

Fiammetta Wilson: Mandolins and meteors

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This paper presents an overview of the life of Fiammetta Wilson (1864–1920), a pioneer female meteor observer. Born as Helen Frances Worthington in a wealthy medical family in Lowestoft, Suffolk, her first marriage ended in divorce and she took to living under the pseudonym of Fiammetta Waldahoff. To support herself financially she taught the mandolin at the Guildhall School of Music in London. Her second marriage to Sydney Arthur Wilson (1875–1925) in 1908 was more settled and she became interested in astronomy. She was one of the first female Fellows of the Royal Astronomical Society and a meteor observer for the British Astronomical Association. She also joined other astronomical societies. The circumstances of her death are also covered.

1. Family background

The lady who would become known as Fiammetta Wilson was born on 1864 July 19 in Lowestoft, Suffolk, and was actually christened Helen Frances; she assumed the forename Fiammetta around the beginning of the 20th century (Section 1.3). Her work as a meteor observer is fairly well-known in amateur astronomy circles but the rest of her life story has received only incomplete attention.¹ This paper sets out to fill in some of the details, including the circumstances surrounding her change of name.

She was the eldest of five children of Francis Samuel Worthington (1836–1912) and Helen Felicite née Till (1839–1922) who were married at Holy Trinity Church, Clapham, London, on 1862 October 2.² Her father shared a medical practice in Lowestoft with his younger brother, James Copland Worthington (1841–1906).

The practice had been established by their own father, William Collins Worthington (1800–85), when he came to Lowestoft as a young doctor in 1820.³ William Worthington could count Edward FitzGerald (1809–83), the poet and translator of *The Rubaiyat of Omar Khayyam*, among his patients, even if FitzGerald did rate him as ‘expensive’.⁴

Fiammetta’s father Francis was of sufficient standing in the medical community that he was elected president of the East Anglian Branch of the British Medical Association in 1880–81.⁵ Francis’s brother James married Harriet Myatt Vigers (1844–1933) on 1867 July 10 and they had five sons and four daughters. One of their sons, Sir John Vigers Worthington (1871–1951), was Member of Parliament for the Forest of Dean and

parliamentary private secretary to the Labour Prime Minister Ramsay MacDonald.⁶ A daughter, Phyllis Mary (1880–1961), married Robert Thorne Coryndon (1870–1925) in 1909; he later became governor of the British colonies of Uganda and Kenya.⁷

The Worthington family were prosperous enough for the young Fiammetta (then still known as Helen) to be schooled at home by a governess from Denmark.⁸ She continued her education abroad in Switzerland and Italy and also spent a year at a finishing school in Germany.^{9,10}

After a time in the UK she returned to Italy to study music. She also travelled through the United States and Canada.¹¹ An animal lover who owned pet dogs and rode horses, Helen/Fiammetta also enjoyed dancing and playing tennis. Her wide education gave her the ability to speak Italian, French, and German.

Francis encouraged his daughters’ appreciation of the natural world, and after retirement from medicine, devoted himself to microscopical studies and became an acknowledged authority on rotifers.¹² When he died at The Beeches in Ipswich Road, Stowmarket, on 1912 April 23 his estate was valued at nearly £32,000, worth between £500,000 and £750,000 today.^{13,14}

1.1. *Other family members*

Helen/Fiammetta had four siblings: two brothers and two sisters. The elder brother was William Scott Till Worthington (1872–1955), a broker who traded rubber and who married Mabel Smith (1878–?) in 1903.¹⁵ The younger brother, Richard Till Worthington (1875–1936), continued the medical practice and married Edith Marion Hedges (1870–1944) in 1904.¹⁶ Richard served

on the committee of the Lowestoft and District Field Club (1911–12) and its successor the Lowestoft and District Literary and Scientific Association (1912–13 and 1913–14), of which he remained a member until 1920.¹⁷

In some recollections by the Suffolk amateur astronomer Roland Lebeg Townley Clarkson (1889–1954) in 1951, Clarkson ascribes joining the British Astronomical Association to Fiammetta's encouragement. (Clarkson incorrectly remembers Fiammetta's father as J. H. Worthington, not F. S. Worthington. There was a James Henry Worthington who was a member of the BAA at this time, but he is not believed to be related to the Lowestoft Worthingtons.)¹⁸

