



"The needle is the chain of woman, and has fettered her more than the laws of the country."

- Professor <u>Maria Mitchell</u>





MARIA MITCHELL

1818

August 1, Saturday: Maria Mitchell was born, the 3d child of Friend William Mitchell and Friend Lydia Mitchell, a Quaker family that would produce a total of 10 children.



The infant had a facial birthmark.

Friend Stephen Wanton Gould wrote in his journal:

7th day 1st of 8th M 1818 / Rose this morning early, went over to the Point & at Dyres shore took a sea Bathing, this with the walk, has been very serviceable this Very Warm Summer. - A walk in the morning is pleasant, being cool, the air sweet & as few are moving retirement may be enjoyed to reflect on pleasant Scenes around - when I got to the Mansion of our late friend Thos Robinsons I found carpenters at work building a new fence around the garden & John Morton looking on it was very agreeable to see any improvement in the looks of our town which I think has been Smarted up a little this Summer

RELIGIOUS SOCIETY OF FRIENDS

"NARRATIVE HISTORY" AMOUNTS TO FABULATION,
THE REAL STUFF BEING MERE CHRONOLOGY



FRIEND MARIA MITCHELL

1827

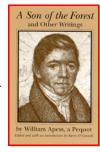
Harrison Gray Dyar erected an experimental telegraph wire at a Paumanok Long Island racetrack. He proposed to string a wire between New-York and Philadelphia, across New Jersey, and ran into skepticism from members of the New Jersey legislature who feared Dyar as some sort of "wizard" of deception like the figure that would later appear in the "The Wonderful Wizard of Oz" story by L. Frank Baum. They feared that behind this project there might be some sort of dangerous agenda to send secret communications in advance of the mail.

"Pay no attention to the man behind the curtain!"

When one of Dyar's financial backers threatened to accuse him of "conspiracy to send secret communications in advance of the mail" as part of an attempt to get his money back, Dyar fled the country. For many years he would live in Paris where, apparently, he was able to make good money as a chemist.

For the next two or three years William Apess would be an itinerant Methodist exhorter on Paumanok Long Island, in the valley of the Hudson River, on <u>Martha's Vineyard</u> and <u>Nantucket Island</u>, and in the cities of <u>Boston</u> and <u>New Bedford</u>. Much of the work he would be doing, of course, since he was not a white man, would need to be with mixed groups of African-Americans and native Americans.

In this timeframe, on <u>Nantucket Island</u>, <u>Friend Maria Mitchell</u> would have been attending Cyrus Peirce's School for Young Ladies. (Other than that, and her own self-education, she was mainly being educated by her father, whom she assisted in the checking of chronometers for the local whaling fleet.)





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1830

The running estimate fostered by charitable organizations was that, to live in the city of Boston, a single adult needed to be able to generate an income of not less than \$3.00 per week. To have an income of less than that would mean the necessity of indecent living: unclean, unsafe, and quite probably necessitating the occasional offering of sexual liberties in return for money. However, the Reverend Joseph Tuckerman, <u>Unitarian</u> missionary to the city of <u>Boston</u>, estimated that a fully employed woman would be earning perhaps a dollar a week, or at most \$1.50, whereas an unskilled male laborer might be making on an average a dollar a day. –And after this point, this disparity would be getting worse rather than better. For, ten years later, the Episcopal minister William Hague would issue an estimate, that a seamstress would have to have a specially good situation, and work seven days a week, in order to be able to make as much as that one whole dollar. Working five long hard days in a week, in the home <u>sewing</u> shirts, he calculated, would produce an income of only \$0.49.



"The needle is the chain of woman, and has fettered her more than the laws of the country."

- Professor Maria Mitchell





"Clothes brought in sewing -a kind of work you may call endless."

- Henry Thoreau



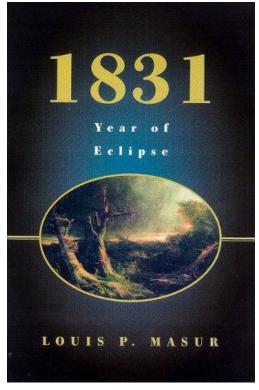


FRIEND MARIA MITCHELL

1831

February 12, Saturday: At this point the Glasgow Skating Club's SKATERS MANUAL contained descriptions of 13 combined skating figures.

