Port Augusta.

Exploration for a Route.

The 14th August, 1870 saw explorer John Ross riding north from Mount Margaret searching for a route through country familiar to him as he had already been as far north as the Macumba Creek with stock in the previous year.

At the Finke River, near Charlotte Waters, he turned north towards the Strangways Range and on for 60 miles into desert country. Forced to turn back by the dry conditions and the sandhills of what was to be called the Simpson Desert, he turned south-westwards towards the Depot. On the way he discovered and named the Todd River and the Fergusson Range (after the Governor of South Australia), and also Giles Creek which is some 30 miles in an easterly direction from Alice Springs.

Returning towards the Depot once more, the party crossed the Finke and followed it down for 20 miles to its junction with the Hugh River. Here he found a lagoon where there was grass and timber in abundance. This was later to be named Alice Well and a Depot was to be established there for the Central Section.

Ross and his party arrived back at Peake on 19 October, 1870. They had ridden a thousand miles in nine weeks, and had passed through the ranges in the Ross River area.

About a month later, after resting and re-shoeing the horses and gathering supplies, Ross set out again to reach Central Mount Stuart. Meanwhile, the wagon parties were to establish a Depot at the junction of the Finke River and the Hugh River.

On December 8th, 1870 Ross' party crossed the Hugh River and moved through dry country to a gap in the Fergusson Range which they had found on the earlier trip. Crossing this range they followed a course parallel with that of John McDouall Stuart's but seventy to eighty miles east, and came to Hart's Range which they named after the Premier of South Australia. Northward again to Mt. Mann they went near Barrow Creek and then across to Stuart's track which they came upon on 2nd January, 1871. Turning south, they came back to Central Mount Stuart and on 4th January, 1871 they found the message buried beneath the cairn on the top of the mountain, left there by Stuart.
They were 540 miles north of Peake Station. Ross and his party then travelled back over Stuart's route through the MacDonnell Ranges and reached the new depot at Alice Well, on the junction of the Finke and Hugh Rivers on 26th January, 1871.

Here they found a camp established with the parties of Surveyors Woods, Gilbert McMinn and Mills and the Storekeepers busy erecting a new depot. At Alice Well (as it was to be called), was the main supply centre for the central section and among his stores, Storekeeper Harley Bacon had a mob of 2,000 sheep to look after as well as all the other stores.

By now Sub-sections A and B were going well but Sub-section B had difficulties. Surveyor Gilbert McMinn was held with the last miles as the route through the MacDonnell Ranges had not been found. Ross had had no success in finding a wagon route through the ranges so small exploring parties under Surveyors Mills, Woods and Gilbert McMinn went out to try to find a way through.

McMinn found Orange Creek (named it) and went on to find Temple Bar Gap and Simpson's Gap. This was a beginning to finding a wagon route.

Mills followed on from McMinn and on the 11th March, 1871 he and two others of his party found a line of waterholes. He named the main one The Alice Spring, after Mrs. Charles Todd.

After these two explorations work was able to go ahead and the line continued to move northwards.

In the meantime, Ross had gathered a party of 5 men together and with 22 horses and rations for 11 weeks, he set off again towards the Roper River on the 7 March, 1871. They arrived at the Roper on 19 May of that year, but there was no sign of the contractors, or of William McMinn who was to meet them there. So Ross pushed on, hoping to meet up with the party. After they had passed the Katherine River, they found a line of poles, unwired and some months old, and came to a deserted camp. Of the workmen there was no sign.

The Northern Section.

The contract was given to the firm of Darwent & Dalwood who had to erect the line from Darwin to just north of Daly Waters (or Latitude 16° South). In Adelaide, they chartered a ship to take about eighty-six men, seventy eight horses, ten bullocks, wagons supplies, sixty tons of wire and 3,000 insulators and pins to Darwin. From here, they were to work south. On 15 September, 1870, at 4 p.m. the first pole was planted with great ceremony, and the work was begun.

Work went steadily southward for eighty-nine miles to the Adelaide River which was reached on 9 December, 1870. The route chosen had been surveyed in the dry weather and seemed excellent. Then came the "wet". The contractors of the line, the workmen and the surveyors, had no experience with these wet and muddy conditions, and, although the work went on, it was very slow.

On 28 January, 1871 the line had reached Katherine River but supplies were running short, the flour was full of weevils and all other food was going bad. Some men left the job and returned to Darwin. Slowly the line reached the King River, but because of the wet and boggy conditions, the poor food and sickness, the men went on strike. Work was abandoned and the parties returned. This was why Ross found the line deserted.

When the Government Surveyor, William McMinn, arrived he considered that progress was too slow and he returned by ship to Adelaide, to report. The Government then cancelled the contract with Darwent and Dalwood and took over the job of completion.
Only five months were left to complete the work and R. C. Patterson, Surveyor-in-Chief and Engineer of Railways, was appointed in a great hurry to take over the work. He went north by sea and the work recommenced on 24 August, 1871. Another "wet" was approaching and the job of organizing was attacked with great haste.

