SELF-GUIDED TOUR 3

AROUND MONTAGUE



This tour will take you on a circuit around the southern end of Montague Island, with several key stopping points to use as a link to the information in this booklet.

This tour could take around 2 hours to complete, so let someone know where you're going, and take water and use sun protection!

Follow the path as shown on the guide opposite.

Where possible we have used a prominent feature as a stopping point for the tour.



You will explore the Island through several themes:

• Find out about the naming of the Island

• Find out about current work on the Island concerning Kikuyu Grass and its effect on the Island's seabirds. This work is part of a project known as the "Seabird Habitat Restoration Program".

• Find out about basic Sea Bird biology and life-cycle information.

• Find out about the graves in the Island's Cemetery

• Find out what happened to the trees on Montague.

• Find out about some of the Island's secrets!

Enjoy.



The old sign above the channel in Narooma, circa 1953, and still there!

START AND FINISH THIS TOUR AT THE "MONTAGUE ISLAND LIGHTSTATION" SIGN.





"<u>Montague Island Nature Reserve</u>" is now the full title for this Island.

It wasn't always so ...

Original Name "Baranguba"

Local Aboriginal people know the Island as Baranguba - the name they have used for thousands of years. Baranguba is the eldest son of Gulaga, the mountain clearly visible on the mainland west of the Island. His younger brother Najanuga is the smaller hill at the southern foot of Gulaga. For more details on this, please see the "Lure of Montague" book in the Island's library.

The first Island name change "Cape Dromedary"

"...[in] 90 fathoms, 5 Leagues from the land. At 6, we were abreast of a pretty high Mountain laying near the Shore, which, on account of its figure, I named Mount Dromedary (Latitude 36 degrees 18 minutes South, Longitude 209 degrees 55 minutes West). The shore under the foot of the Mountain forms a point, which I have named Cape Dromedary, over which is a peaked hillock."

So reads the entry in James Cook's journal at 6am on Saturday April 21, 1770.

Being 5 leagues out, (15 nautical miles) Cook's Endeavour was 3 times the distance of Montague and Narooma offshore, and therefore could not see that the "hillock" was an island.

Thus the Island was marked on Cook's map as "Cape Dromedary" as he presumed it to be joined to the mainland.

Cook's map was used by the First Fleet in 1788 as they sailed along the coast, avoiding "Cape Dromedary" as they sailed by.

The second Island Name Change "Montagu Island"

The Second Fleet, dispatched from England in 1789, was meant to be bringing skilled convict workers and important supplies for Governor Phillip's settlement in Port Jackson (now Sydney). Instead this fleet became infamous for the deaths of some 278 convicts during the journey of 3 of the ships which arrived.

The Second Fleet ships were chartered, not owned by the British Government, thus they were ordinary merchant ships.

"The crew, who were recruited from the Back Streets and Taverns in London, having sold the prisoners food to line their own pockets, they left the prisoners half starving for most of the journey.

To add to the misery of the prisoners' voyage these two (the "Neptune" and the Surprise") were 'wet' ships, used previously for slave trading, which leaked so badly as to have the prisoners waist deep in water most of the journey."

During their journey, the "Surprise" passed near enough to "Cape Dromedary" to realise it was an island. On reaching Port Jackson they reported it as such and it was named "Montagu", referring to the middle name of the 2nd Earl of Halifax - George Montagu Dunk - who, amongst other things, was the First Lord of the Admiralty for a time, but perhaps most famously known as the 'Father of the Colonies' for his success in extending American commerce. The city "Halifax" bears his title name. Previously, in June 1770, Cook had named "Dunk Island" on the Barrier Reef after the Earl.



A sketch of Cook's travels past this area.

It is worth briefly continuing with the Second Fleet's story with some quotes from the time...

"... the landing of those who remained alive despite their misuse upon the recent voyage, could not fail to horrify those who watched. As they came ashore, these wretched people were hardly able to move hand or foot. Such as could not carry themselves upon their legs, crawled upon all fours. Those, who, through their afflictions, were not able to move, were thrown over the side of the ships; as sacks of flour would be thrown, into the small boats. Some expired in the boats, others as they reached the shore. "

In the late 1790s more information was provided through the efforts of Bass and Flinders.

