

DOUBLE ISLAND POINT LIGHTHOUSE

BY RON & YVONNE TURNER



"I am a self confessed pharophile, that is, a person interested in lighthouses. My wife and I have been volunteers assisting the preservation of these unique areas in Queensland for some years. Part of our role is to care for and interpret the heritage of the sites to visitors".

Ron Turner

Lighthouses in the New Colony

Within two years of the First Fleet arriving at Sydney Cove, Australia in 1788, the fledgling colony was short of food. Governor Macquarie directed a lookout be established on the South Heads of the entrance to Sydney Harbour. The objective was to signal the colony of the approach of any ship, including those bringing food.

Officers and crew of *HMS Sirius* (flagship of The First Fleet) built huts for shelter 20 January 1790 and erected a flagstaff which could be seen from Sydney Cove. Fires were said to have been lit each night from dusk to dawn. The first recorded use in Australia of a navigational light was the fire lit there 15 January 1793 for the *Bellona* waiting off shore to enter Sydney Harbour through the heads.

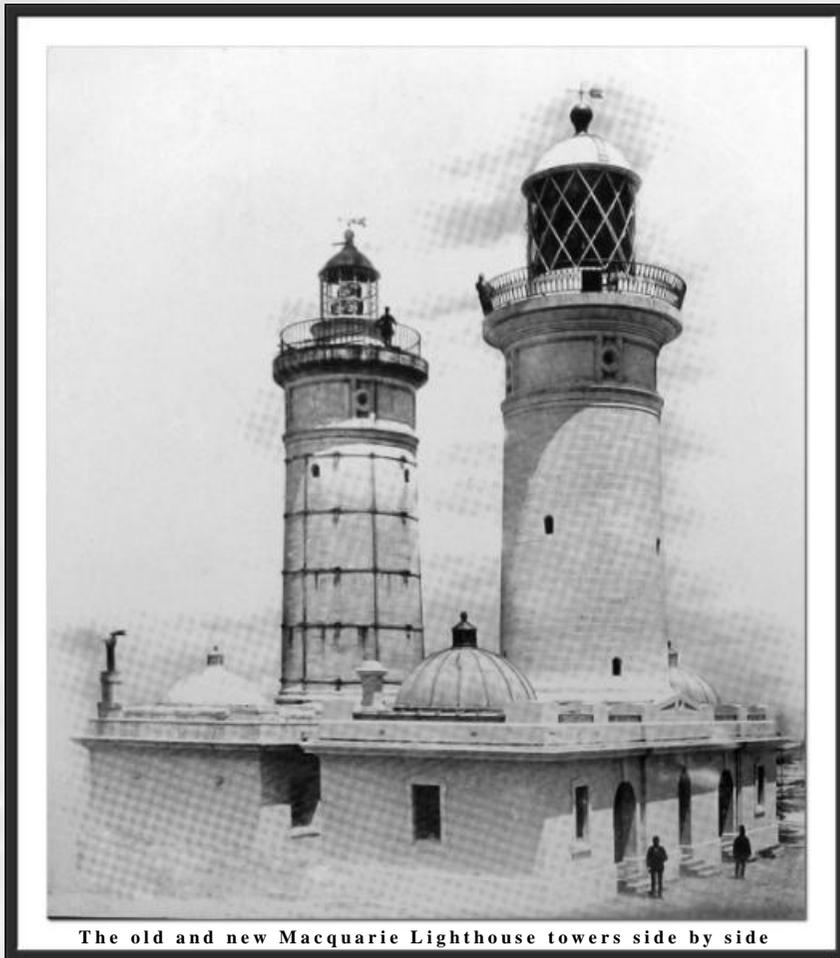
The present stone building located at the site (inset) was designed by Colonial Architect Mortimer Lewis and built by convict labour in about 1840 to replace the timber huts. In 1893 a 9.2 inch gun (about 234mm) was put into position and the area became known as the 'Signal Hill Fort'.

Australia's first lighthouse was designed by convict Francis Greenway and built at this location at the direction of Governor Macquarie. It began operating 30 November 1818. Fifty years later, stonework in the original tower began to crumble. Iron bars were strapped both horizontally and vertically to hold the stone together while a second tower was built in 1883 as a close replica of the original structure. For a period of time both towers stood side by side. Accommodation for the head lightkeeper was on the right while two assistants were housed on the left.



Signal Hill Fort

Use of electric power in lighthouse technology prior to 1900 was rare, due to lack of a suitable constant power supply, batteries and lamps. The first electric system in an Australian lighthouse was installed in the late 1800s in the replacement tower at Macquarie Lighthouse. This was powered by electricity that was generated by two dynamos driven by coal gas engines. The cost of operating this system was very high and the electric arc lamp was replaced by a kerosene vapour lamp in 1912.



The old and new Macquarie Lighthouse towers side by side

Macquarie Lighthouse in 2013.



© Ron Turner.

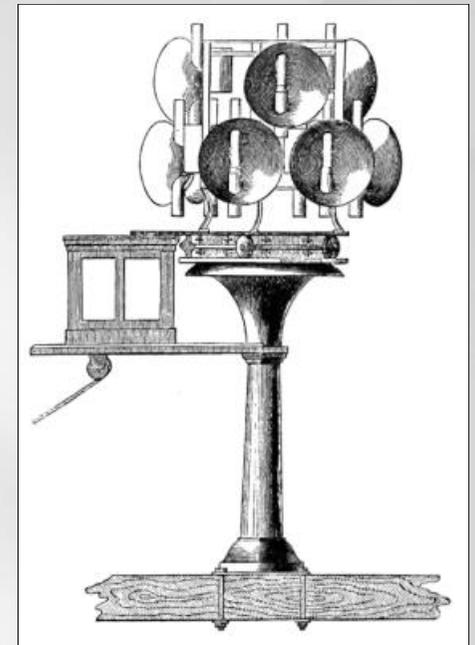


Hornby Lighthouse

In 1857, the sailing ship '*Dunbar*' was wrecked on rocks in bad weather near South Head, while waiting to enter the harbour; 121 lives were lost. Two months later the *Catherine Adamson* was wrecked in the same area, with the loss of 21 lives. As a result, a manned lightstation known as the Hornby Light was constructed and began to operate in 1858 to assist with the passage of shipping both into and out of the harbour.

The initial light source was 16 kerosene lamps in front of parabolic reflectors arranged in concentric circles.

This early lighting at Hornsby Lighthouse was similar to this model (right). At the top of the pedestal is a flat pan containing the fuel. In this sketch note, three wicks are drawing the fuel upwards from the pan to the round parabolic reflectors.



These early systems tended to have no chimney to vent fumes, and the acrid fumes would build up and burn the eyes and nose of the keeper, often driving him out of the lantern room.

The intensity of the light emitted depended on the lantern glass being kept scrupulously clean and the wicks properly trimmed; early keepers became known as 'wickies'.



Circular wicks were developed later, and this newer design allowed oxygen to pass both inside and outside of the wick at the same time (see photograph page 20). Together with a glass chimney, the flame burned much more brightly and efficiently with less fumes and smoke.

Some lighthouses used chandeliers holding up to thirty of these lamps to provide adequate light. In 1904 this lighting system was converted to 10 incandescent gas burners. In 1948, mains electricity was connected to the lighthouse and the lighting source was changed over to an electric light system.

The Hornby Lighthouse is more strictly a harbour light than a coastal navigational aid. It was painted with the red and white vertical stripes to distinguish it from the nearby white Macquarie Lighthouse, and remains today as the second oldest harbour light in use in New South Wales.



Defensive gun emplacements are often found on strategic hills near important harbours. In addition to Signal Hill Fort - located about a kilometre to the south of the entrance to Sydney Harbour - gun emplacements were also established beside the Hornby Lighthouse to guard it from hostile attacks.

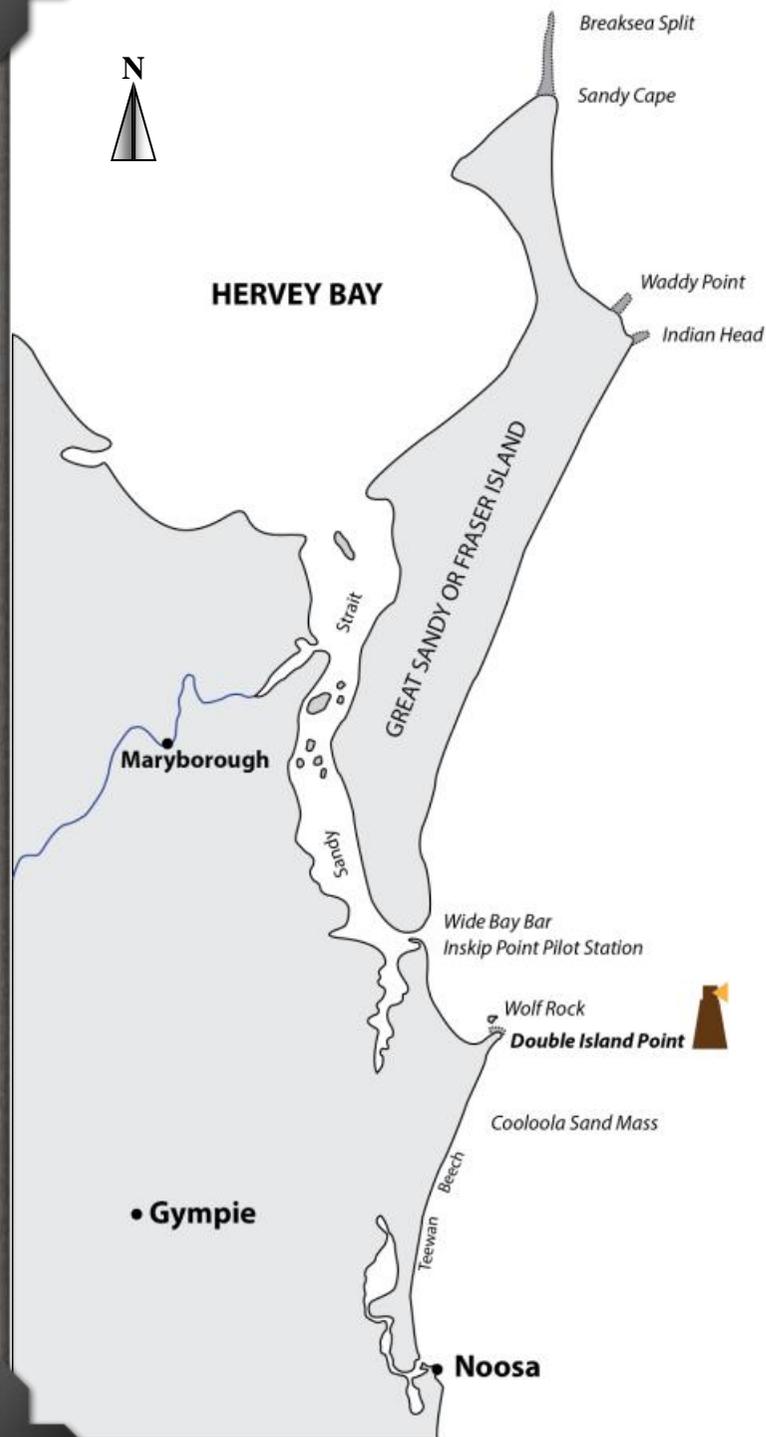
During the Second World War, armed coastal raiders were known to sink shipping close to the Australian mainland and bombard strategic lighthouses along our coast. In 1942, our defences were inadequate to defend Sydney Harbour from an attack by three enemy Japanese midget submarines.



Locale



On the left is Teewah Beach and one can just see the hills of Noosa National Park some 70 km away. This is the beach along which stores were ferried by early motor vehicles and were dragged up to the station on a sled behind a horse. The Noosa River - across which the motor vehicles were ferried - lies in front of those hills. The beach on the right leads to the present township of Rainbow Beach beyond which is Inskip Point, another old lightstation, and the point at which stores were put ashore. The stores were then transported via four-wheel buggy and horse to the Double Island Point station.



Along the south-eastern Queensland coast there is a series of rocky headlands, each with a corresponding wide sweep of sandy beach extending beyond the headland to the north. These reverse capital 'J' shaped beaches are also known as 'zeta' curve beaches. The rocky headlands were formerly islands and they have helped shape this part of our coastline over millennia.

