

Thomas Maclear, Astrologer Royal at the Cape

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At the 14th Annual General Meeting of the Royal Astronomical Society in 1834, it was announced that: "Mr Maclear, so well known for his ardour in the cause of astronomy, is gone to take upon himself the care of the Observatory of the Cape of Good Hope." In his letter of appointment, Maclear was commanded by the British Admiralty to proceed without loss of time to the Cape of Good Hope, and there to assume the control and direction of His Majesty's Observatory from the Assistant Astronomer, Lieutenant William Meadows, and to take charge immediately of all the instruments, books and other stores left there at the departure of his predecessor.

It interests me as librarian at SAAO, to read that he was specifically instructed to care for the books. The inventory of movable property that was presented to him when he arrived included a list of 168 books - all of which are still in the library. So, we know that he did that part of his job well! In the 37 years that Maclear was in charge of the Royal Observatory at the Cape, he firmly established it as one of high standing, a reputation it has maintained up to the present, having been reconstituted in 1972 as the South African Astronomical Observatory (SAAO).

Maclear, born in 1794, qualified as a Surgeon, but in his spare time read and experimented in astronomy, chemistry and electricity. He built his own small observatory at Biggleswade in Bedfordshire, and became so proficient at making astronomical observations, that he was appointed Fellow of the Royal Society in 1831. In 1828, when still an amateur, Maclear published his first paper. It was on the Occultations of Aldebaran by the Moon computed for 10 different observatories in Europe, including Greenwich (Maclear 1828).

Maclear was convinced that the meridian observations of sun, moon, planets and principal stars should form the chief work of the Observatory of the South. (RAS 1858). His intentions however, were diverted by the major challenge of remeasuring Abbé de la Caille's Arc of Meridian at the Cape, and of publishing the results. This work occupied almost his entire working life. Initial investigations were undertaken in 1836, but the major survey was started in 1838 and only completed in 1847. Maclear's magnum opus was the 2-volume work, *Verification and Extension of La Caille's Arc of Meridian at the Cape of Good Hope* that was published in 1866 under the editorship of Sir George Airy. (Maclear 1866)

Abbé Nicolas-Louis de la Caille was at the Cape from 1751-53. He laid the foundations of Southern Hemisphere astronomy and has been called "the true Columbus of the Southern Sky". La Caille was given instructions firstly to catalogue and map the southern stars as an aid to maritime navigation, and secondly to obtain more reliable measurements of latitude and longitude, and declination at the Cape in order to determine the shape of the earth.

During his stay, La Caille charted the positions of almost 10 000 southern stars, grading them according to brightness. His third, and most important catalogue, *Coelum Australe Stelliferum*, which lists 2 000 of these stars, is in the SAAO library. There is a biblical verse on the title page from Psalm 147, verse 4: He telleth the number of the stars; he calleth them all by their names. Very apt for an astronomer such as the Abbé de la Caille

La Caille named 14 new constellations to which he assigned "the names of the principal

implements of the sciences and fine arts” instead of the traditional nomenclature of mythology. He designated one constellation Mons Mensae - Table Mountain in honour of Cape Town’s mountain, which, as he said, “had witnessed his nightly vigils and daily toils”. This constellation, now called Mensa, is the only constellation ever called after a geographical feature.

There was one problem with his measurement of the arc of meridian at the Cape. On La Caille’s return to Europe, he announced to the scientific community that he had deduced from his work done in the Southern Hemisphere, that the earth was pear-shaped. It took years of remeasurement by Maclear and his team to prove otherwise. La Caille had omitted to take into account the plumb-bob deviation caused by the mountain masses at the southern and northern limits of his arc.

A list of more than 130 of Thomas Maclear’s published works, reflects not only the career and interests of the man, but the working of a major observatory in the 19th century. Maclear’s published works fall into 6 distinct, but related categories - astronomy, geodesy, geographical exploration, meteorology, hydrography (lighthouses and wrecks), weights and measures (Lastovica 1995). Maclear was criticized for not publishing more astronomical catalogues during his career, but he did, in fact, publish much of substance in his lifetime, and some of it was published posthumously.

