Comet Halley 1910: A Local Experience

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This paper deals with the 1910 approach and passage of Comet Halley as reported in the *Queensland Times* in Ipswich, Queensland, Australia. Readers of the newspaper were given regular reports on the comet, as well as scientific and historical background information. While reports of superstition and panic came from other countries, the local scene was apparently one of calm. In the opinion of the author of this paper, that was due in part to the way in which the newspaper coverage was handled. It was also consistent with anecdotes of the comet that he had heard from his grandparents and other local people.

In 1910, the small Australian city of Ipswich, in southeast Queensland, was home to the author's four grandparents, then in their early twenties. They saw Halley's comet — as it was called in those days — and during the course of the next half-century, naturally told their descendants about it. The same sort of thing happened in families throughout the world, adding personal dimensions to the long wait for the 1986 return.

It is well-known, however, that the 1910 approach of Comet Halley had been awaited with a certain amount of apprehension in some quarters. The story is familiar: Astronomers had determined that Earth would pass through the tail. Many people, despite assurances that nothing was going to happen, were swept up in a mood of doom and gloom. Yet the recollections of the author's grandparents, and other local people, suggested that nothing of the sort had happened locally. Was that true, or just stoic concealment of the truth?

Other questions came to mind. How were the approach and passage of the comet reported locally? What kind of information about the phenomenon was available in the local newspaper? What kind of general astronomical information was published in the press in those days, and what kinds of scientific and technological developments were in the news? Furthermore, it is scarcely remembered today that Comet Halley was preceded by a spectacular comet discovered early in 1910. Had that made local news?

Curiosity demanded some investigation, which was conducted from July 2004 to May 2005, primarily at the Local History Room of the Ipswich Library and Information Centre. There, microfilm copies of the local newspaper, the *Queensland Times*, were available back to its establishment in 1859, as well as books and compilations on various aspects of the history of the Ipswich district. The research mainly covered the period 1909-1910. That enabled a picture to be built up of the kind of information that had been available to newspaper readers. There were, as will be seen, reports of events such as meteors, eclipses, and earthquakes, and numerous articles about developments in aviation and wireless communications. There were reports, too, of the "other" comet in January of 1910, and of the return of Brook's Comet later in the same year.

Regular reports of the position and visibility of Comet Halley were published, along with general-interest articles that went into considerable detail about the nature of comets. A small amount of what might be termed sensationalism was found with regard to comets and superstition, as well as reports of panic in other places. On the whole, however, the *Queensland Times* appeared to have published mostly sober, factual material, including what, in some instances, seemed intended to counter or allay any fear of the comet's return.

This suggested the possibility that perhaps information from other sources had been circulating in the district: magazines, other newspapers, or information received from overseas by means such as personal letters. That information from other sources might have been coming into the author's own family was suggested by the surprise discovery, in the *Queensland Times*, that his great-grandfather was sent by a relative in England a photographic postcard of the comet. We should never fail to remind ourselves that a fascination with natural phenomena is not a clinical, academic property but a living treasure shared by lay-person and scientist alike.

The Local Setting

From its beginnings in the 1820s as a source of limestone dug by convict labour, Ipswich grew to become the centre of a wider farming district, and major industries in coalmining and railway workshops. In the first decade of the 20th century, it could boast state and private schools, a technical college and diverse cultural activities.[1]

Thanks to the telegraph and overseas cables, the local newspaper kept its readers informed of current affairs such as the increasing militarism in Europe, polar expeditions, and the deaths of King Edward VII and the writer Mark Twain.[2,3] In the various fields of science, there were articles on subjects as diverse as earthquakes and mammoths.[4] From closer to home, there was coverage of a Summer School of Geology[5], while a report of the annual meeting of the Literary and Scientific Club told of a talk given by a Mr P.L. Weston, B.Sc., B.E., an instructor at the Ipswich Technical College, on the subject of electricity and its applications.[6] We also find reports on allied topics such as the spread of wireless telegraphy[7], as well as what must have been mind-boggling at the time: news of wireless telephony and the broadcast of music.[8]

Articles about astronomy, sometimes quite lengthy, dealt with such subjects as stars and their distances[9], the composition of the Sun[10] and something which must be regarded as in keeping with those times: Martian canals. In an article entitled, *Martian Engineering,* on 26 May 1910, Percival Lowell was reported as having discovered two new canals. However, Mr E.W. Maunder, of the Royal Observatory, Greenwich, was said to hold the opinion that the canals were optical illusions.[11]

