

Editorial

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On May 31, 2018, I was privileged to be a guest at the N.S.W. Judicial Commission Ngará Yura Program’s¹ visit to the Sydney Observatory when a star was named in honour of Bonita Mabo AO, Eddie Mabo’s widow. Bonita could not be present but was represented by their daughter, Gail, who thanked the Observatory and the Museum of Applied Arts & Sciences on her mother’s behalf. On the 23rd anniversary of the Mabo decision² in 2015, a star had been named Koiki, in memory of Eddie Koiki Mabo.³ We peered at both stars through the Observatory’s 40cm North Dome reflecting telescope⁴, and discussed the vexed issue of longitude⁵ at the date of the Observatory’s founding, in 1858.⁶ The Observatory has been a running theme in the *Journal & Proceedings*, with early Sydney astronomers, such as W. Scott, J. Tebbutt, H.C. Russell, and G.D. Hirst, regular contributors. The Sydney Southern Star Catalogue (SSSC) was compiled by Sydney Observatory during its

time as a research facility and published in 1983 (King and Lomb, 1983).⁷

This convergence between astronomy and Indigenous affairs⁸ is timely, since the first paper in this issue is an address given at the annual dinner of the Royal Society (the first at the State Library of N.S.W.) on 18 May 2018 by recently elected Dist-FRSN Tom Keneally. He is writing a historical novel about Mungo Man, who lived and died in western N.S.W. about 42,000 years ago, and who was ceremonially laid to rest, decorated with ochre from a distant deposit. The printed version of the address includes references Tom used in his research, but I have also found some, including the recently published work by Billy Griffiths, *Deep Time Dreaming* (2018), which is an account of the people and discoveries and disputes that have arisen in the past half century of Australian archaeology, written by a historian who has also worked on some digs. This book, for instance, discusses the issues around ownership of ancient remains, the protocols established since Mungo Lady and

¹ <https://www.judcom.nsw.gov.au/education/ngara-yura-program/>

² Recently elected Fellow, Sir Anthony Mason FRSN, was the Chief Justice of the High Court when the decision was handed down.

³ The stars’ SSSC numbers are: Koiki 803504, Bonita 803544. And see Indigi Lab (2016).

⁴ See photos of the stars on page 4 below.

⁵ See Tebbutt (1878) and Russell (1878) and Sobel (1995).

⁶ See Ashcroft et al. (2018).

⁷ In a recent email, Nick Lomb tells me: “The catalogue is online. In 1983 I sent off the catalogue on a reel of computer tape to an astronomical data centre in the US. It has been preserved all these years and is now available through a data centre in Strasbourg at <http://vizier.u-strasbg.fr/viz-bin/VizieR-3?-source=I/86A/primary>. Through that link you can interrogate the catalogue by putting in the star’s SSSC number, eg 803504 (Koiki), in the box marked num and pressing Submit.”

⁸ See also Bhathal (2009).

Mungo Man appeared to Dr. Jim Bowler in 1969 and 1974.⁹

The second paper is an address given on Australia Day, 2017, by this year's Australian of the Year, DistFRSN Michelle Simmons, on, *inter alia*, her team's progress at making a quantum computer, using single phosphorus atoms on a silicon lattice. As teams here and abroad compete to design and construct quantum computers, theoretical computer scientists are discussing how such machines will behave. Aaronson (2018) stresses that "Quantum computers would (sic) not solve hard search Problems instantaneously by simply trying all the possible solutions at once." Rather, he and de Wolf (2017), argue that they could provide dramatic speed-ups of a few specific problems, three of which they emphasise: first, simulation of quantum physics and chemistry, to design new drugs, materials, solar cells, high-temperature superconductors, etc. Second, breaking existing public-key cryptography, although probably not future standards, and not private-key cryptography. Third, optimization and machine learning, they believe. But there will no doubt be benefits for other applications. At a more mundane level, Professor Simmons, who has recently been elected as an FRS (London), also focused on high-school education, and deplored the watering down of HSC physics, for instance, given the need for pupils to be challenged in order to learn and to develop confidence in the STEM subjects.

⁹ See Bowler (2014) and Bowler et al. (1970), (1972). For a longer discussion of the issues between Indigenous peoples and archaeologists and science over the past 40 years, see Colley (2002). As members of the Royal Society, we should not always assume that science must trump the interests, ownership, and responsibilities of Aborigines.

