COMMANDER MATTHEW FLINDERS R.N. (H. M. SLOOP INVESTIGATOR):

Joining the Royal Navy at the age of 15, Matthew Flinders transferred to H.M.S. Providence as midshipman under Captain William Bligh in May 1791, at the age of 17, while she was being fitted out for a second, and this time successful, attempt to carry breadfruit trees from Tahiti to the West Indies. During this second breadfruit voyage, which lasted from 2 August 1791 to 7 August 1793, Flinders made his first contact with Australian waters, at Adventure Bay in Van Diemen’s Land, where he made his first chart.

Subsequently promoted to the rank of Master’s Mate, Flinders joined the Reliance, which together with the Supply, was about to take Governor Hunter to New South Wales. On the trip, Flinders made friends with George Bass, the surgeon of the Reliance. The Reliance arrived in Sydney on 7 September 1795, and the two, together with a boy named Martin, then made various exploratory expeditions up and down the coast of New South Wales. Bass then made his celebrated voyage in a whale-boat, exploring the east coast of Victoria, rounding Wilson’s Promontory and discovering Western Port. The heavy south-west swell Bass experienced when rounding Wilson’s Promontory made him almost certain that a strait separated Van Diemen’s Land from New South Wales. Before Bass had returned to Sydney, Flinders was sent on 1 February 1798 to the Furneaux Group in the Francis, to pick up the crew of the Sydney Cove. On his return the two friends began to plan the circumnavigation of Van Diemen’s Land; if accomplished, this would prove the existence of Bass’ strait.

Due to other commitments in the Reliance, including two return trips to Norfolk Island and a very rough voyage around the world to the Cape of Good Hope for cattle, it was not until September 1798 that Governor Hunter appointed Flinders to command the twenty-five tonne colonial-built sloop Norfolk, and ordered him, accompanied by Bass, to sail ‘beyond Furneaux Islands, and should a strait be found, to pass through it, and return by the south of Van Diemen’s Land.’ This was achieved.

189 The first attempt had resulted in the mutiny on the Bounty, and Bligh’s magnificent 3600-mile journey in an open boat with his supporters from the island of Tofoa (now known as Tofua) in the Ha’apai Group of the Tongan or Friendly Islands) to Timor, a Dutch settlement in the East Indies.
between 7 October 1798 and 12 January 1799. Flinders named the strait after Bass. After Flinders had spent a further period of time in the Norfolk exploring the coast north from Sydney as far as Hervey Bay, Hunter sent the Reliance back to England, where she arrived with Flinders (now a Lieutenant) on board on 26 August 1800.

On 6 September 1800 Flinders wrote to Sir Joseph Banks, the influential President of the Royal Society, proposing that a full-scale scientific expedition be commissioned to complete the explorations of the coasts of New Holland and New South Wales. Banks and the Admiralty quickly approved the plan, knowing that the French had recently organised their own expedition to the South Seas and New Holland under Post-Captain Nicolas Baudin. [The French expedition under Baudin in fact sailed from Le Havre in the Géographe and the Naturaliste on 19 October 1800.] On 12 December 1800, the British Admiralty issued orders to prepare the expedition. In January 1801, a ship called Xenophon was chosen. On 19 January 1801, in Flinders’ appointment to the command (as Lieutenant in Command), the ship was re-named Investigator.

During this busy period for Flinders, he published a small volume of 36 pages, entitled Observations on the Coasts of Van Diemen’s Land, on Bass’s Strait and its Islands, and on part of the coasts of New South Wales; intended to accompany the Charts of the late Discoveries in those Countries... Three charts were published by Aaron Arrowsmith in 1800-1801 to which Flinders’ Observations was a companion: the first chart shows Bass Strait, the coast of New South Wales from Western Port to Twofold Bay, and the whole of Van Diemen’s Land or Tasmania. The second chart, showing part of the coast of New South Wales drawn in two parallel sections - the first section depicting the coast from Ram Head to Shoal Bay, the second from Shoal Bay to Northumberland Isles - is based on Cook’s charts but is corrected from the surveys of Bass, Flinders and other navigators. The third chart is a composite chart, comprising four smaller charts on one sheet, of which one is of particular relevance to the coast of Victoria, being a chart of Western Port from Mr. Bass’s Eye Sketch.

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190 Captain Michael Hogan, master of the convict transport Marquis Cornwallis (and later owner of the merchant brig Harbinger), wrote that Van Diemen’s Land ‘is separated from the main land of New South Wales by a sea 40 leagues in extent, communicating with the South Pacific Ocean, by an opening about 20 leagues broad, which Lieutenant Flinders has named Bass’s Straits; these lie between New South Wales, and Furneaux Islands, which islands extend about 20 leagues in a direction North and South nearly, and are separated from Van Diemen’s Land by Banks’s Straits, only 4 leagues in width. Reference: The Oriental Navigator; or, New Directions for Sailing to and from the East Indies, China, New Holland, &c. &c. &c.;, 2nd edn, with considerable additions, Robert Laurie and James Whittle, London, 1801, p. 608. Not seen by Ferguson. SLV -sf 656.27 OR 4. See also Appendix III.

191 HRNSW 4, p. 300 (note). See also Jonathan Wantrup, Australian Rare Books 1788-1900, Hordern House, Sydney, 1987, pp. 135-8, and 361-2, for a discussion on the variant issue of this pamphlet, and on the three charts referred to in the pamphlet’s title.
Fitting-out and the selection of the crew and scientists went forward rapidly, and Flinders was promoted to Commander on 16 February 1801, a month before his twenty-seventh birthday. Among the scientists carried as supernumeraries were Robert Brown, naturalist; Ferdinand Bauer, natural history painter; and William Westall, landscape painter.

On 18 July 1801 the Investigator sailed from Spithead (an anchorage in the Solent, outside Portsmouth Harbour) with eighty-eight men on board, reaching the coast of New Holland on 6 December 1801. Commencing near King George’s Sound, Flinders then worked systematically eastwards along the southern coast, making an astonishingly accurate exploratory survey. His method was to bring the ship each day ‘within sight of the breakers’, and to tie the coast by a network of angles to shore ‘stations’ whose geographical co-ordinates had been determined.192

After discovering the gulfs of South Australia, Flinders met Baudin on 8 April 1802 in what Flinders was to name Encounter Bay. After exchanging information with Baudin, Flinders continued his charting, reaching what is now the South Australian - Victorian border on 19 April 1802. He recognised various capes and Lady Julia Percy Island, named previously by Grant. Flinders missed much of the Victorian coastline between Lady Julia Percy Island and Cape Otway due to bad weather. From off Cape Otway on 21 April 1802 he sailed south to explore King Island, returning two days later to resume charting along the Victorian coastline, past Grant’s Cape Patton, entering Port Phillip on 26 April (learning later that it had been discovered ten weeks earlier by Acting Lieutenant Murray, commander of the Lady Nelson, and named by him Port Phillip).

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192 This account of Flinders’ early activities in Australian waters before the fortnight spent in Victorian waters has been adapted from K. A. Austin, Matthew Flinders On the Victorian Coast April-May 1802: Select Documents, Cypress Books, Melbourne, 1974, pp. 6-12, 56-7.
On 27 April 1802, accompanied by the botanist Robert Brown, the landscape painter William Westall and some other men, Flinders climbed Arthur’s Seat, from the summit of which he sighted Indented Head, which he named. From near the summit of Arthur’s Seat Flinders also sighted Western Port, thus confirming that they were separate ports. In the meantime the natural history painter Ferdinand Bauer, the gardener Peter Good and the miner John Allen landed on Nepean Peninsula, and also at Swan Bay, while the First Lieutenant Robert Fowler landed on Mud Island. An attempt on 28 April by Flinders to examine Port Phillip by coasting round the shore in the *Investigator* was abandoned, as it turned out to be too slow, so the next day (29 April) Flinders began his important boat voyage, visiting a rocky point near Arthur’s Seat before rowing across the bay to Indented Head, reaching there late in the evening. Meanwhile, the surgeon Hugh Bell with the gardener Peter Good and one other had landed on the shore of Point Nepean, staying overnight. The next day (30 April) Flinders explored the western arm of the bay (along the northern shore of the Bellarine Peninsula), before crossing to the northern shore of the western arm to set up camp for the night, in readiness for ascending the You Yangs the next day. In the meantime, the naturalist Robert Brown visited Point Nepean, returning on 2 May, and also Swan Bay. On 1 May 1802 Flinders and three of his crew
climbed to the highest point of the You Yangs. Flinders named this Station Peak but this was later changed to Flinders Peak in his honour. From the summit Flinders could ascertain the northern extent of Port Phillip. He and his companions then rowed back to Indented Head. The following day (2 May) Flinders explored Murray’s Swan Harbour – renaming it Swan Pond (!) - and the West Channel, before returning aboard the Investigator, which First Lieutenant Robert Fowler had in the meantime taken back to near the entrance to the bay.

To complete his chart of Port Phillip, Flinders was able, subsequently, to draw upon results of the complete coastal survey carried out by Charles Grimes, Surveyor-General of New South Wales and the soundings made by Grimes’ companion, Lieutenant Charles Robbins, when Governor King sent them to Port Phillip in 1803. On Flinders’ chart of Port Phillip the parts of the coast left unshaded were borrowed from Grimes and the soundings written at right angles were those of Robbins.\(^{193}\)

On 3 May 1802 Flinders resumed the coastal voyage eastwards in the Investigator. From five miles outside the entrance to Port Phillip, William Westall drew the view, to assist others in locating this extensive, but obscure, port. Later, Westall drew another view, this time from off Grant’s Cape Schanck, as Flinders considered it to be a beacon for both ports.

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\(^{193}\) Flinders, *A Voyage to Terra Australis*, vol. 1, p. 218.

Off Wilson’s Promontory Flinders noticed numerous islands and rocks, which had been named by Grant – although discovered earlier by Bass. He also observed the small cluster of islands discovered by Captain John Black of the Harbinger, named Hogan’s Group after the owner of the Harbinger. Flinders threaded his way south of the Kent Group, before returning to the mainland near Cape Howe, which he passed on 6 May 1802. Three days later the Investigator anchored in Sydney Cove.

On 22 July 1802 Flinders sailed northwards in the Investigator, charting the coastline in an anti-clockwise direction; surviving rotting timbers in the ship, and scurvy and dysentery that ravaged the ship’s company. He eventually reached Sydney again on 9 June 1803, having circumnavigated the continent.

195 View 13 is headed ‘Entrance of Port Phillip: taken May 3. 1802 at 9h. 20' a.m.’, with ‘Entrance’, ‘North 5 miles’ and ‘Point Nepean’ labelled. View 14 is headed ‘Cape Schanck: taken May 3. 1802 at 11h. a.m.’, with ‘Arthur’s Seat’, ‘N.64° E. 5 or 6 miles’ and ‘Western Port’ labelled.
The rest of Flinders’ story is one of tragedy and hardship, ennobled by his determination to finish his charts and to publish the results of the interrupted voyage. After Investigator had been declared unseaworthy in Sydney, Flinders was wrecked in H.M.S. Porpoise on his way to England for another ship, and eventually he was detained on Mauritius by the French for six years. His great book, A Voyage to Terra Australis, with its folio of beautifully engraved charts, was published the day before he died. Against this background, the fortnight he spent on the Victorian coast stands out as a brief, pleasant interlude of creative activity, one of the happiest periods of his strenuous career.196

It is interesting to compare the survey techniques employed by James Cook with those of Matthew Flinders. Cook improvised the (land-based) method of triangulation by using a measured sea base determined by ‘log’, to effect ‘running surveys’ of new coastlines, which he charted with quite remarkable accuracy. Flinders, on the other hand, some three decades later, and under different circumstances, validated his survey using more secure land bases, and this method was followed by his successors in the Royal Navy.197

It is true that no part of the Victorian coast was actually discovered by Flinders, but the drama of his passage, the sheer brilliance of his explorations in Port Phillip, the wealth of detailed observations of plants and animals made by his scientific team, and his shrewd assessment of the potential value of the country surrounding Port Phillip, have caused Victorians to afford him an honoured place in the history of their State. The accounts written by Flinders and his team in this area create a vivid close-up of the expedition at work, an insight which helps one to understand why it achieved so much.

Flinders’ work in Victorian waters is significant also for other less obvious reasons. From the time of James Cook’s arrival near Point Hicks on 19 April 1770 (ship’s time) to the arrival of Flinders in the Investigator in April 1802, many sailors had had some contact with the Victorian coast, with Bass Strait and its islands, and with Van Diemen’s Land, as Tasmania was then called. The men who discovered parts of the Victorian coast before Flinders arrived in the Investigator had been unable to fix the positions of their discoveries accurately, nor had they been able to provide anything better than rough ‘eye sketches’ of what they had seen. It remained for Flinders to correct their mistakes, and to co-ordinate the various isolated discoveries with his more accurate survey of the whole coastline.198

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196 Austin, p. 11.
198 Austin, p. 6.
The historian Ernest Scott noted that only three features in Victoria were named by Flinders: Point Franklin, Indented Head (Port Phillip), and Station Peak (Port Phillip).199

References:

Matthew Flinders, *Observations on the Coasts of Van Diemen’s Land, on Bass’s Strait and its Islands, and on part of the coasts of New South Wales; intended to accompany the Charts of the Late Discoveries in those countries*, by Matthew Flinders, Second Lieutenat [sic] of His Majesty’s Ship Reliance, John Nichols, Earls’ Court, Little Newport Street, Soho, London, 1801. Ferguson 329

SLV has a copy: 919.46 F 640. [Copies of a variant of this pamphlet are at UniM Bail SpC/AX 994.008 A938 v. 2 and UniM ERC AB 910.0916576 FLIN, being reprints of the 1910 edition published by G. Mackaness, Sydney. Another copy at UniM, having no apparent call number, is a facsimile reprint by the Libraries Boards of South Australia 1965.]


[Chart] Matthew Flinders, ...*Western Port on the S. Coast of N.S.W., from Mr. Bass’s Eye Sketch....* [plus three other charts] together on one sheet. London, Feb. 20, A. Arrowsmith, 1801.