The erosive forces of running water has moved - and still moves - particles of sand from the mountains in north-eastern New South Wales and southern Queensland via the big rivers to the ocean. A south-easterly long-shore current and corresponding winds have moved the sand northerly along the coast. As the ocean currents passed around the former rocky islands, the movement of water slowed. Sand was deposited, and this residual sand extended to the south. (See photo page 8). Variable sea levels have enabled on-shore winds to uplift and modify the sand to form dunes. Evidence of a former sea level can be seen some 1.5 metres above the present ocean level at nearby Rainbow Beach. A 1924 undersea geological map to the east of Teewah Beach indicates former sea levels scores of metres below the present sea level.

In the Cooloola area, the sand deposited has been modified to form at least six different systems of parabolic sand dunes up to 240 metres high. The former island at the north became a rocky headland formerly known by local Aborigines as *Gullirae*, and named by Lieutenant James Cook as Double Island Point, while the associated dunes in the Cooloola Sand Mass extend southerly for 35 kilometres.

The rocky headland of Double Island Point is mainly volcanic in origin. Almost two kilometres off-shore lies the dangerous Wolf Rock, an outlier consisting of five rocky peaks and a hazard to navigation. Only two of these pinnacles are barely awash at low tides.

To the south, at today's Noosa National Park, an identical rocky headland and associated sand mass occurs while further to the north, the rocky Indian Head and Waddy Point on Fraser Island each have their own 'zeta' curve beaches. Prior to the shipwreck of the brig *Stirling Castle* in 1836, and rescue of Eliza Fraser, the present Fraser Island was known as the Great Sandy Island. We recognize it today as the largest sand island in the world.

DOUBLE ISLAND POINT HEADLAND WITH LIGHTHOUSE AT EXTREME RIGHT



Taken from Waddy Point, two thirds along Fraser Island where there is a distinct change of foreshore beach direction in favour of a zeta curve (reverse capital 'J').



Lieutenant Cook sighted this area from out to sea during his first voyage of discovery northerly along the Australian coast. On Friday 18 May 1770 he saw from a distance what appeared to be '...two small Islands laying under the land...', and named the area Double Island Point. This image illustrates why he gave the area that name. The lighthouse can be seen on the headland at the far right. The cottages are located on the clearing just to the left of the lighthouse. The strip of white sand (centre left) marks the start of the Wide Bay Bar, with surf off-shore. Beyond the strip of sand is the Great Sandy Straits.



Lighthouse

Lighthouse and Watch Hut at Double Island Point 2006.

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History

Great European sea-faring nations had long considered the possibility a large continent existed south of the equator. Before Cook arrived on his voyage of discovery, the Spanish had searched for *Terra Australis Incognita* for over 200 years. The wreckage of a wooden ship lies on North Stradbroke Island, off Brisbane, 150 kilometres to the south of Double Island Point. Artefacts uncovered nearby indicate this may be a 16th century Portuguese carrack. Other wooden ships lie along our coastline - but their crews didn't survive to tell the world of their discoveries.

In 1867 the main shipping passage to the new settlement of Maryborough and its port was via Inskip Point and along the shallow Sandy Straits. A much longer alternative route was for ships to travel well to the north of Fraser Island with its dangerous underwater Breaksea Spit extending several kilometres out to sea, and double back to Maryborough. A pilot station was eventually established at Inskip Point and navigational lights provided to guide ships across the very dangerous sandy bar between Fraser Island and the mainland. A pilot guided ships to Maryborough and back. A long circuitous telegraph line to Inskip Point enabled contact with the Harbourmaster at Maryborough.

When the new Colony of Queensland was formed in 1859 there was only one lighthouse for the entire eastern coastline.

**Lighthouse and generator shed at
Double Island Point circa 1938.**

Courtesy State Library of Queensland

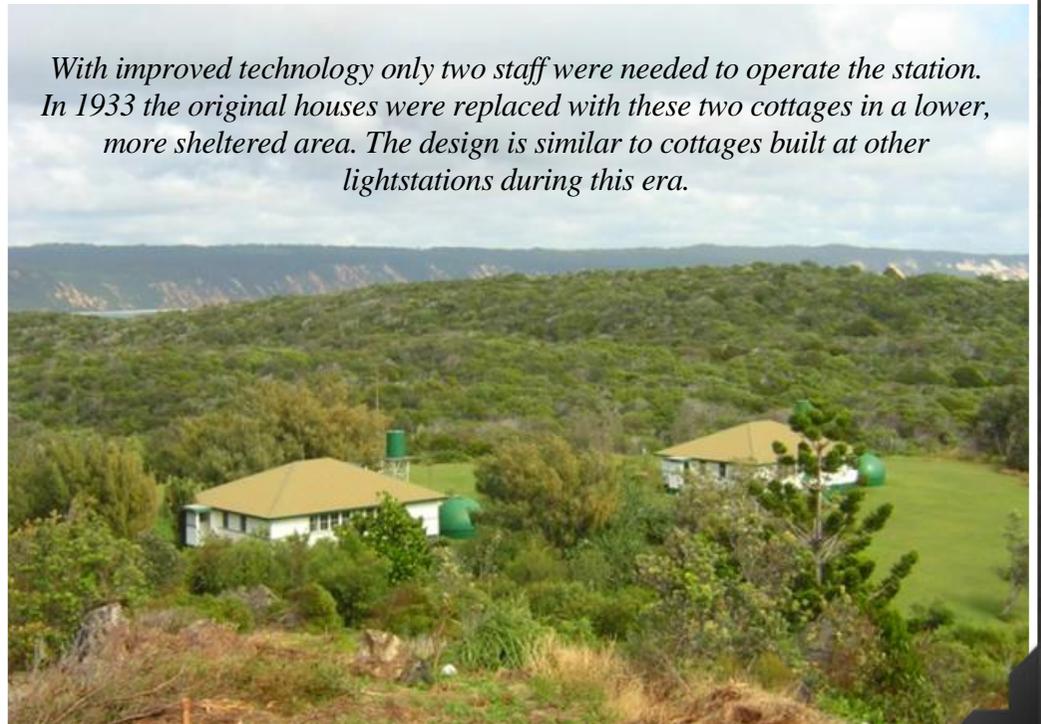


Commander Heath was appointed as Portmaster to advise the government on safety at sea and the need for lighthouses along the coast. The discovery of gold at Gympie in 1867 saw the Port of Maryborough become the sole source of food and all forms of mining equipment. European immigrant ships also landed here.

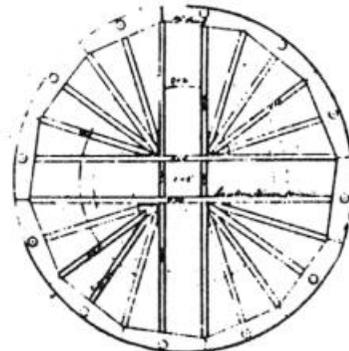
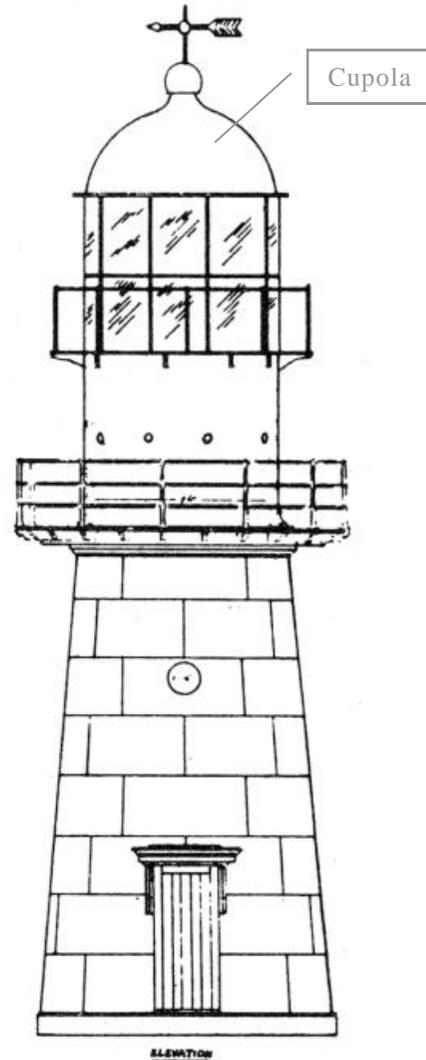
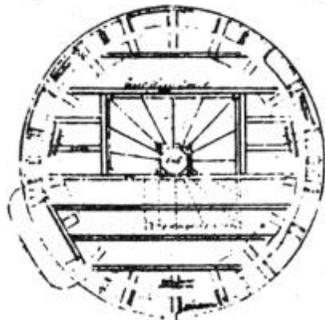
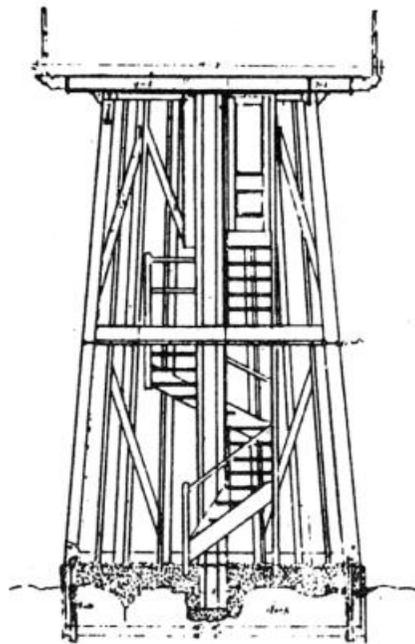
In 1881 Heath recommended a lighthouse at Double Island Point would be '...a great convenience...'. He returned to the area early in 1883 and recommended a lighthouse be built on the top of the headland with a 3rd Order Light. Within five months drawings and specifications had been prepared and the lowest of five tenders accepted.

Within 15 months the lighthouse was operational with staff housed in three cottages adjacent to the tower.

With improved technology only two staff were needed to operate the station. In 1933 the original houses were replaced with these two cottages in a lower, more sheltered area. The design is similar to cottages built at other lightstations during this era.



Commander Heath, as Portmaster, recommended a lighthouse be built on top of the 91 metre high Double Island Point. Plans were drawn and five tenders received. Five days later his recommendation to the government was accepted. The speed of the whole operation in building this lighthouse was remarkable.



Construction

Formed in 1859, the new colony of Queensland was near destitute, financially. There was one lighthouse in the new colony (Cape Moreton, 1857) and thousands of kilometres of coastline with treacherous coral reefs. Along the Queensland coast lighthouses were destined to be built in remote areas where suitable stone was not available for construction, or where poor natural foundation occurred, such as sand or coral.

A relatively new technique of construction first developed on nearby Lady Elliott Island in 1873 was used at Double Island Point. Early in 1884 work started on this lighthouse using a mass concrete foundation. Top soil was removed until solid rock was uncovered. Holes were drilled into this by hand and bolts inserted. Upright timber poles were bolted to a cast iron bedding plate which had been securely bolted to the foundation (next page).

The structure was braced using both wood and, near the platform, angle iron plates and iron ties. Light galvanized steel plates 2mm thick were riveted together and fixed to the frame to form the external cladding. In all, fourteen such timber framed lighthouses were built in Queensland between 1873 and 1897. A further six timber pole lighthouses were clad with vertically fitted corrugated iron.



Cast iron (angle) plates are bolted to the concrete foundation and to which the internal timber structure is fixed.

In the instance of Double Island Point some prefabrication was carried out in Brisbane. The light was first exhibited 11 September 1884, some 15 months after tenders were called. One of the workmen caught typhoid fever and died; his burial site is unknown but presumed to be nearby. Three lightkeepers were employed to work four hour shifts each night. They lived in three cottages built on top of the headland immediately adjacent to the lighthouse.

This lighthouse has seen numerous changes in technology, yet 130 years later, it is still in excellent condition and continues to form an important part of the coastal highway along Queensland's often dangerous coastline.

Despite one author denigrating Queensland lighthouses as 'The Lesser Lights', they were much quicker and far cheaper to construct, and were just as efficient and effective as the many impressive lighthouses of the southern states. The Queensland lighthouses have also been proven to be more resistant to rising damp which was prevalent within many southern lighthouses.

A little known fact is that it takes 10,000 strikes with a ball-peen hammer (engineers hammer with a rounded ball head) to form each plate of the red cupola (lighthouse dome). These plates are curved two ways. It took careful patience to ever so slowly stretch the metal in two directions with the ball-peen hammer.



It must have been frightening for residents during storms and even cyclones which caused some damage. The three houses were located on top of a headland 90 metres high with near vertical cliffs. They were sited close to the lighthouse so staff were on hand to attend to emergencies. Foam was said to blow over the headland during storms. Death adders were living in the rocks but died off with the arrival of the cane toad. They were replaced by taipans and brown snakes.