Reports of unusual phenomena included a spectacular display from what was believed to be an exploding meteor over a nearby rural centre[13], and various strange lights. In August 1909, strange lights in the night sky were reported in various parts of southern Australia and New Zealand12, part of what was possibly a worldwide phenomenon often encountered today in 'UFO' books.[14] A year later, the *Queensland Times* again reported on unusual lights, seen this time from a coastal steamer off South Australia and said by one of the officers to be "like German airships flying about." [15]

In a different category were reports which, like those of aerial phenomena, would not be out of place in a newspaper today. In the article *False prophets: The end of the world* on 12 February 1909, the *Queensland Times* related how a recent prediction by three Americans had failed to occur[16]; while in May 1910, another article told how an Italian medium had been trapped and revealed to be a fraudster.[17]

Times do change, though. Back then, in an article entitled, *Australian pervert*, it was considered outrageous that "a young and good-looking woman" should renounce Christianity in "a novel ceremony" that saw her embrace the Hindu faith.[18]

Waiting for the Comet

For the period researched, the first mention of Halley's comet in the *Queensland Times* was in an article, *Man's debt to the comets*, on 22 February 1909. More than one thousand words in length, the article contained a summary of what was known about comets. However, the article began like this:

> " The announcement that a new comet has been discovered awakes in the man in the street little emotion beyond a transient curiosity. It affects him merely as it offers the possibility of a spectacular display. Reassured by astronomers that the comet will not collide with the earth and that, even if it did, it would work him no harm …" [19]

To this researcher (although he might be quite wrong) such statements seem contrived to reassure the reader. By 1909, the comet, its history and its impending return were probably well-known by the public, but lingering doubts about what might happen could well have been in circulation. What better way to reassure 'the man in the street' than by complementing his understanding of comets? Of course, not every man in the street could read in those days, and in fact, three of this author's great-grandparents were not literate. However, 'street' news and views would probably have circulated much as they can, and do, today.

With Halley's comet not yet visible in telescopes, the same article could argue that there was, in any case, no guarantee that the comet would return as predicted, because it was known that comets disappeared. The idea embodied in the title, *Man's debt to the comets*, became clearer as the article moved into a discussion of the connection between the disappearance of comets, the appearance of meteor showers, and the discovery of meteoritic iron particles in melted snow. In the view of Arrhenius, the article explained, the "primal germs of life" are dispersed through space, and fall onto planets, where, if conditions are right, "the germ is set free and the age long processes of Evolution are begun."

This researcher had been well aware of the hypothesis, known as panspermia, that had been

put forward by the Swedish chemist, Svante Arrhenius (1859-1927), but as a child of his own times had never grasped the simple fact that it had been a dynamic part of his grandparents' times. It had always simply been something in books, mentioned in passing along with the ideas of more recent scientists such as Hoyle and Wickramsinghe. To see it in the context of popular science, 1909, was truly an eye-opening experience.

On 4 August 1909, the *Queensland Times* published a short report, "Where is Halley's comet?" [20] It drew on material from a Yorkshire newspaper (unfortunately, the title was illegible on the microfilm), in which a Professor J. Elgie had suggested that the comet had, perhaps, broken up. At that stage, it had not been sighted, and the article went on to discuss the likely fate of comets, such as Biela's. That article was, so far could be ascertained, the first dealing specifically with Comet Halley in the *Queensland Times* during that apparition. The next would not be until 10 January 1910, when the newspaper gave the Ipswich district the following announcement:

> " It is estimated at Greenwich Observatory that the transit of Halley's comet across the sun will occur on May 19. The transit will be visible in Australia and America. though it is not probable that the comet will be of sufficient density to be seen against the sun's disc with the naked eye. A spectroscope or a spectroheliograph may, however, detect its presence." [21]

Would readers in those days have understood much of that? It is doubtful whether many, even today, would have more than a hazy notion. Most likely, the newspaper simply printed what came in the cable from London. Be that as it may, while many subsequent reports were found to be presentations of the bare facts, general articles about comets gave far more in the way of explanation.