George Bass passed between Mount Dromedary and "an island" during his exploration south of Sydney in late 1797.

Matthew Flinders passed to the west of Montague in February 1798 on his journey aboard the "Francis" to rescue sailors from the wreck of the "Sydney Cove" and noted that it was an island rather than a cape as noted on Cook's chart.

In October that year during a journey with George Bass aboard the "Norfolk", Flinders took soundings of the water depth between the Island and the mainland and found it deep enough for the safe passage of ships.

The third Island Name Change "Montague Island"

This name change is merely an adding of the "e". However it is significant for changing George Dunk's middle name from its French spelling to the more anglicised "e" version.

It was certainly spelt with an "e" by Matthew Flinders in 1798, and presumably added ever since.

Interestingly, the National Trust still use the spelling without the "e", in its much of its literature!

The fourth Island Name Change "Montague Island Nature Reserve"

Although not strictly a "name" change, the extra words came into being in 1990 when the Island was officially gazetted as a Nature Reserve under the NSW National Parks and Wildlife Act.

This name change reflects the Island being protected under the highest level available within NSW law.

CONTINUE THIS TOUR BY HEADING AROUND TO THE EAST PAST THE QUARRY, STOPPING AT THE AREA OF MOSTLY-DEAD GRASS ON THE RIGHT.

Shorebird Habitat Restoration Program



For many years this part of the path has been mown through the lush Kikuyu Grass, a species first introduced to Australia from South Africa in 1912 for agricultural purposes. The keepers brought the grass to Montague sometime early last century.

The grass would have helped feed the goats, the horses and other livestock



on the Island, as well as serving a useful purpose in providing ground cover around the houses.

In the years since its introduction, Kikuyu Grass has steadily invaded much of the western side of the Island, developing into a thick covering which strangles out the native vegetation as it grows over it and preventing any re-growth finding the light. Very few plants other than

Bracken Fern and the Common Reed can penetrate through its canopy of runners and matted leaves, that gets thicker and thicker and higher and higher each growing season.

Interestingly, on a dairy property at Illawambra, just southwest of Gulaga, Sir John Peden developed an improved strain of Kikuyu Grass for use on local dairy farms. Most of the local farms took their "runners" from this property to propagate back on their own dairies. Kikuyu Grass thus has a very local link! Even worse than its affect on the vegetation has been its devastating affect upon the Island's penguins – blocking access to their burrows and killing them, particularly the young, through their feet becoming entangled in its

strong mesh of runners. From 2000, Charles Sturt University and NPWS have conducted the SHRP Program to find a way to eliminate Kikuyu Grass or at least reduce its impact upon the Little Penguins.

Following experiments, a system of spraying small sections to kill the grass, then burning off the dead grass followed by planting of native species has been adopted. You will see the results of this work later in this tour.



Dead Penguin with entangled leg. The grass is wound round and round its leg above the foot.



LOOK... This section was sprayed in 2005 as an experiment, with the idea of directly planting into the dead grass. As you can see, there is still a large biomass of dead Kikuyu Grass, and replanting was not a success.

However, all is not lost for this area... the Crested Terns use it for nesting purposes and over 600 nests were tightly packed into this one small area during the 2007 breeding season.

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CONTINUE THIS TOUR BY HEADING SOUTH TO THE GRASS CLEARING A LITTLE FURTHER ALONG.

Amongst the many changes Montague Island and the people living out here have experienced over the years, the reduction in its isolation through improved communications and transport would be one of the most significant.

Faster boats, breakwalls on the river entrances, improved landing facilities as well as telephones, computers and radio have reduced the impact of being so far from help and support.

This grassed area is the helicopter landing area for the Island and reflects the developments during the age of air transport.

Transport for medical emergencies can now be just a flight away, instead of the risk of waiting for a boat that may not be able to make the crossing due to poor seas.

Helicopters have also been used to transport heavy or bulky items out here, as well as having a role in fire-fighting and aerial spraying programs. When the birds are nesting nearby, the helicopters have to use one of the bare rocky areas much further away, due to the risk of disturbance and injury to the birds and also of damage to the helicopter.

