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*Every Hour, On the Hour, From Sun Up
'til Sun Down:*

*William Brahe and the establishment of central Australia's
first weather station during the Burke
and Wills Expedition*

MANY EXPLORING EXPEDITIONS made meteorological recordings, and the Burke and Wills Expedition was no exception.¹ Four different members of the party recorded weather data at various times as the expedition crossed Australia from Melbourne to the Gulf of Carpentaria.² As surveyor of the party, William John Wills was responsible for observing and recording a wide range of data and the studious young scientist undertook the greater share of the task of recording the journey. However, some of the observations recorded in field books during the crucial section of the journey from Cooper Creek to the Gulf were not made by Wills, but have been incorrectly attributed to him.

Sarah Murgatroyd in *Dig Tree* praises the work of Wills:

. . . without William Wills we would have almost no record of the first European crossing of Australia . . . the surveyor maintained his diary scrupulously, leaving a detailed if somewhat clinical journal . . . they include a set of scientific records, consisting of up to fifteen meteorological readings a day.³

It now appears that Wills was not so scrupulous in maintaining the scientific records, and the meteorological readings contained in two field books were not made on the arduous journey to the Gulf. In fact they were made at the Cooper Creek depot camp by William Brahe, the young German officer who was left in charge. Under instruction from Wills, Brahe established central Australia's first weather station.

Brahe's departure from the Dig Tree depot on the same day that Burke, Wills and King returned from the Gulf is inextricably linked to the drama of the story and the deaths of Burke and Wills. Brahe faced stiff criticism for leaving his post and his reputation suffered as a result.⁴ The fact that Brahe conscientiously carried out his duties while keeping meticulous scientific records has not been acknowledged. This article aims to correct that omission and discuss the methodology of meteorological data collection on the expedition and the provenance of those meteorological records.

II

Wills was appointed the expedition's 'Surveyor, astronomical and meteorological observer'. His instructions were drafted by Dr John Macadam, Honorary Secretary of the Exploration Committee of the Royal Society of Victoria. They required him to make meteorological observations:

Whenever a permanent camp is to be erected, a systematic registration on meteorology should at once be carried on. The hours of registration are to be as numerous as possible. The hours 6am, 9am, 3pm and 9pm being obligatory.⁵

Wills started making meteorological observations on the second day out of Melbourne, and he continued to make recordings in one form or another until just before his death at Cooper Creek.⁶ Most of the observations were recorded in small, blue surveyor's field-books, which had pages printed specifically for the purpose with twelve columns for barometric, temperature, wind direction and strength, cloud cover and type and magnetic variation observations. The pages had twenty-four hourly divisions and followed the convention of the astronomical day, when the new day started at noon. Some of the larger hard-bound field-books (203 x 254 mm) were cut and improvised into smaller volumes covering one week's travel. These soft-bound smaller books (203 x 127 mm) were easier to store in saddle-bags and packs while travelling each day.⁷ When the Exploration Committee in Melbourne received Wills' first two surveyor's field-books in October 1860, the data was sent to Professor Neumayer at the Flagstaff Observatory to be transcribed and analysed.⁸

The expedition's two German scientific officers, Ludwig Becker and Hermann Beckler, assisted Wills with the observations as they crossed Victoria, and when Burke divided the party at Menindee, the two men established their own weather observation station on the banks of the Darling River.⁹ Although Neumayer provided enough instruments to facilitate simultaneous observations at several locations, the vagaries of overland travel with horses and camels resulted in damage to the mercurial barometer, and so atmospheric pressure was recorded using aneroid barometers.¹⁰ Wills had wooden boxes specially constructed to transport the instruments, but he too suffered several breakages when camels rolled while carrying the instruments.¹¹

III

Once the expedition arrived at Cooper Creek, Burke selected a suitable site for a depot camp while Wills went out on reconnaissance trips in search of a route to the north. Burke decided to divide the party again, leaving four men at the depot while the other four made the dash to the Gulf, and he planned to promote Brahe as an officer and leave him in charge of the depot.¹²