DOUBLE ISLAND POINT LIGHTHOUSE AND WATCH HUT



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Technical

LIGHTHOUSE LIGHT INTENSITY CHART



Coal & Wood

Small modern auto lights

Kerosene and reflectors

Kerosene and small lens

Rotating modern auto light

Kerosene and first order lens

Electricity and first order lens

Cape Byron at its most powerful

The Nautical Mile is the unit used by sea and air navigators to measure distance at sea. The International Nautical Mile was defined by the first 'International Extraordinary Hydrographic Conference' held in Monaco in 1929 as being 1,852 metres.

Courtesy
Bustard Head
Lighthouse
Association.



Lights

The earliest lighthouses in the world are recorded more than 2000 years ago. The initial light source was generally wood or coal (if available) and tended by slaves. With the passage of time various oils were used depending on availability and cost.

In the case of Bustard Head Lighthouse, the use of China oil was recorded. This oil may have been obtained from various trees such as tung oil or candlenuts, though we believe it was more likely an early form of what later became canola oil. This was said to have been used by the Chinese and Indians for cooking and lighting for some thousands of years. Other oils came from sperm whales, mutton birds or from beneath the Earth's surface.

Note the three concentric wicks in this photo. It indicates a much improved version from the original single wick which, over time, was found to give a steadier and brighter flame when an inverted glass funnel was placed over the top. The wicks were trimmed using a special pair of wick trimming scissors which retained ash from the trimmed wick rather than have it fall into the apparatus (see photograph page 24).

The misuse of wood fires to lure ships to their doom is well recorded. Such people were often known as 'wreckers' and Bella Bathurst, in her book 'The Lighthouse Stevensons', gives accounts of the wealth accumulated into some coastal communities from on-going shipwrecks. She even writes of the opposition encountered to building early English lighthouses as local people believed 'It is the will of God' that ships should be wrecked on their shore.

Photograph courtesy Australian
Maritime Safety Authority

Lenses

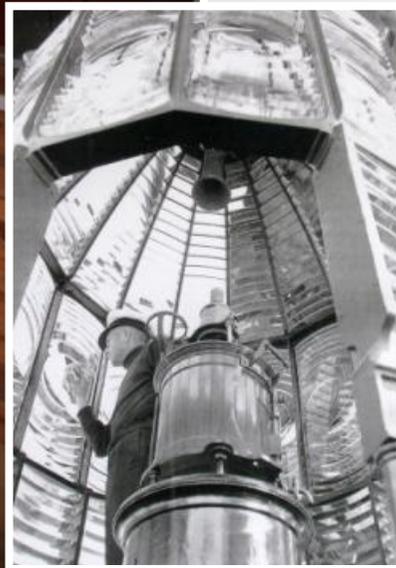
When first illuminated, the Double Island Point Lighthouse used a Third Order lens. These came in two sizes; 375 mm and 500 mm focal length (seen here).

The original lens at Bustard Head was slightly smaller than this First Order version (inset). The pictured light source is a pressurised kerosene system, using a mantle. An inverted funnel is located above the mantle to catch exhaust heat and fumes, and exit them out of the structure. The inset photo shows Mr. Moore, Lightkeeper at Althorpe Island, cleaning a 1st Order Lens in 1963.

The term 'Order' refers to the focal distance between the source of light (of whatever type) and the lens. This photo is of a restored 3rd order lens on display at the Port Douglas Maritime Museum. (Courtesy Australian Maritime Safety Authority).

Just how these precision lens were created by Chance Brothers in England, carried on sailing ships to Australia, off-loaded onto a coastal ship then hauled up difficult slopes to reach the isolated headland was little short of miraculous.

*Mr Moore, Lightkeeper at Althorpe Island, cleaning the lens in 1963.
Inset courtesy Cape Willoughby (Kangaroo Island) Lighthouse.*





Kerosene Lamp

Many people may be familiar with Grandma's kerosene lantern. Grandpa also had a kerosene hurricane lantern which he could take outside into strong winds and rain. Both of these early lights had a straight wick and needed careful trimming to keep the flame burning evenly. It was noticed by accident, that the placement of a glass funnel around the flame encouraged the flame to burn higher and brighter. Some early lighthouses used kerosene lights with reflectors to concentrate and improve the light strength.

About 1880, Incandescent Oil Vapour (IOV) burners were introduced into lighthouses. This relied on a pressurised kerosene/air mix forced into a pre-heated tube where, on striking the hot walls of the pipe, the mixture instantly turned to vapour. This pressurised vapour was burnt through an impregnated glass cloth mantle and became a brilliant glowing ball. Methylated spirits and shellite (or white spirits) were common pre-heating fuels used also in pre-heating camping cookers and lights.

The mantles as supplied by the manufacturer, were silk-like and soft. Once installed on top of the burner, they were pre-burnt with a wick at which time the mantle expanded to a spherical shape and became quite brittle. A disadvantage of using the mantles were flying insects. This is the reason why a second mantle was kept ready for instant use if the need arose.

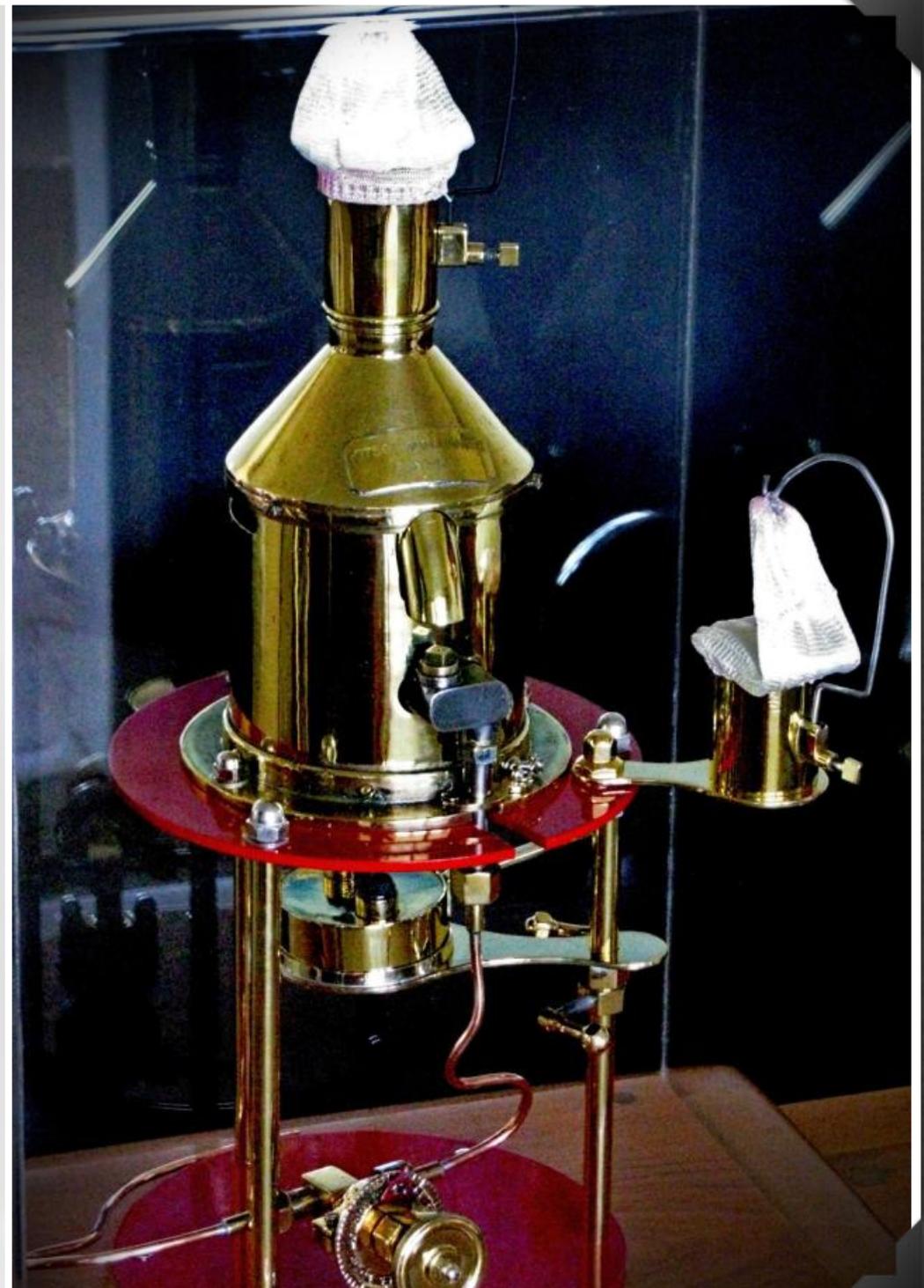
A fundamental instruction to lightkeepers was 'the light must be kept burning during the hours of darkness'. Lighthouse doors were therefore kept closed to exclude insects.

In the photograph (previous page) the right hand cylinder was used to hold kerosene while the left hand cylinder contained air. The lightkeepers had to pump the hand pump every two hours in order to maintain the required operating pressure.

This light source was used at Double Island Point from 1923 to 1933.

During the 1910-25 era, many Australian lighthouses were either established with IOV burners as the light source, or were converted to IOV burners to increase the light's range. The power of the light source was set using burners with mantles of 35 mm, 55 mm or 85 mm diameter.

Photograph © Ron Turner.





Light Sources

- 1884 - 1923** An Argand oil wick burner was used to burn a petroleum oil. Special scissors were used to trim the wicks and catch any ash. The power of the light in its 3rd Order lens is 30,000 candlepower.
- 1923 - 1933** The white unburnt mantle was used with an Incandescent Oil Vapour apparatus with kerosene as the fuel source. A 55 mm diameter mantle was used.
- 1933 - 1980** Lister petrol engines were used to produce 110 volt DC electricity. The lamp used was a round 500 watt globe and the power of the light was 750,000 candlepower. They were replaced every 800 hours.
- 1980 - 1991** The 110 volt DC system was replaced by two diesel motors powering 240 volt AC electricity. This almost certainly allowed a tall 1000 watt tungsten halogen lamp to be used which was replaced every 3000 hours.
- 1991 - present** Prior to the station being de-manned an acrylic six sided FA251 lens was installed in 1991 which rotates 24 hours a day by means of 12 volt solar power. The beam reaches 17 nautical miles (32 km) out to sea.

With the advent of Global Positioning Systems and better navigational aids, larger ocean going vessels no longer had need for lighthouses. As a result, lightstations were progressively de-manned in favour of automatic operation. Smaller coastal vessels still had a need for lighthouses and the tendency was to replace the glass lens with what were known colloquially as 'Tupperware' lights to support this need. These were illuminated by a baby quartz iodide globe, standing around 30 mm high in total and generally powered by solar panels.



The 'Wooden weight tube'.
The small door on the right
(centre) was used for
maintenance, and to
adjust weights.

Flashes

To differentiate between lighthouses along our coastline, each light was assigned a different 'Character' of flashing. This information was published and available to all interested persons by means of a 'Notice to Mariners'. In the case of Double Island Point Lighthouse - the flashes were proposed at half minute intervals. The light was strong enough to be seen at a range of 24 nautical miles (45 km).

A large grandfather clock mechanism was used to rotate the lens and maintain this precise series of flashes - without variation - each and every night. A heavy weight was connected by a chain beneath the mechanism and contained within a 'weight tube' in the centre of the tower. Most lighthouses have a round, hollow, cast iron weight tube. Many Queensland lighthouses are unique in that they have a wooden weight tube, as seen here with its inspection hatch door on the right. Every two hours the lightkeeper had to manually wind the weight back up by means of a handle. The centrifugal force developed by two spinning cast iron balls (governors) was used to even out any minor variations caused within the mechanism as the weight descended. The speed of rotation of the balls was adjusted and set by means of the pointer (inset) also seen above and to the right of the handle (right photo on next page).

© Barbara Thomas.