CONTINUE SOUTH ALONG THE LEFT-HAND TRACK (EAST SIDE). STOP AT THE TOP OF THE LITTLE DIP.



LOOK... down to the right and you will see a burrow, and there's another one just further along on the bank as well. These are burrows used by Little Penguins for roosting and breeding. Montague Island is home to one of the largest Little Penguin populations in Australia with approximately 5000 pairs.



Little Penguins do not always come home each night, and in the non-breeding season (March to July) may not come ashore at all for weeks. They are wellequipped for long periods at sea. However, from July through to January these burrows will be used for the raising of up to 2 chicks, and there will be much evidence of burrow-usage. If there are fresh guano marks outside, then this means the burrow has been used recently.

3

Notice how high up the Island these are! It's a long walk to the water, and the Penguins will use the network of tracks as a series of "highways" in their journeys to and fro.

Male penguins are responsible for burrow preparation, and may have to fight off other contenders for desirable burrows. The route from the burrow to the water and the landing site is ingrained into a male's brain for life. This navigational ability enables them to have a high level of loyalty to their nest and also to their returning partner!

He may even find one of his "sons" trying to steal the burrow when he is of breeding age!



LOOK... for any feathers around the burrow entrances. These may be a sign that one or both of the pair has "moulted" in the burrow some time

in February or March. Most flying birds lose a few

feathers each day that are then replaced by growing a new one. Little Penguins, however, "moult" by changing all their feathers at once over a 16-day period. They cannot eat as they cannot swim. Their new feathers literally push out their old ones.

This process will cost them dearly in terms of energy, and so they will go to sea to recover and regain their weight, and will stay away for weeks on end.

WALK ALONG A LITTLE FURTHER AND LOOK INTO THE GRASS ON THE LEFT-HAND (EAST) SIDE OF THE TRACK.

Here, depending on the season, you may be able to see evidence of Shearwater (muttonbirds) burrows, and their excavations into the sandy soils.

We have 3 species identified as breeding on Montague: Short-Tailed, Wedge-Tailed and Sooty Shearwaters. Shearwaters are the most numerous seabirds to visit Australia. Quite literally

more than 50 million may spread out

along our coast for the breeding seasons. Montague can expect up to 15000 pairs to nest here!

All of these species are remarkable for their long-distance migrations from the northern hemisphere from their "northern summer" feeding grounds in the North Pacific to their "southern summer" breeding and feeding grounds in Australia.

Sooty Shearwaters make a looping figure-of-eight flight that takes in more than 70,000kms a year! Short-tails may fly 15000kms north in about six weeks, and come the same distance to return – 30000km annually! Shearwaters lay their single eggs in late November and will spend close on 4 months raising their chick before heading off in early April to return north. The chicks will lose weight, gain adult feathers and head off themselves - without being shown the way.

During these migrations many birds are seen dead along our shores, some years more than others, but to keep it in perspective, there are an estimated 23 million Short-Tails visiting our shores each year alone!

4

WALK ON DOWN THE HILL UNTIL YOU REACH A FORK IN THE TRACK, THEN TAKE THE LEFT-HAND TURN. The right-hand track leads directly to the old jetty, and we will re-join it later.

LOOK...

Stop for a moment along this section and examine the vegetation. The dominant plant here is *Lomandra longifolia* (sometimes known as Spiny headed Mat Rush, or just Mat Rush). The impact of Kikuyu Grass is much less apparent down the east of the Island and is controlled by spraying only - burning and replanting are not needed.

CONTINUE ON UNTIL YOU REACH A STEEL POST WITH A SILVERY TAG UPON IT.

This is one of the original

experimental plots for Kikuyu Grass control. There are more such experimental plots scattered around this end of the Island.

LOOK... The letters CSU stand for Charles Sturt University.

The last group of letters on the sign – "SBA" tell us that this plot was <u>Sprayed</u> and then <u>B</u>urned and is Plot "A".

This occurred in 2001. There are plots SBB and SBC in other areas. The area has re-vegetated itself. In areas of low Kikuyu Grass infestation spraying alone is enough to control it.

CONTINUE ON UP THE HILL AND STOP AT THE INTERSECTION OF THE THREE TRACKS.

of how Little Penguins use the clumping growth pattern of Lomandra to make their nests.