Matthew Flinders, *A Voyage to Terra Australis; undertaken for the purpose of completing the discovery of that vast country, and prosecuted in the years 1801, 1802, and 1803, in His Majesty’s Ship the Investigator, and subsequently in the armed vessel Porpoise and Cumberland Schooner. With an Account of the Shipwreck of the Porpoise, arrival of the Cumberland at Mauritius, and imprisonment of the Commander during six years and a half in that island*, G. & W. Nicol, London, 1814, vol. 1, chapter IX, pp. 200-5, 208-20, chapter X pp. 221-6, and Appendix (pp. 255-61), Table V (p. 266); - together with Atlas: Plate V: *Chart of Terra Australis by M. Flinders Comm. of H. M. Sloop Investigator. South Coast, Sheet IV. 1802.* (covering coastline from NW of Cape Bernouilli [South Australia] to Cape Otway); Plate VI: *Chart of Terra Australis by M. Flinders Comm. of H. M. Sloop Investigator. South Coast, Sheet V. 1798, 1802, & 3.* (covering coastline from Cape Otway to Barmouth Creek [N.S.W.], together with four insets, of which one is an enlargement of the coastline from west of Port Phillip to east of Western Port; and Plate XVIIb: [Coastal] Views on the South Coast of Terra Australis: View 13 = Entrance of Port Phillip: taken May 3, 1802 at 9h. 20′. a.m.; View 14 = Cape Schanck: taken May 3, 1802 at 11h. a.m. UniM ERC MAPS zf 919.4042 FLIN (v. 1, charts)


[See also Jonathan Wantrup, *Australian Rare Books 1788-1900*, Hordern House, Potts Point, 1987, pp. 132-8, 361-2.]
The *Cumberland* was the first schooner built in the Colony and the first armed vessel belonging to the Colony, being of 29 tons and a length of 40 feet; it was built in Sydney by Henry Moore, the government boat-builder, and launched in 1801.

Charles Robbins was a midshipman aboard H.M.S. *Buffalo* when it made its maiden voyage out to New South Wales at the start of 1802.

Late in 1802 Governor King sent the *Cumberland* to survey King Island and Port Phillip to the north of it. The purpose of the survey was to establish whether or not either location might prove a suitable site for a new settlement. The *Cumberland*’s party of 17 included her commander Charles Robbins (1782-1805), Acting Surveyor-General Charles Grimes (1772-1858), Surveyor James Meehan (1774-1826), James Fleming (gardener), Mr. McCallum (doctor), and three marines from H.M.S. *Buffalo*. Meehan had been sentenced to transportation for a part in the Irish rebellion of 1798; he arrived in Sydney in February 1800 and in April of that year was assigned as an assistant to Charles Grimes.

After examining King Island (where they encountered Baudin’s ships – first the *Naturaliste* and the next day the *Géographe* - and hoisted the Union flag in an attempt to reinforce Britain’s claim to the territory) the party sailed on to Port Phillip, which the *Cumberland* entered on Thursday 20 January 1803. Jointly, Robbins and Grimes carried out the first complete survey of Port Phillip, during which they discovered the Yarra River.

Robbins began his survey by following the eastern side of Port Phillip from the entrance to its head in Hobsons Bay. Here on Wednesday 2nd February 1803, they found the Yarra River - which Fleming, who compiled a detailed journal of the survey, called the ‘Fresh Water River’ - and its tributary, the Maribyrnong, which Grimes called the ‘N. W. branch’. Grimes’ party first investigated the Maribyrnong, which they examined as far upstream as Braybrook. They then returned to the freshwater stream, which they followed as far as Dight’s Falls in Abbotsford. Unable to proceed further in their boat, they retraced their course, crossed Hobsons Bay to Williamstown and then began to follow the western side of Port Phillip to Corio Bay201 and from there back to the entrance of Port Phillip. The *Cumberland* sailed from Port Phillip on 27 February after a survey lasting five weeks.

Grimes’ survey was the first to follow the entire shoreline of the harbour and the first to find a major freshwater river. His map is regarded as one of the finest and most accurate of all early survey maps. But Grimes was not impressed by Port Phillip’s potential for settlement. It was, he wrote, in general ‘very swampy’, the timber was ‘all very bad’, and the soil generally stony and very badly watered. Fleming was less dismissive. Fleming later reported that the land around the Yarra River offered ‘the most eligible place for a settlement’, and reported that ‘the Country in general is excellent Pasture’. Neither portrayed Port Phillip as the ideal place for a new convict settlement. But because of Grimes’ discouraging assessment of Port Phillip, more than 30 years were to pass before Melbourne was established.202

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200 The vessel was named incorrectly as the *Buffalo* in ADB, volume 1: 1788-1850 A-H, p. 487, entry for Charles Grimes.
201 Corio Bay. Geelong’s original owners are the Wathaurong People who called the bay “Jillong” and surrounding land “Corayo”. The name Jillong has a meaning similar to “a place of the sea bird over the white cliffs”. Superintendent of the District of Port Phillip, Charles J La Trobe, favoured “Corio” for all official names of the area, but the settlers generally adopted “Geelong” for the town and the district around it, and “Corio” for the bay. References: Bryan Wardle, *Corio Bay*, Pepper Tree Press, Geelong, 1978; [http://www.intown.com.au/locals/geelong/historical/default.htm](http://www.intown.com.au/locals/geelong/historical/default.htm).
Twenty-two years later, in 1825, James Meehan was to tell Hamilton Hume that there were no large islands in Port Phillip, and that therefore Hume and Hovell, on their overland expedition in 1824-5, had reached Port Phillip, not Western Port as Hovell had insisted.203

References:

Governor King to Charles Robbins 22 November 1802, _HRNSW_ 4, pp. 908-910.  UniM ERC AB 994.4 H 673 Vol. 4.

[Chart] Charles Grimes, _Port Phillip_  The Timber round the banks of this Port is very low and bad.  The different kinds are Blue gum, Banksia, Oak, & Mimosa of sorts.  High Water full & change, at the Heads at 2 O’Clock.  The soundings by M. Robbins.  The quality of the soil by Jas. Flemming.  Tides rise irregular from 3 to 6 feet.  surveyed by C Grimes Act G.  N. S. Wales, 1803.  _Dixson Map Collection Z/Ca 80/3_.  Copy (lithographed at the Department of Lands and Survey Melbourne by T. Slater 14 2 [18]79) at _SLV MAPS 821.01 AJ._

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[Manuscript] Charles Grimes, Field Book No. 18, entitled General Observations, Port Phillip 1802 & 1803, State Records New South Wales SZ81. [A 25-paged negative photostat copy entitled Diary, 1803 of part of Charles Grimes’ journal of his visit to King Island and Port Phillip Bay between 8th December, 1802 and 27th February, 1803 was made c. 1934. A hand-written note dated 9th May, 1934, is included with the copy, noting that there are two pages unnumbered between pp. 13 and 14, being missed in the pagination of the original. SLV MS Box 18/3 H12435/M5130.]

Matthew Flinders, A Voyage to Terra Australis; undertaken for the purpose of completing the discovery of that vast country, and prosecuted in the years 1801, 1802, and 1803, in His Majesty’s Ship the Investigator, and subsequently in the armed vessel Porpoise and Cumberland Schooner. With an Account of the Shipwreck of the Porpoise, arrival of the Cumberland at Mauritius, and imprisonment of the Commander during six years and a half in that island, G. & W. Nicol, London, 1814, vol. 1, chapter IX, pp. 218-20; - together with Atlas: Plate VI: Chart of Terra Australis by M. Flinders Comm’r of H. M. Sloop Investigator. South Coast, Sheet V. 1798, 1802, & 3. [Covers coastline from Cape Otway to Barmouth Creek N.S.W., together with four insets, of which one is an enlargement of the coastline from west of Port Phillip to east of Western Port.] UniM ERC MAPS zf 919.4042 FLIN (v. 1, charts).

[A very rare broadside, published in Sydney in April 1803 and written by Governor Philip Gidley King, records sailing directions and offers other nautical observations on Bass Strait based on the expeditions of Grant, Murray, Barrallier, Flinders and others. It is entitled Remarks on the Passage through Bass’s Straits, from the Westward, Government Press, Sydney, 16 April 1803. Ferguson 376. The only known copy is in ML. SLV has facsimile copy of limited edition of 100 copies, published at Sullivan’s Cove, Hobart, 1973: 623.890916 K58R. There is no copy at UniM.]

[Parliamentary Paper No. C 15] John J. Shillinglaw (compiler), Port Phillip, First Survey and Settlement of: Copies of certain recently discovered historical records respecting the first Survey and subsequent Settlement of Port Phillip Heads, formed under Lieutenant-Governor Collins in 1803, John Ferres, Government Printer, Melbourne, 1878; 80 foolscap pp., 775 copies. [Includes the journal of James Fleming. Also includes a facsimile of Grimes’ chart: Charles Grimes, Port Phillip The Timber round the banks of this Port is very low and bad. The different kinds are Blue gum, Banksia, Oak, & Mimosa of sorts. High Water full & change, at the Heads at 2 O’Clock. The soundings by M’r. Robbins. The quality of the soil by Jas. Flemming. Tides rise irregular from 3 to 6 feet. surveyed by C Grimes Act’g Surveyor G’. N. S’. Wales, 1803. Lithographed at the Department of Lands and Survey Melbourne by T. Slater 14 2 [18]79. SLV MAPS 821.01 AJ.] SLV RARELTF 994.52 P83V; UniM Bail SpC/GRIM f 994.502 PORT.


where his annotations have been replaced by a more legible script. An almost correct extract from Grimes’ Field Book No. 18: ‘General Observations, Port Phillip 1802 & 1803’, being his journal from 20th January to 22nd February 1803, is given as an Appendix.[ UniM Bail ERC AB 919.451042 FLEM.

The Secretary of State for War and the Colonies from 1801 to 1804 was Robert Hobart, fourth Earl of Buckinghamshire. Hobart wished to establish a settlement in Port Phillip, to discourage the interest of the French (whose ships were known to be exploring in the region) and to establish control over the lucrative sealing in Bass Strait. Under Hobart’s directions, Lieutenant-Colonel David Collins R.N., who was to be the Lieutenant-Governor of the new settlement, sailed from England in April 1803 aboard the 1200 tonne 52-gun warship H.M.S. Calcutta under the command of Captain Daniel Woodriff, with about 300 convicts.

The proposed new settlement in Port Phillip was to be guarded by a garrison of Royal Marines. When it became apparent that the Calcutta could not carry everyone - which included Collins’ civil staff, and a small party of free settlers – together with all the stores, a store ship, the Ocean of 484 tonnes (Captain John Mertho), was chartered to accompany the Calcutta.

The two ships arrived at Port Phillip within a couple of days of each other early in October 1803. After landing at Sullivan Bay near present-day Sorrento, First Lieutenant James Hingston Tuckey, a competent marine surveyor, was sent to explore Port Phillip. Tuckey’s report and his own dissatisfaction with the site chosen prompted Collins to write to Governor King seeking permission to remove the settlement. When King agreed, Collins decided to move to the Derwent River in Van Diemen’s Land. Woodriff annoyed both Collins and Governor King by refusing to transfer to the Derwent River, as he himself was under instructions to bring to England as quickly as possible the naval stores awaiting him at Port Jackson. Woodriff felt he had no alternative but to go at once to Sydney to collect them, believing that the Ocean was sufficient for the move to Van Diemen’s Land. Collins arrived on the Derwent River in February 1804 and established the future town of Hobart.

204 The painting shows the 52-gun HMS Calcutta (Captain Daniel Woodriff RN) arriving at Sullivan Bay, Port Phillip with Lieutenant-Governor David Collins and the first European Settlers in Victoria, October 1803. The merchantman Ocean (Captain John Mertho) is at anchor, having arrived two days earlier.
David Collins, previously Judge-Advocate to the settlement at Sydney from 1788 to 1796, wrote about his experiences there in *An Account of the English Colony in New South Wales*, but he left no published account of his work as Lieutenant-Governor at Port Phillip (nor later as the founder of Hobart). He may have left no account of the aborted settlement in Port Phillip, but several did, including James Tuckey, the Rev. Robert Knopwood, and Third Lieutenant Nicholas Pateshall.

Tuckey’s survey was one of the first surveys of Port Phillip. Lieutenant John Murray and his crew in the *Lady Nelson* had discovered Port Phillip in 1801. Matthew Flinders had surveyed Port Phillip in April 1802 and had given a favourable report to Governor King, prompting a more thorough survey by Charles Grimes and Charles Robbins in February 1803. But when Tuckey carried out his survey from 16 to 26 October 1803 - following the coastline in a generally anti-clockwise direction, making frequent landings to take bearings and to examine the terrain - he had only Murray’s sketch with him: Flinders’ chart of Port Phillip had not reached England at the time of the departure of the *Calcutta* and the *Ocean*, and Collins’ expedition was ignorant of the survey carried out by Grimes and Robbins.

For his survey of Port Phillip, Tuckey was accompanied by George Prideaux Robert Harris, colonial surveyor, William Collins, settler and mariner, and William S. Gammon, assistant master’s mate, H.M.S. *Calcutta*. They had the use of the launch, a 6-oared cutter, and two boats’ crews, and were victualled for eight days.

References:


James Hingston Tuckey, *An Account of a Voyage to Establish a Colony at Port Philip in Bass’s Strait, on the South Coast of New South Wales, in His Majesty’s Ship Calcutta, in the years 1802-3-4. By J. H. Tuckey, Esq. First Lieutenant of the Calcutta*, Longman, Hurst, Rees, and Orme, London, and J. C. Mottley, Portsmouth, 1805. Ferguson 418, 419; also mentioned at 381.

Matthew Flinders, *A Voyage to Terra Australis; undertaken for the purpose of completing the discovery of that vast country, and prosecuted in the years 1801, 1802, and 1803, in His Majesty’s Ship the Investigator, and subsequently in the armed vessel Porpoise and Cumberland Schooner. With an Account of the Shipwreck of the Porpoise, arrival of the Cumberland at Mauritius, and imprisonment of the Commander during six years and a half in that island*, G. & W. Nicol, London, 1814, vol. 1, chapter IX, pp. 219-20 UniM ERC MAPS zf 919.4042 FLIN (v. 1).


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206 These notes are taken mainly from works by John Currey.
John Currey (ed.), *Memoir of a Chart of Port Philip, Surveyed in October 1803 by Lieut. James Tuckey of His Majesty’s ship Calcutta*, The Colony Press, Melbourne, 1987, chart in rear pocket is a facsimile of Tuckey’s chart *Port Phillip in Bass's Strait*, … UniM Bail SpC/AX 919.45104 TUCK.


John J. Shillinglaw (compiler), *Port Phillip, First Survey and Settlement of: Copies of certain recently discovered historical records respecting the first Survey and subsequent Settlement of Port Phillip Heads, formed under Lieutenant-Governor Collins in 1803*, John Ferres, Government Printer, Melbourne, 1878, UniM Bail SpC/GRIM f 994.502 PORT.

CAPTAIN DUMONT D’URVILLE (CORVETTE L’ASTROLABE):

In 1826, an officer on the French corvette La Coquille, Jules Sébastien César Dumont d’Urville (1790-1842), was himself given command of the ship which he renamed L’Astrolabe\(^{207}\) in honour of one of the two ships belonging to the expedition of the ill-fated French navigator Jean-François de Galaup, comte de La Pérouse. Dumont d’Urville had visited Sydney in January 1824 as entomologist and botanist in the scientific expedition of La Coquille then under the command of Captain Louis Isidore Duperrey\(^{208}\), when Dumont d’Urville held the rank of Lieutenant.