Maclear defended himself to the Lords Commissioners of the Admiralty in 1850 by saying: that he gave precedence to the organization of the regular functions of the observatory once the survey was completed in order to forward the real interests of astronomy. Due to this course of action, there had not been staff available to work exclusively on the reduction and publication of arrears, including the survey (Maclear 1851).

The Council of the Royal Astronomical Society replied (RAS 1851) that: We understand the astronomical observations [at the Cape] are proceeding with great activity now that the staff of the observatory are freed from their heavy task

of measuring an Arc of the Meridian. Though we are justly proud of the energy and skill with which, under no common difficulties, this harassing operation has been carried out by Mr Maclear, we have to regret that the effect upon his health has been exceedingly injurious, and that the fatigue and anxiety attending his exposure and responsibility have brought upon him the signs, and we see some consequences, of premature age...

Maclear had sent the Royal Society a catalogue of southern stars which Professor Mädler suspected had a large proper motion; he also submitted a singularly full and complete series of observations of Wilmot’s Comet. Another series, equally full and complete, of observations of the interesting double comet of Biela, was published in the Monthly Notices of the Royal Astron. Society v.10.

We have in the SAAO archives, Maclear’s drawings of Comet Halley done in 1836. One sketch in particular was made in a letter written on 27 January. The letter starts: “Went to Sir John Herschels to observe Halley’s Comet through his 20 foot reflector.” Herschel lived in the suburb now known as Claremont from 1834-1838. Although a very close friend of Maclear, he had no official link to the Observatory.

Maclear held a life-long interest in geographical exploration. Shortly after arriving in Cape Town he became a committee member of the Association for Exploring South Africa, and later was on the Committee of Management for the Expedition for Exploring Central Africa. He was elected a Fellow of the Royal Geographical Society in 1859. This could account for the interesting collection of 18th and 19th century books on voyages of exploration in the SAAO library today.

He became a close friend of David Livingstone, the missionary and explorer who spent time at the Observatory with Maclear in 1852 to learn techniques for determining his geographical position when exploring uncharted Africa. Over the years much correspondence

passed between the two men, because for one reason, Maclear offered to do the reduction of Livingstone's observations. In a letter to the British Admiralty in 1855, Maclear wrote for the record that he considered it to be his duty to forward geographical research by any means within his power. We have at SAAO a walking stick that Livingstone presented to Maclear. It is said to be made of rhino hide.

In the archives at SAAO are the full handwritten daily weather records of the site from 1843. Detailed readings were taken at least 4 times a day and up to 8 times at one stage, except for odd intrusions when, for instance, it is noted in the remarks column that readings were not taken as the officer in charge was attending Lady Napier's ball in the Town Hall. From these early days until the latter part of the 20th century, the Royal Observatory in Cape Town maintained a First Order weather station on site. Obviously the citizen's of Cape Town turned to the Observatory when weather predictions were required.

Maclear was well respected in Cape Town, a leader not only in the scientific field but also in the cultural and social life of the town. In July 1870 the local press had a chance to have some fun at Maclear's expense. The inauguration and naming of the Alfred Dock by His Royal Highness the Duke of Edinburgh (Prince Alfred) was scheduled for 6 July, but due to rain, the ceremony was rescheduled a number of times. The short-lived satirical magazine, *The Squib*, which was published in Cape Town, made much of this bad weather. In a parody of the official advertisement for the elaborate "Dock Ceremonial" involving flotillas of boats, school children, dignitaries and the public, the editor wrote:

... The officials who are to join the Water Procession, at the Central Causeway, are to wait orders from the Government Prophet and the Prophet of Squib, who will lecture and expound on the theory of atmospheric betting. The Government