A depot was established on the Roper River, and a ship was chartered to carry supplies up the Roper as far as possible to Roper Bar. From here wagons were to carry supplies across to the line depot. The steamer "Guinare" was wrecked while ferrying supplies but was quickly replaced. But this was only one of many setbacks which Patterson encountered. In the end it was necessary to call for help from the Southern (Central) parties who were almost through their sections. They were asked to continue northwards.

The first new pole past the King River was not placed until 1 December, 1871. With two parties working, one from Daly Waters and one from the King River, progress was made but it was very slow. It was eight months since any work in extending the line had been done. From the Central Section, Harvey was joined by Mills and Knuckey and these parties pushed on northwards towards Attack Creek and finally to Powell Creek.

Meanwhile, back in Darwin, the undersea cable had come ashore and the link with Java was established. Messages to be sent south over the line were taken across the "break" by riders on fast horses to prevent any delays. Then, fortunately for Todd and the S. A. Government, the undersea cable broke and contact was severed. (It was not repaired until 21 October, 1872).

The four parties worked feverishly to complete the line before the undersea cable was repaired. Finally, Patterson was able to join the wires at Frew's Ponds on 22nd August, 1872. At 3.15 p.m. that day, he signalled a message to the Governor of South Australia and to Charles Todd saying that the line was completed.

Australia was in communication with the rest of the world.

The Overland Telegraph Station (etc.) at Alice Springs.

It is believed that the line of the Overland Telegraph first entered the MacDonnell Ranges through Temple Bar Gap. From here it turned eastward past the foot of Mount Gillen and so on out to where the Old Telegraph Station stands today. This section, Section C, was in charge of W. W. Mills, who found the waterhole, known as Alice Springs. He continued with his workmen to build the line north to the Reynolds Range.

Section "B" was now complete, and on 15 November, 1871, Gilbert McMinn arrived at Alice Springs to take over the buildings at the Station, and to complete the wiring. Stone had to be cut and limestone for mortar carted. Progress was slow, as McMinn wrote on 8 January, 1872, "engaged every day in building. It goes slowly owing to the absence of skilled masons."

McMinn was in the Alice Springs area until 29 July, 1872 and besides much building he also explored the country to the east and south-east of the Telegraph Station, towards the Fergusson Range. He left to turn south on 29 July, 1872.

The first Postmaster was appointed in 1872 - 1879. He was Mr. Johannes Ferdinand Mueller.
The Southern section of the Overland Telegraph Line.
509 miles from Stirling northwards to the Hamilton River close to the N. T. border.
Contractor: E. M. BAGOT. Price £41. a mile. Finished, December, 1871.
Government overseers: W. H. ABBOTT and B. H. BABBAGE.
Central sections of the Overland Telegraph Line.

621 miles from Hamilton River to Tennant Creek.

Erected by the government parties under 5 surveyors.

R. KNUCKEY, G. McMinn, W. MILLS, A. WOODS, E. HARVEY.

(A)  (B)  (C)  (D)  (E)

15 horse wagons, 5 buggies, 210 bullocks, riding horses,
18 bullock wagons, 165 horses, 80 camels, pack horses.

This section was finished by December, 1871.
The Northern section of the Overland Telegraph Line.

Approximately 500 miles - Darwin to Powell Creek.

Contractors: J. DARWENT and W. DALWOOD."

Price - to Roper River, £60 a mile, after Roper River, £89 a mile.

Government overseers - W. McMinn and R.C. Burton.

Planting of the FIRST POLE - 15th September, 1870.

Contract cancelled by McMinn when line had reached KING RIVER, 3rd May, 1871. Patterson took charge of work in September, October, 1871 but poling began only in December and the WET stopped them. Work began on 11th April, 1872 and was completed on 22nd August, 1872.

Submarine cable came ashore at Darwin - 20 November, 1871. On 24 June, 1872, the cable failed. The Line was joined on 22 August, 1872. The cable was restored on 21 October, 1872, and AUSTRALIA was joined to the WORLD.
CHAPTER VI.

THE DROVERS.

When John McDouall Stuart returned from his first trip through the Centre of Australia, he reported to the Government that good country was available for the raising of sheep and cattle. Nothing was done about bringing cattle or sheep to the area that is now the Northern Territory but sheep were brought up as far as the Macumba River before the Overland Telegraph Line was built.

The men of the Overland Telegraph Construction parties had to be fed and one of their main sources of meat was "Red Blanket". This was the name given to what we now call "Bully Beef" or tinned corned beef. The "Red Blanket" of the Overland Telegraph days was very different to the type now sold in our shops. It was tough, salty and almost all fibre. But it was meat and this is what the men working on the line needed to eat.

Some say that the name "Bully Beef" came from a station in South Australia where the beef was canned. It was called "Booyoolee". Others say that it comes from the French word "bouilli" which means beef. The name "Red Blanket" was used because the tins had a red label.

The result of living on tinned food all the time was the dreadful disease, scurvy, and the workers needed fresh meat to partly prevent this. Thus began the droving of animals for the provisioning of the O.T. Line.

Ralph Milner, Drover.