The talented Dumont d’Urville, a renowned hydrographer, botanist, geologist, astronomer and entomologist who could also speak seven languages, arrived at King George’s Sound in October 1826, where significant biological studies were undertaken. From there, he sailed east to Western Port, arriving on 12 November 1826, and staying a week.

He set up an observatory on the north-eastern shore of Phillip Island. He and his scientists explored and charted the bay’s main western channel, studied the flora and fauna of both land and sea, the soils, the availability of water and wood and the evidence of former Aboriginal occupation. Their reports comprised the first thorough scientific surveys of the area. The ship’s surgeons, Jean René Constant Quoy (1790-1869) and Joseph Paul Gaimard (1796-1858), acting as naturalists, collected and named over 20 species of molluscs; they not only collected the shells but drew the beautiful live molluscs in natural colour, then, after dissecting them, described their anatomy. It was in Western Port that the expedition’s artist, Louis Auguste de Sainson (1801-1887), gave the world its first glimpse of Victoria through his Coastal scene of seal fishermen’s hut on hill and men carrying dead seal from beach, Western Port. The results of the voyage of L’Astrolabe were “for science and geography, the most remarkable undertaken since the beginning of the century.”\(^{209}\)

\(^{207}\) An astrolabe is an instrument for measuring altitudes of stars etc.

\(^{208}\) Duperrey’s voyage around the Pacific proved important for the quality of scientific data collected, particularly on flora and fauna. Duperrey and the expedition’s surgeon and naturalist, René Primevère Lesson, published accounts of their voyage.

\(^{209}\) Reference: Jean Edgecombe, Phillip Island and Western Port, 1989.
On the 19 November *L'Astrolabe* left Western Port for Sydney to refit. On his way to Sydney, d’Urville passed the incoming expedition of H.M.S. *Fly* and the colonial brig *Dragon*, but did not sight it.

On the 2 December d’Urville landed in Port Jackson and, again, the artist Sainson drew some beautiful work. *L'Astrolabe* left for New Zealand later in December 1826 and, after extensive additional surveying, Dumont d’Urville returned to France in 1829.

[In 1837, Dumont d’Urville led another expedition in *L'Astrolabe*, accompanied by *La Zélée*, to explore the Antarctic and survey the Pacific Islands. In September and October 1838, the ships were among the Samoan and Fiji Islands, from where they sailed to the Philippines, East Indies, mainland Australia and finally south to Hobart, the expedition arriving there in December 1839. In January 1840, the expedition sailed south to discover Adelie Land. The vessels returned to Hobart for a brief visit before sailing for New Zealand, then through Torres Strait to Timor. Dumont d’Urville returned to France from his second expedition in 1840. These two voyages resulted in his being considered the greatest French explorer of the nineteenth century.\(^{210}\) He and his entire family were killed in a train that caught fire near Meudon between Versailles and Paris on 12 May 1842.]

References:


Jules S-C Dumont d’Urville (Helen Rosenman tr. and ed.), *Two Voyages to the South Seas by Captain (later Rear-Admiral) Jules S-C Dumont d’Urville of the French Navy to Australia, New Zealand, Oceania 1826-1829 in the corvette Astrolabe and to the Straits of Magellan, Chile, Oceania, South*


Susan Hunt, Martin Terry & Nicholas Thomas, Lure of the Southern Seas; the Voyages of Dumont d’Urville 1826-1840, Historic Houses trust of New South Wales, 2002.

[See also: Keith Bowden, The Western Port Settlement and Its Leading Personalities, South Eastern Historical Association, Cheltenham, 1970; Valda Cole, Western Port Chronology 1798-1839 Exploration to Settlement, Shire of Hastings Historical Society, 1984; Anne-Marie Nisbet, French Navigators and the Discovery of Australia, School of French, UNSW, 1985; Jean Edgecombe, Phillip Island and Western Port, 1989.]
In 1826 the old bogey that the French intended to establish themselves on the southern shores of Australia raised its head (again). It was believed by some that the French desired to send out convicts to a penal settlement which they contemplated establishing on part of the unoccupied coast of Australia. Aware that a French ship was about to set out for the South Seas, Earl Bathurst, in March 1826, wrote from London to Lieutenant-General Ralph Darling, instructing him ‘to commence immediate preparations for the formation of a settlement at Western Port by directing a survey to be made of the adjoining country or by sending from Sydney a certain number of convicts for the purpose of clearing the ground for future settlers.’

Darling, who had recently become Governor of New South Wales, was anxious about a possible French attempt at settlement because his commission limited the western extent of his government to 129ºE longitude. Should the French land, it would be difficult for him to justify the claim that the whole of Australia was a British possession. So settlements were formed at King George’s Sound and Western Port - these, together with the settlement on Melville Island, were thought sufficient to secure the continent from the French! Hamilton Hume and William Hovell, on their overland journey in 1824-5, had reached Port Phillip Bay, but mistakenly believed that they had reached Western Port. Their favourable report induced Darling to select Western Port as one of the three sites for a settlement.

On 9 November 1826 the colonial brig Dragon (Captain Skelton), escorted by the naval vessel H.M.S. Fly, under the command of Captain F. A. Wetherall, sailed from Sydney bound for Western Port to establish a new settlement. Captain Samuel Wright of the 3rd Regiment or Buffs was chosen as Commandant for the new settlement, with Lieutenant Birchell appointed as his assistant. Hovell accompanied them because of his supposed knowledge of the Port. The whole party consisted of two officers, eighteen soldiers, and twenty able-bodied convicts, with provisions for six months.

Much was expected of Wright who was given copious instructions. Assisted by Captain Wetherall who was to remain surveying for one month at Western Port, Wright was to select the best possible site for a settlement, a site with a good anchorage for ships, with an adequate supply of fresh water and with suitable surrounding country for subsequent selection. In addition it had to be a place that could be easily defended if it were attacked.

The party established themselves on Phillip Island at the beginning of December 1826 near present-day Rhyll. Water (unfit to drink) was obtained from a tide-well, and about four acres (1½ hectares) of land was cleared about the most commanding spot. There a flagstaff was erected, two long six-pounder guns were landed, and Captain Wetherall took formal possession of Western Port on Sunday 3 December 1826, naming the place Fort Dumaresq. The Union Jack was hoisted

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212 F. A. Wetherall: perhaps he subsequently became Rear Admiral Frederick Augustus Wetherall (1798-1856), the son of General Sir Frederick Augustus Wetherall (1754-1842). There is also a Frederick Augustus Wetherall who rose to at least the rank of Commander and who died >1888, according to a list of RN commissioned officers given in http://www.pdavis.nl/SeaOfficers.php?page=8.
213 When the expedition sailed out of Port Jackson it was joined by another colonial brig, the Amity, on her way to King George’s Sound, to form a second settlement under the command of Major Edmund Lockyer.
215 Named after a member of the Dumaresq family, all of whom distinguished themselves in various capacities in Australia. Governor Darling married Elizabeth Dumaresq (1798-1868). Her three brothers Henry (1792-1838), William (1793-1868) and Edward (1802-1906) were thus brothers-in-law of Governor Darling. At the time of the settlement in Western Port, Henry was Governor Darling’s private secretary and later Clerk of the Executive Council, while William was civil engineer and later inspector of roads and bridges. Henry’s son, Charles Henry Darling, was Governor of Victoria 1863-1866.
and a royal salute (21 volleys) was fired from this battery. But Fort Dumaresq was considered unsuitable as a site for a settlement.

Boats manned by experienced parties were sent out to examine the harbour. After a meticulous examination of its shores and its two large islands, a site for the settlement was chosen. Wetherall himself carefully examined the possible sites, retracing his steps before making a final decision. On Sunday 10 December he met Wright for a final consultation in the Dragon. The shipboard conference concluded, the two men landed and, having satisfied themselves that water could be readily obtained by digging wells among the tea-tree lining the shore, they decided upon a site for a township overlooking the bay about two miles (three km) to the east of Red Point. This was a short distance to the east of the present township of Corinella. On the 12 December 1826 Wright moved his little settlement to this more strategic point on the eastern shore of the bay. Here tents and temporary huts were put up and a garden was planted. For a while, a guard remained at Fort Dumaresq.216

Meanwhile, the French corvette L’Astrolabe had arrived at Port Jackson in early December 1826. Her commander, Dumont d’Urville, who had visited Western Port during the previous month, reassured Darling that his expedition was purely scientific.

The convict settlement at Corinella was short-lived. Governor Darling had one purpose in mind when he established it, to secure formal possession of the Bay. As this had been accomplished, he soon suggested to the authorities that the settlement be withdrawn, and in January 1828 it was abandoned and the party returned to Sydney.217

References:


[Chart] Western Port March. 1827. SLV MAPS 821.35 A 1827.


Keith Bowden, The Western Port Settlement and Its Leading Personalities, South Eastern Historical Association, 1970.


Jules S-C Dumont d’Urville (Helen Rosenman tr. and ed.), Two Voyages to the South Seas by Captain (later Rear-Admiral) Jules S-C Dumont d’Urville of the French Navy to Australia, New Zealand, Oceania 1826-1829 in the corvette Astrolabe and to the Straits of Magellan, Chile, Oceania, South East Asia, Australia, Antarctica, New Zealand and Torres Strait 1837-1840 in the corvettes Astrolabe and Zélée, Vol. I: Astrolabe 1826-1829, MUP, 1987, p. 306.


218 Syzigee [sic, syzygy]: conjunction or opposition, especially of moon with sun.
SURVEYOR-GENERAL THOMAS MITCHELL:

On his well-known exploratory expedition (subsequently known as his ‘Australia Felix’ expedition) through what is now Victoria, in 1836, the Surveyor General of New South Wales, Major Mitchell – as he was universally known – discovered and named the Glenelg River in south-western Victoria. As he and his men rowed down the river towards the coast, the river became wider and deeper, causing Mitchell to countenance a hope of finding a navigable harbour at its embouchure. However, like the Murray River and a number of other rivers along the southern coastline, the Glenelg River emptied into a shallow lagoon – much to Mitchell’s disappointment, as one of the aims of an exploratory expedition is to locate rivers emptying into a port, thus enabling them to be navigable from the sea.

The bay into which the Glenelg flowed, between Cape Northumberland and Cape Bridgewater, Mitchell named Discovery Bay.

Fig. 30. Thomas Mitchell’s Map of the Mouth of the Glenelg River, 20 August 1836. (T. L. Mitchell, Three Expeditions…, Inset in folded Map at back of Volume I, 2nd edn, 1839.)

Fig. 31. Portion of Oxbow Lake 1:25 000 Topographical Map (compiled 1975) showing the Mouth of the Glenelg River. © Crown (State of Victoria).
The route taken by Mitchell’s ‘discovery boats’ near the mouth of the Glenelg River on 20 August 1836 was plotted accurately by Mitchell at a scale of 800 yards to an inch (1:28 800). His map fits very well with the modern Oxbow Lake 1:25 000 map.

Mitchell’s map subsequently appeared as an inset to the general map at the back of volume I of his book *Three Expeditions*.

References:

Thomas Mitchell, Plot of Survey at scale 0.4 inch to 1 mile. State Archives of New South Wales, Sydney, AO map SZ 178.


Lieutenants Hastings R. Henry R.N.\textsuperscript{219}, Thomas M. C. Symonds R.N.\textsuperscript{220}, and Mate P. Frederick Shortland R.N.\textsuperscript{221}, for Captain William Hobson R.N.\textsuperscript{222} (Sloop H.M.S. Rattlesnake):

In order to establish permanent official authority over the fledgling settlements at Port Phillip, Governor Sir Richard Bourke appointed Captain William Lonsdale of the 4th or ‘King’s Own’ Regiment of Infantry as Police Magistrate for the district. H.M.S. Rattlesnake, under the command of Captain William Hobson, conveyed Lonsdale from Port Jackson to Port Phillip (arriving on 27 September 1836), where it spent the first night anchored about 2 miles inside the entrance.

Taking advantage of the period required establishing a residence in the settlement for the Police Magistrate, during which time the Lonsdale family were to remain on board, Hobson and his officers were able to survey the navigable areas of Port Phillip.

On 28 September the Third Lieutenant, Thomas Symonds, and three others were supplied with a fortnight’s rations and sent in the pinnace\textsuperscript{223} to survey the entrance to the bay, returning to the ship (by that stage anchored in Squatter’s Bay off Gellibrand Point) on 9 October. The Rattlesnake reached the head of the bay at six in the evening of the 29 September 1836.\textsuperscript{224} On 6 October 1836 a party in the cutter, under the command of the Second Lieutenant, Hastings Reginald Henry, went away to survey Geelong Harbour, taking with them provisions for a fortnight, and returning to the ship on 19 October. On the 25 October the pinnace under the command of the mate, Frederick Shortland, was sent to survey a portion of the coast between Gellibrand Point and Geelong Harbour, returning on 30 October. On 13 November 1836 the ship proceeded towards Arthur’s Seat, anchoring there the next day, to enable surveys to be made of that part of the coastline.\textsuperscript{225} The ship stayed off Arthur’s Seat until 20 November when it returned to Gellibrand Point, leaving the pinnace under the command of the Third Lieutenant Symonds to continue the survey at the entrance of the port. On 1 December the Rattlesnake left Gellibrand Point and proceeded to the entrance to Port Phillip where they picked up the pinnace, and anchored for the night. For the next week there was much surveying activity, taking soundings, and bearings of shoals and points of land etc.

In all, the Rattlesnake stayed a total of 11 weeks in Port Phillip before returning to Sydney.\textsuperscript{226}

Early in the New Year, Governor Bourke decided that he must view the progress of the new settlement at Port Phillip. The Governor’s party embarked on the Rattlesnake (Captain William Hobson) on 21 February 1837. Among the vice-regal entourage were Captain Phillip Parker King as travelling companion, and surveyor-in-charge Robert Hoddle.