Fiammetta's two sisters were Janet Marion (1870–1953) who in 1912 married John Joseph Jervase-Hatt (1868–1937), a civil engineer, and Beatrice (1879–1961), who married a solicitor from a Suffolk beer-brewing dynasty, Francis Alfred Worship Cobbold (1882–1947), in 1922.¹⁹

1.2. First marriage

On 1889 October 29 the 25-year-old Helen Frances (aka Fiammetta) Worthington married Herbert William Webster (1864–1922) at St Gabriel's Church, Warwick Square, Pimlico, London.²⁰ Webster was a singer and music teacher who went to Magdalen College, Oxford, from where he matriculated in an unrecorded subject in 1883 October. His father was the Reverend John Webster (1826–86) and his elder brother, also a clergyman, was another John Webster (1860–1937?).

At some stage something went wrong with the relationship, and eighteen years later, on 1907 February 1, Helen/Fiammetta initiated divorce proceedings against her husband on the grounds of his desertion and adultery dating from the summer of 1898. (As an aside, of the 644 divorces in England and Wales in that year, 52% were started by the male partner and 48% by the female.)²¹ The decree final was granted to her on 1907 October 21.²²

Given the nearly ten years from the marital split to the start of proceedings it seems likely that the divorce was only undertaken so that the parties could be free



Fig. 1: Fiammetta Wilson c.1903. This, the only known portrait of her, was taken by the London photographic studio Lafayette, based in Bond Street, who were noted for their pictures of English high society. It was published in the scientific magazine *Knowledge* in 1915.

to remarry. Indeed, Helen/Fiammetta married Sydney Arthur Wilson (1875–1925) early the following year, on 1908 February 29 at All Saints Church, St John's Wood, London. It was at this point that she acquired the surname by which she became known in astronomical circles.

1.3. Second marriage and a new name

Her new husband, eight years her junior, was a clerk employed at the Bank of England. On the 1908 wedding certificate (Figure 2) Helen is described as 'single and unmarried' rather than the usual 'spinster', possibly implying that the registrant knew something of her marital history. Helen's ex-husband was even quicker

Fig. 2: Certificate for the marriage of Fiammetta Waldahoff to Sydney Wilson on 1908 February 29. The certificate records that she had changed her name by deed poll to Fiammetta Waldahoff in 1901. At that time she was still married to her first husband, Herbert Webster.

1908. Marriage solemnized at <u>All Saints Church</u> in the <u>parish of St. Mary Abchurch</u> in the County of <u>London</u>								
No.	When Married.	Name and Surname.	Age.	Condition.	Rank or Profession.	Residence at the time of Marriage.	Father's Name and Surname.	Rank or Profession of Father.
41	February 29 th 1908	Sydney Arthur Wilson Helen Frances Webster <i>by deed poll of 23rd Feb^{ry} 1901 from name Waldahoff</i>	35 43	Bachelor Single and unmarried	Bank Clerk	53 St. James Street Regent Park 19 St. James Terrace	James Wilson Francis Samuel Worthington	Bank Manager Gentleman
Married in the <u>All Saints Church</u> according to the Rites and Ceremonies of the <u>Church of England</u> by <u>Stevenson</u> or after by us,								
This Marriage was solemnized between us, <u>Sydney Arthur Wilson</u> and <u>Helen Frances Webster by deed poll Fiammetta Waldahoff</u>			in the presence of us, <u>James Marion Worthington</u> <u>John Richardson Esq</u> <u>Agnes Martha Chamberlain</u> <u>Vicar</u>					

off the mark, remarrying sometime in the last quarter of 1907.²³

Helen's new marriage certificate also refers to a second identity, that of 'Fiammetta Waldahoff'.²⁴ Working back from the 1908 marriage, the only previous official record for someone of that name comes from the 1901 census when she was lodging at 25 Upper Baker Street, London, describing herself as a professor of music and, quite fancifully, a Russian subject from Poland. She is also recorded as being 33 years of age, some four years younger than Helen would have been at this time.²⁵ A different source, though, describes her as being a native of Milan.²⁶

It turns out that Helen had adopted the name Fiammetta Waldahoff by deed poll on 1901 September 23.²⁷ The name Fiammetta means 'little flame' in Italian, and presumably originated from her time studying music in that country; it is sometimes incorrectly written with only one 'm'. Why she chose Waldahoff as her adopted family name is unknown.

