



Clement Wragge 1852–1922. Courtesy Bureau of Meteorology, Commonwealth of Australia.

## Tropical Disturbance Eline—1898

E. BREWSTER BUXTON, *Montreal, Canada*

**T**ROPICAL storms bearing the names of soft-eyed Polynesian damsels often swept through the South Pacific in the 1890s and early 1900s setting an early precedent for the current practice of giving feminine names to hurricanes.

Clement L. Wragge, a pioneer meteorologist in Australia, was responsible for this convenient and practical method of identifying and tracking these storms from day to day and week to week. His custom of christening tropical storms with the names of island beauties he admired was actually part of a broader system for classifying several weather types, the most common being the cold, blustery cyclones on the polar front. For these troublesome storms, which so regularly harassed the farmers and sailors in his part of the world, he reserved the masculine names of politicians unsympathetic toward subsidies for his various projects. With this system he was able to focus public attention on his critics and to associate devastating gales and floods with government neglect of his weather services. Recognizing the origin of monsoon air masses which affect Australia on a seasonal basis, he labelled these incursions from the northern hemisphere with proper names suggestive of Asia and the Middle East, and sometimes for a supporter of one of his projects.

An emigrant to Australia in about 1876, Clement Wragge was a man with a colorful

personality and a flair for publicity. With experience gained as a Gold Medallist of Ben Nevis Observatory in Scotland, he established observatories on Mt. Lofty in South Australia, Mt. Wellington in Tasmania, and Mt. Kosciusko in New South Wales. He was one of the early "rain makers," using Stiger vortex cannons in noisy attempts to induce precipitation from stubborn cumulus clouds. Characteristically, he gave these spectacular installations names like "Stiger," "Leahey," and "Wragge"—probably to stimulate public interest and to acknowledge stockholder support.

In 1887 Wragge organized the Queensland Weather Bureau in Brisbane and boldly dispensed his forecasts far beyond the borders of his own State. Written in a narrative style, his forecasts were directed at farmers and sailors and made effective reference to his personified storms. Thus, a six-day outlook went something like . . . "Under the influence of Antarctic disturbance Sir JOSEPH WARD, rough seas will prevail over the southern oceans and sailing ships will probably be under close-reefed topsails." . . . "Tropical storm LEONATA is still hanging around the Queensland coast." . . . "A new monsoon which we will call LEWIS after a supporter from Tasmania will long be remembered for its beneficial rains."

Among his many activities, Wragge travelled extensively through Queensland delivering

lantern slide lectures on "The Cosmos." Announced ahead of time, with notices in stores and with the help of bell ringers, the lectures followed a routine which commenced with an introduction by a member of the clergy and concluded with the traditional God Save the King slide. The lectures themselves encompassed the whole gamut of heavenly events. Although he stuttered a bit, his intonations and sophisticated expressions impressed his intellectual audiences while his repertoire of sea stories and chauties ensured his popularity with less dignified groups. He has been de-

scribed as a tall, ungainly man with scraggly whiskers, and when loaded down with his scientific equipment, which was calculated to impress his audiences, he must have looked more like an adventurous South Sea Trader than a dedicated natural scientist.

His journal, "Wragge," published while he was the government astronomer and meteorologist of Queensland, provided a medium for publicizing his maps and forecasts and for promoting a variety of other weather projects. In this weekly gazette of some half-dozen


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# WRAGGE

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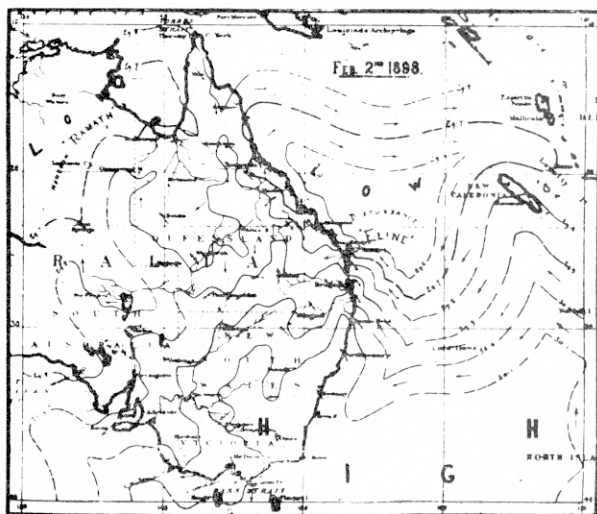
EDITED and OWNED BY  
**CLEMENT L. WRAGGE, F.R.G.S., F.R. MET. SOC., F.R.C.I., ETC.**  
GOLD MEDALLIST OF BEN NEVIS OBSERVATORY.





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MONSOON "RAMATH," AND DISTURBANCE "ELIME."—2nd FEBRUARY, 1898.

Front page of Wragge's Journal for 4 December 1902.

erties even though the actual processes it summarizes are very complex.

Scientists, in considering a new problem, will generally see if the usual definitions of energy will work in the new case. If they do not, then the investigator will try to invent a new form of energy that will serve in the context of the new problem. So far, a suitable form of energy has always been invented (discovered?). This all seems a little wondrous—that something like energy exists which is conserved, something that always dovetails so nicely with the equations governing a problem under study. It does because the energies we use are defined so that they are quantities which are conserved. It has always been possible to discover some way of manipulating the equations so that a quantity appears which can be identified as an energy and which has a conservation law that follows from the equation of motion or better said, the equation governing the phenomenon under study. Of course, for most problems and especially those in atmospheric science, the classical forms of kinetic, internal, and potential energy suffice and are a valuable guide to our thinking.

So energy is energy because it behaves like energy should.

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### C. Wragge *(Continued from page 223)*

pages, dedicated to "God, King, Empire and People," Wragge managed to show how the weather of the preceding week had followed his prognostications or to give rational explanations for events not forecast. These dissertations were interspersed with a sort of continued story called *Meteorographica* in which meteorological theory was expounded. When assailed in the House of Representatives as a "Hottentot Rain God," or hounded by creditors and critics, his columnists would denounce these short-sighted enemies of science in scholarly vernacular. Advertisements for his specialized private forecasts and lectures were also strategically spotted in this official publication. Reviewing his own lectures in the journal, he was not conspicuously modest and employed such phrases as: "The lecturer meditatively remarked . . . etc. . . (Applause) . . . etc."

He was the author of the book, "Romance of the South Seas," published in 1903, which presents an interesting picture of life in the islands during the days of sailing ships. In his writings he displayed great admiration for the "dusky maidens with liquid eyes and bewitching manners."

In later years after his career as head of the Queensland Meteorological Service had ended, Wragge produced long range forecasts based on sun spot cycles which were apparently fairly successful during the period 1913–17. When these correlations failed to hold up in later years, he introduced a 19-year cycle based on lunar declination with results which have not been verified.

Clement Wragge spent his last years in New Zealand, near Auckland, where he continued his weather studies and cultivated a tropical garden. He died in 1922 with many old timers still maintaining that unusual droughts and storms in Australasia were predicted by "Inclement" Wragge, F.R.G.S., F.R. Met. Soc., F.R.C.I., Etc.

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