Important changes occurred in 1925 when a mercury bath float was installed. A plaque on the inner wall of the lighthouse

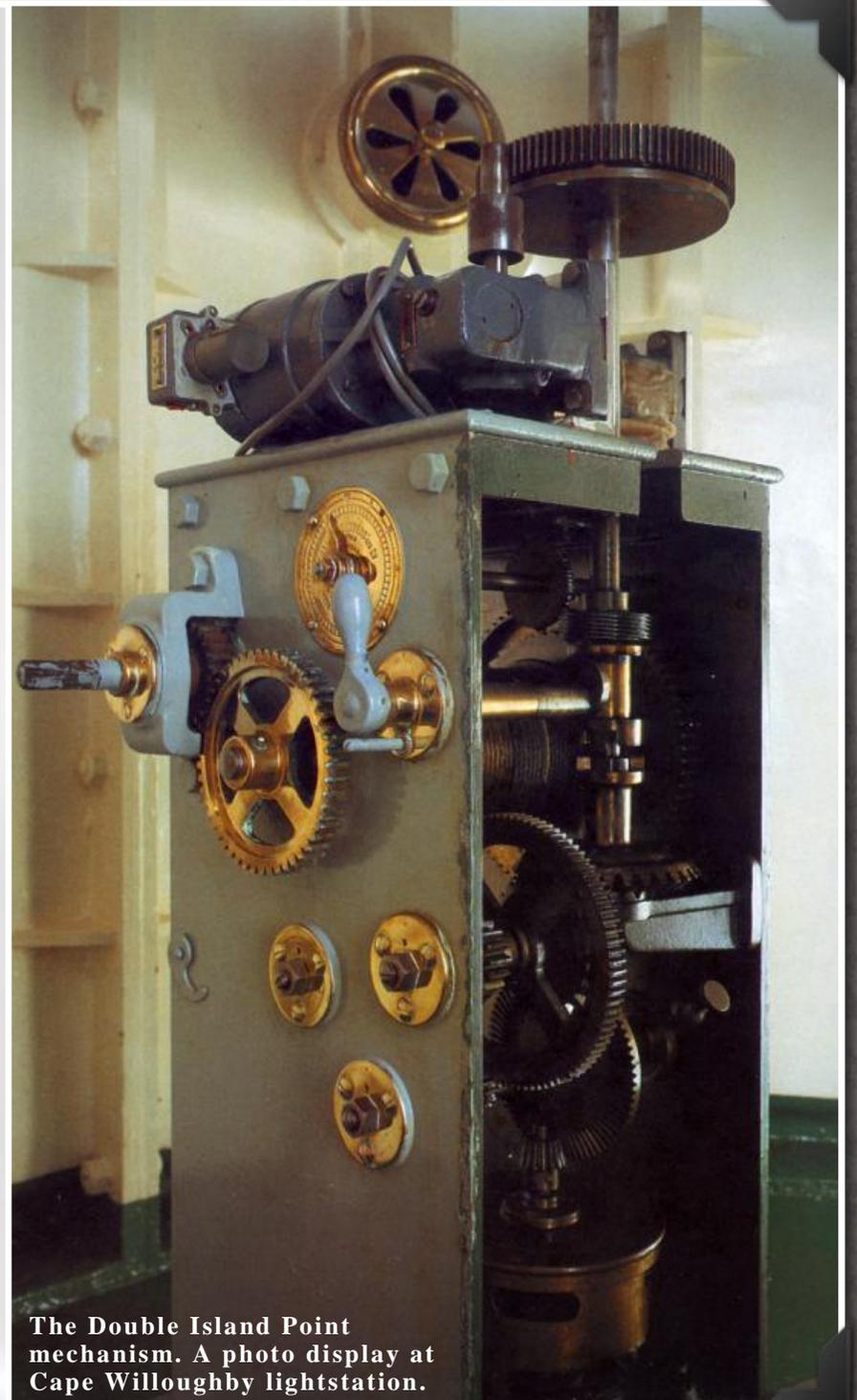
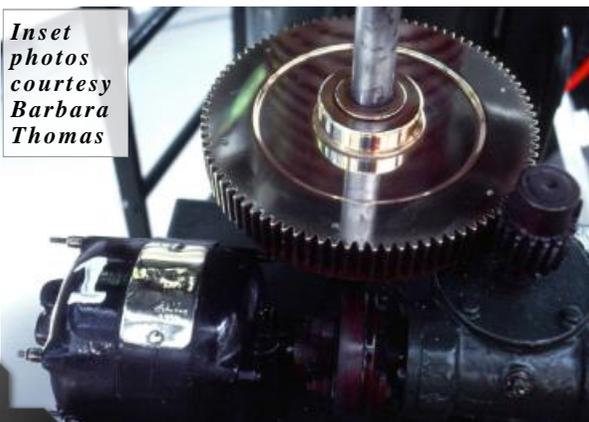
records the speed of the optic as one revolution per minute (inset). As the optic had eight panels - each flash was for seven and a half seconds. This was the first such technology to be used in Queensland although two such units have been used in southern States. The power output was 750,000 cp.

Two 110 volt DC generators were installed at Double Island Point Lighthouse in 1933 and the grandfather clock mechanism was replaced by two small electric motors. The bottom left photo shows the No. 1 motor at Double Island Point in 1978.

In 1980 a new power house was built and 240AC electricity (powered by diesel motors) was connected to the lighthouse. The light was visible for 25 nautical miles (26 km), flashing for 1/10th of a second each 7.5 seconds. It had an intensity of 1,000,000 Candela (roughly equivalent to candlepower) This information was publicly available by means of a 'Notice to Mariners'.

In 1991 the original optic, electric motors and wind-up mechanism were removed. A new FA251, 12 volt lantern with six rotating lens panels (powered by solar panels and batteries) was installed. The range of the light was reduced from 25 to 17 nautical miles (31 km).

*Inset
photos
courtesy
Barbara
Thomas*



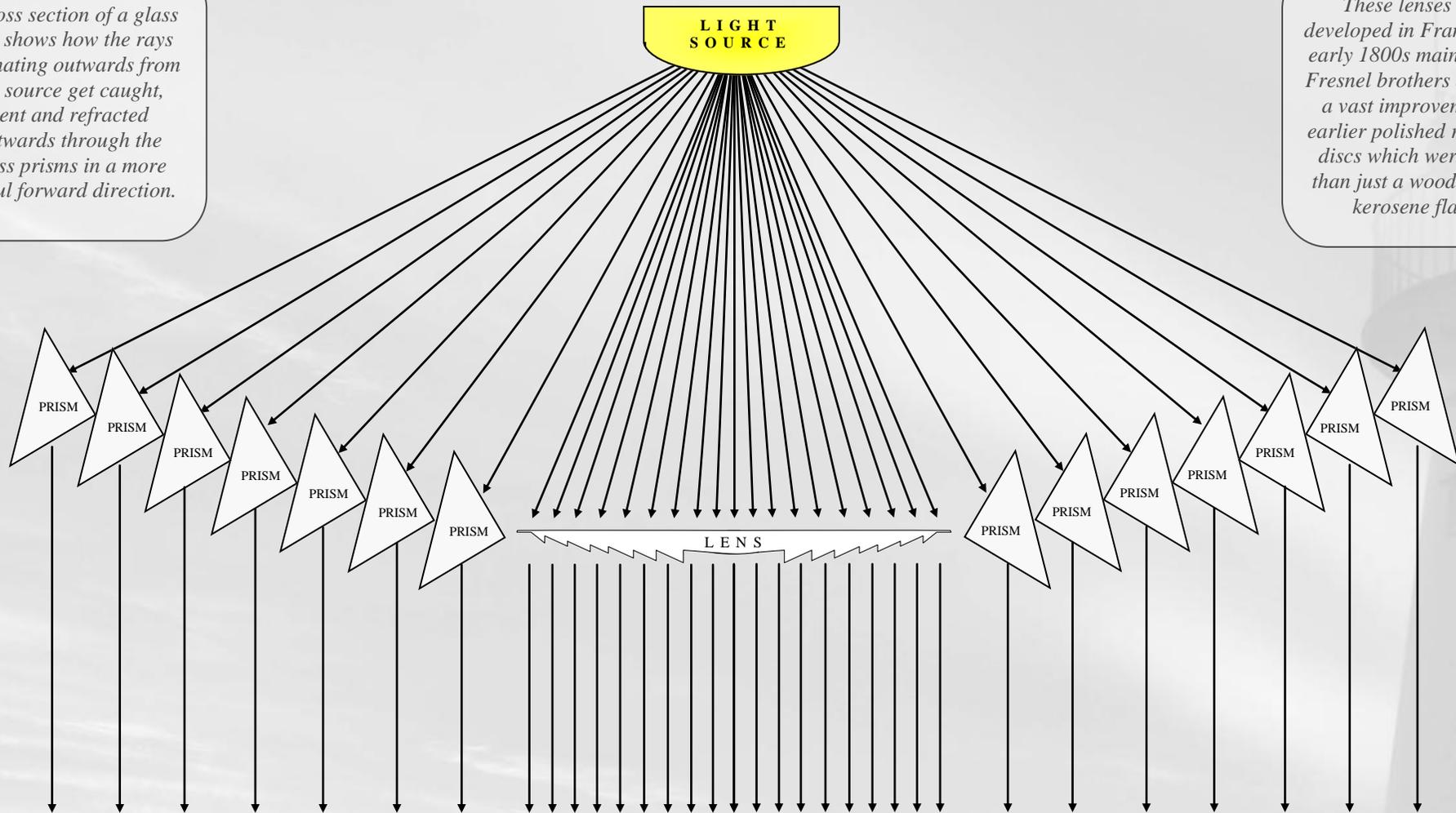
The Double Island Point mechanism. A photo display at Cape Willoughby lightstation.

LIGHTHOUSE LAMP

CROSS SECTION (LIGHT REFLECTION)

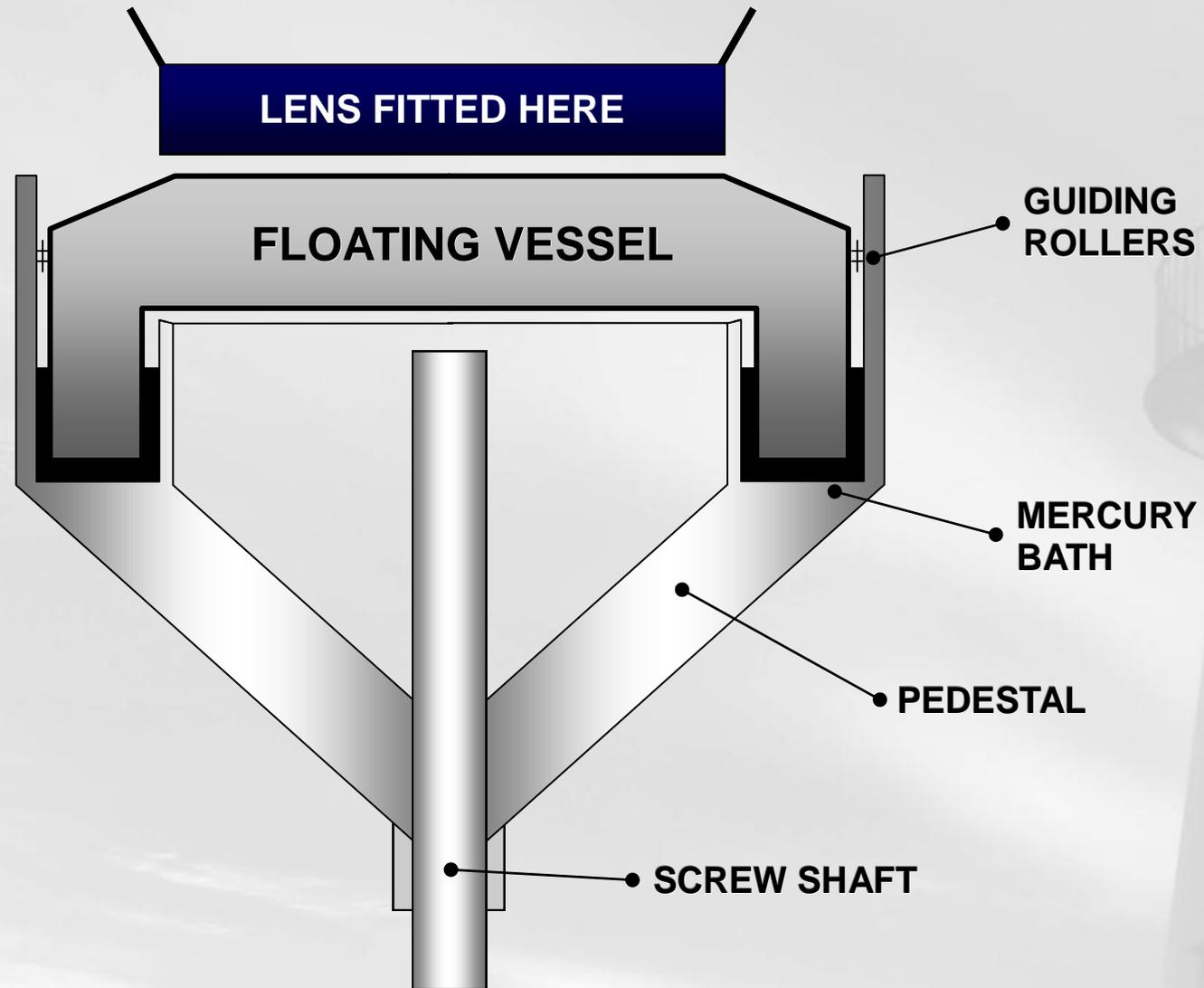
A cross section of a glass lens shows how the rays emanating outwards from the source get caught, bent and refracted outwards through the glass prisms in a more useful forward direction.