On 1 March 1837 the Rattlesnake entered Port Phillip once more and anchored outside the shoals, about three miles from where Colonel Collins had formed his temporary establishment in 1803. In the evening Governor Bourke and his entourage landed at Sullivan’s Bay (so-named by Collins) to ascertain the best position for a lighthouse and signal post. The next day Bourke proceeded early in the morning to the opposite side of the Entrance and selected a house site for a customs boat or a

\begin{footnotesize}
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\item \textsuperscript{219}Later Admiral Sir Hastings Reginald Yelverton GCB (1808-1878). Changed his surname to Yelverton in 1849.
\item \textsuperscript{220}Later Admiral of the Fleet Sir Thomas Matthew Charles Symonds GCB (1813-1894).
\item \textsuperscript{221}Later Vice-Admiral (Peter) Frederick Shortland (1815-1888).
\item \textsuperscript{222}Captain William Hobson RN (1793-1842) later became the first independent Governor of New Zealand.
\item \textsuperscript{223}pinnace: ship’s small boat.
\item \textsuperscript{224}Captain and Mrs. Lonsdale remained based on the Rattlesnake until 30 November, by which time their pre-fabricated house – having arrived in early October on the hired brig Stirlingshire, along with other stores and officials – had been erected.
\item \textsuperscript{225}Mount Martha and Mount Eliza were named by one of the lieutenants of the Rattlesnake, in compliment to Mrs. Lonsdale and Mrs. Batman, respectively.
\item \textsuperscript{226}Part of the description of H.M.S. Rattlesnake’s first visit to Port Phillip is based on the private journal (now held in the National Library of Australia) kept by the ship’s gunnery officer, John Henry Norcock. See HRV 1, pp. 64-77.
\end{itemize}
\end{footnotesize}
pilot’s boat just inside the Heads, after which, at noon, the \textit{Rattlesnake} weighed anchor and proceeded to its old berth at Gellibrand Point, near the mouth of the Yarra Yarra River.

On 3 March the Governor went ashore on Gellibrand Point and indicated to Hoddle the direction for principal lines for quays and buildings, together with areas to be permanently reserved for Government purposes - such as a battery for the protection of the bay, and a beacon or tower to be erected on Gellibrand Point to assist approaching vessels. During the next few days the Governor visited the main settlement and its environs. On 9 March he officially named the main settlement Melbourne\textsuperscript{227}, Williamstown after the reigning monarch, and Hobson’s Bay after Captain Hobson. Leaving Melbourne on 9 March with a horse-drawn cart and heavy dray (drawn by bullocks), and accompanied by Captain Phillip Parker King and others (including William Buckley), the Governor then rode to Geelong – arriving there on 13 March - fixed its site on the Barwon River, and rode back via Mount Macedon to Melbourne, reaching the settlement on 21 March.

In the meantime, a survey party from the \textit{Rattlesnake} was sent away on 14 March to carry out further surveys in the vicinity of the Heads, and were picked up by the ship four days later. Further survey work was undertaken by the ship and its boats near the entrance to Port Phillip until 23 March, when the \textit{Rattlesnake} returned to its anchorage near Melbourne.

On the 30 March 1837 the \textit{Rattlesnake} set sail from its Melbourne anchorage, and at noon the following day passed through the Heads to return the vice-regal party, including Robert Hoddle, to Sydney.\textsuperscript{228}

During the first visit of the \textit{Rattlesnake} to Port Phillip, a number of buoys was laid down to facilitate the navigation through some intricate channels, and considerable progress was made in the survey of the waters of Port Phillip. Upon the second visit, three charts were completed: a general one of the coast of Port Phillip; one of the several navigable channels; and a third of Hobson’s Bay.\textsuperscript{229}

Captain Hobson also drew up sailing directions for the safe navigation of all areas of Port Phillip, in particular recommending extreme care when navigating the Rip.\textsuperscript{230}

Captain Phillip Parker King prepared a map of the survey of Port Phillip, at twice the scale of an earlier map supplied to him by Governor Bourke. Its scale was based on Grimes’ survey of 1803 and the latitudes recently observed at Point Gellibrand and Point Nepean.\textsuperscript{231}

Governor Bourke subsequently reported on those officers of the \textit{Rattlesnake} who were principally engaged in making the survey. A large share of the fatiguing duty of the measurement, and the task of laying all the work down, fell to the Mate, Mr. Frederick Shortland. Lieutenant Thomas Symonds took the next considerable part of the fatiguing duty in boats, while the survey of Geelong Harbour

\textsuperscript{227} The town of Melbourne was named after the then British Prime Minister, Lord Melbourne.

\textsuperscript{228} The description of H.M.S. \textit{Rattlesnake}’s second visit to Port Phillip is based partly on the private journal (now held in the National Library of Australia) kept by the ship’s gunnery officer, John Henry Norcock; partly on the journal kept by Governor Sir Richard Bourke; partly on the journal kept by Phillip Parker King; and partly on the field book of Robert Hoddle. See \textit{HRV} 1, pp. 91-116; \textit{HRV} 5, pp. 74-7.

\textsuperscript{229} The plots and coloured plans of the three charts are held by the United Kingdom Hydrographic Office in Taunt, Somerset (references L1084, L1405, L1406, L3574, L3576 and L3578, respectively). Hobson gave Governor Bourke duplicates of the charts, with permission to have them engraved in Sydney and copied for local use. The Sydney engraver was John Carmichael. See \textit{HRV} 1 pp. 99-100, \textit{HRV} 4 pp. 8-9, 14-20.

\textsuperscript{230} Captain Hobson’s Sailing Directions for Port Phillip are quoted in full in \textit{HRV} 4, pp. 9-13; the original is held by the Archives Authority of New South Wales.

\textsuperscript{231} Captain Phillip Parker King to Sir Richard Bourke, 25 April 1837; \textit{HRV} 1, p. 122.
was performed by Lieutenant Hastings Reginald Henry. Observations on board the *Rattlesnake* were made by the First Lieutenant C. Richards and the Master, Mr. Pope.


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232 Point Henry, near Geelong, was named after the 150 tonne brig *Henry*, rather than after Lieutenant Henry. By January 1837 this vessel had already made nine crossings of Bass Strait, bringing about 700 sheep on each voyage. See *HRV* 4, pp. xiv.

233 Sir Richard Bourke to Lord Glenelg, 10 September 1837.
BRITISH HYDROGRAPHIC CHARTS SUBSEQUENT TO H.M.S. RATTLESNAKE’S SURVEYS IN PORT PHILLIP:

Following the success of the Royal Navy’s exploring expeditions of Grant, Murray and Flinders (and Phillip Parker King in North-West Australia) in determining the general shape of Australia’s coastline, the Admiralty produced an atlas of charts in 1825. But, notwithstanding the excellent surveys carried out by the crew of H.M.S. Rattlesnake in 1836 and 1837, it soon became apparent that more detailed naval surveys were required in the treacherous Bass Strait (and on other sections of the Australian coastline such as the Great Barrier Reef and Torres Strait), where conditions made navigation very hazardous. The west coast of Victoria had become notorious as the graveyard for many sailing ships, and hundreds of lives were lost as a result of shipwrecks. Surveys had to be carried out to chart dangerous reefs and shoals, and for the siting of lighthouses, beacons, buoys and jetties.


Fig. 33. HMS ‘Beagle’ setting off on a survey of Australia. (Watercolour by Owen Stanley (1811-1850), 1841.)

In mid-1837 a re-fitted Beagle, under Commander John C. Wickham as captain and with John Lort Stokes as assistant surveyor, set sail down the Thames from Woolwich with instructions from the Admiralty, and conveyed by Captain Francis Beaufort, Hydrographer of the Royal Navy ‘…for the purpose of exploring certain parts of the north-west coast of New Holland, and of surveying the best channels in the straits of Bass and Torres, …’

More specifically, to quote the detailed instructions regarding the survey of Bass Strait,

“…The above objects [in north-western Australian waters] having been accomplished… you will return to the southern settlements for refreshments; and then proceed, during the summer months of fine weather and long days, to Bass Strait, in which so many fatal accidents have recently occurred, and of which you are to make a correct and effectual survey.

“But previous to your undertaking that survey, as it has been represented to us that it would be very desirable for the perfection of the Tidal theory, that an accurate register of the times and heights of high and low water should be kept for some time in Bass Strait, you will, (if practicable) establish a party for that purpose on King Island, and you are to

234 Preamble to Admiralty Instructions, quoted in Stokes, Discoveries in Australia, I, p. 6.
cause the above particulars of the Tides there to be unintermittingly and minutely observed, and registered in the blank forms which will be supplied to you by our Hydrographer. If, however, circumstances should render this measure unadvisable at that island, you will either choose some less objectionable station, where the average tide in the Strait may be fairly registered; or, if you can employ no permanent party on this service, you will be the more exact in ascertaining the above particulars at every one of your stations; and in all parts of this Strait you will carefully note the set and strength of the stream at the intermediate hours between high and low water, and also the time at which the stream turns in the offing.235

“The survey of Bass Strait should include, 1st, a verification of the two shores by which it is formed; – 2ndly, such a systematic representation of the depth and quality of the bottom as will ensure to any vessel, which chooses to sound by night or day, a correct knowledge of her position; – and, 3rdly, a careful examination of the passages on either side of King Island, as well as through the chains of rocks and islands which stretch across from Wilson’s Promontory to Cape Portland [near the north-eastern tip of Tasmania]. This survey will, of course, comprehend the approach to Port Dalrymple, but the interior details of that extensive harbour may be left to the officers employed by the Lieutenant-Governor of Van Diemen’s Land, provided you can ascertain that it is his intention to employ them there within a reasonable time.

“The number of vessels which are now in the habit of passing through Bass Strait, and the doubts which have recently been expressed, not only of the just position of the dangers236 it is known to contain, but of the existence of others, show the necessity of this survey being executed with that care and fidelity which will give confidence to all future navigators; and may, therefore, be more extensive in its limits, and occupy a larger portion of your time than is at present contemplated. You must exercise your own judgment as to the fittest period at which you should either repair to Sydney to refit, or adjourn to Port Dalrymple to receive occasional supplies. Whenever this branch of the service shall be completed, you are forthwith by a safe conveyance to transmit a copy of it to our Secretary, that no time may be lost in publishing it for the general benefit.

“At Sydney you will find the stores which we have ordered to be deposited there for your use, and having carefully rated your chronometers, and taken a fresh departure from the Observatory near that port, and having re-equipped His Majesty’s ship, and fully completed her provisions, you will proceed by the inner route to Torres Strait…”237

Late in 1838 H.M.S. Beagle under Commander John C. Wickham departed Sydney to make a new survey of Port Phillip waters, and to indicate where he thought beacons and buoys should be placed (to replace a system of tea-tree stakes planted in shallow waters by John Pascoe Fawkner’s men). The call at Port Phillip was also to establish a base for surveying the western part of Bass Strait. The Beagle left Sydney Harbour on 11 November 1838, reaching Port Phillip a week later. Surveyor Robert Hoddle accompanied the Beagle to point out prominent landmarks, while Lieutenant John Lort Stokes directed the soundings and observations. (Following the Beagle’s voyage, several buoys were laid in the western channel in July 1839.) Taking two whalers, Lieutenant John Lort Stokes first chose a conspicuous spot on the shore of Point Nepean from which triangulations could be made, and then began to survey channels at the port’s entrance. This exacting task, hampered by bad weather, took eight days. He concluded that the two best channels were the South and West Channels.238

235 offing: (n.) the part of the visible sea distant from the shore or beyond the anchoring-ground; position at a distance off/from the shore. Hence ‘in the offing’; (fig.) not far away, likely to appear.
236 the just position of the dangers: the true/exact/accurate position of the dangers.
237 Stokes, Discoveries in Australia, I, pp. 9-12.
238 HRV 4, pp. 3, 23-4; Marsden Hordern, Mariners are Warned!, pp. 120-2.
On 26 November 1838 the *Beagle* hoisted her boats and put to sea again, steering south-westward along the coast towards Cape Otway, passing on the way the mouth of the Barwon, a river which Stokes intended to trace at a later date, and Point Flinders, which resembled an island from seaward, on account of the low land in its rear. In fine clear weather, they were at times only a mile offshore and thus able to record the coastline and off-lying dangers in detail – such as a small detached reef half a mile off Cape Otway. Abeam of the brown cliffs of Cape Otway – the westward limit of their Bass Strait survey – they turned south for King Island.

After a few weeks’ survey in the waters of Van Diemen’s Land, the *Beagle* re-entered Port Phillip at noon on 23 December 1838, travelled up the West Channel and by that evening had moored close to the mouth of the Yarra River in Hobson’s Bay. The *Beagle* remained in Hobson’s Bay for a week, in order for Stokes to carry out a survey of Hobson’s Bay, connecting it by triangulation to Melbourne. Stokes completed this survey on 31 December.

On New Year’s Day 1839 the *Beagle* sailed out of Hobson’s Bay for Geelong, anchoring off Point Henry. Stokes noted that the long spit extending out from Point Henry made it impossible for large ships to enter Geelong Harbour, despite its wide mouth. The next day Stokes set off to climb Flinders’ Station Peak in the You Yangs, reaching the summit the following day. He was disappointed to discover that the bottle and message left by Matthew Flinders under a pile of stones on 1 May 1802 had disappeared, but he was able to sketch the view and read some angles.

Later, from an elevated point in the Barabool Hills, Stokes was able to trace the Barwon River some distance downstream from Geelong, but he became convinced that it would never be navigable for ships, due to the exposed situation of its mouth (which he had observed some weeks earlier as being navigable for boats entering only in very fine weather) and the information he had been given about its shallow depth.

On the morning of 5 January 1839 the *Beagle* returned to Melbourne to check the chronometers and collect the mail, and then proceeded down the bay via the South Channel, passing close under Arthur’s Seat. Being again detained by bad weather for three days near the entrance to Port Phillip, the southern channel was surveyed, Stokes declaring it fit for battleships. As soon as the weather improved, the *Beagle* sailed, and the coast was surveyed eastwards, reaching the western entrance to Western Port after dark on 10 January.

The next morning they examined the south-west part of Grant Island but another gale forced them in to Western Port, moving the ship to a more secure anchorage off its north-east point and pinning them there for nine days. This gave Wickham the opportunity to tune the rigging and for the crew to hunt Western Port’s wildlife. Stokes noted that there were scarcely any traces to be found of the old settlement on the clifffy point on the eastern shore of Western Port. They noticed, however, an old flagstaff still erect, on the bluff near the north-east end of Grant Island.

But by this stage they were running out of supplies – in particular, water. So they returned to Melbourne to replenish stores, before heading south towards Circular Head on the northern coast of Van Diemen’s Land. Yet another spell of bad weather held them at Hunter Island in Bass Strait,
giving Stokes, Ship’s Master Alexander B. Usborne and Mate Lewis R. Fitzmaurice the chance to catch up on their chart work, and they made the most of it, for one day’s survey could require five days on the plotting table. After obtaining supplies at Circular Head, they returned to Bass Strait, but once again had to shelter from a furious storm under Robbins Island before continuing survey work in Bass Strait, which occupied the next few weeks. Wickham then decided to return to Melbourne to clean the hull of the Beagle, and the nine days there gave Stokes the opportunity to extend his surveys in Port Phillip. The ship then returned to Sydney – arriving on 10 March 1839 – where Stokes and Usborne completed their work on the Bass Strait charts and tracings.²⁴⁵

When Wickham fell ill and resigned, the command of the Beagle was taken over in March 1841 by Lieutenant John Lort Stokes who continued the survey.