However, the long-awaited return of Comet Halley to naked-eye visibility was trumped by the discovery of a new comet (that became known as the 'Daylight Comet'), announced in the *Queensland Times* on 19 January, with further reports on 20 January, 29 January, and 2 February.[22]

On 10 March 1910, the *Queensland Times* published *About comets*[23], an article of several hundred words in which the occasional appearances of comets at times of momentous events were dismissed as "mere coincidences". It went on to discuss the long orbital periods of various comets, and asked:

> " Does the reader, however, realise that profound as are these incomprehensible spaces, in every inch of its celestial path, the comet, large or small, and every atom of its tenuous substance is obeying that law which but to guess a Newton made immortal?"

A brief discussion of gravitation ensued, followed by another on the size of cometary tails, with the size of Earth's orbit as a comparison. Then,

> "... a theory of Clerk Maxwell's that when particles of matter are of microscopic size, say two or three hundred-thousandths of an inch in diameter, the sun's light would repel such particles more than the mass of a comet would attract them."

Such an action on the "fine, gauzy" composition of a comet was invoked to account for the "sickle-shaped outline" of cometary tails, and part of the reason why some comets apparently broke up. It was thought possible that "the comet of 1910" - Halley, presumably - might throw "further light on this remarkable light force." The article concluded with opinions from several astronomers that to pass through the tail of Halley's Comet would not pose a danger to Earth.

On 17 March, in *Halley's Comet*, with a subtitle, *Do comets cause floods?*, the *Queensland Times* presented a dichotomy which, nearly a century later, seems almost incredible.[24] A weather forecast for Queensland, for the period 16 to 23 March, predicted heavy thunderstorms, and advised that Halley's comet would be visible to the naked eye, before sunrise. The article continued:

> " This curious scientific problem, "Do comets cause floods?", is raised by a correspondent to the "Express", who calls attention to a series of curious coincidences. The floods in France in this year of two great comets, he says, add another example to the many recorded coincidences of such events."

Yet rather than necessarily representing a descent into sensationalism for its own sake, the tone of the article seemed to suggest more of an "I wonder if ..." feeling about floods and comets that left this researcher wondering if many people actually did believe in the link. Then, on 26 March, in another article, which commenced with details about the transit and how astronomers planned to study it, attention was drawn to "a curious parallel" the cometary visits of 1835 and 1910 and the fact that in each year there had been general elections in England in which the numbers of Liberal and Opposition seats before the dissolutions, and the numbers after, had been almost identical.[25]

Scepticism, however, was never far away. For example, in *Collision with the comet*, on 9 April 1910, the *Queensland Times* presented Sir

Robert Ball's opinion, originally in a letter in *The Times* (of London), that a rhinoceros in full charge would not fear collision with a cobweb, and nor need Earth be afraid of a collision with a comet.[26]

> " In 1861 we passed through the tail of a comet and no one knew anything about it at the time...
>
> So far as I can learn we may be in the tail of Halley about May 12, and I sincerely hope we shall."

Also on 9 April, a reflection of the general interest in the comet was evident in a brief announcement[27] that Mr W.S. Lye (the present writer's great-grandfather), had received, from his brother in England:

> "... a post-card ... bearing a very fine photographic view of Halley's comet and the planet Venus, as seen in Oxford on the 20th January last.... The tail of the comet is distinctly shown, and the planet Venus stands out very clearly."

In that time, photographs in newspapers were not as common as they would soon become. No photographs of the comet appeared in any of the articles that were found in the period researched.

The Local Experience: April 1910

It seems that the first reported sighting was that of on Mr G. Reginald Piggott, of Harlin Road, Ipswich on Monday, 11 April 1910, at about 5:15 in the morning:[28]

> " It was then clearly seen ... at a point east by north.... [It] had very little "tail" — it was more like two stars joined together. It was visible ... until almost 9 o'clock in the morning.

Other reports soon followed, of sightings from the nearby rural area of Laidley, from where it was viewed telescopically[29], and by more residents in Ipswich with the naked eye: one person reported the tail as "seeming to be about 2ft long." [30]

Meanwhile, on 14 April, a lengthy article, *Halley and his comet*, drew on a lecture, reported in the London *Daily Telegraph*, by Professor H.H. Turner, of Oxford University.[31] It explained the cometary work of Edmond Halley, and gave a considerable amount of information about the orbit of the comet: including influences attributed to the gravitational attraction of the planet Jupiter.