This burrow is not strictly underground, but rather goes around under the thick old growth of the Lomandra plants, providing a safe home for nesting purposes.

CONTINUE AROUND TO THE LEFT (SOUTH-EASTWARD) TO THE CEMETERY.

These graves are a reminder of the isolation of Montague, particularly in days gone by. Had these individuals been on the mainland at the time, with access to help, they may have lived longer – we'll never know.

The older gravestone, unfortunately made of softish sandstone which has not weathered well, marks the burial sites of firstly John O'Dell Burgess and then Isabella Millicent Burgess - two of the first Head Keeper's children - Captain John Burgess and his wife, Isabella.

The metal plaque unfortunately wrongly records John's age as 9 years and 10 months instead of 2 years and 10 months.

In 1888 young John fell ill, and his condition deteriorated to the point where the family flew the distress pennant from the signal mast.

After a wait of almost 5 days, with no response from passing ships, a boat was seen heading to the Island from Narooma. The doctor on board was rushed up to the house but was unable to save the young lad. Mrs Burgess made this the Anglican Cemetery and held a service with her officiating and the keepers being witnesses.

His death certificate just lists

"Childhood Disease" as the cause of death.

Mrs Burgess was pregnant at the time and gave birth to "Isabella Millicent" a few months later. Little Isabella lived only 1 year and 8 months before succumbing to whooping cough. She died overnight. Again Mrs Burgess had to conduct a service for one of her children. Two children in two years... perhaps this is one reason Captain Burgess went on to stay here until 1898 – seventeen years as Head Keeper – this being the record for service on this Island.

The other gravestone, of more durable marble, belongs to Charles Townsend, an Assistant Keeper at the time of his death just before Christmas in 1894. He and his growing family had been on the Island for some five years.

He was killed, according to the death certificate by "internal injuries as the result of an incident with a horse". He apparently fell awkwardly onto the ironwork of the cart, and died in agony after 12 hours.

Mrs Burgess conducted the ceremony, burying Charles next to her children.

Ellen Townsend – Charles' wife – was left with their 5 children in a time of economic depression in NSW. She was transported by road to Sydney via Narooma, and found "domestic work" and managed somehow to raise her children. Many Townsend descendents have

visited the Island and the grave of their ancestor Charles.

In 1892 the Island's visitor's book records the death of "our young friend and companion, Westaway who was washed off the rocks and drowned" during an Easter visit by a group of 6 people.

Take in the view to the south and notice the remarkable rock tors. That area is a significant place to local Aboriginal people and access past this area is only for researchers and the Elders. Please respect this.

RETURN TO THE INTERSECTION AND TAKE THE TRAIL DOWN THE HILL TO THE WEST.

At the bottom of the hill, the track to the south leads to Old Jetty Bay, which is worth another visit on its own – see tour 4.

HEAD TO THE RIGHT ALONG THE WATTLE TREE "HEDGE", AND STOP AT THE CLEARING IN THE SHRUBS JUST A LITTLE TO THE NORTH.

This hedge of wattles (*Acacia sophorae*) marks the boundary of around 4.5 hectares of land treated for Kikuyu Grass in 2001.

The clearing exists due to one of the experimental plots being allowed to re-vegetate naturally following the burn, acting as a kind of "Control" plot.

LOOK... You can clearly see the difference in vegetation - the clearing is mainly filled with bracken and only a few lomandras compared to further in with its greater variety of shrubs.

Inside the area you can see *Bankias, Lomandras* and *Wystringias* planted after the burn.

The hedge of wattles was to act as a buffer zone preventing Kikuyu Grass getting back in there from the other side. This practice is no longer used on the Island as it creates a monoculture not conducive to seabird nesting.

LOOK.. As you walk along to the north on the right you will see another experimental plot with only wattles planted in it. There are several such plots around which experimented with trying to shade out the Kikuyu Grass with shrubs. However these methods have not been adopted as the "monoculture" created is undesirable .

As you walk enjoy the massive tors on the eastern side of the track and the ever-changing views of the lighthouse tower. You can also see naturally-occurring growths of native grasses clinging to the cracks in the boulders. Some of these species are now also planted in with the mix of plants in newly-treated areas.