Brahe was born at Paderborn, Germany on 16 January 1835. He arrived in Australia in 1852 and worked on the Victorian gold diggings where he was an excellent wagon-driver. Originally employed by Burke as an 'expedition assistant' on a salary of £120 a year, the twenty-five year old was hoping to accompany the expedition all the way to the Gulf of Carpentaria. He was certainly not expecting to be made an officer or to be placed in such a responsible position, but as the only person other than Wills who could use a compass, he was the logical choice to be left in charge of the depot party should he need to navigate the other men back to Menindee. He initially turned down Burke's offer of promotion, despite assurances that it would be a distinction for him. The next day,

however, an impatient Wills forced his hand and simply told Burke that Brahe would accept the position.¹³

Burke did not issue any written orders to Brahe, but merely told the depot party to wait at Cooper Creek for three months.¹⁴ Wills allegedly asked Brahe to wait for four months.¹⁵ Brahe waited for four months and five days before marking the famous 'Dig' inscription on the Dig Tree and returning to Menindee.

Before departing Cooper Creek for the Gulf, Wills gave Brahe a number of his journals for safe keeping. Brahe took the journals to Melbourne and handed them to the Exploration Committee.¹⁶ These journals, along with a range of other notes, field books and diaries were deposited in the Melbourne Public Library in 1875.¹⁷ Along with Wills' journals are two additional field books which are currently described as:

William John Wills, 'Field book, 22 November 1860 - 14 February 1861.' (Exclusively wind and barometer readings), Box 2083/2 (c).

William John Wills, 'Field notes, 15 February - 24 April 1861.' (Exclusively wind, thermometer and barometer readings), Box 2082/6 (k).¹⁸

Item 2083/2c is a surveyor's field-book, 203 x 254 mm. The pages are printed in twenty-four hourly divisions with columns for meteorological data and the space for field observations. The page header has spaces for the date and latitude and longitude by observation and by account (dead reckoning). There are seventy pages in the book and there are entries on every page. The data is exclusively meteorological observations, with the first entry dated 22 November 1860, followed by entries dated 23, 26, 27, 28 and 30 November and then consecutive entries from 10 December 1860 through to 14 February 1861.

Item 2082/6k is an improvised volume, 203 x 127 mm made by cutting a surveyor's field book in half, leaving just the left hand side of the page with space for the meteorological observations. There are 67 pages dated consecutively from 15 February 1861 to 24 April 1861 and there are meteorological observations entered on the first 64 pages.

After the deaths of Burke and Wills these two field books were overlooked, even though the 7,000 meteorological observations represented the first detailed description of climatic conditions in the arid interior. The field books were not presented as evidence to the Commission of Enquiry, nor were they sent to the Observatory for transcription, as Wills' earlier books had been.¹⁹ There was no mention of them in the press, even though the public readily devoured the publication of the expedition's diaries, journals, letters and despatches. The two accounts of the expedition that were published immediately after the funeral did not mention these two field books either, even though one account was written by Wills' father, and both accounts relied heavily on Wills' other field books to construct the narrative.²⁰

When the two field books were accessioned into the Melbourne Public Library in 1875 they were attributed to Wills. However no one examined them closely to ascertain the weather conditions faced by the explorers. This lack of analysis is surprising, given



The Dig Tree at Cooper's Creek, site of Brahe's Depot. (Dave Phoenix, 2012).

that weather has been proposed as one of the contributing factors to the expedition's failure; Burke was criticised for travelling in the desert in summer and it has been suggested that his delayed return to the Cooper depot was due to the camels' inability to negotiate the muddy conditions of the northern monsoon.

The first historian to refer to the field books was Tim Bonyhady, who commented on the temperatures Wills faced in the desert and the Gulf. He thought the meteorological observations demonstrated Wills'

remarkable devotion to duty . . . Whether travelling, cutting up a camel or burying Gray, Wills recorded his meteorological observations – temperature, air pressure, wind and clouds – at least eight times, usually fourteen times and sometimes even sixteen times a day.²¹

One has to ask would it have been possible for Wills to make such regular and comprehensive observations while walking across the desert in the summer heat and floundering through the mud in the Gulf during the wet season as the camels, and his comrades, collapsed and died around him? It is certainly something of an anomaly that Wills' diary was incomplete and fragmented, which has been attributed to the difficult conditions and physical exertions he faced, yet the hourly meteorological observations he allegedly made were comprehensive and consistent, with scarcely a single observation missed in the entire four month period.