These lenses were developed in France in the early 1800s mainly by the Fresnel brothers and were a vast improvement on earlier polished reflecting discs which were better than just a wood, coal or kerosene flame.



LIGHTHOUSE LAMP MERCURY FLOAT

Mercury was an important part of lighthouse lamp design. When a rotating crystal Fresnel Lens was installed, so was a Mercury Float to enable the heavy lens to rotate easily. As mercury is 13.6 times heavier than water, it was possible to make heavy fixtures to float on it. These heavy lenses were floated in a bath of Mercury. Manufacturers also claimed the mercury helped smooth out vibrations caused by earthquakes.





Acrylic Vega VRB-25 Lens

Within the lighthouse 'community' these lenses are known colloquially as a 'tupperware' lens, meaning they are good, but not to be compared with the original glass prism lens. Either six or eight sided, they are powered by a single 100 watt quartz iodide globe. The range of this light is only about half of the former polished and magnifying lens driven by kerosene or electricity, but is sufficient for current day coastal navigation.

The Double Island Point Lighthouse has seen many changes after being first lit in 1884. The most dramatic change occurred during 1991 when the original optic and electric lamp were removed. The clockwork rotating gear, including the weights, were also removed. The mercury float was drained and the turntable fixed. A new FA251 fully automatic 12 volt system with six panels was installed and powered by a bank of lead acid batteries charged by solar panels. The light now has a luminous range of 17 nautical miles (31 km), a reduction from the previous 25 nautical miles (46 km). The last remaining employee was withdrawn in 1992. This development reflects the changed importance of coastal lighthouses for marine transport.

One of the duties of the lightkeepers at the Double Island Point Lighthouse was to move a calico curtain inside the lighthouse because of potential damage to the bulb's filament caused by the sun, or of the lens starting a fire.

In the 1920s the noxious weed prickly pear was becoming a serious pest with the potential to grow into an impenetrable mass. The lightkeepers were involved in poisoning and burning to clear this terrible, prickly cactus which was threatening to spread across the lighthouse precinct. In the decade following 1931 over half a million cactoblastis eggs were introduced to the headland. (The Queensland Government had previously enforced the use of arsenic pentoxide across the State to control the plant).

Use of the amphibious Larc commenced in 1974, enabling the transportation of materials to make a new engine room to house two diesel motors and 240 volt generators. Four large tanks were installed and bulk distillate provided. Usage was in the order of 20,000 litres a year. Two concrete ramps were constructed on the track (foreground) to enable all-weather access to the lighthouse and engine room.

The 1978 photo (inset) indicates stock grazing the surrounding forests and foreshore has ceased. The white fence posts used around the cottages can now be seen lining the foot track at left connecting the cottage precinct to the lighthouse. The photo also shows a small radio/weather recording shack (left of the cottage). One of the duties of lightkeepers was to advise the Bureau of Meteorology of weather conditions four times daily.

The short vegetation (lower right) is a manually cleared 'sight line' to provide visibility from the cottages towards the dangerous Wolf Rock. After the station was de-manned woody weeds became a problem here. A local Land Care group was engaged to deal with the problem, and re-plant the area. This temporary clearing drew some strident, ill informed criticism. Minister for the Environment, Dean Wells, declared 10 years earlier a similar sightline at Bustard Head was part of the heritage and should be maintained as such.



Today, lighthouses encircle Australia and are a poignant reminder of the all-to-frequent loss of life in nearby waters. They stand in mute testimony of the endeavours of the pioneers who built them (often in the most adverse conditions), the engineers who improved them, and most of all, the people who manned them in isolated conditions and during all extremes of weather, when living conditions were often a daily struggle. They are now a beautiful visual reminder of our history and heritage.

Wolf Rock

The Lighthouse is located on the highest point of the peninsula with Double Island Point Headland behind it.

A local Aboriginal legend says two adventuresome boys paddled their bark canoe out to sea and were never seen again. These rocks are said to be the restless spirits of the lads and the event was used by elders to instil obedience into their children.

Matthew Flinders recorded in his journal that he rounded Double Island Point in 'The Investigator' on Tuesday 27 July 1802 and took a depth sounding. He recorded the rocks lying between one and two miles offshore (about 2-3 km). Lt. E.P. Bedwell, R.N. conducted a detailed hydrographic survey of this part of Queensland's coast. His chart, produced in 1868 and received in Queensland 1869, is the first to show the name 'Wolf Rock'.

There are three other pinnacles under the surface in 30 metres of water. The area is given special protection as it is a breeding area for the endangered grey nurse shark. Manta rays and a variety of other fish species and corals are often seen by a dive group which operates here from nearby Rainbow Beach.



A lighthouse is visible on the right side of the image, partially obscured by the text. The sky is filled with soft, wispy clouds illuminated by a low sun, creating a warm, golden glow. The lighthouse has a white body and a dark lantern room at the top.

Shipwrecks



Shipwrecks

Many shipwrecks and strandings have been recorded along the coast near Double Island Point during the past 100 years, with occasional loss of life. These have been mainly coastal traders but, in July 1973, an unseasonable cyclone developed and the 1600 ton 'Cherry Venture' came ashore on Teewah Beach, about 5 km south of the lighthouse. Attempts to refloat the vessel were thwarted. It was eventually written off and salvage operations began. Initially, the more valuable materials were removed. After a period the easily recoverable steel was then cut and carted away until a skeletal mess remained.

According to the local council Teewah Beach is considered as '*a road remade twice a day at no cost*'. The wreck became the focal point for increased tourism for many years with ice-creams and drinks available for sale. The rusting hulk eventually became dangerous and was removed completely. An interpretive photographic display in the dunes nearby is all that remains to mark the site of the wreck. The ship's propeller is mounted at road's end above the beach at Rainbow Beach shopping centre.

*A lifebuoy ring mounted on the inner wall of the Double Island Point Lighthouse.
Photograph © Ron Turner.*

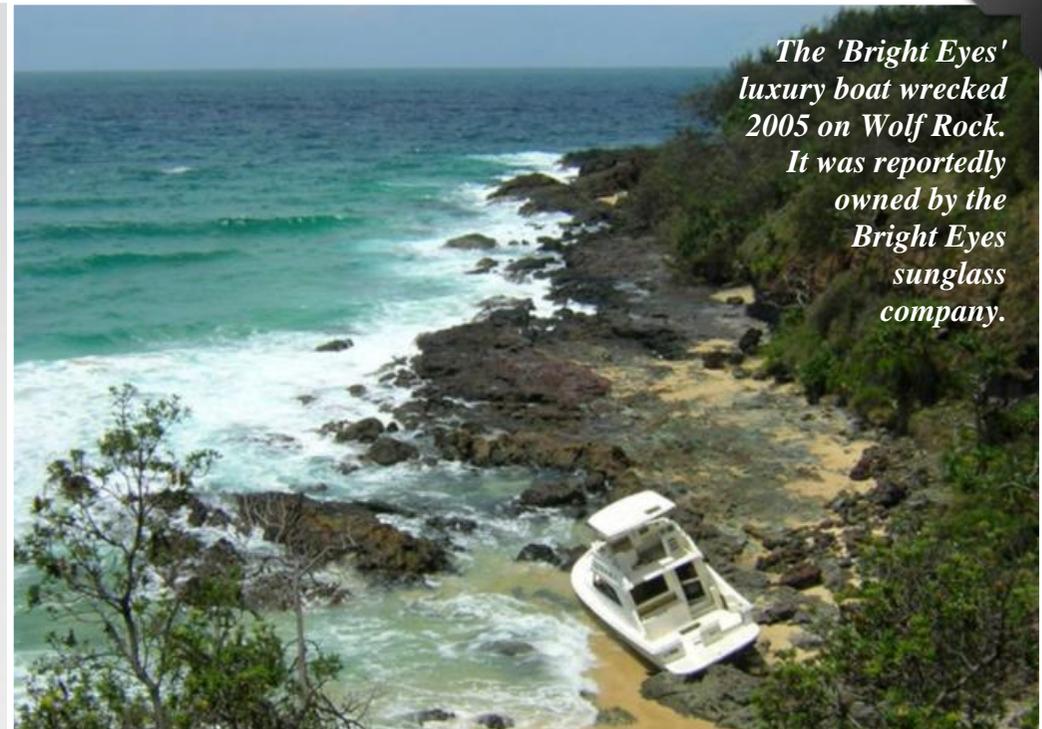
Near the site of the wreck of the Cherry Venture another craft came ashore. The *Leisha* was an earlier wreck and is now remembered with the name of a major boarded vehicular crossing of the sand isthmus. It came ashore in 1954.

In April 1926 the 715 ton steamer Dorrigo was carrying 600 tons of general cargo from Sydney to Thursday Island when it encountered gale force winds. Taking on water it foundered, turned on its beam and sank (stern first) some 25 km south east of Double Island Point. At that time it was considered the worst sea disaster in Queensland as 22 crew lost their lives. Amazingly, the captain and his son clung to a raft and were rescued close to the Wide Bay Bar. Fishermen and visitors enjoyed the spoils of the wreck which came ashore on the southern beach of Fraser Island. One entrepreneur landed a vehicle and retrieved hundreds of cases of benzine, methylated spirits and paint.

The 105 ton MV Ruena was caught in a 1948 cyclone and came ashore near the lagoons on the northern side of Double Island Point. Much of the cargo was temporarily buried nearby in the sand dunes.

In 1959 the 402 ton MV Natone started to leak badly during near cyclonic weather. Its pumps were unable to cope and it came ashore at the Mudlo Rocks near the present Rainbow Beach township. All 18 crew made it safely to shore.

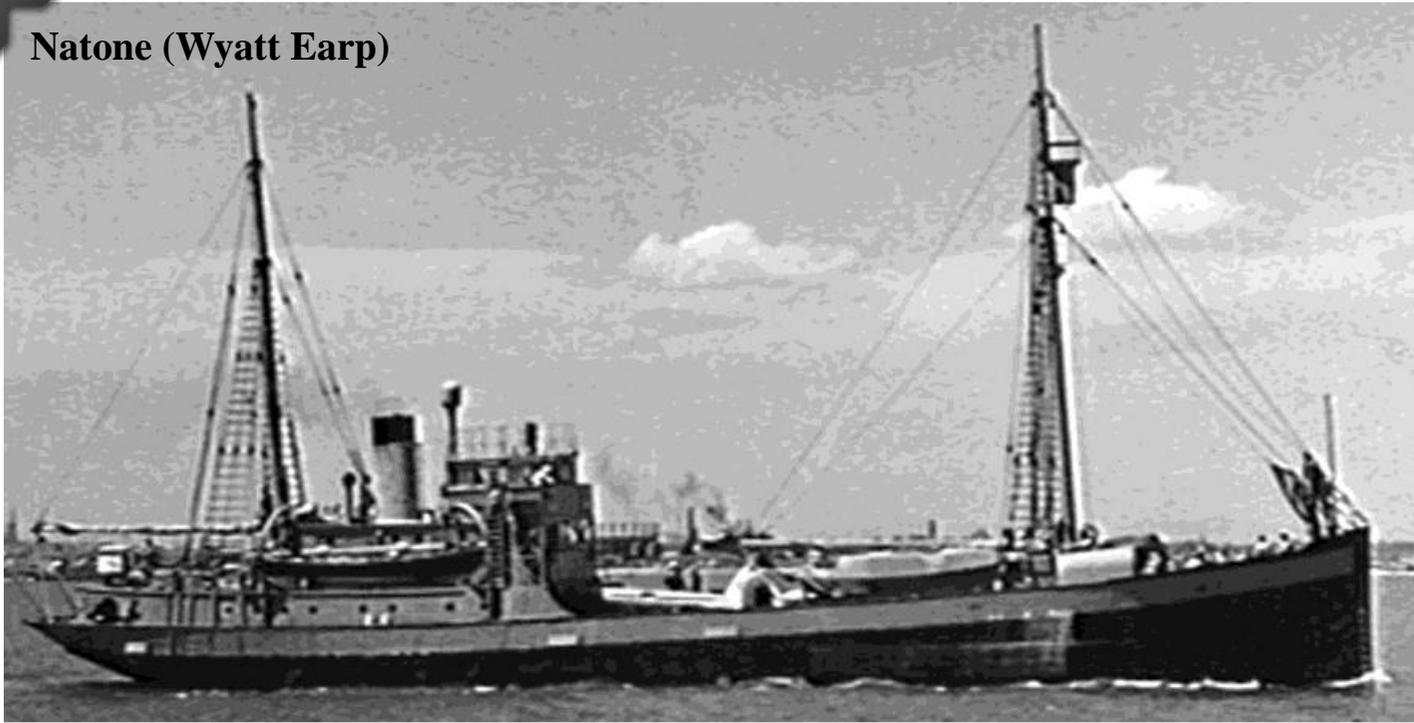
Many fishing trawlers, yachts and other miscellaneous craft have come to grief in the area especially on the dangerous, shifting sands of the Wide Bay Bar. As recently as 2005, the *Bright Eyes*, a luxury cruiser, hit Wolf Rock and ended up on