Reports or articles continued to appear every almost every other day, either telling where the comet had been seen, or, in the case of *Fifty million comets*, published on 21 April, presenting an array of general information.[32] The message changed, however, in a brief report from London, published in the *Queensland Times* on 25 April[33], which is worth reproducing here in full.

> " Tidings of the approach of Halley's comet has [sic] aroused intense excitement amongst the inhabitants of parts of China. The Christian Literature Society, with a view to allaying those fears, is distributing a poster, showing that the comet visited the neighbourhood of the earth of previous occasions, and that the consequences were harmless."

On the following day, an article by Walter F. Gale, F.R.A.S.[34], published originally in the *Sydney Morning Herald*, informed readers that those looking forward to seeing the comet might be disappointed, because it would:

> "… probably not afford a spectacle anything like the great comets of last century. [because] … its substance is so wasted by repeated expenditure that it is becoming bankrupt of vaporisable elements."

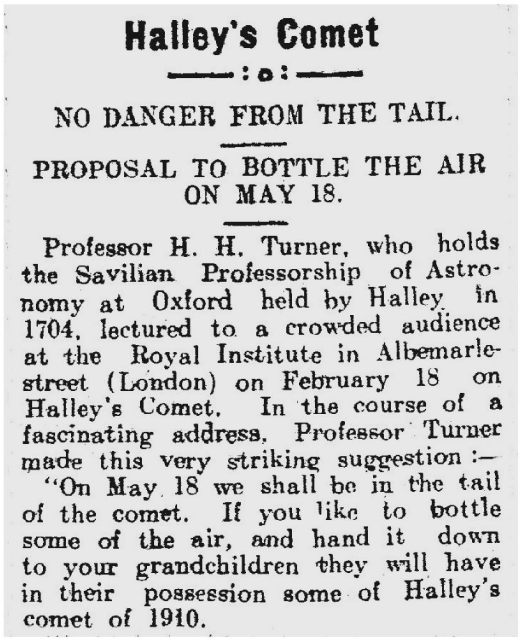
Gale pointed out that many of the short-period comets were devoid of tails, and that he was convinced that such comets represented "an effete stage in the life-history of these curious bodies." "What purpose comets may serve in the economy of the universe," he wrote, "is at present quite unknown." He added that the principal interest in Halley's comet was a result of the intimate knowledge of its motion, and therefore its identification with previous great comets:

> " The exhaustive computations of Messrs. Cowell and Crommelin, of the Greenwich Observatory staff [1909] ... enabled them to forecast the comet's return to perihelion ... with an error of less than four days.... [The] intellect of man is capable of following the comet ... with such precision that the point ... where it would again become visible ... was indicated with an error of less than one-fourth the apparent diameter of the moon."

By such means, Gale had been able to locate Halley's comet on 21 November 1909, and he now gave projections of where it would be in the near future. The final week of May, he suggested, would be the best time to see it (in the evening) because it would be close to Earth and, as an additional factor that favoured observation, there would be no moonlight. "At that time," he suggested, "Halley's comet will make its most lasting impression on the public mind."

It would seem, however, that another impression had been made upon the public mind, in some places, at least. For on 30 April, the *Queensland Times* ran a short article[35] in which Professor H.H. Turner, from Oxford University was again quoted (Figure 1). He is reported as saying that on 18 May, the Earth would be passing through the tail of comet, and that:

> " If you like to bottle some of the air, and hand it down to your grandchildren, they will have in their possession some of Halley's comet of 1910."



Halley's Comet

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NO DANGER FROM THE TAIL.

PROPOSAL TO BOTTLE THE AIR ON MAY 18.

Professor H. H. Turner, who holds the Savilian Professorship of Astronomy at Oxford held by Halley in 1704, lectured to a crowded audience at the Royal Institute in Albemarle-street (London) on February 18 on Halley's Comet. In the course of a fascinating address, Professor Turner made this very striking suggestion :—

"On May 18 we shall be in the tail of the comet. If you like to bottle some of the air, and hand it down to your grandchildren they will have in their possession some of Halley's comet of 1910.

Figure 1

Bottling the comet's tail

Extract from the *Queensland Times* of 30 April 1910

By courtesy of the Local History Section, Ipswich Library and Information Service

According to the article, Turner believed that only one hundred-thousandth part of the air would be "comet's tail", and dismissed any fear of the consequences of passing through the tail. He did say, though, that attempts should be made to analyse the air on that night, to "find out what is really in the comet's tail." Turner also referred to the work of Professor A. Fowler, of the Royal College of Science, South Kensington, with regard to the composition of the tail, but, perhaps due to poor editing, what appeared in the article probably left many readers scratching their heads.