IV

Inspection of field-book 2083/2c shows that it contains two different styles of handwriting. The majority of entries in the first ten pages are undoubtedly by Wills; his handwriting and composition are consistent with the previous eight field-books he completed. He begins the book with a diary entry recording their arrival at Camp 63, the first depot camp on Cooper Creek, and then there are occasional memoranda and meteorological observations. On 15 December, the day before he left Cooper Creek for the Gulf, he compared the two aneroid barometers, No. 21'543 and No. 21'548, and wrote the comparison readings on the blank facing page for that day. He then added a note,

After this date the Bar[ometer] Readings have been made with Aneroid No. 21'543 in place of No. 21'548.

Wills explained why he was comparing the barometers in his *Third Surveyor's Report*.

Mr Brahe, who remains here in charge of the depot, and from whom I have received great assistance both in making meteorological observations and in the filling in of feature surveys, will keep a regular meteorological register. I have handed over to him for that purpose an aneroid barometer, No. 21'543, and four thermometers, two for dry and wet bulb observations, and the others for temperature of water, &c.²²

Brahe had already assisted Wills make observations, and Brahe had made his own meteorological observations at Camp 58 when Wills had been away on a reconnaissance trip.²³ Now Wills was setting up a weather station for Brahe to maintain while he went to the Gulf with Burke. In doing this, Wills was fulfilling his instructions that systematic registration of meteorological phenomena be undertaken whenever a depot was established. He had already given barometers and thermometers to Becker and Beckler for them to use at the Darling, and he was now organizing the same system prior to his departure from Cooper Creek. In his report, dated 30 June 1861, Brahe alluded to the fact that he had a barometer and thermometer and was taking meteorological observations while at the depot.

The last three days have been fine and cool, but now it again looks like rain, although the barometer is very high - higher, indeed, than it has been during our stay here.²⁴

Wills made no further entries in these field books after 15 December 1860, and the following day he departed for the Gulf. Brahe began observations on 17 December



Photograph of William Brahe taken around the time of the expedition, photographer unknown, n.d.
MS 10902, Australian Manuscripts Collection, SLV.

1860. He was unable to make observations on 16 December as he accompanied Burke and Wills on the first day of their journey and did not arrive back at the depot until late.²⁵ Brahe's observations began the next morning, and he filled out a page a day until the 14 February when all the pages in the field book 2083/c were full. Brahe then began the second book, 2082/6k, which was improvised from spare books that Wills left behind.

Further physical examination of the two field-books suggests they were from a fixed meteorological station at the Cooper depot rather than Wills' field books written on the journey to the Gulf. The books are remarkably clean and undamaged. The handwriting is neat and tidy and there are virtually no errors, smudges or corrections and only an occasional ink blot to blemish the pages. The books do not exhibit any of

By observation

Date Friday 5 April 1861 Lat. _____
 1861 April 5th Long. _____

Time	Baromet.	Thermom.	Wind		Clouds		Mag- netic Vari- ation	Remarks
			Dir.	Force	Obs.	Max. amount		
Midnight	30.6	72	SE	1				
1								
2								
3								
4								
5								
6	30.65	72	SE	1				
7								
8								
9	30.72	81	SE	1				
10								
11	30.72	82	SE	1				
12								
13								
14	30.75	84	SE	1				

Date Saturday 6 April 1861 Lat. _____
 1861 April 6th Long. _____

By observation

Time	Baromet.	Thermom.	Wind	Clouds	Remarks
Noon	30.7	84	SE	1	
1	30.68	82	SE	1	
2					
3	30.67	82	SE	1	
4	30.67	82	SE	1	
5					
6	30.66	82	SE	1	
7	30.65	80	SE	1	
8					
9	30.67	80	SE	1	
10					
11	30.67	80	SE	1	

Brahe's observations for Friday, 5 April 1861, starting at 1.00 am and finishing at 11.15 pm. 'Field notes, 15 February - 24 April 1861,' Box 2082/6k, MS 13071, SLV.

the exposure to the elements that would be expected from field-books taken to the Gulf and been subjected to the monsoonal wet season rains and associated mud. The hours of observation are remarkably consistent; they start at 5.00 am or 6.00 am and there is an hourly entry for nearly all the daylight hours. Some days have up to seventeen hourly entries and every day except two have ten or more entries. This type of record is consistent with a fixed recording station where the meteorological observer had a routine, rather than mobile field-observations. Wills wrote that on the trip to Carpentaria they often traveled at night and their daily routine varied according to the weather.²⁶ The books do not exhibit the variation in hours that could be expected from Wills' variable travel itinerary.