*The 'Bright Eyes'
luxury boat wrecked
2005 on Wolf Rock.
It was reportedly
owned by the
Bright Eyes
sunglass
company.*



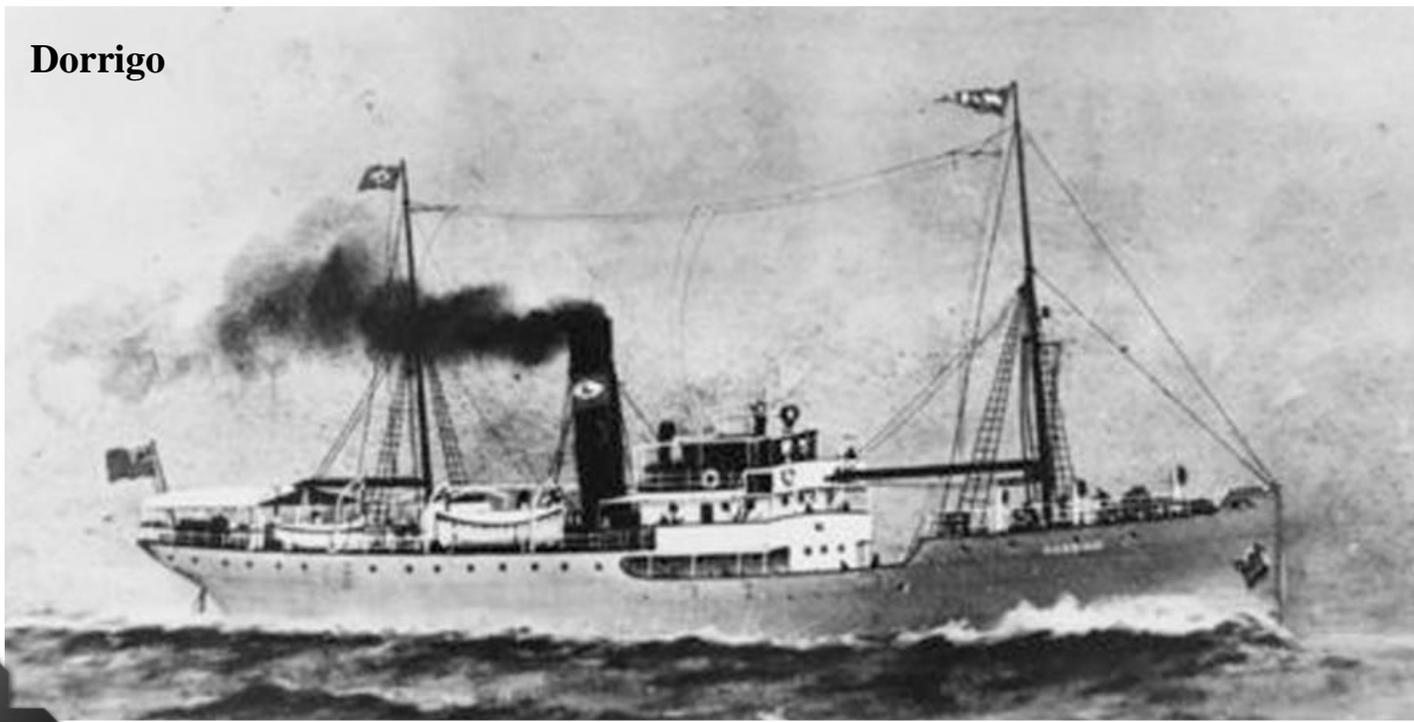
Natone (Wyatt Earp)



the beach beside the Double Island Point headland (top previous page).

Further north along the Seventy Five Mile Beach of Fraser Island are the skeletal remains of the *Maheno*. Formerly a WWI hospital ship; this vessel was being towed to Japan for scrap metal when it encountered another unseasonable cyclone in July 1936. During WWII it was used by the RAAF for bombing practice. The rusting and dangerous remains lie between the high and low water marks and are also a focal point for tourism. Interestingly, along this beach the broken remains of yachts wrecked far off-shore in the Tasman Sea have come to land.

Dorrigo



Maheno

A photograph of a white lighthouse on a cliffside, partially visible on the right side of the frame. The sky is filled with soft, wispy clouds, and the sun is setting, creating a warm, golden glow across the scene. The text "End of an Age" is overlaid in the center in a bold, black, serif font.

End of an Age

Early Scrimshaw Art Form

The art form of scrimshaw was practised by the early Inuit peoples for many hundreds of years before Europeans sailed the oceans. Those Inuit peoples would be confined to igloos for lengthy periods and would use walrus teeth or bones.

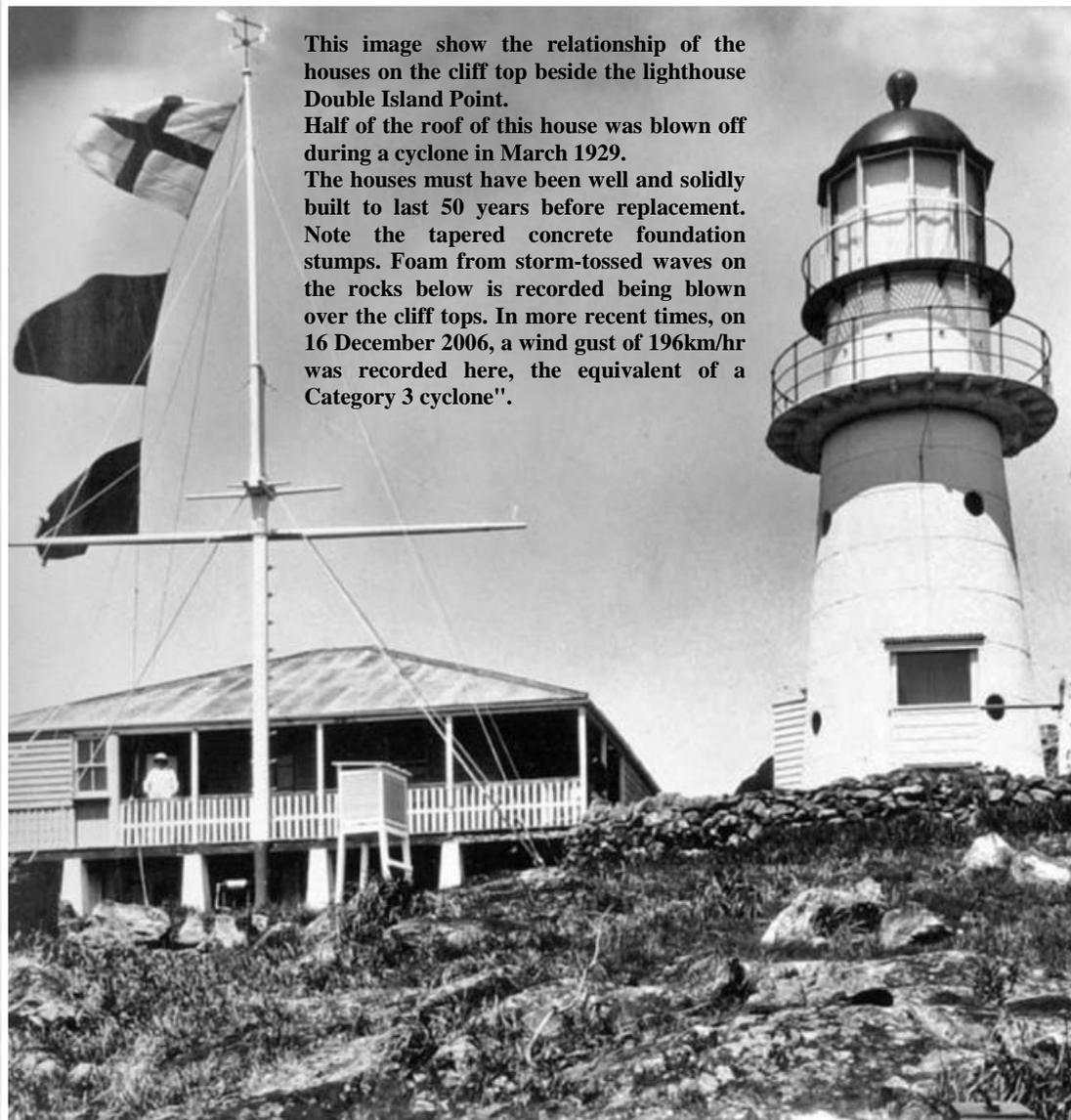
The art then became widely practised by the early whalers. In the example shown a tooth of a sperm whale has been used. The outline of the sketch is made with the tip of a sail needle, or sailor's knife. Lamp black is then rubbed into the groove to highlight the outline.

Lightkeepers, because they were ex mariners and lived by the sea, tended to do hobbies related to the sea such as carving scrimshaw, making ships in bottles, ropework or wood carving. Scrimshaw depicting sailing ships and whale harpooning such as this example are considered more valuable than other specimens.

A lighthouse tower is visible on the right side of the image, partially obscured by the text. The sky is filled with soft, wispy clouds, and the overall color palette is dominated by warm, golden-yellow and light blue tones, suggesting a sunset or sunrise. The lighthouse tower is white with a dark railing around the top section.

Living at the Lighthouse

The fundamental instruction for lighthouse keepers was to maintain the light during the hours of darkness each and every night. Additionally, the keepers maintained a watch for ships in distress and recorded the passage of vessels. Gale warnings were issued. After 1891, weather observations were maintained for the Weather Bureau. A new watch hut was built, probably in 1933.



This image show the relationship of the houses on the cliff top beside the lighthouse Double Island Point.

Half of the roof of this house was blown off during a cyclone in March 1929.

The houses must have been well and solidly built to last 50 years before replacement. Note the tapered concrete foundation stumps. Foam from storm-tossed waves on the rocks below is recorded being blown over the cliff tops. In more recent times, on 16 December 2006, a wind gust of 196km/hr was recorded here, the equivalent of a Category 3 cyclone".

At Double Island Point three cottages were built in 1884 close to the lighthouse to facilitate immediate action should any faults develop with the light. Two cottages were located on the edge of very steep cliffs and subject to winds from every direction. In 1894 the head lightkeeper's house was almost destroyed in a cyclone while the lighthouse was recorded as having 'narrowly escaped destruction'. In 1929 another cyclone partially unroofed the head lightkeeper's house with the debris ending up 'over the edge of the cliff'. On this occasion part of a second cottage roof was lifted. It was roped down, while nearby sheds and their contents were blown away. In 1933 two new cottages were built in a more sheltered area some 200 metres away and the original houses removed. More recently, a wind gust of 196 km/h was recorded on the cliff-top in 2006.