From 1897 until at least 1916 Fiammetta held an appointment at the Guildhall School of Music in London as a professor teaching the mandolin.²⁸ She was influential in the origin of the British Guild of Mandolinists and Guitarists, which held its first meeting on 1906 June 9 but proved to be short-lived.²⁹ Fiammetta gave public and private recitals on the mandolin, with Edwin Ashdown (1827–1912) as her agent.³⁰

Fiammetta and Sydney Wilson were both elected to the BAA on 1910 February 23.³¹ At that time they were living at Rose Cottage, Windmill Lane, Cheshunt, Hertfordshire. Fifteen months later they were lodging at Rock Farm, Reigate, Surrey.³² From approximately 1914 to early 1916 they lived at a house called Zavijava in Hansol Road, Bexleyheath, Kent. Zavijava is the Arabic name for the star β Virginis but how this name came to be selected is not known. In 1916 July they moved to Chestnut Cottage, Barnet Lane, Totteridge, in northwest London (Figure 3).³³

There is only one known likeness of Fiammetta Wilson, credited to the studio of James Lafayette who was a well-known society photographer (Figure 1). It was published in 1915 but dates from around 12 years earlier when she would have been in her late thirties.³⁴

2. Fiammetta's astronomy

Fiammetta Wilson is said to have become interested in astronomy through attending lectures given by the astrophysicist Professor Alfred Fowler (1868–1940) at the Imperial College of Science and Technology, London, around 1910. From this point she withdrew from her previous active social and musical life to follow astronomy.³⁵

Fiammetta only ever used modest observing equipment, starting with a Zeiss 8×24 binocular with a 6°.6 field of view³⁶ with which she made an independent



Fig. 3: Chestnut Cottage, Totteridge, where Fiammetta and Sydney Wilson lived from 1916 until her death in 1920, photographed in 2018. From here she made observations from an elevated platform in the rear garden. (Bill Barton)

recovery of Comet 20/D Westphal in 1913.³⁷ Discovered in 1852, this comet had a period of 61.8 years, but was not recovered at its next predicted return in 1976 and is now considered lost.³⁸

She also used these same binoculars to produce a list of over 60 clusters and nebulae that could be observed with small optical means. The list, published in 1916, was composed from observations mostly taken at Chestnut Cottage. Even then, her true love was never far from her thoughts, for she wrote: 'My principal interest being engaged upon meteoritic observation, I have never liked to prolong the study of a cluster lest a fire-ball should escape me.'³⁹

Her second instrument was a 3-inch or 3½-inch (76-mm or 89-mm) aperture refracting telescope. During World War I this was loaned to the Belgian astronomer Félix de Roy (1883–1942), who had fled to the UK when his native country was over-run by the German army.⁴⁰ Fiammetta promoted his plight through the pages of *Nature* and *English Mechanic* magazines.⁴¹

2.1. Contributions to the BAA

As mentioned in Section 1.3, Fiammetta and her husband were elected to the BAA in 1910. She encouraged others to join and proposed or seconded 11 members between 1915 and her death in 1920. Perhaps the most notable of these new members was Hugh Percy Wilkins (1896–1960) who went on to direct the BAA's Lunar Section from 1945 to 1956.⁴²

Fiammetta's first published astronomical observation was of an occultation of Mars by the Moon on 1910 April 13 which she and her husband watched through binoculars from the belfry in the centre of Bruges, Belgium.⁴³ At the BAA meeting on 1913 May 28 Fiammetta displayed a sample of a set of charts of naked-eye stars on the gnomonic projection that were being prepared by the amateur astronomer and