> "... [The] contents of the tail are similar to some substance which is present in a tube which has contained hydrogen when the hydrogen is extracted. What that substance is Professor Fowler has not yet been able to determine. but it has the same spectrum as the comet's tail …"

Perhaps the substance was carbon monoxide, produced in the process in which hydrogen is produced from steam and methane. At any rate, the further information given about the tail of the comet was probably fascinating to readers, for it described how a comet may seem to lose its tail because the tail is temporarily behind the comet and, temporarily, invisible. Then, the tail might appear on one side or the other, depending upon the position of the comet with respect to the Sun:

> "... apparently blown outwards by some force from the sun. This force ... is either electrical or the light of the sun itself, which has a force of its own. The dissipation of the tails ... is now accepted as fact, and ... leads to the conclusion comets gradually grow smaller until they "probably break up into small meteors."

As Halley's comet passed perihelion, which occurred on 20 April, it became more readily visible.

The Local Experience: May 1910

The comet had become visible to the naked eye and was steadily increasing in brightness, according to a brief report on 7 May, which noted that the tail was much longer.[36] On the same day, a notice was given that on the following Monday (9 May), a partial eclipse of the Sun would be visible from Ipswich during the mid to late afternoon.[37] That apparently stimulated the article that appeared on 12 May[38], entitled, *Eclipses and comets*, which spoke of the importance of understanding such occurrences, and briefly recapitulated how Halley, with "the Newtonian theory", undertook his investigation of comets. It reminded readers that where comets came from was still unknown.

Figure 2

Comet Halley on 6 May 1910

This image was taken at Melbourne Observatory at 1910 May 6.315 using a 6-inch doublet.

The time quoted is that of mid-exposure using the time convention used at the 1910 apparition namely Greenwich Mean Time in Astronomical Time, which began at noon. The lens had an aperture of 15.0 cm, and a focal length of 106.7 cm.

Image by courtesy of the Royal Astronomical Society

Sir Robert Ball was quoted in that article as saying that it was impossible to give more than conjecture, and while perhaps they came from outside the solar system, perhaps they had originated

inside it, perhaps even as "fragments driven off from the sun himself." What was certain, however, was that comets were "obedient to the great laws of gravitation", and that modern science had cleared away the fear and superstition that comets had once attracted.

Was there a need to remind readers that the comet would be harmless? Were rumours of doom and gloom circulating? On 8 May, an article had mentioned a comedy sketch, about the comet, by university students in Sydney[39], but on 15 May, in *Coincidences of the comet*, the *Queensland Times* saw fit to recall that comets had once been thought of as heralding of disasters and great events.[40] If there were any misgivings in the district, it seems that they could not have been of great significance.

On 17 May, there were two reports. One was of plans by the International Commission on Aeronautics to launch a balloon in an attempt to collect air samples for analysis; it also reported that observations made in Madrid had found no trace of the poisonous gas, cyanogen.[41] The other report, from a German steamer that had visited ports in New Guinea, said that the natives regarded the comet as "an aerial demon come to destroy the world, and were performing many weird dances to drive it away." [42]

When 19 May arrived, the *Queensland Times* reminded readers that Earth would pass through the tail that morning.[43] Mr Cooke, the government astronomer in Perth, Western Australia, was quoted as saying there was no cause for alarm because the matter in the tail was "extremely attenuated". He did warn of possible disturbances to magnetic instruments, and of possible auroral displays, but concluded that "in all probability nothing out of the ordinary will be noticed."

Not so, however, in the opinion a Mr Clement Wragge, who in a letter received in Brisbane (40 km from Ipswich), was reported in the same article as advising that:

> "... the earth will pass through the comet's tail between 12.22 p.m. and 1.22 p.m. on the 19th, [and] it might be just as well to remain indoors between noon and 2 o'clock p.m. ... with doors and windows shut, in case cyanogen gas may make you feel temporarily upset. I don't anticipate any danger yet, but be careful."