CONTINUE NORTH ALONG THIS TRAIL UNTIL 50 METRES FROM THE SEATS.

The area on your left (western) side is the top end of the area treated for Kikuyu Grass in 2004.

LOOK... for one of the first Eucalypt trees to be returned

to Montague. It's a Southern Mahogany (some say Coastal Mahogany) (*E. botryoides*), common on the coastline around NSW.

Were there ever trees on this Island? What happened to them?

Early photographs show trees on the Island, as do the sketch plans of James Barnet, Colonial Architect who designed the light station. As Montague's trees aged and died, there would have been fewer and fewer replacements due to several factors:

• The Island was "seeded" with goats and rabbits in the early 1800s, as were many such islands around our coast. This was a deliberate act to provide a food supply for ship-wrecked sailors. These animals managed to exist out here until their removal in relatively recent times. Goats and rabbits love new growth to eat, and would have nibbled on any young plants, even pulling them from the ground in the process.

• Up until 1953, when it became a wildlife sanctuary, campers, particularly fishermen, had basically unlimited access to the Island and would have used some of the timber for firewood.

• The houses have many fireplaces within their walls – in fact the total is 19 counting laundries and kitchens! Kindling would have been required for lighting these fires.

• Over the years, the Island has had several instances of bushfires from lightning strikes, some quite severe in their impact upon breeding birds. Following a fire, Kikuyu Grass will spread rapidly over the cleared ground.

• Kikuyu Grass grows in a manner which covers the ground in a thick matting of runners and leaves. This in itself would have stopped many seedlings from ever reaching the light should they germinate.

CONTINUE ALONG TO THE HALF-WAY SEATS. ENJOY THE VIEW AND READ THE SIGNS FOR SOME MORE OF MONTAGUE'S HISTORY.

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This intersection provides an opportunity to see several stages of the Kikuyu Grass program from one vantage point.

LOOK... Behind the seats is the obviously untreated mass of Kikuyu Grass.

See how thick it grows and how few other species are in the area.

It is worth remembering that the whole western side of the southern Island looked this way, and some areas much worse, until the program started in 2001!

LOOK... Directly to the

west across the track to see the 2004 treated area. It has a mix of species and the Kikuyu Grass has been removed. This picture on the left shows the area

immediately after the burn in 2004. You can see penguin boxes placed where there were active nests. Each breeding season researchers and volunteeers mark out the active nests in the areas to be burnt the following

year. Using GPS technology, a temporary nesting box is placed in the approximate nest area. Penguins have been found back in the boxes within 4 days of the burn!

Scientists have been using such boxes for many years to make it easy to monitor penguins. This is making good use of a penguin's natural instinct to come back to the same nest each year.

LOOK... to the north to see the 2007 treated area. Comparing the 3 areas shows what can be achieved in a relatively short space of time.

Penguin monitoring is an on-going process during breeding seasons, with checks being made in both treated and untreated areas. Information is gathered

on breeding success, numbers of new nests, nest occupancy rates and there is also an annual "census" of penguins on the Island.

Interestingly, some data has emerged about which way penguins prefer the entrance of their nesting box to face - North or north-East!

CONTINUE YOUR WALK UP THE HILL TO THE QUARRY, BUT HEAD TO THE NORTH DOWN TO THE NURSERY - THE SHADECLOTH SHED.

This temporary shed was constructed on the clearing which once was the site of the Island's horse stable, chicken coop and machinery shed.

In 2006, as part of the SHRP Program, the area to the north of the track from the jetty to the light station was spayed in May to kill the Kikuyu in preparation for burning.

Burning can only take place in June or July – a time of low penguin visitation.

However in 2006 unusually heavy rains prevented this from occurring.

It thus became necessary to house the 13000 seedlings that had been delivered to the Island ready for planting after the burn. This shed was built as a temporary measure to care for the plants for a year or so, until the burn could (hopefully) take place in 2007.

During their time in the shed, the plants required potting-on into bigger pots. This was largely done by our Overnight Conservation Tour participants.

Fortunately the area was subsequently successfully burnt in 2007 together with the scheduled area for 2007 – now forming the single treated space to the north of the main track.