Table 1**Fiammetta Wilson's other areas of observation**

- The zodiacal light, including one occasion from Casablanca, Morocco.⁷⁴
- Aurorae between 1916 April and 1917 August.⁷⁵
- Comet Beljowsky (C/1911 S3) in early October 1911.⁷⁶
- Mercury from 1914 summer to 1916 April.⁷⁷
- Uranus's movement against the background stars during the summers of 1911 and 1915.⁷⁸
- Neptune's movement in 1914 February.⁷⁹
- The minor planet Vesta through the stars of Taurus in 1915 January, and its brightness estimated.⁸⁰
- The variable star Mira in 1915 January, 1915 December, and 1916 January.⁸¹

meteorologist Thomas William Backhouse (1842–1920) of Sunderland for use by meteor observers. 'I consider it the most perfect map in all respects that an observer could have,' she told the meeting, adding her hopes that 'we now, one and all, will turn our enthusiasm into making observations of the greatest accuracy'.⁴⁴

From 1911 to 1921 the BAA meteor section was directed by the Reverend Martin Davidson (1880–1968) but in 1916, during World War I, he temporarily left the UK for a chaplaincy in the military services. In his absence the section was run by Wilson and Alice Grace Cook (1877–1958).⁴⁵ Later Cook acknowledged that Wilson was the *de facto* director and that she had given only 'some slight assistance' until Davidson's return at the end of the War in 1918.⁴⁶

2.2. Memberships and awards

Wilson was elected to the BAA Council in 1916, 1917, and 1919.⁴⁷ Another landmark was that she was in the first group of female Fellows of the Royal Astronomical Society elected on 1916 January 14; the others were Mary Blagg, Ella Church, Grace Cook, and Irene Warner.⁴⁸ Her address was given as care of the Pioneer Club in St James' Street, London. Originally a noted centre of feminism dating from 1892, the Club's reputation had been reduced following the death of its prime mover Emily Langton Massingberd (1847–97); presumably Wilson was a member.⁴⁹ By 1918 Wilson had 'compounded' her RAS fellowship fees, enabling her to enjoy life membership.⁵⁰

In 1916 November a group called the Chaldaean Society was formed to promote basic naked-eye astronomy.⁵¹ The origin of the society's unusual name is not known; perhaps they took it because they considered the Chaldaean civilization to be founders of astronomy. Wilson was an active member and served as co-editor

of its quarterly journal, *The Chaldaean*, up to the summer issue of 1919 as well as being Director of Observations from spring 1920 until her death a few months later.⁵² She was also a member of various other societies in the UK and overseas.⁵³

The Edward C. Pickering Fellowship for Women, an annual award of US \$500, was established in 1912 to assist female astronomers working at the Harvard College Observatory.⁵⁴ The award for 1920 was to be the first to someone outside America. Wilson was to receive the award, but she died before it arrived. It was subsequently transferred to her sometime BAA Meteor Section co-director Grace Cook.⁵⁵ Wilson might possibly have travelled to Harvard to work. Cook did not, but instead spent the money on observing equipment.⁵⁶

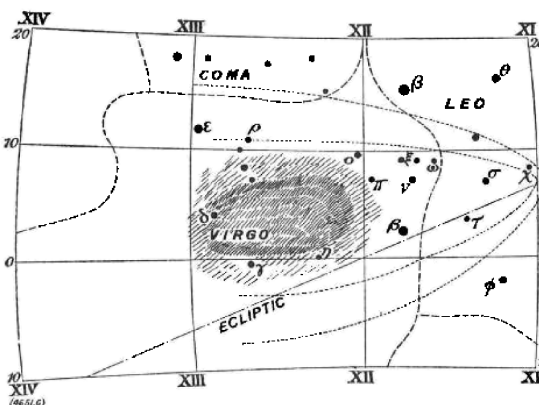
2.3. Meteor work

Above all, Fiammetta Wilson is best known for her positively Herculean efforts in meteor observation, even continuing during World War I Zeppelin air raids. As well as the hazard from falling bombs during a raid, there was also the risk of arrest by a conscientious special constable.⁵⁷ On one occasion Wilson even had an astronomical telegram to Grace Cook about a fireball stopped by the censor because the object was suspected of being a 'spy rocket'.⁵⁸

Wilson noted some ten thousand meteors between the years 1910 and 1920, 650 of which were doubly observed, usually by Cook in Stowmarket, Suffolk, or William Frederick Denning (1848–1931) in Bristol. Two geographically separated observations of the flight of the same meteor allow its track through the Earth's atmosphere to be calculated and although this wasn't pioneering work the number of real paths derived in this decade equalled the number obtained in the previous quarter of a century.⁵⁹