Wragge was a meteorologist well-known in Australia at the time.[44] The article does not state to whom the letter was addressed, but perhaps it was a relative or close friend. Whether his advice was heeded was not, so far as this researcher could find, subsequently noted in the newspaper. Nor, it seems, was any coincidence between the presence of the comet and the death of King Edward VII on 18 May. In fact, on 20 May, the *Queensland Times* carried a report on the comet and an article about the King[45], in adjacent columns.

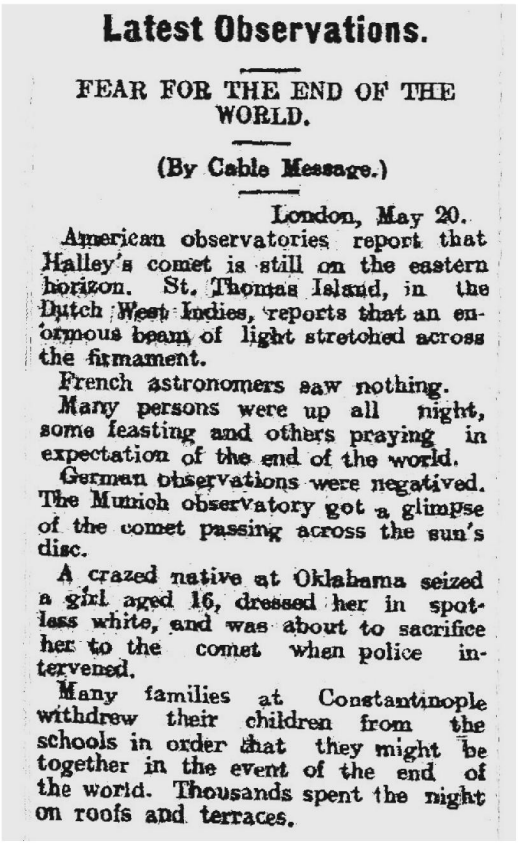
The article on the comet[46] was, however, full of news. From Germany it was reported on 19 May that scientists were not anticipating electrical storms as a result of Earth being in the tail, but the Royal Prussian Meterological [sic] Society was arranging for thirty-eight balloons to be sent up, with trained observers and "chemical and electrical meteorological apparatus." However, the article then proclaimed, "Halley's comet monopolises the American newspapers." Balls and breakfast parties were being arranged on the roofs of hotels in New York, while in the southern states, "negroes" were suffering from "comet panic". They had stopped working, the article continued, and were devoting their time to prayer meetings: "Many of them are half-crazed with fear, and are hiding in cellars." Then, concluding with an oddly mixed bag, the article reported that insurance agents were reaping a rich harvest; Professor Dounard of Yerkes Observatory said that the tail extended for 107º, and up to 5 or 7 in width; while in St Petersburg, Russia, many people were spending the night in churches.

On the following day, 21 May, reports of astronomical observations from around the world were accompanied by news that in some places overseas, people had been up all night, "some feasting and others praying", and in Oklahoma, "a crazed native" had been about to sacrifice a sixteen-year-old girl to the comet when police intervened (Figure 3). In Constantinople, families had taken children from school so they could be together if the world ended. "Thousands," said the article, "spent the night on roofs and terraces." [47] And in Ipswich? To judge from the rest of the *Queensland Times*, life had gone on as usual. Nor were there reports of parties or prayer sessions from elsewhere in the nation; just astronomical observations from various places, a list of recommended viewing times for the next few days, and a note in the same article that there had not been "the slightest sign of the earth having passed through the tail of Halley's comet." From Launceston, Tasmania, the same article reported that Wragge had recently made "a careful observation with a special solar telescope":

> "... the only indication of the comet's transit was a magnetic glare all round the solar edge. The observation shows that the nucleus of the comet

> was not what would be termed solid, but evidently consisted of an aggregation of cosmical electrons in violent motion."

No elaboration was made on what "cosmical electrons in violent motion" might be. On 23 May it was reported that Professor Hale had made interesting observations from the Mount Wilson Observatory, which showed that the comet "was disappearing in the distance." In Scandinavia, a Professor Birkeland had suggested that the tail "is principally electric rays". From Melbourne electrical engineers in Victoria, Queensland, and Tasmania were reported to have said that "no unusual earth currents were received on the telephone or telegraph" in the period when Earth was in the tail.[48]



Latest Observations.

FEAR FOR THE END OF THE WORLD.

(By Cable Message.)

London, May 20.