![Figure 34. John Lort Stokes (1812-1885). (Miniature by William Egley (1798-1870), 1864.) (Courtesy National Library of Australia, reference PIC T3076 LOC 7982.)](image)

Early 1842 found Stokes as Acting Commander of the Beagle carrying out hydrographic surveys on the south coast of mainland Australia. Proceeding eastwards, the Beagle reached a point 10 miles N 65° W from Cape Bridgewater at dusk on 11 February. Finding a positional discrepancy of three miles from the existing charts, Stokes resolved to carry out observations on land, so he headed for the nearest anchorage, Portland Bay, reaching it on the evening of 12 February.

Stokes had another reason for visiting this place, namely to assist in determining the 141st meridian, which had been defined as the western boundary of the colony of New South Wales (and therefore the eastern boundary of the territory of South Australia). Anchoring the Beagle in 7 fathoms between Cape Grant and Lawrence Isles²⁴⁶, Stokes disembarked and entered the little settlement of Portland which had been established by the enterprising pioneer Stephen Henty on the site of the original whaling station in Portland Bay. Here Stokes met C. J. (Charles James) Tyers, for eleven years a member of the Royal Navy and now a surveyor in the colonial service, who in July 1839 had been appointed to determine the exact boundary between New South Wales and South Australia. Tyers had recently completed laying out the township of Portland and had also made an accurate survey of Portland Bay.

²⁴⁵ *HRV* 4, pp. 24-8; Marsden Hordern, *Mariners are Warned!* , pp. 128-35.
²⁴⁶ Cape Sir William Grant and Lawrence Rocks.
In his book, Stokes gives the results of a number of observations for the geographical co-ordinates of Mr. Henty’s new house: $\phi = 38^\circ 20' 45"$ S, $\Delta \lambda = 9^\circ 36' 22"$ west of Sydney. Noting that Tyers had measured the difference of longitude between Henty’s house and the east entrance point of the Glenelg River by (a) triangulation, (b) chronometric measurement, and (c) lunar observations, Stokes decided that Tyers’ results by triangulation were to be preferred, namely $\Delta \lambda = 37' 29"$, which when added to Stokes’ $\Delta \lambda = 9^\circ 36' 22"$ west of Sydney, gave the east entrance point of the Glenelg River to be west of Sydney by $\Delta \lambda = 10^\circ 13' 51"$.

Stokes compared this with Captain Owen Stanley’s calculation (using Tyers’ triangulation from Batman’s Hill in the Port Phillip District to the east entrance point of the Glenelg River) which, together with Stokes’ own measurement of difference of longitude between Batman’s Hill and Sydney of $\Delta \lambda = 6^\circ 16' 17"$, gave the east point of the Glenelg River to be west of Sydney by $\Delta \lambda = 10^\circ 14' 02"$. This compared with Tyers’ calculation of $\Delta \lambda = 10^\circ 14' 59"$.

Stokes then noted that the longitude of [Fort Macquarie in] Sydney, by differing observers, ranged between $\lambda = 151^\circ 12' 00"$ E and $\lambda = 151^\circ 17' 00"$ E, but that he himself believed that $\lambda = 151^\circ 16' E$ to be within a minute of the truth; hence, using this latter figure, and by his own observations, the east point of the Glenelg River was calculated to be $\lambda = 151^\circ 16' E - 10^\circ 13' 51" = 141^\circ 02' 09" E$.

Stokes concluded that the mouth of the Glenelg fell within the colony of New South Wales, but that if the boundary of the colony were to be $\lambda = 141^\circ E$ there would not be much difficulty attending its determination. In fact, Tyers noted in his report that he calculated the conversion from a second of arc of longitude and latitude to a distance in English feet on the Earth’s surface, using

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249 C. J. Tyers, Surveyor, ‘Report of an Expedition to Ascertain the Position of the 141st Degree of East Longitude, being the Boundary Line between New South Wales and South Australia, by Order of his Excellency Sir George Gipps, Knight,
Thus if $\varphi = 38^\circ 20' \text{S}$, for instance, interpolation between entries for $\varphi = 38^\circ \text{S}$ and $\varphi = 39^\circ \text{S}$ would yield 1 second of longitude = 79.65 feet; at that latitude, 02' 09" would equal a distance of about 129 $\times$ 79.65 feet $\approx$ 10275 feet, or 1.95 miles. Thus Stokes was implying that the $\lambda = 141^\circ \text{E}$ meridian was a little under 2 miles to the west of the east entrance point at the mouth of the Glenelg River.

After he had made a series of magnetic observations, and others for the errors of his chronometers, Stokes took the opportunity of visiting, on horseback, the countryside to the north of Portland, with Tyers. They reached the Fitzroy River, and then Major Mitchell’s Mount Eckersley, where they came across a tree carved with Mitchell’s initials. Continuing on, through the flats near the Crawford River towards Mr. J. Henty’s station, they eventually reached a pointed hill called the Sugarloaf, from which they had an extensive view of this fertile district. To the westward Stokes saw the winding course of the Glenelg River and was informed that some of the squatters had located themselves on its banks.

Having extended their ride to more than seventy miles, they returned to Portland, being convinced that there was a greater extent of good land here than in South Australia, although further from the coast. On their way, they met a party of natives; and seeing a bundle of spears leaning against a tree, Stokes rode up to examine them, but the owner instantly ran and retrieved them, suggesting to Stokes that they were not on very good terms with the settlers.

On 17 February 1842 Stokes went to Cape Bridgewater, to make a sketch of the coast and to visit some caves lying four miles north of it. Nearby were some freshwater lakes, upon which were a few [Black] swans ‘and a black and white kind of goose, one of which Mr. Bynoe shot; it resembled the species we had seen flying over the Albert in the Gulf of Carpentaria.'

On 20 February the Beagle departed Portland Bay directly for Hobart, to enable Stokes to consult with His Excellency, Sir John Franklin, before commencing the survey of Bass Strait. Hobart was reached on 26 February.

“Sir John Franklin, who has always taken great interest in the Beagle’s voyage, testified every wish to afford me assistance: and in the most liberal manner placed at my disposal the colonial cutter, Vansittart, to assist in the survey of the Strait. Messrs. Forsyth and Pascoe were selected for the service, the former being in command. After giving the Vansittart a slight refit, and a few alterations which were expedited in a most praiseworthy

&c. &c. &c., Governor and Captain-general of New South Wales’ being Appendix D in Despatch from Sir George Gipps to Lord John Russell, Papers Respecting New South Wales, House of Commons, 1841, p. 25.


Benjamin Bynoe (1803-1865), Surgeon on the Beagle, and naturalist.

Magpie Goose (Anseranas semipalmata), formerly widespread in large number in SE Australia. Now extends coastally from near Broome (WA) to about Brisbane (Qld). Occasionally reported in other parts of Australia, including Tasmania.

Charles Codrington Forsyth RN (1810-1873).

Crawford Atchison Denman Pasco RN (1818-1898), was the youngest son of Rear Admiral John Pasco, who was flag lieutenant on Nelson’s Victory at Trafalgar and who signalled the famous message: ‘England expects every man will do his duty’. After carrying out hydrographic surveys in Australian waters, Crawford Pasco retired from the navy, settled in Victoria and became a police magistrate.
manner by Captain Booth, commandant at Port Arthur, she was to proceed to the scene of operations near Banks Strait. In the meantime the *Beagle* sailed for Sydney to receive the stores we expected from England."^{255}

After leaving Sydney the *Beagle* encountered severe gales, and sheltered in Twofold Bay. Stokes found that this part of the coast to as far as Jervis Bay was laid down ten miles too much to the eastward of Sydney. The error he found in the position of Twofold Bay induced Stokes to commence his survey there, for the purpose of ascertaining the position of Cape Howe, which he discovered to be rather more out in longitude; whilst the islet^{256}, instead of lying off it, lies four miles to the south-west.

Stokes remarked that Cape Howe, whose geographical co-ordinates were $\varphi = 38^\circ 31' 00''$ S, $\Delta \lambda = 1^\circ 14' 15''$ west of Sydney, although rather low, is of bold approach, and admirably situated for a lighthouse. Others, if erected on Montague Island and Point Perpendicular, would light the whole coast as far as Sydney.

The crew of the *Beagle* then surveyed the features around Flinders Island before proceeding in tempestuous weather through a maze of reefs and low rocks to the Kent Group, where the *Beagle* eventually reached shelter in East Cove on the west side of Deal Island, facing Murray Pass. Bad weather detained them here for a fortnight. Stokes applied the name Lighthouse Hill to a prominent and suitably positioned hill on Deal Island, and indeed four years later construction of a lighthouse was commenced there.\(^{257}\)

Eventually the weather improved and in the first week of June 1842 the *Beagle* headed first westwards then north-eastwards, spending the first night in the middle of Bass Strait between Curtis Island and Devil’s Tower, and on the second night five miles to the south of the Hogan Group. The *Beagle* was now close to the northern boundary of Tasmania (and by implication, the southern boundary of what is now Victoria), defined as $\varphi = 39^\circ 12' 00''$ S.

Stokes noted that the central position of Curtis Island renders it quite a finger-post for ships passing through Bass Strait; towards the north it slopes away something in the shape of a shoe, from which it is called by the sealers The Slipper. Stokes found the summit of Hogan Island to be a most important station and, with his Lighthouse Hill on Kent Island, he was able to form an astronomical baseline for his survey.

“From Hogan Group we stood to the northward, and were able to pass another night at anchor six miles from a low sandy shore, and fourteen to the eastward of Corner Inlet, which we found on examination had a bar extending off six miles from the entrance, on which at low tide there is water for vessels drawing sixteen and eighteen feet. A group of islets, named from their utility Direction Isles, lies in the fairway\(^{258}\), a few miles outside the bar.

During the examination of this great useless sheet of water, the ship lay near a small islet close to the Promontory about seven miles from the entrance, which, from the abundance of rabbits, we called Rabbit Island;* I have since learnt that these animals had multiplied from a single pair turned loose by a praiseworthy sealer six years before; and the sight of their number did not a little encourage me to expect a similar result from the gift I had bestowed on Kent Group.

^{256} The islet: Gabo Island.
^{257} The Deal Island Light Station was completed and became operational in 1848. At 305 metres above sea level it is reputed to be the highest in the southern hemisphere and possibly second highest in the world. Reference: [http://www.parks.tas.gov.au/file.aspx?id=19044](http://www.parks.tas.gov.au/file.aspx?id=19044).
^{258} Fairway: navigable channel, regular course or track of ship.
(*Footnote. The outer extreme of this island, in one with Cape Wellington, forms a leading mark into Corner Inlet, but vessels should get them on within a mile of the island. These marks are of use until the eastern and highest of the Direction Isles opens out just clear of the others, when by keeping it in that position, or steering for the middle of the entrance, a ship may be taken safely in. The tide rises eight feet at springs, when the time of high-water is twenty minutes before noon.)

From the highest hill on the south-eastern point I had obtained a most excellent view of Corner Inlet, which bore a great resemblance to a basin. I have before called it useless, from its being only navigable a mile or two within the entrance and that chiefly on the northern side, the rest being occupied by mud flats. It was a bitter cold day; but between the sleet squalls I was able to trace the coast westward as far as Cape Liptrap over the low neck connecting Wilson’s Promontory with the main, and forming the south-western shore of Corner Basin; and eastward beyond Shallow Inlet,* where the Clonmel steamer was lost.259 About six miles to the north-east the masts of some vessels pointed out the approach to Alberton. The intervening space was filled with islands and mud banks; which character the shore appeared to retain further eastward, being fronted by a margin of low sandy land, sometimes broken by the pressure of the sea from without or of the waters from within, when the streams that add to the fertility of Gipps’ Land are swollen by the melting of the snows on the Australian Alps.

(*Footnote. Vessels bound to Alberton, the capital of Gipps’ Land, generally pass through this inlet, but as the water is shallow, and breaks across the entrance, if there is any swell, it is more prudent to enter by Corner Inlet, and take the second opening on the right within the entrance.)

To commemorate my friend Count Strzelecki’s discovery of this important and valuable district, which he named in honour of His Excellency the Governor, I called the summit of a woody range 2110 feet high, over the north shore of Corner Inlet, Mount Fatigue.* The only vegetation this part of the promontory supports is a wiry grass, stunted gums and banksias in the valleys, and a few grass-trees near the crests of the hills which are generally bare masses of granite. Behind a sandy beach on the east side beneath where I stood were sinuous lines of low sandhills, remarkable for their regularity, resembling the waves that rolled in on the shore.

(*Footnote. It was in the rear of this range that Count Strzelecki and his companions, on their way to Western Port, experienced the sufferings related in the Port Phillip Herald, June 1840, from which I extract the following:-

“The party was now in a most deplorable condition. Messrs. MacArthur and Riley and their attendants had become so exhausted as to be unable to cope with the difficulties which beset their progress. The Count, being more inured to the fatigues and privations attendant upon a pedestrian journey through the wilds of our inhospitable interior, alone retained possession of his strength, and although

259 Early on the morning of 2 January 1841 the paddle steamer Clonmel, bound from Sydney to Melbourne with passengers and a mixed cargo shuddered to a halt on a sand bar at the entrance of what is now known as Port Albert. It became so badly stuck that it was impossible to free. When dawn broke Clonmel’s passengers were faced with the exposed and inhospitable shores of a low sandy spit now known as Snake Island and the realization that their precious cargo that had been either damaged or totally destroyed. Three days later news of the disaster reached Melbourne and a rescue operation began. References: http://www.dpcd.vic.gov.au/heritage/projects-and-programs/heritage_stories/shipwreck-stories/clonmel; Don Love, Shipwrecks on the East Gippsland Coast, Don Love, Meerlieu, 2003, pp. 16-18.
burdened with a load of instruments and papers of forty-five pounds weight, continued to pioneer his exhausted companions day after day through an almost impervious tea-tree scrub, closely interwoven with climbing grasses, vines, willows, fern and reeds. Here the Count was to be seen breaking a passage with his hands and knees through the centre of the scrub; there throwing himself at full length among the dense underwood, and thus opening by the weight of his body a pathway for his companions in distress. Thus the party inch by inch forced their way; the incessant rains preventing them from taking rest by night or day. Their provisions, during the last eighteen days of their journey, consisted of a very scanty supply of the flesh of the native bear or monkey, but for which, the only game the country afforded, the travellers must have perished from utter starvation... On the twenty-second day after they had abandoned their horses, the travellers came in sight of Western Port.