The Government of South Australia offered a reward of £10,000 to the first person to overland stock from Adelaide to Darwin to supply fresh meat to the camps of the Overland Telegraph Line. This offer was taken up by Ralph Milner who had started out as early as 1863 to overland stock. Unfavourable seasons caused him to stay around Cooper's Creek for six years but in September, 1870, he set off again.

In his party were his brother John, four station hands, three eight-horse wagons (with their drivers) and about 50 spare horses plus a mob of 4,300 sheep and rations for one and a half years.

It is said that all went steadily until the Finke River was reached and here the party was held up by floodwaters. When the river went down and the animals began to cross, many of the sheep had to be rescued from quicksand. A crossing bridge was built out of spinifex bushes and gum branches over the treacherous parts of the crossing and with a few goats leading, the thousands of sheep were led, in single file, over the rough bridge.

At the McDonnell Ranges they rested for a short time while the ewes lambed (probably at one of the Gaps where water was available) and then went on fairly slowly. Several weeks later they were at the Devil's Marbles and just north of here a tragedy occurred. Suddenly the slowly travelling sheep, in ones and twos, began to gallop forward for a short distance, then drop, breathing heavily with blood-flecked foam at their mouths. In a short time they were dead and, in all, 3,000 sheep and 100 goats died this way. The cause was a pretty flowering bush, Wallflower Poison Bush, which grew in abundance in the area. It had already killed some of Stuart's horses and has killed many animals since.

With the numbers of the stock greatly depleted, Milner and his party went on northwards. At Attack Creek, which seems to well deserve it's name, John Milner was killed when a native crept up behind him as he rested beneath a tree and fractured his head with a club. The other members of the party buried him with great sorrow.
By now the drovers were in thick scrub country and sometimes a track for the sheep had to be cut before they could pass. The "wet" slowed them down as the rivers flooded and on the last stage the sheep had to be ferried across the Roper River, eleven at a time, in a boat. One reason for this was that crocodiles infested the area.

When Milner reached the O.T. camp of R.C. Patterson, he shore the remainder of the sheep - they were carrying eighteen months of wool - and sold them for a few shillings a head. Milner then went on to Darwin.

The greatest blow of all fell when Milner received the news that, while he had been travelling, the Government of South Australia had been changed and that the offer of the reward had been withdrawn. However, he had proved that stock, especially sheep, could be overlanded from Adelaide to Darwin.

Arthur Giles, Drover.

Trip One.

Further supplies of fresh meat were needed for the stations of the O.T. Line and Arthur Giles contracted to take five thousand sheep and one hundred horses from Beltana Station in South Australia to the Overland Telegraph Stations as far north as Daly Waters. This was in 1872. Together with seven experienced drovers, he successfully completed this trip. The droving fee for overlanding the animals was 2s. 6d. (25¢) per head.

Trip Two.

On his return, Giles met another mob of five thousand sheep west of Mount Margaret Station and continued north with them. On this trip they were unfortunate enough to camp in the same spot as Milner had at the Devil's Marbles. One morning they discovered that six hundred of their sheep had died from eating the same poison bush plants as had killed Milner's sheep. They found evidence of this in the old sheep bones and skulls lying in the area and which they had not noticed when they had camped.

This trip was also threatened by aborigines in the Haywood Creek area, and the party were attacked later near Charlotte Waters by another party of aborigines. The aborigines came threateningly towards the camp and the eight drovers pretended to retreat, riding away on their horses. As the attackers charged the camp, the horsemen turned and galloped towards them, firing their rifles over the heads of the aborigines and cracking their stockwhips. The surprised aborigines turned and fled.

More sheep were lost, about thirty of them, when they ate a berry which was probably of the quinine bush which grows north of Newcastle Waters. The rest of the trip was recorded to be "without incident". This trip was in 1874.

Trip Three.

Springvale Station, north of Katherine, had been acquired by a Dr. W. J. Browne. Now, of course, he needed to stock the station and gave the big task of bringing in the animals to Arthur Giles. This was in 1877. Giles had to drove twelve thousand sheep, and two and a half thousand cattle as well as the "plant" from South Australia to Katherine.

The first job was to bring the cattle through from New South Wales. These were picked up at a station near the Darling River, driven down this river and the Murray River to Morgan, then across to Burr and Beltana, and finally were headed northward for their eighteen hundred miles journey. They started this long march eight months ahead of the sheep.

The sheep were in charge of Arthur Giles' brother Alfred, and were split into three mobs of sheep each four thousand. At Charlotte Waters, the decision was made to shear the sheep and a shed and yards were built. Shearing began on the 13 August, 1878, and the men finished on 30 October, 1878, having shorn four thousand sheep in seventy-eight days with hand-shearers.
Free of their heavy wool the sheep would travel better through the heat and the dry stages that the drovers and Giles knew that they would encounter.

The mobs of sheep then moved northward and overtook the cattle between Charlotte Waters and Alice Springs. Here, because of the dry conditions, the drovers spelled the sheep and also began shifting them by moonlight when the weather was cooler. This was in January, 1879, and the weather was very hot. Giles was a careful drover and planned each stage with consideration for the stock.