Although the field books contain observations through to 21 April 1861, Wills was forced to abandon his instruments on 3 April and was therefore unable to make any observations beyond this date. Wills was understandably reluctant to part with his

instruments, as it was not just the meteorological equipment that was buried but also his sextant, artificial horizon, universal circle and compasses; items that were essential for navigation.²⁷ However, the party was in a tenuous position and Wills had no alternative but to acquiesce to Burke's demands.

. . . the order has been given for leaving behind everything but the grub and just what we carry on our backs, so that the instruments being planted, no more observations can be made.²⁸

Wills didn't abandon all his instruments at the *Plant Camp*; he did keep a few smaller items, but he does not mention having a barometer after 3 April 1861.

. . . the only things I have left being my watch, prism compass, pocket compass and one thermometer.²⁹

It would seem unlikely given the extremely difficult situation the men faced at the *Plant Camp* that Wills would have chosen to keep his barometer while abandoning his sextant, yet the hourly barometrical entries continue uninterrupted in the field-book beyond this period. In addition, the only thermometer Wills kept after 3 April was calibrated in the Reaumur³⁰ scale rather than Fahrenheit, yet there is no mention in the field-book of any change of instrument and the temperature scale used in the field-books continues to be shown as Fahrenheit.

V

So if Brahe was maintaining a meteorological station at the Cooper depot, do the observations correlate to his account? Cross-referencing Brahe's report with the weather data in the field-books shows:³¹

On 26 February Brahe rode to a conical hill about nine miles (15 km) distant from the Dépôt. There are no observations recorded in the field-book between 7.00 am and 2.00 pm for that day indicating Brahe was absent for seven hours.

Brahe noted in his report that the first twenty-four days of March were particularly hot and the field-book shows maximum temperatures between 90°F and 100°F (32°C-38°C) on twenty-two days during this period. Ten of these days had maxima of 100°F (38°C) or more and the highest temperature recorded was 107°F (41°C).

Brahe's report noted there was a sudden change on 24 March as the wind picked up and the temperature dropped. The field-book shows high winds on the afternoon of 24 March and the daytime maximum temperatures moderated from 102°F (39°C) on the 24th to 87°F (30°C) on the 25th.

Brahe's report notices the nights became cool after the change on 24 March. The field-book shows night time temperatures moderated from 86°F (30°C) at sunrise on the 23rd to 67°F (19°C) at sunrise on the 25th and dropped to 64°F (17°C) at sunrise on 27 March.

Brahe's report notes lightning in all quarters and rain between 8.00 and 9.00 pm on 29 March. The field-book shows lightning in the north and north-east, followed by lightning in the south-west and south-east and at 8.30 pm it commenced to rain.

Brahe reports a slight shower of rain in the morning of 30 March and the field-book shows a slight shower of rain falling between 7.00 and 8.00 am.

Brahe reports the barometer reached its highest reading on 18 April and the field-

notes show the 18 and 19 April to be the only days when the barometer reads above 30.00 in Hg (1016 hPa).

In the afternoon of 19 January 1861 there is an observation in the field-book that the temperature was 116°F (47°C) 'in tent'. Burke did not take tents with him on his trip to the Gulf and at the Commission of Enquiry, King confirmed this;

Had you tents?: None.
You camped out? : Yes.³²

Burke's tent was at Cooper Creek, and Brahe had erected it inside the small stockade that they had built.³³ It appears that on 19 January the temperature of 46.6°C was recorded by Brahe in Burke's tent in the stockade at the depot, rather than by Wills who was 750 kilometres north at Greens Creek in the Selwyn Ranges.

There is nothing in Brahe's report and his evidence at the Commission of Enquiry that conflicts with the field books. Furthermore, the meteorological observations are entirely consistent with any that could have been recorded at the Cooper depot. Brahe measured atmospheric pressure using an aneroid barometer, temperature in degrees Fahrenheit, and wind direction. When there were clouds visible he recorded the direction they were travelling, and comments were added on fifty occasions when it was particularly windy or when it rained. Two thermometers were set up as wet and dry bulb to measure relative humidity, but the wet bulb temperature was only recorded once a day at 6.00 am.