Volunteers do the bulk of the planting either university students or our over night Conservation Tour participants.

Plants receive just one watering when they go into their new home, as Island water is too scarce for a repeat.

As you have seen during your tour thus far, the strike rate has been exceptionally good in most areas, despite some very dry years, in particular 2005 when the Island's houses almost ran out of water during a long dry spell!

The shed will be pulled down once scheduled plantings stop occurring.

CONTINUE YOUR TOUR TO THE NORTH AND NORTH-WEST ALONG THE TRACK UNTIL YOU REACH THE NORTHERN END. THE VEGETABLE GARDEN AREA.

LOOK... around and explore this area.

No details exist as to how long this area was used for growing vegetables, but we know of the existence of a garden from early descriptions of the life of the keepers on the Island.

Some of the corrugated iron work suggests there were structures for pig

pens, chook pens and perhaps pens for other animals such as geese.

LOOK... for the old well, now covered with a wire top to prevent penguins from falling-in!

This well is reasonably reliable, though with such a small catchment in dry times would not have re-filled very quickly.

The corrugated iron fences may have also been used to keep the Island's goats out of the vegetable patch as much as to protect plants from the strong winds such an exposed place would receive.

Interestingly, the Hampson family recalled that during their stay in the early 1970s the garden was much overgrown and not used by them or the other family here at the time.

CONTINUE YOUR TOUR UP ONTO THE GRANITE TOWARDS THE NORTH UNTIL YOU CAN LOOK DOWN UPON "THE GUT" - THE GAP BETWEEN THE ENDS OF THE ISLAND.

On the western side is Yellowtail Bay, named after the small baitfish caught here for later use to catch the "big ones" such as tuna and kingfish.

LOOK... across to the area where the seals live. If the wind is right, you may be able to hear and even smell them! Sometimes there might be a seal in the bay below.

LOOK... for the differences in the rocks between the northern and southern ends of the Island.

The northern end is a basalt-type rock that cooled much quicker than the southern granite-type rock

following the volcanic activity millions of years ago which formed the Island.

If you can see into the Gut itself, you'll notice its bouldery floor is strewn with debris washed up by big seas. Historically, since 1953, the northern end is a no-go zone for all but researchers or during emergencies. This is still the case today to protect the seals and the many burrows that honeycomb the soil up there.

CONTINUE YOUR TOUR BY WALKING BACK TO THE VEGETABLE GARDEN AND THEN BACK TO THE NURSERY AREA. TO THE EAST IS A GRANITE TOR WITH THE REMAINS OF SOME BRICK FOUNDATIONS.

Secret Submarine Tests!

In 1961 and 1962 the Royal Australian Navy (RAN) built 3 small huts on and around this rock as an experimental facility for testing submarines.

Apart from the Dutch submarine 'K9' used for training during the Second World War, Australia did not operate its own submarines for 36 years between 1931 and 1967. However, during the period 1949-1969, 10 Royal Navy submarines were stationed in Sydney.

A cable extended from the sheds out to the continental shelf with a string of hydrophones, presumably for the testing of noise levels in the submarines. It was very secretive in nature and the keepers on Montague had very little if any contact with the naval staff stationed here.

After the navy's work finished in the late 1960s and the sheds were emptied of equipment, and researchers then used them on and off as accommodation. The huts could only be described as "spartan" due to being constructed of unlined fibrous cement sheeting over timber frames.

Eventually the sheds were demolished in the late 1980s.

COMPLETE YOUR TOUR BY RETURNING TO THE STARTING POINT NEAR THE SIGN.

YOUR TOUR IS NOW COMPLETED. PLEASE RETURN THE BOOKLET TO THE LIBRARY IN THE ACCOMMODATION.

We hope you've found your self-guided tour a rewarding experience.

Any feedback on this booklet is welcome, particularly contructive suggestions, corrections or ideas.

Acknowledgements:

Written by Mark Westwood, NPWS Narooma 2008

"The Lure of Montague", revised edition 2001, by Laurelle Pacey, has been cited extensively for this document. This book is available for purchase in the Narooma Visitors Centre.

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Photos:

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Websites:

historyaustralia.org.au members.westnet.com.au) www.karizmah.com