Katherine was reached on 9 July, 1879 - "with a few cattle lost from poison bush" but the herds were mainly intact. The cattle had been on the road for twenty-two months and the sheep for twenty-four months.

This trip is said to be the greatest droving feat in Australian history and was one of the biggest "lifts" of stock ever achieved. Besides the sheep and cattle there were three hundred horses, scores of dogs, forty men and ten wagons and drays in the expedition. They did not move all the stock together but had several mobs some miles apart. Probably the cattle were sent ahead to "break the route" and the sheep followed in smaller mobs.

These are not all the stories of the drovers who came into the northern areas in the early days. Others came in through Queensland and their stories make interesting and exciting reading. Two names to remember are Nat Buchanan who drove a record twenty thousand head of cattle in from Queensland and the Durack family who were also pioneer drovers. Two books have been written about the Duracks by a descendent of their family, Mary Durack, "Kings in Grass Castles" for adults and "To ride a Fine Horse" for younger readers.
CHAPTER VII.

ARLTUNGA.

About sixty-five miles east of Alice Springs is the abandoned town of Arltunga. Empty buildings, roofless and open to the sky, abandoned machinery and a few ragged date palms are all that remain of the tiny town.

The credit for the first discovery of gold in the area goes to the ex-cameleer and teamster, Joseph Hele, and a mate, Isaac Smith. In the creekbed near Paddy's Rockhole they found alluvial gold in the sand and rocks. This was in April, 1887.

Prospectors had first come into the MacDonnell Ranges in search of "rubies" which were discovered by the explorer-surveyor, David Lindsay, at Glen Annie in 1886, (Glen Annie is now known as Ruby Gap.) These "rubies" were later identified as garnets.

By August, 1887, there were almost a hundred men in the area - some searching for "rubies" but a few searching for gold near Paddy's Rockhole. Each miner had to be issued with a Miner's Right, which was a licence to prospect for gold and these were issued at the Police Station at Heavitree Gap at Alice Springs. The policeman, Mounted-Constable W. H. Willshire, was appointed Goldfields Warden in the MacDonnell ranges in 1887.

To get the gold from the rock a crusher was needed, and the first one was brought into the area by one of the companies formed to mine the gold, the Wheal Fortune Mining Co. Their mill took four months to reach the field being carried overland by horse-drawn wagon from Oodnadatta. This crusher (or battery) began crushing in August, 1889.

At about this time a drought struck the area and water was in short supply. Wells went dry and crushers were forced to stop working as there wasn't sufficient water to keep them operating. In 1890, the little settlement at Paddy's Rockhole had a population of 12, including 2 storekeepers and butchers. The well at Paddy's Rockhole was deepened but even then the supply of water was not enough for the people, animals and the small crusher belonging to William Benstead, which was operating there. However, despite the dry conditions, the tiny settlement progressed.

The first Post Office was started in 1891 by Mr. Joseph Harding, who was one of the two storekeepers and he became the first Postmaster. The mail was carried once a month between Alice Springs and the Arltunga area by a contractor, R. R. Smith, who had been a colt-breaker before this. He was paid £70 per year.

For the next few years the miners were just able to keep going. Life was very hard - water was short and costs were high. Finally, in 1895, the geologist H. Y. L. Brown suggested to the Government of South Australia that a Government Battery be erected at the field. In December, the first manager of the MacDonnell Range Battery and Cyanide Works was appointed. He was Mr. James Gilbert Woolcott. The machinery left Oodnadatta in early 1897 and was hauled overland by horses. Mr. Woolcott had a month-long trip overland by camel from Oodnadatta and he found the conditions very trying.

While the battery was coming, a further important discovery was made when, in 1897, J. Byrne discovered alluvial gold in the White Range area, about four miles northeast of Arltunga. A short time later Henry Luce found reef gold in the same area. These discoveries meant more work for the crusher.

The site chosen at Claraville was found to be unsuitable for the battery as the water supply was not reliable. Mr. Woolcott decided to change the site to the Star of the North Well which was on a creek at Arltunga.
The establishment of the Government Battery began the township of Arltunga. In February, 1898, Mr. F. J. Gillen, Postmaster at the Telegraph Station at Alice Springs, opened the battery by turning on the steam and the plant commenced crushing. From then on all the activities of the area were centred around this site. In March, 1899, the Post Office was shifted (from Paddy's Rockhole) to Arltunga and the mail service became twice monthly. January 14, 1899, saw the establishment of a Police Station not far from the little township and Mounted-Constable Patrick Johnson was sent from Alice Springs as the first policeman. The first police station was built of wooden logs until it was replaced by a stone building in 1912. This was built by Mr. Gerhardt Johannsen and the remains of it can still be seen today.

Miners worked the mines in the Arltunga and White Range area with varying success up until quite recently, but the Battery closed down in 1916 when the supply of ore became too small for economic operation. Sometime later, much of the machinery was removed. The remainder of the boilers and the settling tanks used in the Cyanide Process to extract the gold can still be seen today.