After some delays in receiving their papers (and never hearing from one participant — his paper is an edited version of the transcript of his talk), the proceedings of the Royal Society of N.S.W. and Four Academies Forum, "The Future of Reason in a Post-Truth World," on November 29, 2017, at Government House, Sydney, are presented in this issue. A wide variety of issues is raised in the presentations, and news (of Russian influence in various votes and elections outside Russia, for instance) and research into the phenomena discussed continues to appear. In particular, to understand how false news spreads, Vosoughi et al. (2018) used a data set of rumour cascades on Twitter from 2006 to 2017. About 126,000 rumours were spread by about 3 million people. False news reached more people than the truth; the top 1% of false news cascades diffused to between 1000 and 100,000 people, whereas the truth rarely diffused to more than 1000 people. Falsehood also diffused faster than the truth. The degree of novelty and the emotional reactions of recipients might be responsible for the differences observed. This is depressing, if not entirely unexpected.

Finally, I wish to thank the team of people who have helped me with this issue: new father Ed Hibbert, and new Members Jason Antony and Rory McGuire. A note: following a chat between us, Rory found that his grandfather's grandfather, Henry Grattan Douglass (1790-1865),¹⁰ a physician from Dublin, was the first secretary of the Australian Philosophical Society and later helped re-form it into the Royal Society of N.S.W. He was also a vice president of the Mechan-

¹⁰ <http://adb.anu.edu.au/biography/douglass-henry-grattan-1987>

ics’ School of Arts in 1850. And much more besides.¹¹

While using the Trove database to confirm Dr. Douglass’ role, I found the transcripts of seven papers presented to the Australian Philosophical Society in 1850 and 1851 and subsequently published in the popular press. I have added links to them in the *Journal Archive*¹². Fortuitously, one is the earliest paper known on the utility of the bomareng (sic) (Mitchell 1851).

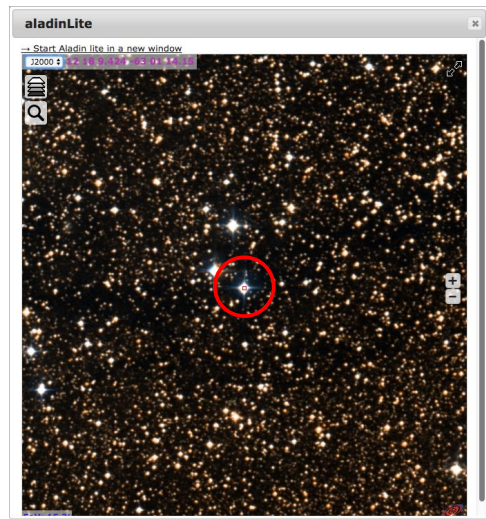
Stop press: On the fiftieth anniversary of Jim Bowler’s first seeing the remains of Mungo Lady (July 15, 1968), he has written a piece in *The Conversation* (2018), arguing that inaction by state and federal authorities has deprived us “of that fundamental right to honour the dead to whom our history owes so much.”

Acknowledgements

The photo of the stars made use of the “Aladin sky atlas” developed at CDS, Strasbourg Observatory, France (<http://aladin.u-strasbg.fr>). The photo was forwarded by Joanne Selfe of the Ngarā Yura Program (images courtesy of VizieR).

¹¹ On page 16 of his inaugural address to the Royal Society, on 9 July, 1867, the Rev. W.B. Clarke (1867) reports that H.G. Douglass was the first Honorary Secretary of the Australian Philosophical Society, formed in 1850.

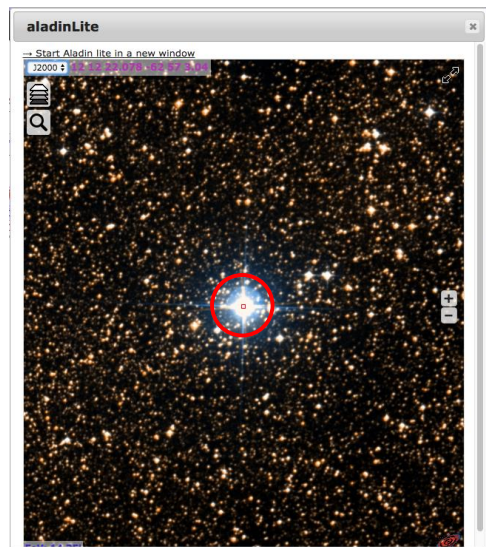
¹² <https://royalsoc.org.au/links-to-papers-since-1856>



Bonita

SSSC 803544
SAO 251838
GSC 897900623
1630 light years

Hot blue “B” star
Vis mag 9.26
Constellation Crux
RA 12h 18m 09.42s
Dec -63° 01’ 14.1”



Koiki

SSSC 803504
SAO 251790
GSC 897805899
4800 light years

Hot blue “B” star
Vis mag 5.97
Constellation Crux
RA 12h 12m 12.9s
Dec -62° 57’ 03.0”

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