The entries generally start at 5.00am during December, January and February when the sunrise was before 6.00 am.³⁴ In March, because the sun was rising later it would have been dark at 5.00 am and so Brahe stayed in bed a little longer and after 6 March 1861 the first observation was taken at 6.00 am.³⁵ During December the last observation for the day was taken at 8.00 or 9.00 pm, but from early January right through to their departure in April, Brahe makes the last entry at 11.00 pm.

The pattern of hourly observations is irregular during the first few weeks but once the stockade had been built and the Yandruwandha moved on to another part of the creek a more regular routine emerges. Brahe makes several observations early in the morning and then is often away for an hour or more, most likely supervising the camels or tailing the horses while they feed. Brahe rarely misses the 1.00 pm observation, but hardly ever makes an observation at 2.00 pm. In fact, during the final nine weeks at the depot, Brahe misses the 1.00 pm observation on only three occasions, but only makes an observation at 2.00 pm once. This consistency indicates the Brahe established a regular routine at the depot and the break at 2.00 pm could have been when the four men ate their lunch of damper, tea and salt pork or beef.³⁶

The evening observations show a similar pattern, with regular observations at 6.00 and 7.00 pm, no observation at 8.00 pm, observations at 9.00 pm, no observations at 10.00 pm and a final observation at 11.00 pm. It could be assumed that the men's dinner of two expedition meat biscuits and tea was taken at 8.00 pm, after sunset, when they were no longer bothered by the flies.³⁷

In the final three weeks before he left the depot, Brahe started making observations at midnight or 1.00 am and once at 3.00 am. This change in routine occurred at the same time that the blacksmith, William Patten, became ill and took to his bed. Brahe's late night observations might be a result of irregular sleep patterns as a result of tending to the sick. The daytime observations showed a change as well, with periods of up to seven hours when no observations were recorded and days when only seven or eight recordings were made. Brahe noted that the horses, which were not hobbled, began to stray and that five of the twelve horses had gone missing and were found some fifteen miles away. Patten had been responsible for the horses but was now too ill, so the extended gaps in the meteorological record may be a result of Brahe taking on additional camp duties.

The accuracy of Brahe's observations cannot be ascertained. Brahe was not scientifically trained and the instruments had been transported 1,800 kilometres on horse-back in pack-saddles. Once Wills departed for the Gulf taking the second set of meteorological instruments with him, there was no way of comparing or calibrating Brahe's instruments and there is no record of whether the instruments were checked afterwards or even if they were ever returned to Melbourne. However Wills made every effort to ensure the observations were as valid as possible through the instrument comparison and check made before he left the depot.

A detailed comparison of Brahe's temperature observations with current Bureau of Meteorology records for Moomba shows that Brahe's observations correlate well and there are no obvious anomalies.³⁸

VI

Even though these two field books are Brahe's observations, there are still some meteorological observations that can be attributed to Wills. We do not know whether Wills made any systematic meteorological recordings on the northbound trip from Cooper Creek to Carpentaria, as his field books for that part of the journey have been lost and their contents were only partially transcribed before they went missing.³⁹ Wills must have recorded temperature and pressure when taking sextant readings, as this data is required to reduce the observations, and we know Wills made astronomical observations as his nine field books were headed with the dates and the latitudes they cover. However the notebook containing his astronomical observations and reductions was never recovered.

On the return journey Wills made meteorological observations in two separate books. His notebook of astronomical data contains brief notes on temperature and pressure for the seventeen occasions he made sextant observations. On returning to the deserted depot, Wills buried the notebook in the wooden camel-box that Brahe left as a cache at the Dig Tree. Three months later it was recovered by Alfred Howitt of the Victorian Relief Expedition and returned to Melbourne where the Government Astronomer, Robert Ellery, produced a two-page report on the astronomical observations.⁴⁰ The Melbourne Observatory held on to the notebook until 1932 when it was donated to the

Public Library of Victoria by the Dr Baldwin, the Victorian Government Astronomer.⁴¹