Water and fuel are abundant on the point abreast of Rabbit Island. Southward from this projection a sandy beach extends five miles, with a rivulet at either end, and separated from a small deep bay* open to the east, by a remarkable bluff, the abrupt termination of a high-woody ridge. The trees on the south-west side were large and measured eight feet in diameter. In the humid shelter they afforded the tree and a variety of other kinds of fern were growing in great luxuriance, with a profusion of creepers matted together in a dense mass of rich foliage. From thence southwards the shore is rocky and the water deep.

(*Footnote. This bay is evidently Sealer’s Cove in the old charts; but this part of the Strait is so much in error that it is hardly possible to recognize any particular point.)

Refuge Cove, lying seven miles South ¼ West from Rabbit Island, was our next anchorage. It was so named from its being the only place a vessel can find shelter in from the eastward on this side of the Promontory. Of this we ourselves felt the benefit; for although in the middle of June east winds prevailed the first few days we stayed there, with thick hazy weather, whilst at Rabbit Island we had constant westerly gales with a great deal of hail and sleet. This small cove, being only a cable wide260 at the entrance may be recognized by Kersop Peak, which rises over the south part, and from its lying between Cape Wellington and Horn Point,* and also from its being the first sandy beach that opens north of the former.

(*Footnote. This projection has two pointed hummocks on it resembling horns.)

Such of us as had been in Tierra del Fuego were particularly struck with the resemblance of the scenery in Refuge Cove; the smooth quiet sand beaches, and dense forests reaching the water’s edge, the mist-capped hills, and the gusts that swept down the valleys and roared through the rigging, forcibly recalled to our recollection that region of storms.

We found a whaling establishment in the south-east corner,† and the houses for the boats and their crews formed quite a little village. The person in charge, with one or two others, remains during the summer. These people had a novel safeguard against the attacks of the natives:-a horrible looking figure, dressed so as to represent the evil spirit, of which the Australian aborigines are so much afraid, was placed in a conspicuous place; but whether it would have had the desired effect was not proved, as the natives had never been seen in those parts. There can, indeed, be little to tempt them to wander thither; for there are neither kangaroos nor wallabies, and but few birds. Among the most curious of those

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242 a cable wide: a cable length or cable’s length is a nautical unit of measure defined as equal to one tenth of a nautical mile, or 185.2 m. The unit is named after the length of a ship’s anchor cable in the age of sail.
belonging to the land, is a kind of finch, with a black head, yellow beak, a dark brown back, and dirty white belly; across the wings and arching over the back, at the stump of the tail, was a stripe of white.\textsuperscript{261}

(†Footnote. Our observations made this spot in $\varphi = 39^\circ 02' 30"$ S., and $\lambda = 4^\circ 44' 45"$ W. of Sydney. High-water on the full and change of the moon, takes place at 12 hours 5 minutes when the tide rises eight feet; a mile in the offing\textsuperscript{262} the northern and ebb stream, which runs from one to two knots, begins at 11 hours 40 minutes. Past the south end of the promontory the same stream sweeps round from the westward, sometimes at the rate of two knots and a half.)

Cape Wellington, the eastern projection of the Promontory, forms the north point of Waterloo Bay, which is wide and spacious. These names were suggested by the fact that the day of our anchoring there was the anniversary of one of the greatest triumphs ever achieved by British arms.\textsuperscript{263} At the head of the bay, lies the low valley, three miles in length, which stretches across the promontory and forms a very conspicuous break in the high land. On the northern side of it, the highest hill, Mount Wilson, rises abruptly until its woody crest reaches an elevation of 2350 feet. On the southern, was a ridge strewn over with immense boulders of granite, one, near where I stood, measuring eighty feet in height, and resting with such apparent insecurity, that little seemed required to send it rolling and crashing into the valley below, along which a rivulet winds, and falls into the sea at the north end of a sandy beach, forming the head of Waterloo Bay. The depth in the middle of the latter is 12 fathoms, muddy bottom; it lies four miles from the south end of the Promontory, and there is no good anchorage between.

From a small flattened sugarloaf, forming the summit of Cape Wellington, I got an angle to the Crocodile Rock,* and with others from the south-west end of the Promontory, and from the ship on passing, I determined the position of this danger most satisfactorily.

(*Footnote. This rock, in $\varphi = 39^\circ 21' 30"$ S., and $\lambda = 4^\circ 41' 45"$ W. of Sydney, lies in a line midway between the western extremities of Curtis and Rodondo Islands, nearly nine miles from each. It is a smooth round-topped granite boulder, just protruding above the surface; and in fine weather the sea runs over it without breaking. The depth being 43 fathoms close to it, if the waters of the Strait were drawn off [,] the shape of it would be that of a column nearly 260 feet high.)

As we had not, as I expected, met the Vansittart, I was anxious to learn something of her, and crossing over to the south side of the Strait, for the purpose, entered Port Dalrymple\textsuperscript{264}, where I found that Mr. Forsyth and his party had preceded our arrival by a day or two. The Vansittart’s employment had been the examination of the north-east extreme of Tasmania, some portions of which were found to be nine miles out in latitude.”\textsuperscript{265}

Whilst the Beagle was laid up on the west bank of the Tamar, having repairs to her bottom, Stokes extended the triangulation from near Garden Island upstream to Launceston. The entire month of July

\textsuperscript{261} From the description, it is difficult to identify this bird. After checking various books on birds and consulting experts at Birds Australia, a possible candidate would be one of the subspecies of the Striated Pardalote (\textit{Pardalotus striatus}). Reference: Sean Dooley, Birds Australia, pers. comm., 8 December 2011.

\textsuperscript{262} offing: part of visible sea distant from shore or beyond anchoring-ground; hence ‘in the offing’: not far away, likely to appear. Reference: COD, entry for ‘offing’.

\textsuperscript{263} Battle of Waterloo, 18 June 1815.

\textsuperscript{264} Port Dalrymple: on the Tamar River, Northern Tasmania.

\textsuperscript{265} Stokes, \textit{Discoveries in Australia}, II, pp. 426-32.
1842 was occupied by the repairs to the ship, and these surveying operations. Eventually all was ready, and the Beagle returned to Bass Strait for the survey of the passage at the eastern entrance. Then, leaving the eastern entrance of the strait, the Beagle ran up to Sydney, to collect the supplies that had not arrived from England on their previous visit; they now found them waiting for them, together with orders for the Beagle to return to England.

“…Fortunately, however, the survey of Bass Strait was in such a forward state, thanks to Sir John Franklin’s kind assistance in lending the Vansittart, that I could take upon myself the responsibility of waiting a few months to complete it.* I was, however, compelled by the brief interval of time allowed me, and the urgent demand that existed for a correct chart of the whole strait, to work on a smaller scale than I could have wished. It seemed to me that detached portions on a very large scale would be of far inferior utility to a complete survey on a comparatively small one.

(*Footnote. This step was approved of by the Commander in chief.)

It was not, however, my being prevented from completing Bass Strait in the manner most satisfactory to myself that occasioned the greatest part of the regret that accompanied this summons for the old Beagle to wend her way homewards; for we were thus also deprived of the opportunity of gratifying our desire to explore the southern parts of New Guinea, which we had always looked forward to as one of the most interesting parts of our voyage, containing elements of excitement sufficient to cheer the hearts that were yearning for home, and a character of novelty that would have amply compensated for whatever fatigue and exertion we might have experienced…”266

Leaving Sydney towards the end of October 1842, Stokes and his crew resumed their hydrographic work along the north coast of Tasmania. At this time, Stokes writes feelingly about the terrible treatment of the Tasmanian aborigines, and their rounding up and shipment first to Point Woolnorth, later to Swan Island, and eventually to Flinders Island.

On 19 December 1842 both survey vessels left the Tamar: the Vansittart for Flinders Island (to land the unfortunate natives), whilst the Beagle crossed the strait to Wilson’s Promontory, anchoring behind an island two miles long, trending north and south, with a hollow in the centre, forming a saddle, the highest part being 450 feet high.

“…It is the northernmost of a group called the Glennie Islands, fronting the south-western face of the Promontory; and is strewn over with blocks of granite, which give it a castellated appearance. We did not find this anchorage very good, the depth being 20 fathoms, and the bottom sand over rock. Three small islets lie close to the south-west point, and a reef extends a cable’s length off the northern. There is a passage nearly four miles wide, and 23 fathoms deep, between this part of Glennie’s Group and the Promontory. The singular break in the high land on the latter, bearing E. ½ N. is a distant guide to the anchorage, in which the flood-tide sets to the northward, and when aided by the current, attains a strength of a knot and a half; the time of high-water, is a quarter of an hour later than at Refuge Cove.

We found on this, the largest of the group, a small black dog, that had been left behind by some visitor, recently I should say, from his anxiety to be taken on board, which was done. It was, also, on this island that the intrepid Bass met a number of runaway convicts, who had been treacherously left by their companions one night when asleep, the party being too large for the boat they had run away with from Sydney, with the intention of

266 Stokes, ibid., pp. 436-7.
plundering the wreck of the *Sydney Cove*, at Preservation Island in Banks Strait. Thus they were actually the first to traverse this part of the Strait, which has received its name from the enterprising Mr. Bass.

Leaving the Glennie Isles we examined the coast beyond Cape Liptrap;* and from thence made the best of our way to Western Port. There I availed myself of the kind offer of Mr. Anderson - a settler on the Bass River, who was going to Cape Patterson, to shoot wild cattle, the produce of the stock left behind when the old settlement was abandoned - to give Mr. Fitzmaurice267, and a small party, conveyance in his bullock dray to that projection, for the purpose of determining its position. A party was also landed on the eastern entrance of Grant Island268, to collect tidal observations.

(*Footnote. The next headland to Wilson’s Promontory, from the extreme of which it bears N.-W. by W., twenty-four miles; the shore between recedes, forming a bay nine miles deep. The Cape lies in φ = 38° 55' S., and λ = 5° 17' 45" W. of Sydney, 145° 57' E.269, and is the extreme of a tableland three hundred and fifty feet high. A small islet lies close to the shore, about two miles northward from the extreme, where there is a boat cove. Where the rocky coast ceases to the eastward, the shore falls back, affording shelter for vessels in north-west winds; a rock lies off the southern point of this anchorage.)

Having made these arrangements, we left for Port Phillip, where, after landing another party at Shortland’s Bluff, also to make tidal observations, we pursued our course round Indented Head towards Corio Harbour, anchoring off Point Henry - where no less than four vessels were lading with wool for England - early on the morning of the 27th [December 1842]. We devoted the remainder of this day and the next to making a plan of the harbour; and from the result of our survey I feel more than ever convinced that the bar (through the northern part of which a channel winds for vessels of eight feet at low-water) might be removed, and the entrance rendered fit for vessels of any draught. There is deep water in the south-western part, close to the northern side of Geelong, where, by erecting wharfs, large ships might discharge alongside, an advantage which can never be obtained at Melbourne,* and of so great importance that I am induced to believe Geelong will ultimately be the capital of Australia Felix. In this event communication will be held with Melbourne by railroad, for which the country intervening is admirably adapted, being a complete level the entire way. At present a steamer plies daily between the two places; and when we consider that on our last visit, only two years before, Geelong consisted of a few sheds at its north end only, and now stretched across from Corio Harbour to the River Barwon, a space of more than a mile, the belief seems warranted that at no distant period the line of rail I allude to must be laid down. The township is now divided into North and South Geelong; the latter lies on a slope, reaching the river’s edge.

(*Footnote. Corio Harbour is in fact the best anchorage in Port Phillip, that at Hobson’s Bay being very confined, and scarcely affording any shelter from southerly winds for large ships. Moreover, Corio Harbour lies more convenient for the western districts, there being no other place where the sheep-farmers of those parts can, with safety, ship their wool, except Portland Bay.)

Located in a snug house, with a garden teeming with flowers, that reminded one of home, and overlooking a still reach of the Barwon, I found Captain Fyans, of whom I have before spoken. In the course of conversation, pointing to a weapon used by the natives, called a

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267 Mate Lewis Fitzmaurice.
268 Grant Island: Phillip Island.
269 This calculation is based on a longitude value of λ = 151° 14’ East for [Fort Macquarie in] Sydney, whereas earlier (and later) he used a value of λ = 151° 16’ E.
Lliangle, resembling a miner’s pick, he said, “I had that driven through my horse’s nose, a short time since, by a native, of whom I was in pursuit.” As I expressed a desire to be made acquainted with the circumstance, he informed me, that being out with a party of mounted police, in search of some natives who had been committing depredations on the flocks of the settlers, in the neighbourhood of Port Fairey, he suddenly, whilst crossing a valley in advance of his men, came upon the chief of those of whom he was in chase. He, too, was alone; an attack immediately commenced. The native threw his spears, but without effect; and Captain Fyans, finding that the rain had wetted the priming of his pistols, charged to cut him down; but such was his antagonist’s dexterity in defending himself with his shield, only a narrow piece of wood, that beyond a few nicks on the fingers, Captain Fyans’ sword-cuts were of no avail. Several times he attempted to ride over the native; who, however, doubled himself up in a ball under his shield, and was saved by the natural reluctance of a horse to trample on a prostrate man in going over him. After having been apparently more than once ridden down, the chief managed to drive his lliangle through the horse’s nose, and so firmly that he was unable to withdraw it. The wound inflicted bled so freely that Captain Fyans was obliged to pull up, and the native made his escape. He was not only a fine fellow in conduct, but in person, having a chest, as Captain Fyans expressed it, like a bullock’s. I afterwards learned that he displayed the sword-cuts upon his shield in triumph at some of the sheep-stations.

From Corio Harbour* we proceeded to Hobson’s Bay, for a meridian distance, the result of which was highly satisfactory, differing from our former measurement only five seconds. The longitude, therefore, of Batman’s Hill, \( \Delta \lambda = 6^\circ 16' 17'' \) W. of Sydney, or (approximately) \( \lambda = 144^\circ 59' 43'' \) E. of Greenwich, may be relied on.\(^{270}\)

(*Footnote. The approach to this harbour would be vastly improved by a buoy placed at the end of the spit extending nearly across from Point Wilson on the north shore.)

A great improvement had been made since our last visit in the approach to the anchorage, by the erection of a light on Point Gellibrand.* This we found to be a small lamp fixed at the top of a kind of wooden framework, thirty feet high, suggested by the superintendent, Mr. LaTrobe; and for a temporary economical affair, until a more expensive light can be afforded, it is certainly a clever contrivance.

(*Footnote. This light may be seen from a ship’s deck, in clear weather, seven miles off. Vessels intending to anchor in Hobson’s Bay should keep the light bearing N.W. by N. until the water shoals to 6 fathoms; then steer N. by W. When the lights of William Town open out, bearing S.W. by W., haul in W.S.W. for the anchorage. The best berth is in 3½ fathoms, with the light bearing S. ¼ E. and the jetty at William Town S.W. ½ W.)