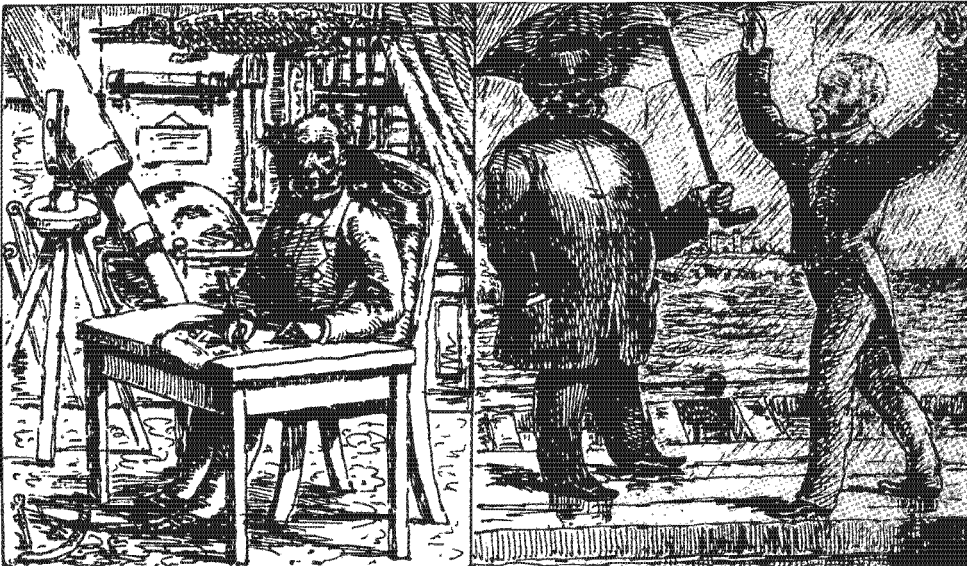
Prophet, Sir T. Muddclear, and the Prophet of Squib, will lay a heavy bet as to the winner of the Derby, - the half of the winnings to go to the wharfage dues. (Anon 1870)

Squib printed an excellent cartoon – "The Astrologer Royal" – which gives a good likeness of Maclear surrounded by the furnishings of a 19th century observatory: telescopes, sextant, a globe, books, and a thermometer. However the picture also shows a crocodile suspended from the ceiling (a present from Livingstone?), or more probably, that, and the cat perched on Maclear's shoulder, are symbols of his satirical role of the wizard/astrologer called in to predict the weather. Maclear is prophesying that the weather will be FAIR. The caption to the cartoon reads: "Make-Clear the weather, we'll raise a spell." Obviously, Maclear was no wizard, no one can stop the Cape's winter storms! It teemed with rain for 5 days. Even the normally staid Cape Argus (Anon 1870b) reported that:

Sir Thomas of the Observatory was on the lookout, and doubtless in obedience to his conjuring spell, by midnight the barometer had risen two tenths. He immediately pronounced in favour of fair weather for Monday, and was speculative enough to offer pounds to pennies in bets on the result.

(The Docks were finally opened on 11 July 1870, but not before the food prepared for the scheduled opening on the 6 July had begun to go off, so it was given as a treat to the convicts who had built the Prince Alfred Docks).

A number of poems written by Maclear have been traced in the *Cape Monthly Magazine*. The last few have an air of depression about them which probably reflect Maclear's state of mind, as blindness afflicted him, and death approached. In addition, Maclear's closest friend, Sir John Herschel had died on 1 May 1871. Sir Thomas Maclear died in his 86th year on 14 July 1879,



**MAKE-CLEAR THE WEATHER. WELL
RAISE A SPELL.**

BREAKWATER, 6th JULY, 1870.

Spell.—Ah, Sir Thomas, you and I are at our post at all events.
Sir T. M.—Of course, just a feeble showery; but where are all those other effendi gone folks!

and was buried alongside his wife in the grounds of the Observatory in Cape Town.

*Man seems a waif on the stream of time,
That bears him onward to the unknown shore,
That longed for, feared, dread mysterious clime,
Toward which all hasten - to return no more...*

A Sonnet - T.McC, (1875)

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