Other buildings also stand in ruins at Arltunga - all that remains of the Post Office are the chimney and small pieces of the walls. At the crossroads, approaching the little town are the remains of the Hotel which was run by "Sandy Myrtle" MacDonald and, opposite it, the old bakehouse.

**Life on the Goldfields.**

When a miner decided on a site for a claim an area was pegged out and registered with the Government Officer or Warden. Then the great task of digging into the hill or ground was begun. In the case of a hillside, a shaft was usually driven into the hillside and then a "drive" went off to the right or left or down. Most shafts were about 60' deep and the rock was extracted with picks and shovels. Sometimes the rock was broken up and loosened with dynamite. The extracted ore was lifted to the main shaft in buckets by a series of ledges, then carried by wheelbarrow to the main opening where it was dumped onto a bullock hide to be sorted. Aborigines were often used to sort the useless rock from the gold-bearing rock. The useless rock was dumped over the side of the entrance of the mine, out onto the hillside and the ore-bearing quartz was put aside. Later this rock was taken to the battery by cart or wagon to be crushed and the gold extracted.

At the battery the ore was crushed and treated with chemicals to extract the gold. When this was done the gold was weighed and the miner was paid by the Government Assayer (3.14.10d. per ounce). In about 15 years, 11,673 ounces of gold were taken out of the Arltunga-White Range goldfield, valued at 43,698 in those days.

At the height of its prosperity Arltunga is said to have had 500 people living there and most of these lived in tents, log huts or "tent huts". The remains of these "Tent-huts" can be seen all over the place in the hills near the town. They consist of a low stone wall with a doorway at one end of the rectangle of stone and sometimes a chimney at the other. The stones are cemented together with mud in the better ones but many are built of stones piled on top of one another. The tents were erected on top of these walls and the stones acted as a windbreak and gave extra head-room for the users. Occasionally a stone hut was built and this, too, had a canvas roof because roofing iron was extremely expensive.

The first Post Office had a stone chimney, which is still standing, and walls of upright poles stuck in the ground. The poles were cemented together with mud and it had an iron roof. The mail was carried, together with the gold, to Alice Springs in a four-wheeled buggy pulled by four horses with the driver and one other man as escort. There was little fear of robbery because there was little hope of escape in such an isolated area.
Costs of food and other items necessary for life on the goldfields were very high. For example, freight on a ton of flour was £18.6.2d. by camel and the cost of buying the flour was added to this. A good wage for a man in those days was about £3 per week. These are some of the food prices at the goldfields in 1903.

- **Flour** (200 lb) - £2.10.0d.
- **Sugar** - 4d. per lb.
- **Salt Meat** - 5d. per lb.
- **Dry biscuits** - 1.0d. " "
- **Meat (tinned)** - 2.0d. tin.
- **Salt** - 4d. " "
- **Jam** - 2.0d. tin.
- **Tea** - 2.0d. " "
- **Tomato Sauce** - 1.3d. per bottle.

Camel freight from Oodnadatta was cheaper than wagon freight - £10 per ton compared with £12 per ton - and camel trains came and went regularly to and from Arltunga.

The area where Atnarpa Station homestead is now was the grazing area for camels and the area known as Paddy's Plain was reserved for horses. Each miner had the right to graze a team of horses and a number of goats in this area, also.

To get to the minefield cost -

- From Adelaide to Oodnadatta by train - 1st Class - £5.14.8d.
- From Oodnadatta to Alice Springs by coach - £7.0.0d.
- From Alice Springs to Arltunga by buggy (etc.) - £2.0.0d.

Some people travelled this way, other used their own horses and wagons, rode horses or even walked. Some even rode bicycles.

The life and work of the miners was very hard and the dust and rock chips they inhaled while working at the mine face took the lives of several of them. At White Range is a cemetery with the graves of the men who died on the gold fields and among them is one, "H. Luce", the discoverer of gold in the White Range area.

No one lives in the old huts now - except the lizards. Arltunga is a ghost town.
1. Old Battery Site.
   Cyanide plant.
   Star of the North Well.

2. Arltunga Police Station.
   Private Battery.
   Kangaroo Well.

3. Old Mission Site.
   Arltunga Bore.
   Old Well.

   Crossroads Well.

5. Cemetery.


7. Cemetery.


10. Wipe Out Mine.
    Wipe Out Well.
    Jenkins Battery.
CHAPTER VIII.

CATTLEMEN & STATIONS.

As the Overland Telegraph Line construction progressed and the building was completed, drovers began moving stock to the newly-granted leases. These new stations included two in the Alice Springs area, Undoolya and Owen Springs.

The first, Undoolya, (the aboriginal name means "shade" or "shadow") was granted on the first of April, 1872 to Edward Meade Bagot who had been the successful tenderer and contractor for the Southern Section of the Overland Telegraph Line. The station in those days extended from Temple Bar Gap almost to Ross River, an area of 575 square miles. This was the first station inside the MacDonnell Ranges.

The second, Owen Springs, was granted at the same time to a South Australian pastoralist, Joseph Gilbert. It was 900 square miles and covered the Waterhouse Range area on both sides of the Overland Line.