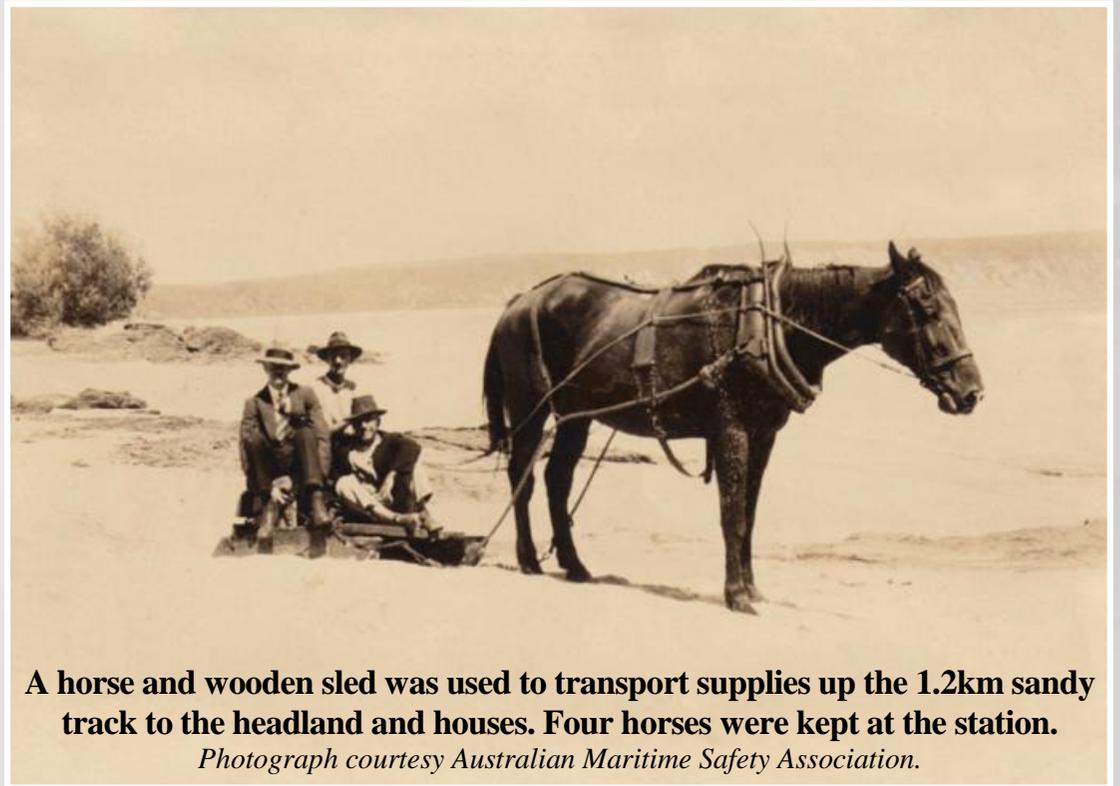
The headland of Double Island Point is comprised of rough, volcanic, andesite rocks and boulders. It was the perfect home to a variety of reptiles, especially the death adder, eastern brown, taipan and red bellied black snakes. These animals have declined in numbers most likely due to the introduction of the cane toad. It is recorded one of the lightkeepers was once alerted to a fault within the lighthouse when a snake became caught in the mechanism but it was most likely a

variety of tree snake, or perhaps a carpet python, all harmless. (A large sand dune nearby was known as 'Death Adder Hill' after World War II as a soldier died of a bite from one of these snakes).

Bulk supplies for the station arrived four times a year by sea. Weekly food and mail was landed at Inskip Point Pilot Station and brought around the beach 15 kilometres on a horse and buggy to the foot of the headland. Another horse and wooden sled was then used to tow the supplies up the kilometre long sandy slope to the station. From the 1920s a contractor was used to bring supplies along the beach from Tewantin by motorised lorry to the waiting horse and sled.

At times the beach to Inskip Point became impassable and supplies were landed on the nearby northern beach at the base of the headland. (In 1908 the beach was impassable for most of the year. Inskip Point has a long history of developing sink holes with up to 2 hectares of the beach front disappearing on one occasion). Several small terraced areas with rock retaining walls near the lighthouse suggest vegetables may have been grown. There are references to poultry and a house cow and calf. Cattle from the district were agisted on the station property, and grazed adjacent coastal areas until the 1970s, so some fresh meat may have also been available. After 1933 fences were erected around the new cottages to exclude stock. The concrete fence posts now line an old foot track to the lighthouse. Fish were almost certainly an important source of fresh food and a boat shed was built on the western side of the isthmus. This was said to have been inundated by a mobile sand blow – as was a second hut belonging to the Page Bros. The horses became redundant in 1946 when 4wd vehicles were supplied to the station.

The initial area of the lightstation was 355 acres (144ha). This large area was necessary to maintain access to the station in all weather. Early maps show a network of tracks (especially along the south-western side of the isthmus) above the high water



A horse and wooden sled was used to transport supplies up the 1.2km sandy track to the headland and houses. Four horses were kept at the station.

Photograph courtesy Australian Maritime Safety Association.

mark. The location of the buggy shed is shown in a 1911 survey plan, near the old Massoud's or Fishermen's track (north of the existing Leisha track). As transport methods improved, the isthmus area was surplus to requirements. It was surrendered in 1970, leaving the lightstation covering the existing headland area of 144 acres (58ha).

Day-time communication with passing ships was initially by means of an internationally used system of flags. Morse code signalling equipment was supplied for night-time communication in 1910. In 1904 a telephone was connected with a branch line constructed off the Inskip Point line. This eased the sense of isolation at Double Island Point, but maintaining the line was a time consuming issue for lightkeepers with frequent storm and termite damage within the heavy forests. The route of this line was located along what became known as the Telegraph Track (above the cliff tops from the present Rainbow Beach township). Within the original lightstation the line traversed along the centre of the isthmus going up and down across the high dunes. The telephone was superseded when the Cape Capricorn lightstation became the base for all local Lightstation communications. A two way radio was installed at Double Island Point in 1956.

Kerosene was the main source of lighting and cooking from 1884 despite 110 volt DC electricity being connected to the lighthouse in 1933. New kerosene wash boilers were installed in 1964 with fuel most likely connected to a small tank on the wall above the unit, as is seen here.

We have been fortunate to interview a man who lived at the Bustard Head Lightstation during World War II and he throws some light on food supplies and living at Queensland lightstations in the 1940 era.

"A variety of heavily salted meat came in tins as did butter, cured bacon and corned beef. Flour came in large bags (about 65 kg) and there were even larger bags of potatoes. Sugar came in 30 kg bags, honey in 20 L tins while syrup came in 3 kg tins. The quality of potatoes was important; some were boiled and the heavily laden starch liquid was kept to be brewed up with hops to make yeast for bread making."



"For cooking, a three burner kerosene stove (almost a metre wide) was used with the kerosene held in a bottle at the side. When the bottle was inverted, the kerosene would drip feed to the burners and be available for lighting. A portable oven was placed over the top of two of the three burners to make bread, cook roasts, or for other cooking tasks. Self raising flour was made mixing baking soda with plain flour. A house cow was kept for milking. Occasional fresh meat came from a nearby cattle station, or from turtles or native pigeons. There was also a small fruit and vegetable garden."

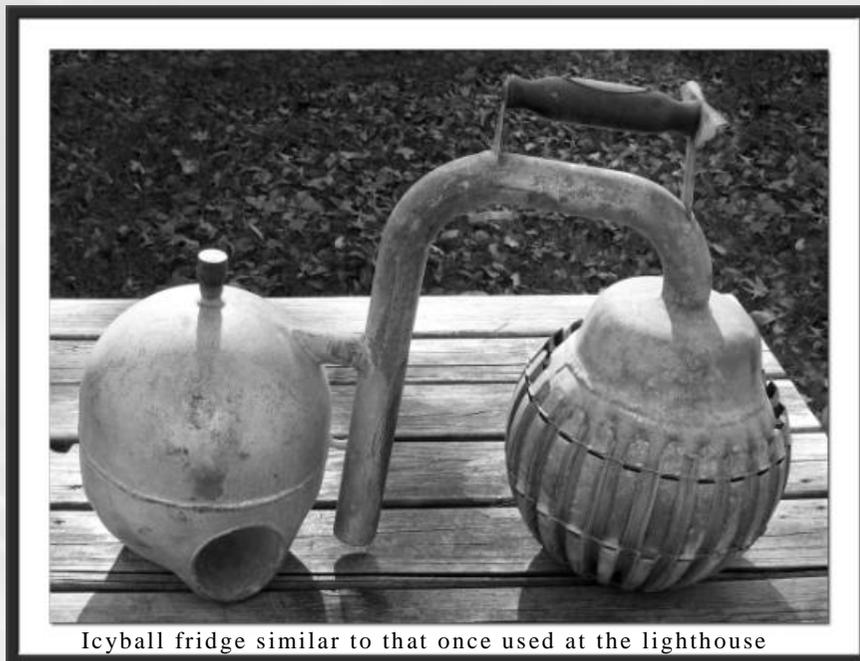
Prior to the war, a Coolgardie safe was used. This consisted of an insect proof container around which was a sheet of hessian or similar material. Water was fed from an elevated container which kept the hessian moist. A breeze moving onto the damp hessian would lower the temperature inside the container. The safe stood in water to exclude ants. During the war an icy ball refrigerator was used". This was invented by an Australian in the 1920s and consisted of two sealed spherical balls containing a solution of ammonia and water. The balls were connected by a pipe. It was operated by heating the 'hot ball' (the 'ridged' sphere) by means of a tiny methylated spirit flame which would force the ammonia

solution through the pipe into the smooth ball. The smooth ball would then be placed into a chest type box which held the food. Movement of the ammonia via the pipe back towards the outer ball would cause the temperature inside the box to fall. So effective was the system that it was even possible to make a small amount of ice (in a container inserted into the hole through the smooth ball). Kerosene refrigerators were supplied in 1947, and a two door electric refrigerator in 1975.

Hot water for washing and laundry purposes was heated by a kerosene 'Steamkleen' boiler.



A Coolgardie Safe



Icyball fridge similar to that once used at the lighthouse

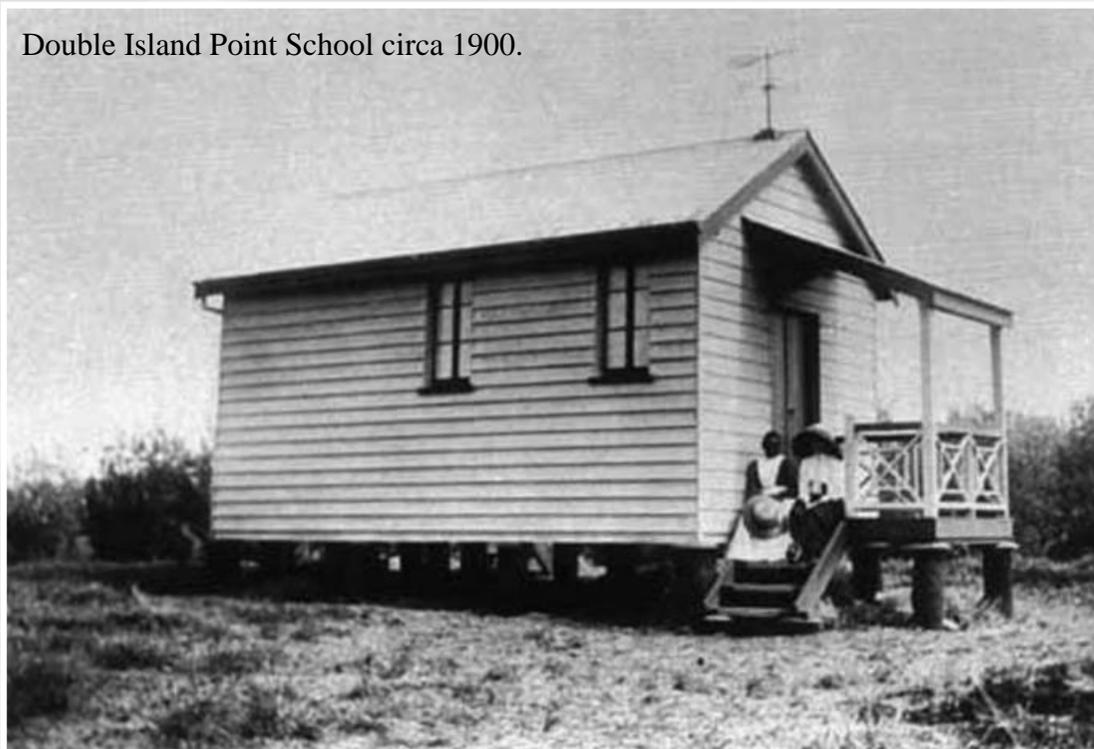
Following the Second War 4WD vehicles were supplied. Apparently some of the early models of Land Rovers had starter-motor problems, as the staff at Bustard Head lightstation found out when the incoming tide submerged their vehicle. A visitor along Teewah Beach in 1956 once came across the Double Island Point Land Rover stranded below the high water mark. After making repairs the visitor was allowed to drive up to the station then down to the northern beach for annual camping visits. Heavy trucks used by the professional fishermen made the traverse across the isthmus virtually impossible for smaller vehicles during this era.

The first amphibious vehicle used to service the station was used in 1974. Off loaded from the re-supply ship moored in Wide Bay the Lighter Amphibious Re-supply Cargo (LARC) affected a dramatic change in station operations. Bulk fuel was able to be transported to a new 4x5000 litre tank farm and 240 volt electricity was now available to the lighthouse and cottages 24 hours a day. Better refrigeration and freezers were now available. Two concrete tracks were built to facilitate Larc access up the last steep slope near the lighthouse, post 1978.