In his obituary of her, Denning paid tribute to what he called her dauntless spirit: 'She sometimes watched

Fig. 4: The zodiacal light as seen by Fiammetta Wilson from Portscatho, Cornwall, on 1915 November 6 at 5.21 a.m. The brightest part of the light was north of the ecliptic in Virgo, and its intensity was said to be twice that of the Milky Way. This diagram appeared in the BAA Journal for 1916 February.



the heavens for five or six hours, when only a few stars were visible amid the clouds, and her perseverance was often amply rewarded by the detection of fireballs.⁶⁰

It seems that Fiammetta and her husband observed together at times. In 1915 she lamented that since the start of the war ‘my husband has been unable to help me’. Consequently she feared that ‘whilst I have been writing down notes recording one meteor, another may have eluded me’.⁶¹

Not wanting to fell the trees that grew in the garden of Chestnut Cottage, Wilson had an elevated platform constructed, which she called her ‘perch’, to see above them. ‘Here,’ wrote Denning, ‘she stood in some of the keenest winds of winter mornings, watching and recording, with wonderful fidelity, the paths of the objects she loved so well.’⁶²

As well as observing from home at Bexleyheath and Totteridge, Fiammetta mentions in her reports the villages of Looe and Portscatho in Cornwall.⁶³ During a 4½-hour watch from the latter place on the night of 1915 October 5 she saw and sketched a train from a bright fireball that persisted for nearly 18 minutes. ‘Nebulous matter seemed to be moving with great velocity, like a sort of whirlwind,’ she reported.⁶⁴

She also saw and sketched the zodiacal light from Portscatho on the morning of 1915 November 6 (Figure 4). Gavin Burns, director of the BAA Aurora and Zodiacal Light section, noted it as being one of the very few morning reports he had received.⁶⁵

Observations of the Quadrantid shower on the evening of 1918 January 3 by Denning and Wilson caused something of a stir, for although the numbers were similar to previous years a new radiant point was discovered near Iota Draconis, 8° north of the normal position. Denning at Bristol recorded 11 shower members, but Wilson in clearer skies at Totteridge logged four times as many.⁶⁶ During February 1920 Fiammetta joined Grace Cook in Stowmarket to carry out joint observations. With only one exception their results were in complete agreement.⁶⁷

As we have seen, meteors were not her only subject of interest. She also observed the zodiacal light, aurorae, comets, planets, and variable stars – for a complete list see Table 1. In addition to her meteor reports published with Grace Cook in the *JBAA* Wilson wrote in the following journals: *Monthly Notices of the Royal Astronomical Society*; *L’Astronomie*; *Journal des Observateurs*; *The Observatory*; *The Chaldean*; and *The English Mechanic*.

3. Death of Fiammetta Wilson

In the autumn of 1919, on medical advice, Fiammetta took a complete rest from astronomical observing.⁶⁸ She died in the following summer on 1920 July 21 at the relatively young age of 56 after four days of illness.⁶⁹ The causes given on her death certificate are uraemia (kidney failure) and coma.⁷⁰ It is possible that

voluntary aid work during the War sapped her strength excessively.⁷¹ Her use of two separate given identities is confirmed by a posthumous announcement made by her sister Janet, who was her executrix.⁷² Neither of her marriages produced any children.

Finding himself single again Sydney remarried to Hilda Virginia Hebden-Phillips (1892–1974) on 1920 September 6, a mere seven weeks after Fiammetta’s death.⁷³ His name no longer appears in the published BAA membership lists after 1920, suggesting that without Fiammetta he had little or no further interest in astronomy.

4. Conclusion

Fiammetta Wilson clearly belongs in the ‘grand amateur’ category of Victorian and Edwardian astronomers, although unlike many of those she never aspired to own a large telescope or observatory; she remained primarily a naked-eye observer. Born to wealthy parents she was schooled abroad, and prior to taking up astronomy, enjoyed a life based around social events. Musically talented, she played and taught the mandolin. However, unlike her observing colleague Grace Cook, Fiammetta neither seriously used a large astronomical instrument, made any significant discovery, nor was she a sole observing section director of the BAA.

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