James Churchill-Smith, step-son of E. M. Bagot, and his son, Ted Bagot, together with William Gilbert, brought about 600 head of breeding cattle from South Australia to stock the two stations and James recorded the trip in a diary. James' diary describes the trip overlanding the cattle, searches for feed and all-important water, places visited and people met during the journey. Some famous names in history appear among the travellers met on the track. For example, early in October, 1872, they met Charles Todd returning to Adelaide from a trip over the whole length of the Overland Telegraph Line and spent the evening with him and his party. The explorer, W. C. Gosse, passed their party and was heading north with eleven camels and sixteen horses for Alice Springs. P. E. Warburton, another explorer, passed, also going north and Ernest Giles was met when he was returning south. All these travellers have left their names on our maps.

Upon arrival in the area (March 1873), James Churchill-Smith set about the task of selecting a site for the homestead and William Gilbert did likewise on the Owen Springs leasehold. There was so much to be done. Wells sunk for water, huts and storehouses built, yards for stock, a lime kiln constructed to burn limestone for mortar, limestone itself to be found and carted as well as stone for a permanent building. Besides all these things, the stock had to be tended and kept in good condition.

The buildings were built with thatched roofs (no roofing iron was available) and all the timber had to be hand-cut from trees growing on the station. Often split-log huts were built and this may have been so at Undoolya Station.

The diary ends on 31st December, 1873, after a description of a very merry Christmas when thirteen people sat down to Christmas dinner at the Station. James did all the cooking and made a beefsteak pie which was enjoyed by all. On Boxing Day he records "all those that could find their horses left to-day."

Although the diary end here, it is known that James Churchill-Smith stayed in the Alice Springs area for many years and although Owen Springs was abandoned for some time during a bad drought of the 1890's and restocked later, Undoolya Station continued without a break to become the first station in the Alice Springs area.

It is thought that Smith Street, leading to the cattle yards, is named for the memory of James Churchill-Smith.
In October, 1888, the Government of South Australia sent David Lindsay, surveyor and explorer, to survey a townsite in Central Australia. The site chosen was about half-way between the Alice Springs Telegraph Station and the Heavitree Gap Police Station. The site was intended to include a railway terminus eventually, and flat country within close proximity to the Telegraph Station was needed. Thus the Western bank of the Todd River was chosen.

Lindsay surveyed 104 lots (or allotments) and a set of streets in a rectangular grid pattern, each street was to be 66' wide. On January 31st, 1889, in Adelaide, a land sale was held and blocks of land in the town were offered for sale. The town had been given the name of Stuart in honour of the explorer, John McDouall Stuart, and although all 104 blocks of land were offered for sale, only five were sold. They were lots Nos. 35, 77, 78, 79, and 80. Notably, Lots 78 and 79 were sold to William Benstead who built the first Stuart Arms Hotel on the site it occupies today. Another, Lot No. 77, which was sold to Frederick Stone is the block where the offices of Ansett-A.N.A. are now situated. Each of these sites were sold for £20. 5s. (about $40.50 today.)

William Benstead was responsible for the first building in the town when he built the first Stuart Arms Hotel. It was very different from the building which is the present Stuart Arms and there is an excellent photograph of it in the book "Alice On the Line". The Hotel obtained its water from a well in the backyard, as did most of the buildings in the town.

The little town grew slowly as cattle and horses were brought in to stock the new stations and as miners came seeking the "rubies" found by David Lindsay and later, the gold.

Soon there were cameleers and their long strings of camels camped down on the banks of the Todd River. Here high saltbush provided plenty of feed for them and they liked it so much that today there is little of the six-foot-high saltbush left in the area. It is said that an aboriginal camp occupied the area on which our school now stands.

In 1911 the Northern Territory changed hands and instead of being the responsibility of South Australia it came under the control of the Commonwealth Government. One of the most well-remembered of the early pioneers now arrived in the town. He was Sergeant Robert Stott of the Police, who kept law and order in the town until 1926. He was called the "uncrowned king of Central Australia" and it was through his help that the first schoolteacher was sent to Stuart.

Mrs. Ida Standley arrived in Stuart in 1913 or 1914 (there is some uncertainty about this), and the first school was a little stone hut which once stood behind the Police Station. (It is now a heap of rubble on the banks of the Todd River at the Old Telegraph Station.)

Both these pioneers are remembered as their names have been given to landmarks in the district. Sergeant Stott is remembered in the naming of Stott Terrace and before its name was changed to Anzac Hill, this landmark was known as Stott Hill. Mrs. Standley gave her name to the impressive Standley Chasm where it is said the children of the Jay Creek area took her on an excursion during the time she was teaching there.

Although the town had been surveyed to allow for a railway in 1888, it wasn't until 4th August, 1929 that the first passenger train arrived in the town. Even then the service was short-lived as the line was washed away soon after and it is said that four months went by before another train could get through.
However, it was not long before trains were taking the place of the Afghan cameleers and their slow-plodding animals.