Over the years there were many children living at the lightstation. A provisional school was built on the present cottage precinct and the doors opened in 1887 for ten children. Despite a public perception that living at a lighthouse was an idyllic lifestyle, there

seemed to be an undercurrent of tension between families, and Double Island Point was no exception. Teachers were expected to board with the head lightkeeper. This did not agree with the often young female teachers and caused frequent changes in teaching staff. One of the teachers either lived in a tent or slept in the school, which eventually closed in 1922.

Double Island Point School circa 1900.



People have died while living at Double Island Point, the first of these was a workman who died of typhoid fever in 1884 (and is presumed buried nearby in an unmarked grave). A headstone marks the grave of Fanny Byrne, wife of the head lightkeeper who died in 1898 and was buried nearby. Her husband left space beside her final resting place for his own eventual burial, but this was not to be.

INTERNATIONAL ALPHABET CODE FLAG SIGNALS

	A	I have a diver down. Keep well clear at slow speed		N	No (negative or "The significance of the previous group should be read in the negative")
	B	I am taking in or discharging or carrying dangerous goods		O	Man Overboard
	C	Yes (affirmative or "The significance of the previous group should be read in the affirmative")		P	IN HARBOUR: About to sail Fishing Vessels at Sea Nets fast on an obstruction
	D	Keep clear of me. I am manoeuvring with difficulty		Q	My vessel is healthy and I request free pratique
	E	I am altering my course to starboard		R	No single international meaning allocated
	F	I am disabled; communicate with me		S	My engines are going astern
	G	I request a pilot Fishing Vessels I am hauling nets		T	Keep clear of me; I am engaged in pair trawling
	H	I have a pilot on board		U	You are running into danger
	I	I am altering my course to port		V	I require assistance
	J	I am on fire and have dangerous cargo on board; keep well clear of me		W	I require medical assistance
	K	I wish to communicate with you		X	Stop carrying out your intentions and watch for my signals
	L	You should stop your vessel instantly		Y	I am dragging my anchor
	M	My vessel is stopping and making no way through the water		Z	I require a tug Fishing Vessels I am shooting nets

When these two flags are used together, they represent the International signal for "I am in distress and require immediate assistance"

NUMERAL PENDANTS



ANSWERING PENDANT or DECIMAL POINT



SUBSTITUTES



DISTRESS



Chart © Copyright David Hibbert 2013.

International Code of Signals

At Double Island Point day-time communication with passing ships was initially by means of an internationally used system of flags. Various systems had long been established to communicate between ships of different countries. A famous use of flags was by Admiral Nelson at the Battle of Trafalgar, in 1805, when a signal was made to his fleet: 'England expects that every man will do his duty'.

Refinements were made to the use of flags for signalling to take account of differing needs. In 1857 a new system was published, and this was known as the International Code of Signals and was recognised by different nations speaking differing languages.

There were several revisions of this Code and, in 1964, the system of spelling out the message word by word was varied. Each flag retained its alphabetical letter but was given an additional meaning.

As a lad, I spent much time visiting the international ships docked in Geelong and learned the blue and white flag on the ship's mast was the letter 'P'. It was also called a 'Blue Peter' and meant all hands are recalled as the ship's departure was imminent. When displayed at sea – especially by fishing vessels – it also means: 'My nets have come fast on an obstruction'.

When communications were available between lighthouses and nearby towns, staff at a lighthouse could advise the ship's captain of prevailing weather forecasts and the captain would advise of cargo he carried; of sought after skilled artisans or domestic servants aboard, or even if there was sickness or contagious diseases aboard. In the latter case he would be directed to a quarantine station, many of which were established around Australia's coastline.

Morse code signalling equipment was supplied to Double Island Point for night-time communication in 1910, as using flags for communication at night was not possible. Morse code used a series of dots and or dashes to relay messages. The SOS emergency call was:

... — — — ...

A variation in the use of flags employed at close range was the Semaphore system. This used two flags held at arms length by the dispatcher. Each of seven different positions - or a combination of two - represented a different letter.





After the first world war general stores and food travelled north from the Noosa/Tewantin area along the Teewah Beach formerly known as the Laguna or Forty Mile Beach. It was almost 70 kilometres to where the horse and sled were used for the last ascent to the lightstation. In 1976 stores and mail came from Tewantin every two weeks.

This was rather an interesting and innovative exercise well in advance of work place, health and safety laws. Two boats were lashed together; planks laid on top, the truck loaded and the crossing of the Noosa River was made, (and I will bet there were no lifejackets). River width varies but in the order of 80 to 100 metres.



1978 LIGHTHOUSE SUPPLY SHIP MV CAPE MORETON



MV Cape Moreton was made by Rob Stenhouse of Bundaberg. Display courtesy of the Bustard Head Lighthouse Association.

After 1974, a LARC (Lighter Amphibious Resupply Cargo) was carried as deck cargo on the MV Cape Moreton. This was swung outboard and lowered to the water. Supplies were loaded then transported to the lightstation.



THE LARC MOVING UP FROM THE BEACH 1978



THE LARC REFILLING BULK TANKS AT BUSTARD HEAD LIGHTSTATION



All coastal lighthouses around Australia have been managed by the Commonwealth Government since 1915. The relevant department is currently the Australian Maritime Safety Authority (AMSA). As the need for lighthouses around Australia has diminished, the stations have been progressively automated. Maatsuyker Island (Tas.) was the last to be demanned, in 1997. That station was taken over by the Tasmanian Parks & Wildlife Service and integrated into the Southwest National Park. It is now cared for by volunteers.

While the Commonwealth retains ownership and control of the actual lighthouses many of these wild and lonely areas were offered to the relevant State National Parks Departments who in turn called for expressions of interest for the cottage precinct. Some lightstation areas were leased to conservation groups who use volunteers to maintain the associated heritage values, or for conducting tours inside the lighthouse and interpreting the history of the station to the public.

In the instance of Double Island Point, some local residents had been calling for an international resort on the headland for almost 40 years. Despite this, the area was integrated into the Coolooloa National Park and the Noosa Parks Association (a long-term and highly successful conservation organization based on the Sunshine Coast) were successful in obtaining a 20 year lease on a Conservation Area, a tiny zone on the headland within the national park. Mission Statement for the area is “To protect, conserve and restore the natural and cultural values of the Double Island Point Lightstation complex and the surrounding Coolooloa National Park”.

The two cottages built in 1933 (with much asbestos cement and lead paint) were restored, solar power installed and the old



septic tanks removed. The cottages were then made available to members who pay for the privilege of staying for one week only, and undertake to do two hours of voluntary work every day.

Under the guidance of a landscape architect there were three main areas of work tackled. Broken bottles, cans, pieces of cast iron, and asbestos cement built up over 100 years - were retrieved and removed from the rocky headland, principally from below the original cottage precinct and taken off-site. Many of the exotic shrubs, flowers and other weeds introduced to the headland were systematically removed and replanted with plants endemic to the area. After restoration, the watch hut is now manned for a minimum of two hours a day to assist visitors understand the history of the lightstation and surrounding area, and record marine mammal sightings.

With the agreement of Queensland Parks and Wildlife Service works outside the Conservation Area are being tackled. A brand new kilometre long walking track has vastly improved access to the headland. This was defined by volunteers who now have an obligation to maintain it. Control of noxious and other woody weeds is progressing. Volunteers are encouraged to leave their vehicles at the cottages and walk. Nature photography is a popular past-time.





**What volunteers do
in their spare time**



FLAT ROCK, WHERE FISHERMEN HAVE LOST THEIR LIVES



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CRUISING YACHT OEMA PASSING DOUBLE ISLAND POINT



WHALES MIGRATING PAST THE LIGHTHOUSE



A POD OF DOLPHINS MOVING PAST THE LIGHTHOUSE



SEAGULLS RESTING



VISITORS HAVE GONE; PEACE AND QUIET RESTORED



Copyright © Ron Turner 2014

ENJOYING THE ISOLATION AND PEACEFULNESS



Copyright © Ron Turner 2014

A SEAT FROM WHICH TO ENJOY THE SCENERY



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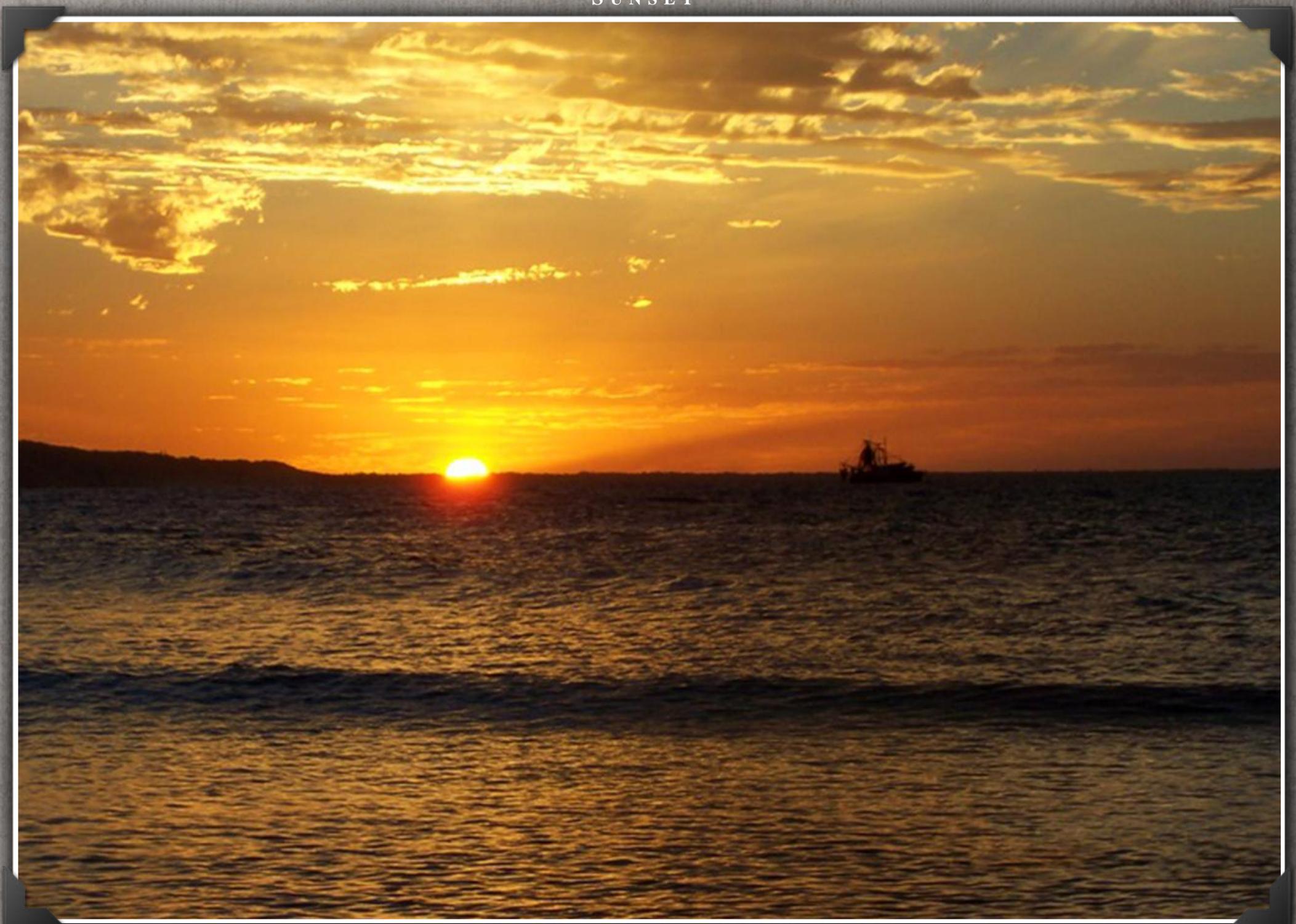
BRUSH TURKEY



PATTERNS IN THE SAND



SUNSET





A CARPET PYTHON



INTERPRETING NATURAL HISTORY OF THE AREA, IN THIS CASE, WHALE WATCHING





Visitors come by 4WD. Often impatient with tides, they drive through salt water. Occasionally, vehicles become stranded and are destroyed by incoming tides.

A PLACE WHERE FATHERS AND SONS CAN ENJOY TIME TOGETHER



DOUBLE ISLAND POINT IS A PLACE FOR SPECIAL OCCASIONS





Double Island Point Lighthouse

By Ron & Yvonne Turner and David & Debbie Hibbert.

Special thanks to Stuart Buchanan, ex lighthouse keeper, who helped foster our appreciation of lighthouses.

Photographers:

Ron Turner, Tracey Turner, Barbara Thomas, Cheryl Maughan and Stuart Buchanan.

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First published May 2015.

Last updated Friday, 15 May 2015