The last three years had also made great additions to the buildings of William Town; but Melbourne had so increased that we hardly knew it again. Wharfs and stores fronted the banks of the Yarra-yarra; whilst further down, tanners and soap-boilers had established themselves on either side, where, formerly, had been tea-tree thickets, from which the cheerful pipe of the bell-bird greeted the visitor. Very different, however, were now the sights, and sounds, and smells, that assailed our senses; the picturesque wilderness had given place to the unromantic realities of industry; and the reign of business had superseded that of poetry and romance.

\(^{270}\) Here Stokes has reverted to his former value of longitude for [Fort Macquarie in] Sydney of \( \lambda = 151^\circ 16' \) East. He confirms this later. Reference: Stokes, Discoveries, II, p. 492.
Near Melbourne I again noticed the manna mentioned in a former page\(^271\), but had no opportunity of making further observations upon it. Mr. Bynoe, however, having since visited Australia, has turned his attention to the subject, and the result of his experience, which will be found below, tends to overthrow the opinion I have previously expressed, to the effect, that this substance is the exudation of a tree, not the deposit of an insect.*

(*Footnote. There is a prevailing opinion in some parts of New Holland, particularly on the east side, that the gumtrees distil a peculiar form of manna, which drops at certain seasons of the year. I have heard it from many of the inhabitants, who, on a close investigation, could only say, that it was to be found adhering to the old and young bark of the trees, as well as strewed on the ground beneath.

In the month of December, about the warmest period of the year, during my rambles through the forest in search of insects, I met with this manna in the above-mentioned state, but could never find in any part of the bark a fissure or break whence such a substance could flow. Wherever it appeared, moreover, the red-eyed cicadae\(^272\) were in abundance. I was inclined to think that the puncture produced by these suctorial insects into the tender shoots for juice, would in all probability give an exit for such a substance; but by wounding the tender branches with a sharp-pointed knife, I could never obtain a saccharine fluid or substance. It was the season when the cicadae were abundantly collected together for reproduction; and on warm, clear, still days, they clung to the more umbrageous parts, particularly to trees that, having been deprived of old limbs, shot forth vigorous stems, thickly clustered with leaves. To one of these, in which the male insects were making an intolerable noise, I directed my steps, and quietly sheltered myself from a hot wind that was crossing the harbour, bringing with it a dense column of smoke, which for a short time shut out the powerful rays of the sun. I found that the ground about the root of the tree was thinly covered with the sugar-like substance, and in a few minutes I felt that a fluid was dropping, which soon congealed on my clothes into a white substance.

![Fig. 36. Australian Redeye Cicada.](Reference: Maxwell Sydney Moulds, *Australian Cicadas*. NSWUP, Kensington, NSW, 1990, pp. 74-7.)


\(^{272}\) red-eyed cicadae: these Australian red eyes are known scientifically as *Psaltoda moerens*. Reference: Maxwell Sydney Moulds, *Australian Cicadas*. NSWUP, Kensington, NSW, 1990, pp. 74-77.
On rising cautiously to ascertain from whence it came, with a full determination not to disturb the insects but to watch their pursuits, I observed that it was passing of a syrup-like consistence per anum from the cicadae. As it ran down the smooth branches of the gumtree and over the leaves it gradually congealed, and formed a white efflorescence. Whilst ejecting this fluid, the insect raised the lower part of the abdomen and passed off three or four drops in sudden jets, which either streamed down the stem, or fell on the leaves or ground.

I watched them for nearly half an hour, and in that space of time observed between twenty and thirty distil this fluid, which gradually concreted into a white substance. I collected above three ounces, some of which I still have in my possession. The natives gather it in their rush baskets and use it as a part of their food.

Leaving Hobson’s Bay we passed along the east shore of Port Phillip in search of a ledge of rocks, reported to lie about three miles off Red Bluff, which is eight miles to the southward of the above-mentioned bay. We, however, found this danger to be nothing more than the extreme of the reef fronting that bluff for a distance of half a mile, in a W. by N. direction, and which has three feet on it at low-water, with three fathoms just outside. As the soundings gradually decrease to this depth, the lead will always keep a ship clear of it.

Anchoring under Arthur’s Seat, I delivered the letters with which Mr. Powlett, Commissioner of Crown Lands at Melbourne, had kindly furnished me, to the different settlers in the neighbourhood, requesting them to afford me every assistance in my contemplated visit to Cape Shanck, for the purpose of determining its position.

One of them was addressed to a gentleman residing close to the Cape, Dr. Barker273, to whom it was forwarded, and who returned with the messenger to welcome me to his station, and in the most liberal manner placed at my disposal, his horses and his services.

Early the following morning, a well mounted party of us started for Arthur’s Seat. I wished to get a few angles from its summit, and to show to Captain Bunbury, R.N.274, Superintendent of Water Police at Melbourne, the banks at the eastern entrance of the South Channel. Dr. Barker had brought his dogs over with him, to show us some sport on our way to Cape Shanck. They formed quite a pack; and among them were two bloodhounds of a celebrated Duke’s breed275 at home. Their deep rich notes as they wound round the foot of Arthur’s Seat, after a kangaroo, were quite cheering to the heart; but the ground was too hilly for the fast dogs, and too dry for the scent to lie.

I was disappointed in not seeing Port Western from Arthur’s Seat, which had one of those unsatisfactory woody summits, of which it is difficult exactly to ascertain the highest part. We passed a spring of water near the south-eastern foot, and in a level beyond were some large lagoons.

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274 Captain Bunbury, R. N.: Captain Richard Hanmer Bunbury (1813-1857), R. N., civil servant and squatter. Son of Sir Henry Bunbury, 7th Bart., and his first wife Louisa.

Our course was now bent towards Cape Shanck, lying eight miles to the south. The first part lay over a level open woodland country; low hills then made their appearance, becoming more numerous as we neared our destination. At their commencement we turned off the road to look for a kangaroo; a herd was soon found; but all, after a sharp burst of a few miles, got away from us.

When both horses and dogs had regained their wind we went to better ground, and came suddenly on a fine herd. A large male, called an Old Man by the colonists, loitering to protect the does under his care, was singled out by the fastest dog; and a splendid run ensued; the country, however, being rather woody, and strewed with fallen timber which was concealed by long grass, only those who risked the pace over it enjoyed the sport. The dogs stuck well to their game, and coming at last to an open piece of ground, the fleetest began to close with the Old Man, who was covering an immense space in each bound. At length the dog reached the kangaroo’s quarters, and burying his teeth in them, made him face about, cutting at his pursuer, who kept out of reach, with his hind feet, and then turning round and endeavouring to escape. But the same liberty being again taken with his haunches he was once more brought to bay. The rest of the pack now came up, and a fine half-bloodhound rushed in and seized the kangaroo* by the throat; whilst the latter, in return, fiercely clutched the dog round the neck; a violent struggle ensued, each trying to choke the other. Although the dog that had first reached the Old Man was biting his quarters, the danger that the game hound would be laid open by a cut from the kangaroo’s hind feet, determined Dr. Barker and myself to watch an opportunity of creeping up behind a tree to assist in the struggle. We accordingly did so, and managed to seize the animal by his monstrous tail, so that by keeping a strain on it he was prevented from lifting his hind leg, as if he had we should have pulled him over.

(*Footnote. Although these animals have a most innocent countenance, the large males are very dangerous when brought to bay. I know an instance of a gentleman, who was endeavouring to assist his dog in killing one of them, having his clothes severed in front and the skin of his body just scratched by a cut from the hind leg. Had this person been any nearer the kangaroo, his bowels would have been torn open. The middle toe projecting and being armed with a strong nail, enable them to inflict dreadful wounds, and frequently to kill dogs. It is seldom, indeed, that they will attack a kangaroo in front; old

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Fig. 37. ‘Killing a Kangaroo’. (Stokes, Discoveries in Australia..., p. 487; engraving by Abraham John Mason (1794-1858).)
dogs never do, but have a very clever way of throwing the smaller kind by the stump of
the tail when running.)

The dogs, thus protected from injury, were at last victorious; and the kangaroo, a great
beast, weighing nearly two hundred pounds, was soon stretched on the ground. Having
secured the tail and hind feet we continued our road to Dr. Barker’s station, situated in one
of the rich valleys I have spoken of, in an early part of the work, as lying a mile and a half
to the N. E. of Cape Shanck.

On account of the state of the weather we were obliged to tax this gentleman’s hospitality
for two nights, both the early parts of which were passed on Cape Shanck, watching
between the clouds for observations. This cape is a narrow projection of calcareous
formation, rendered remarkable by a pulpit-shaped rock lying close off it. About a mile to
the north is a hill 190 feet high, which has been selected for the site of a lighthouse for
showing vessels their position off the entrance of Port Phillip. Being so distant, however,
it is of more service for Port Western.

From Dr. Barker I received some curious information respecting the Aborigines. It
appears that there is great hostility between the Port Phillip and Gipps’ Land natives, who
occasionally visit each other’s territory for the purposes of war. So great is the feeling of
enmity between them, that they will frequently take a piece of the flesh of their foes and
pass it through the skin of their thighs or arms, where they leave it until it withers.

Returning to the ship we placed a buoy* on the five-fathom bar at the eastern entrance of
the South Channel, the bearings from which are Whale Head S. 33º W., and Arthur’s Seat
S. 79º E.; Points Nepean and Lonsdale being a little open. Passing through this channel†,
we spent an afternoon within the heads for the purpose of visiting the lighthouse just built
on Shortland’s Bluff.‡ This I found to be 108 feet high; the lantern, to contain a fixed
light, had not been established. The position of this light being so far within the entrance
it is only visible between S. W. ½ W., and S. ¼ W.; and a light placed at the extremity of
the rocky ledge off Point Nepean would be of infinitely more service in showing vessels
the entrance of the port.

(*Footnote. Another buoy at the east extremity of the bank on the north side of the
channel, which is very steep to, and one at the west end of the bank on the south side,
would render the navigation free from difficulty, as the banks on either side can be readily
made out.)

(†Footnote. The directions for entering by this line-of-battle ship channel are as follows.
After passing Point Nepean steer for Arthur’s Seat, keeping Point Flinders open south of
Lonsdale Point until the last cliffy projection is passed and bears S. ¼ W. Then steer half
a point to the left of Arthur’s Seat, shutting in Point Flinders with Point Nepean, and
keeping Point Lonsdale a little open of the latter. The buoy at the eastern entrance will
now soon be made out, and should be kept in line with Arthur’s Seat. Pass on the north
side of the buoy and then haul up S. E. until the water shoals to five fathoms, or until
Whale Head bears S. W. by W.; then steer N. E. by E. for Mount Martha, the next hill
north of Arthur’s Seat, until the latter bears S. E., when a course may be shaped for
Hobson’s Bay.)

(‡Footnote. The patch of dark bushes, breaking the sand beach to the northward, and
forming one of the leading marks in, had been so thinned that it was very indistinct. Mr.
LaTrobe, however, was going to remedy this evil by erecting a beacon on that spot.)
Whilst we were at Port Phillip this time, a schooner left in a somewhat mysterious manner, on board of which was the Honourable Mr. Murray, who fell afterwards in a conflict with the pirates at Borneo.\textsuperscript{276} The particulars of this gallant affair must be fresh in the recollection of my readers.

Leaving Port Phillip,* we returned to Port Western to pick up the party we had left there. Mr. Fitzmaurice found Cape Patterson, of which I have before spoken, to lie fourteen miles South-West by West \(\frac{1}{2}\) West from the eastern entrance of Port Western,\textsuperscript{**} and twenty-one miles North 55 degrees West from Cape Liptrap, the next headland to the eastward.

(*Footnote. The result of the tidal observations made at Shortland’s Bluff, gives 12 hours 20 minutes for the time of high-water on the full and change days. The simultaneous ones made in other parts of this great sheet of water during our stay, gave the times of high-water later as follows:

\begin{itemize}
  \item At William Town: 1 hour 0 minutes.
  \item Under Arthur’s Seat: 1 hour 45 minutes.
  \item At Corio Harbour: 2 hours 30 minutes.
\end{itemize}

At the entrance of Port Phillip the rise at springs is only three feet and a half, when the stream makes in at 2 hours 0 minutes. It also continues to run out from one to two hours after the water begins to rise by the shore. The outward and inward streams differ considerably; the latter being from 5 to 5½ hours’ duration, whereas the former is from 6 to 6½ and 7. The outward stream between the heads sometimes attains a strength of nearly 7 knots, and when opposed to a southerly gale, causes a sea dangerous to small craft; these gales heap the water up in all parts of the bay, particularly at William Town in the northern corner. On such occasions there is scarcely any fall of tide perceptible near the entrance; the outward stream is then also much weaker. In the West Channel the flood and ebb-streams have a velocity of from 1 to 2½ knots; but in the south it seldom exceeds two. Above the banks or in the inlet leading to Corio harbour there is scarcely any stream of tide perceptible; but through the channel over the bar at the latter the flood runs nearly three quarters of a knot. Outside the entrance the ebb sets between South by East and South-South-West for seven miles, when its strength is weakened to about a knot; from thence it trends more westerly towards the mouth of the Strait.)

Five and seven miles to the westward of Cape Patterson there are two rivulets, near the former of which an inferior kind of coal crops out; it occurs in beds of the carboniferous series. Between the two headlands above mentioned the shore falls back, forming a bight six miles deep, at the head of which is Anderson’s Inlet, six miles in extent, full of mud banks, and available for boats only. A river, called Toluncan by the natives\textsuperscript{277}, empties itself into the head of it.

(*Footnote. The observations on the tides at this place make the time of high-water at the full and change days 1 h. 10 m., when the rise is 8 feet. The stream in the main channel runs upwards of 2 knots, and off the N. E. end of Grant Island\textsuperscript{278} it makes to the eastward


\textsuperscript{277} Recorded as Toulermgum by George Augustus Robinson, Journal, 25 and 27 April 1844. The river is known nowadays as the Tarwin River.

\textsuperscript{278} Phillip Island.
about two hours before the time of high-water; this difference is to be attributed to the flood entering round both ends of the island.)

From Port Western we carried a line of soundings across the Strait to Circular Head†, the greatest depth midway between being 40 fathoms. Here, according to arrangement, we met the Vansittart. Bad weather had prevented Mr. Forsyth from completing the work allotted the cutter. We found the management of the Van Diemen’s Land Agricultural Company in the hands of Mr. Gibson279, from whom we received great attention. The new system of letting lands, recently adopted by this Company, was working well; and it certainly appeared to be a very fair mode of getting their lands occupied.

(†Footnote. My intention of getting some more soundings in the western entrance of Bass Strait was frustrated; but as I have entered into detail respecting the eastern entrance, I am induced to devote some space to a few directions, which may aid in averting a repetition of such terrible catastrophes as the late wreck of the Cataracaqui on the western side of King Island. The western entrance, formed by the islands off the north-west point of Tasmania and the projection on the Australian continent called Cape Otway, is 108 miles wide. King Island, lying nearly midway, occupies 35 miles of this space, and leaves to the north of it a passage of 47 miles in width, and to the south one of 37 miles.