The train was named to allude to these men and was called "The Afghan Express" which has, over the years, been shortened to the name it has today, "the 'Ghan". At this time the town's population had grown to 200 people.

The coming of the railway helped to change the name of the town from "Stuart" to "Alice Springs". There had been some confusion with Stuart Creek, a railway siding near Lake Eyre South. Finally, in 1933, the name was changed officially to Alice Springs.

During the 1939-45 World War II, many troops were stationed in Alice Springs on their way to Darwin and it is said that at one time there were over four thousand troops in the town. There were no buildings on the East Side of the town in those days and an Army Camp was established there. Other places about the town were also built by the Army and also by the Civil Construction Corps who were responsible for building the Bitumen or the Stuart Highway from Alice Springs to Darwin during those years.

In the years between the war and today the town has grown enormously and has spread across the Todd River to the East, North to the Racecourse Area, South to almost touch Heavitree Gap and West to Gillen Subdivision. Incidentally, Gillen Area was once an aerodrome for light aircraft and the old hangars of Connellan Airways can still be seen next door to the Cemetery.

From a tiny township surrounded by saltbush and mulga on the banks of a dry river, Alice Springs is now a city with a population of more than thirteen thousand people and is continuing to grow at a rapid rate.
CHAPTER X.

WATER IN ALICE SPRINGS.

Without water people cannot live. We need water to drink and to grow food. We need water for health and cleanliness, too. We use it for washing and for disposal of waste material which we call sewage.

As Alice Springs is in a very dry part of the driest continent of the world, Australia, our water supply is very important. All the water we use comes from beneath the ground from subartesian bores and wells. Holes are dug or drilled to the sources of underground water and the water is pumped to the surface. This type of water supply is used for the township, settlements and for stations and homesteads throughout the district.

HISTORY.

When Alice Springs was first established as a township, the people used wells for their water supplies. Each house or business had its own well. The wells were dug by hand and the sides were braced with timber to stop them falling in. This was done as the well got deeper. At the top of each well was a windlass and buckets of water were hauled to the top by winding the handle. None of the homes had taps inside them and water was carried inside for cooking, washing and drinking. Some of these wells are still in use in the town and are used for watering gardens.

On stations, where stock had to be watered the wells were wider and larger buckets were used. These were pulled to the top by a horse or camel. The buckets were specially constructed with a hinged plate at the bottom. This was to make handling the heavy buckets an easier job. They were very heavy when full of water and instead of tipping them over to empty them, the hinged flap was pushed upwards and the water gushed out of the bottom.

"Reticulation" means "arranged in a pattern like a grid or net". This word is used to describe the pattern of pipes used in supplying water to a town or city.
The first reticulated water supply in the town was from a well in a house in Hartley Street, near the Residency. Water from this well was pumped to the school (which was in Hartley Street where the Water Resources Branch and Mines Branch are now), the Residency, the Police Station and the Church of England as well as some houses and shops. This was in 1937.

During the war, when there were many soldiers stationed in Alice Springs (in about 1943) the Army helped to install a better water supply for the town and for their own use. Bores were sunk (including the town bores) and more pipes were laid throughout the township.

The town bores, as they were called, were in a block of land in Hartley Street behind the Commonwealth Hostel. These bores supplied the town for some years and other bores as well were sunk to increase the supply. These were in other parts of the town and one was in our school yard. This was named after the bent-ever bloodwood tree not far from it and it is called 'Bent Tree Bore'.

As the town grew, so did the reticulated area. The Eastside was connected in 1949 and later the racecourse area in 1958. The town bores were forced to work very hard to keep up the supply and there was a great need for a better water supply.

In about 1958-59 the Bureau of Mineral Resources began a search for water in this area and tests were carried out to find more underground water supplies. In the Mereenie Field enormous quantities of water were found, enough to pump millions of gallons of water a year to supply the growing town for a very long time.

Bores were sunk near Roe (Temple Bar) Creek. They were equipped with pumps and pipes were laid for about 12 miles to Alice Springs. Through this source, a reliable water supply has been established for the town.

**MEREENIE.**

The bores which supply the town are situated on the edge of the Mereenie Field. There are about 8 bores used at different times (not all at once) and they each pump 14,000 and 100,000 gallons of water an hour. (If all the pumps were used together there would be too much water for the pipeline.)

Each bore cost between $20,000 and $40,000 to sink and equip and they range in depth from 600 feet to 1,900 feet deep.

The bores have two kinds of pumps - shaft driven and electric submersible pumps. Electric submersible pumps are electric pumps that will work under water.

On a very hot day Alice Springs uses about 3½ million gallons of water and yet there is only a drop of a few inches in the level of the Mereenie Supply. The pumps are capable of pumping over 2,000 gallons of water a minute.

At present a project is in operation which will cost $2,400,000 to improve the town’s water supply. Bigger pipes (30 inches wide) are being laid to replace the present 15 inch pipes and a very large storage tank which will hold 7 million gallons of water is to be built in the area between Morris Soak and Mount Nancy.