Wills also made occasional meteorological notes in a separate field book, which he later re-used as a diary to record the journey from Cooper Creek towards Mount Hopeless.⁴² Howitt recovered it from the gonyah in which Wills died, and when it reached Melbourne the contents were transcribed by William Henry Archer, Victoria's Registrar-General.⁴³ However Archer only transcribed the diary portion and made no mention of the meteorological notes. The field book then disappeared and was not seen again until 1909 when it was bought at auction by the Commonwealth Parliamentary Library from Archer's deceased estate.⁴⁴ The meteorological observations were transcribed for the first time in 2002 by Valerie Helson, Assistant Manuscripts Librarian at the National Library of Australia as part of the project to digitise the diary. The digitised version was made available on the National Library of Australia's website as part of the *Melbourne to Myth Exhibition* along with enhanced scanned images of the pages.⁴⁵

An examination of this field book shows it was an improvised volume, almost identical to field book 2082/6k that Brahe was using. Wills' observations were irregular and he made just 21 observations over a four week period (Brahe made 396 observations during the same time). Wills recorded three separate hourly observations on one day (28 February 1861), but usually managed just one observation a day, and often several days would pass without a single observation at all. His method of recording meteorological data was predominantly a description of the day's conditions without reference to scientific instrumentation, which is to be expected of an explorer covering long distances through difficult and trying conditions.

Cross referencing Wills' observations with those taken by Brahe shows that none of the barometrical readings coincide and there are wide variations in the recorded wind speed and direction. In addition temperature readings taken at the same time on the same day have variations of up to 9°F between the two sets of data, indicating that they are indeed separate sets of weather data which were recorded some distance apart.

VII

The whereabouts of Wills' missing field books from the journey from Cooper Creek to Carpentaria and return hold a great deal of interest to Burke and Wills researchers, as they would explain a great deal about the northern half of the expedition's journey. There are currently only five manuscript items in the archives that are believed to have been taken to the Gulf by Burke and Wills:

Portion of diary kept by Robert O'Hara Burke, MS 30/1, National Library of Australia.

The sparse meteorological records contained in 'Wills' journal of trip from Cooper Creek towards Adelaide,' MS 30/7, National Library of Australia.

Wills' astronomical observations made on the return journey from the north, Box 2083/1d, MS 13071, State Library of Victoria (SLV).

Field book, 22 November 1860 to 14 February 1861, Box 2083/2c, MS 13071 (SLV).

Field notes, 15 February to 24 April 1861, Box 2082/6k, MS 13071 (SLV).

I now propose that the last two of these items were not Wills' records but Brahe's, which means there are only three known original manuscript items that can give us any indication of the conditions, events and route of the trip from Cooper Creek to the Gulf.

Wills may not have been quite as conscientious as Bonyhady and Murgatroyd would have us believe. However he still ensured that his scientific duties were carried out to the best of his ability. On the day before he was to depart on the dash to the Gulf, when so much preparation was to be done, he found time to calibrate the barometers and instruct Brahe on their use. His diligence ensured the first long term weather recording station was established in central Australia. Comparison of Brahe's records with modern data show his observations to be very reliable.

Brahe's reputation suffered as a result of his decision to leave the Dig Tree depot before Burke returned from the Gulf. Burke inferred Brahe had abandoned his post and Wills claimed his departure contravened orders.⁴⁶ Many subsequent commentators have perpetuated the idea that the responsibility Burke placed him under was 'too heavy for him'.⁴⁷ However, Frank Clune's image of 'backslider Brahe' sojourning in his summer chateau on Cooper Creek during the long, summer months does not equate to the responsibility shown by the young man who, under difficult circumstances, carefully entered thousands of meteorological observations into these two small field-books.⁴⁸

Although this weather data is not new information, placing it in the correct context as data carefully recorded at a fixed observation station located in the Strzelecki Desert, will hopefully add to the debate about the Victorian Exploring Expedition's contribution to scientific understanding, and show that, despite the popular impression of the expedition as an ill-fated dash to the Gulf, the scientific officers did try to advance their knowledge of the interior.

The image shows a handwritten manuscript page, likely a page from a journal, with a table of meteorological observations. The page is numbered 156 at the top and 157 at the bottom. The table has several columns: 'Time', 'Barometer', 'Thermometer', 'Wind', 'Clouds', 'Barometer', and 'Remarks'. The rows are numbered 1 through 11. The handwriting is in cursive and somewhat faded. The table contains various numerical entries and some descriptive notes.

William John Wills, 'Journal of trip from Cooper Creek towards Adelaide', MS 30/7, National Library of Australia.