The latter, however, is impeded by Reid’s Rocks, the Conway and Bell sunken rocks, with Albatross Island and the Black Pyramid; the tide also sets across it at the rate of from one to three knots, as I have already mentioned in the first volume; consequently, the entrance between King Island and Cape Otway is much safer, the chief danger being the Harbinger Rocks, two granite boulders, with deep water between, one lying N. 74º W. three miles and a half, and the other N. 88º W., nearly four miles and a half from the north point of King Island, Cape Wickham, which may be recognized by a round hill, 595 feet high, over it. The southern Harbinger is a few feet only out of the water, and the other scarcely a wash. These, with the Navarin Rock, lying N. 25º W., one mile and a half from the same cape, and the reef lying half a mile off Cape Otway, constitute the sole dangers in this entrance.

Masters of vessels should endeavour, if possible, to make the land in the neighbourhood of Cape Otway; but if the weather be thick they may know they are in the fairway of the Strait when they get into sixty fathoms, fine grey sand; in the same depth, with a rocky bottom, ships will be to the southward, and off the west side of King Island, which, as I have before described, is a rocky dangerous coast. There is a doubtful position of a sunken rock, ten miles W. ½ N. of the south point, which is low and rocky, and in φ = 40º 10’ S., λ = 143º 58’ E.; whilst Cape Wickham is in φ = 39º 35’ S., λ = 143º 59½’ E.; and Cape Otway in φ = 38º 51’ S., λ = 143º 35½’ E. of Greenwich, considering Sydney, to which these longitudes refer, to be in 151º 16’ E.

Various opinions have been expressed as to the best position for a lighthouse at this entrance of the Strait, some recommending Cape Wickham; others, Cape Otway. I, however, hold to the latter, for this simple reason, that it will avoid bringing ships in the neighbourhood of the Harbinger Rocks and the western side of King Island. If a light were erected on Cape Wickham, and a vessel running for it should be to the southward of her position, she would risk sharing the fate of the Cataracaqui,* unless more caution were used than is generally the case, I regret to say, in merchant vessels. Whereas, if the light were on Cape Otway, a ship to the southward of her position would have the Strait open to run through, and to the northward, would discover her error, by falling in with the land.

279 James Gibson, who succeeded Edward Curr as manager of the company in c. 1842.
The lead, also, would inform the master that his ship was near it, there being 30 fathoms ten miles from the land thirty-five miles to the westward of Cape Otway; the trend of the coast besides is too westerly to make it a lee shore.

(*Footnote. In consequence of a letter of mine that appeared in the ‘Times’, the owners of the Cataraqui have communicated with me, stating that they have reason to believe the Beagle’s chart of Bass Strait was among those with which the ship was furnished, and that with regard to leads and lines she was well supplied.)

From the middle of the entrance between Cape Wickham and Cape Otway, in 57 fathoms, fine grey sand, and in $\phi = 39^\circ 13'\ S., \lambda = 143^\circ 48'\ E.$, the course to the entrance of Port Phillip, is N. E. ½ N. seventy miles; the soundings will be found, at first, to decrease rapidly, and in the parallel of Cape Otway the depth will be 47 fathoms, fine sand and shells. Further particulars respecting the quality of the bottom off this part of the coast will be found in the first volume.

A S. E. ½ E. course 176 miles, from the same position, will take a ship to Port Dalrymple. In the first twenty-nine miles of this distance, the soundings will have decreased to nearly 30 fathoms, and the ship’s place should be then abreast of the N. E. end of King Island, distant ten miles. The sight of this and, further on, of the Hunter Group, which should be passed at a distance of 20 miles to the S. W., will show if the right allowance has been made for the set of the tides. In the courses given in this note, the tidal influence has not been noticed; but I have above noticed the direction of the streams, and the allowance to be made will of course depend on what stream the ship enters or leaves the Strait with.

Again, from the same position, an east course, 136 miles, will place a ship four miles to the south of the Curtis Isles. The soundings will be found to decrease to 40 fathoms thirty miles to the eastward of King Island, and will continue within a fathom or two of that depth for the remainder of the distance.

Two hundred and four miles from the above position, on a N. E. ¼ E. course, will take a ship to abreast of Cape Howe, distant twenty miles; passing midway between Hogan and Kent Groups, distant nearly nine miles from each, at which time twenty-eight miles will have been run on the above course. In passing the latter group, attention should be paid to the set of the tides; as with the flood-stream and a northerly wind vessels may be obliged to pass on the south side of it. Cape Howe bears from Kent Group, N. 36º E., 170 miles. When a ship gets into 30 fathoms she will be within 8 miles of the N. E. side of these islands; and on the opposite she will have that depth half the distance off.

It only now remains to notice the tides in the passage north of King Island. It is high-water on the full and change days at 1 o’clock; the stream begins to set to the S. W. three hours and a half before high-water, running with a velocity of from 1 to 2 knots; past the Harbinger Rocks, however, it sweeps round to the S. S. W., sometimes at the rate of nearly two knots and a half.

Having alluded to the entrance south of King Island in an earlier part of the work, and as it is a passage I do not recommend, I shall not here enter into many details respecting it, further than to say that if a ship is obliged to enter Bass Strait by that entrance, she should keep to the southward of Reid’s Rocks, passing close to the Black Pyramid, a dark rocky lump, 240 feet high, in $\phi = 40^\circ 28'\ S., \lambda = 144^\circ 18\frac{1}{2}'\ E.$ This should be made bearing N. E.
¾ E., which would keep ships clear of the Conway and Bell sunken rocks\textsuperscript{280}, the former and outermost of which lies fifteen miles N. 83º W. from it. The cross set of the tides should be particularly borne in mind, and likewise their strength, which is sometimes 3 knots. The stream to the S. W. by S. begins at 3 P.M. on the full and change days, or three hours and a half before high-water. The depth in the south entrance varies from 35 to 38 fathoms.

I shall perhaps make this note more useful by stating that January and February are the best months for making a passage to the westward through Bass Strait; although easterly winds blow on some rare occasions at other times, but these are mostly gales, and generally terminate in a breeze from the opposite quarter, having much the character of a rotatory gale, one of which I have described in an early part of the work. The gales that chiefly prevail in this Strait begin at N. N. W., and gradually draw round by W. to S. W., at which point they subside; but if the wind, before it has so much southing, veer again to the northward of west,--or backs, as it is expressed,--the gale will continue; but its duration may be told by the barometer, as it is seldom fine when it registers less than 29.95, and bad weather is certain if it falls to 29.70.

N.B. The courses recommended in this note are marked in the chart accompanying the work.)

Our anchorage this time was on the south side of the singular natural fortification I have before described; and whilst there we were placed in some anxiety by being caught in a gale from the eastward. The holding-ground, however, being very good, and a strong outset sweeping out of the bay round the south side of the head, lessened the strain on the cables. The sudden appearance of this breeze, and the manner in which it was succeeded by another from the westward, afforded additional evidence of how necessary it is for anchorages in this strait to be sheltered from both quarters. A jetty, which has been run out by the Company, forms available shelter at high-water for vessels of nine and ten feet draught.

On the 20th of January [1843], having made a valuable set of tidal* and other observations, and arranged with Mr. Forsyth to meet him at Hobarton, we sailed in the afternoon, and next morning passed half a mile from the south side of the Pyramid\textsuperscript{281}, in 35 fathoms. It is a light-coloured mass, worthy of its name, 300 feet high. From thence we steered towards Cape Frankland, the N. W. point of Flinders Island, which we had still to examine, decreasing the soundings gradually to 26 fathoms within two miles and a half to the W. N. W. of it. We could see nothing of the sunken rock said to lie two miles west from the above headland; yet, as we have not exactly gone over the spot, it has been marked in the chart with a \textit{p.d.}\textsuperscript{282} against it.

(*Footnote. The time of high-water at the full and change is 11 hours 40 minutes, when the rise is 9 feet.)\textsuperscript{283}

It was now time for Stokes to depart Bass Strait and head up to Sydney, to leave what stores were not absolutely required during the passage to England, for the use of ships there. Stokes expressed his appreciation for the good treatment that he and his crew had received whilst in Sydney. With final arrangements having been made, the \textit{Beagle} departed Port Jackson on the 18th February 1843 and

\textsuperscript{280}\textsuperscript{281}\textsuperscript{282}\textsuperscript{283} The sunken Conway and Bell Rocks are situated between Reid Rocks and Black Pyramid. Their positions are shown on Stokes, \textit{Chart of Bass’ Strait}, to be found folded at the back of Stokes, \textit{Discoveries in Australia}, vol. I.

This island is now known as Bass Pyramid.

\textit{p.d.} = position doubtful.

headed for England by way of Hobarton, King George’s Sound, Rottenest Island, Fremantle and the Swan River (departing the latter on the 6th May 1843 for Mauritius), thence via the southern coast of Africa, St. Helena, Ascension, and the Cape Verd Group, eventually reaching Spithead on the Solent (near Portsmouth) on the 30th September 1843, after an absence of upwards of six years.

During the last few weeks of his stay in Australian waters, Stokes had made a number of insightful comments on a number of topical subjects, including the employment of convicts and the need for lighthouses to be constructed.

“I would also suggest another mode of employing the [convict] probationers. They might be dispersed through the islands in Bass Strait, and engaged in constructing the lighthouses which are so much wanted there. Six years ago his Excellency Sir John Franklin drew the attention of the Government of New South Wales to the necessity existing for these lighthouses. On this occasion a mass of evidence was given before the Legislative Council as to which would be the most eligible sites; but up to this period only two have been founded, both by the Tasmanian Government, one on the Chappell Isles, another in Banks Strait. The important ones for the eastern and western entrances of the Strait have been neglected, although the fullest information was obtained on the subject. Opinions concur in representing Kent Group as the best position for a light at the eastern entrance, where certainly one is most required, the Strait being there so much impeded with rocks and islands. I gave my opinion to this effect before the Legislative Council, in September, 1842. At the same time, for the western entrance, I recommended Cape Otway in preference to the north end of King Island, for reasons already assigned.* The melancholy wrecks that have of late occurred in Bass Strait will, it is to be hoped, direct immediate attention to the construction of these lighthouses, and I think that the collateral benefits to be derived from the dispersion of the convicts ought to be given their due weight. The expense would, in consequence of the ample supply of labour, be small; some of the islands afford stone in abundance; and the convicts might raise part of their food in the vicinity of the proposed buildings. I cannot but think that this, in the end, will prove a lucrative undertaking for Government; as on the number of vessels that pass, light-dues of about a penny a ton might be levied.

(*Footnote. The following is the Report of the Committee of the Legislative Council of New South Wales, on lighthouses proposed to be erected in Bass Straits:- “Your Committee have the honour to report, that having been favoured with the attendance of Captain Stokes, of her Majesty’s ship Beagle, lately returned from a survey of Bass Strait, and ascertained his ideas as to the best position for placing a lighthouse at the western entrance thereof, they are induced to change their opinion as set forth in their Report of the 1st September, 1841, and to coincide with him in thinking that Cape Otway would be a better site for a lighthouse than King Island, as being equally advantageous to the trade at large, and much more so to that of Port Phillip. It would appear, too, that no danger could accrue to vessels endeavouring to make the former, while much mischief might arise in trying to sight the latter, should there be any error in their reckoning; and that it is therefore desirable to keep them as far as possible to the northward of King Island, instead of inducing them to risk the danger of approaching it, to ascertain their true position.

Captain Stokes perfectly coincides with the Committee, in the opinion formerly expressed by them, that the eastern island of Kent Group, is the best position for a light at the eastern entrance of Bass Strait; and they beg leave respectfully to recommend to your Excellency and honourable Council, that immediate steps may be taken for commencing so desirable an undertaking as the erection of a lighthouse on that spot.

Signed) J. GIBBES, Chairman.

Council Chamber, 6th September, 1842.”)

Colonel John George Nathaniel Gibbes M.L.C. (1787-1873), NSW Collector of Customs for the period 1834-1859. His residences included what are now vice-regal residences: Admiralty House, Sydney, and Yarralumla Homestead, Canberra.

Stokes, Discoveries in Australia, II, pp. 509-11.
Subsequent Admiralty Surveys

Of course, the charting of Bass Strait by marine surveyors continued with further refinements and increased accuracy. By the use of triangulation and fixed reference points, these surveyors created charts sufficiently reliable to enable safe navigation for the clippers and steamers of the post-gold rush era. From about 1860 the Colony of Victoria contributed to the costs of the British Hydrographic Office.286 Space does not allow for more than a mention of the names of these men who played an important role in improving the safety of vessels along the coast and in the bays of Victoria. Their charts formed the basis for official Admiralty charts (whose copper-engraved plates were being constantly updated as new information became available). These Admiralty charts were made available for purchase by users, and gradually evolved into our modern nautical charts.

The following marine surveyors created charts (of sections of the Victorian or nearby coastline) that are now kept in the United Kingdom Hydrographic Office in Taunton, Somerset:


![Image](http://www.placenames.nt.gov.au/origins/greater-darwin.)

Fig. 38. Frederick Howard RN.


References:

J. Lort Stokes, Discoveries in Australia; with an Account of the Coasts and Rivers Explored and Surveyed during the Voyage of H.M.S. Beagle, in the Years 1837-38-39-40-41-42-43, T. & W. Boone,

286 Robert Clancy, The Mapping of Terra Australis, pp. 139, 175.
287 Thomas Lipson RN (c. 1784-1863), Naval Officer for South Australia, Harbour-Master at Port Adelaide and Administrator of Marine Affairs. He made several surveys of the South Australian coast for the Home Government.
288 Later Vice Admiral Sir Henry Mangles Denham, CMG (1800 – 1887). He was a Royal Navy officer who went on to become Commander-in-Chief, Pacific Station.
289 Commander Wilkinson RN, having a card of entrée, attended the Royal Levee held by the Duke of Edinburgh in Melbourne’s Exhibition Building on 26 November 1867. Reference: The Argus, 27 November 1867 page 6, column 1.
290 Staff Commander Henry James Stanley RN.
291 Later Commander Frederick Howard RN (?-1892). He became Commander in 1883 after being recalled to England upon completing the survey of the coasts of South Australia. He was later a Hydrographer in the NSW Harbours and Marine Department.
292 Commander Richard F Hoskyn RN.


HRV 4, pp. 3, 23-9, 185-6.

See Appendix IX for a partial list of charts held by the United Kingdom Hydrographic Office (UKHO) relating to Victorian (and neighbouring) coastal locations covered by the ‘Pacific Australia New Zealand’ Index Book at the UKHO.