**GRAVITY AND STORAGE TANKS.**

The large tanks on Anzac Hill, Meyers Hill and Billygoat Hill together hold about 1,000,000 gallons of water. These together with the new one mentioned before, will help to keep up the pressure of the water coming from the taps in your house. Water is pumped up to these tanks and it flows down again into the pipes leading to your house.
ALICE SPRINGS WATER SUPPLY - MAP.

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MAP:
- ALICE SPRINGS
- ANZAC HILL
- BILLYGOAT HILL
- MEREENIE FIELD
- MACDONNELL RANGES
- MOUNTAINS
- WATERWAYS
- WATERMAINS
- BORES
- PUMPING STATION
- SEWAGE PLANT
- CHLORINATION PLANT
- MEREENIE BORES
- AIRPORT
- EASTSIDE
- MEYERS HILL
- MT. BLATHESKITE
- BILLYGOAT HILL
- HEAVITREE RANGE
PERCUSSION DRILLING RIG.

- Guy wires to keep rig upright.

Bore Casing.

Sand Screen.

Sand Pump.

Bit

Walking Boom

Bull Wheel.

Cable.
SEWERAGE.

A system of pipes to carry away waste water and material was first laid in 1964/5. The treatment plant, tanks etc. are south of the town near the rubbish dump.

WATER TREATMENT.

Although Mereenie water is several million years old and free from any bacteria, as a precaution very small quantities of Chlorine gas are added to the water at the Chlorination Plant near St. Mary's. This gas is poisonous to people in large quantities but is is added in very, very small amounts.

Fluoride is also added here to help make the surface of teeth stronger and to reduce tooth decay.

DRILLING BORES – PERCUSSION METHOD.

Many of the bores in the Alice Springs area were sunk by the percussion drilling method. This method is a very old form of drilling and was used by the Chinese over 2,000 years ago. They used it to drill for salt water. (Salt was very valuable and in some countries it was used instead of money.)

The Chinese built a bamboo structure where the hole was to be made and on top of this was a pulley. A rope ran through the pulley and was attached to a heavy iron bit which hung down through the bamboo structure. The other end was pulled by men and when the iron bit was raised a certain distance the men let go the rope and the bit smashed into the ground, point downwards. This happened over and over again and gradually the bit dug its way into the earth and rock.

This is almost the same as a modern percussion drilling rig except that the bit is raised and lowered by an engine.

Some parts of the modern percussion drilling rig or plant have names which are supposed to date back to the time when the Chinese used this type of machine.

The Bull Wheel.

This is the wheel or drum onto which the cable is wound when the bit is raised from the hole. It gets its name from the animal used by the Chinese to haul the bit up from below the ground.

The Walking Beam.

This piece of machinery moves the modern rig’s cable up and down and sends the bit thumping into the earth. It gets its name from a kind of springboard used by the Chinese. When the bit got stuck underground, the cable was attached to one end of the springboard and men walked out on the top beam and jumped up and down on it to jerk the cable and loosen the bit.

In America, in 1859, a "Colonel" Drake used the ideas of the Chinese to build a drilling rig not unlike the one used today. His ideas were better than the Chinese and his machine was powered by a steam engine.
The Sand Pump.

This is a long, hollow, steel pipe with a flap valve at the bottom. As the bit of the boring plant thumps into the earth and rock, water is added to help break up the rock and this turns to mud. At regular intervals the cable is raised and the bit is removed. It is replaced by the sand pump. When the sand pump is attached to the cable and lowered the flap valve opens and the pipe fills with mud. As the pipe is raised again, the valve closes and the mud is held inside. The sand pump is taken out of the hole and the valve is opened to release the mud onto the ground.

Bore Casing.

As the hole gets deeper, its sides have to be supported or they would fall in. Lengths of hollow steel tubing called bore casing are lowered into the holes. These screw together and as the hole gets deeper the casing can follow just by screwing another length of casing to the first one and pushing it down to the bottom of the hole.

Screens.

When a supply of water is found and the bore is ready for its pump often a screen is added to the bottom. This is a slotted piece of metal that will let the water through to be pumped out but which holds back the sand and small pieces of rock. Sometimes the bore casing has slots cut into it for the same purpose.

DRILLING HOLES - ROTARY METHOD.

The Mereenie Bores were sunk by the Rotary drilling method. This more modern method of drilling is used to drill to very great depths for water and for oil. The rotary drill does the same job as the percussion drill but more quickly and more efficiently.

The Rotary Drill works rather like a dentist's drill but it sometimes has more than one set of teeth. The head rotates and grinds into the rock and the particles are forced up through the centre of the head. Instead of water to soften the material being drilled a special mud (called drilling mud) is used. Sometimes the "teeth" on the "head" are tipped with industrial diamonds because diamonds are the hardest material known to man, and can cut through any other rock that they may meet.

Windmills.

On many station and private bores a windmill is erected to pump up the water from below the ground. These save money by using the power of the wind to raise the water. Most windmills have an auxiliary engine which can be used to pump water to the tanks alongside the bores when there is no wind. The tanks store the water until it is needed and a float valve on the trough where stock drink controls the water flow from the tank so that the trough will not overflow and cause wastage.