American observatories report that Halley's comet is still on the eastern horizon. St. Thomas Island, in the Dutch West Indies, reports that an enormous beam of light stretched across the firmament.

French astronomers saw nothing.

Many persons were up all night, some feasting and others praying in expectation of the end of the world.

German observations were negatived. The Munich observatory got a glimpse of the comet passing across the sun's disc.

A crazed native at Oklahama seized a girl aged 16, dressed her in spotless white, and was about to sacrifice her to the comet when police intervened.

Many families at Constantinople withdrew their children from the schools in order that they might be together in the event of the end of the world. Thousands spent the night on roofs and terraces.

Figure 3

Comet Halley causes bizarre behaviour

Report from the *Queensland Times* of 21 May 1910.

By courtesy of the Local History Section, Ipswich Library and Information Service

On 25 May there was a brief report that a steamer, just arrived after a voyage from New York, had afforded a fine view of the comet. It was also noticed that on the previous Thursday, several hundred persons at Bairnside, Victoria, had observed, in line with the Sun, "particles like snow, scintillating and very bright." [49]

The fuss, if there had ever been one in Ipswich, was over. On 30 May appeared an article[50] based on that by Professor Edward C. Pickering of Harvard in the April edition of *Century* that covered similar territory to other articles that the *Queensland Times* had carried. The final word on the local experience appears to have been on 4 June, in an article that drew on one from the London *Daily Telegraph*, in which various opinions from Sir Robert Ball had been presented.[51] Again, it was, in effect, stale news from when the comet had still been approaching the Sun. The return of Brooks's comet was noted later in the year,[51] by which time Halley's comet was long gone. However, let us give that master of communication, Sir Robert Ball, the final word:

> " The light haze that ever floated in a summer sky is cast-iron compared with the spiritual tenuity of the tail of a comet."

Conclusions

The 1910 approach and passage of Comet Halley were well-covered by the *Queensland Times*, with regular information presented in such a way that most readers would have been able to keep abreast of what was happening. In a general background context of reporting news and development in science and technology, the information on the comet, and other astronomical topics, reflected the state of knowledge at the time.

The reports of fear, superstition and panic from other countries made a strong contrast with the absence of such reports from the local district. Sensationalism for its own sake seems largely to have been avoided, and that indicates to the author that any local disquiet had been, at most, minimal.

The possibilities for further research do, however, suggest themselves. It would be extremely interesting to consult the archives of other newspapers. Those of the *New York Times*, for instance, are available electronically.[52] It ought to be possible to compare and contrast the local experiences in a way that future generations, at the time, for example, of the next return of Comet Halley, may find illuminating.

Acknowledgements

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18. Australian Pervert. The *Queensland Times*. 7 July 1909. Page 7.
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21. Halley's Comet: Expert Opinion. The *Queensland Times*. 10 January 1910. Page 5.
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29. Halley's Comet. The *Queensland Times*. 16 April 1910. Page 11.
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33. Halley's Comet: Excitement in China. The *Queensland Times*. 25 April 1910. Page 5.
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40. Coincidences of the comet. The *Queensland Times*. 15 May 1910. Page 3.
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42. Halley's comet: Regarded as an aerial demon. The *Queensland Times*. 17 May 1910. Page 3.
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44. Brief biographical details of Wragge are given in Bernard, J.R.L. (General editor). *The Macquarie Dictionary of People and Places*. Sydney: The Macquarie Library Pty Ltd. 2nd edition 1995. Page 788. A search of the world wide web would probably find a wealth of detail - he was a controversial figure.
45. The separate, but adjacent, articles about the comet [Reference 46] and King Edward VII are in The *Queensland Times*. 20 May 1910. Page 3.
46. Halley's comet: Interests of scientists. The *Queensland Times*. 20 May 1910. Page 3.
47. Halley's comet: World observations. The *Queensland Times*. 21 May 1910. Page 9.
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49. Halley's Comet: Observations on a Steamer. The *Queensland Times*. 25 May 1910. Page 5.
50. Composition of comets. The *Queensland Times*. 30 May 1910. Page 6.
51. Halley's comet: Views of Sir Robert Ball. The *Queensland Times*. 4 June 1910. Page 11.
52. Brook's comet. The *Queensland Times*. 13 October 1910. Page 7.
53. The web-site for the archive of The New York Times was accessed on 31 March 2006 at: http://www.nytimes.com/ref/membercenter/nytarchive.html