According to Chapter I of the history of this year by Professor Louis P. Masur, titled 1831: YEAR OF ECLIPSE (Hill and Wang, 2001. ISBN: 0-8090-4118-9), everyone, presumably even <u>Nat Turner</u>, even the recreational <u>skaters</u> on the frozen Delaware River, knew that an eclipse was coming:



Everyone knew it was coming. "THE GREAT ECLIPSE OF 1831 will be one of the most remarkable that will again be witnessed in the United States for a long course of years," alerted Ash's Pocket ALMANAC. One editor reported that the February 12 eclipse would even surpass historic occasions when "the darkness was such that domestic fowls retired to roost" and "it appeared as if the moon rode unsteadily in her orbit, and the earth seemed to tremble on its axis." On the day of the eclipse, from New England through the South, Americans looked to the heavens. One diarist saw "men, women and children ... in all directions, with a piece of smoked glass, and eyes turn'd upward." The Boston Evening Gazette reported that "this part of the world has been all anxiety ... to witness the solar eclipse.... Business was suspended and thousands of persons were looking at the phenomena



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with intense curiosity." "Every person in the city," noted the Richmond <u>Enquirer</u>, "was star gazing, from bleary-eyed old age to the most bright-eyed infancy."

Unlike previous celestial events, thought some commentators, the eclipse of 1831 would not produce superstitious dread that the world would end. "Idle fears and gloomy forebodings of evil formerly raised by the appearance of phenomena caused by the regular operation of natural laws," one writer claimed, "have yielded to pleasing admiration; a change which the march of science and general diffusion of knowledge have largely contributed to effect." Another writer mocked the notion that eclipses were "signs or forerunners of great calamities." Eclipses, he thought, "necessarily result from the established laws of the planetary revolution, and take place in exact conformity with those laws.... Those who entertain the opinion that eclipses of the sun are tokens of the Divine displeasure can produce no warrant from scripture for their irrational belief. If we would look for the signs of the displeasure of God towards a nation, we can see them, not in eclipses, but in national sins and depravity of morals."

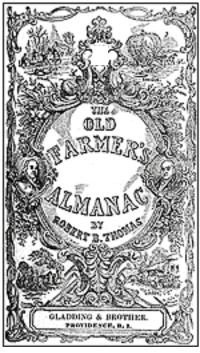
Rational explanations of atmospheric events, however, offered little solace to most Americans. In many, "a kind of vague fear, impending danger -a prophetic presentiment of some approaching catastrophe"- was awakened, and "the reasonings of astronomy, or the veritable deductions of mathematical forecast," did little to diminish the anxiety. One correspondent reported that an "old shoe-black accosted a person in front of our office, the day previous to the eclipse, and asked him if he was not afraid. For, said he, with tears in his eyes, the world is to be destroyed to-morrow; the sun and moon are to meet \dots and a great earthquake was to swallow us all! — Others said the sun and the earth would come in contact, and the latter would be consumed. Others again, were seen wending their ways to their friends and relations, covered with gloom and sadness; saying that they intended to die with them!" The day after the eclipse, preachers employed Luke 21:25 as the text for their sermons: "there shall be signs in the sun." "In strict propriety of language," one minister observed, "it is not the sun that is eclipsed. Not the slightest shadow is cast upon the least portion of his broad disk. His beams are shot forth precisely the same. It is over us only that the momentary darkness is spread, and it is truly the earth that is eclipsed."

The spectacle, however, proved anticlimactic. "The darkness being less visible than generally expected," the heaven-gazers felt "bamboozled." "At the moment of greatest obscuration," reported one paper, "a foolish feeling of disappointment was generally prevalent and this was expressed by many in such terms as they might have used after having been taken in by the quacking advertisement of an exhibitor of fireworks or phantasmagoria. It was not half as dark as they expected." "The darkness was that of a thunder gust," snorted one observer: "The light of the sun was sickly, but shadows were very perceptible."



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"The multitude have been sadly disappointed," reported one editor. "They looked for darkness and the shades of light; they expected to drink in horrors, and feel the power of superstition without its terrors or apprehensions; they expected to work by candlelight, see cows come home, and poultry go ultimately to roost -to count the stars and tell them by their names; in short, to see something that they might talk about now and hereafter-something to tell their children and grandchildren."



With the anticipation more disturbing than the event, some sought to cast blame. Almanac makers and newspaper editors were chastised for their extravagant predictions of darkness and glowing descriptions of the wonders that would be seen. Some thought the astronomers deserved condemnation for offering elaborate calculations that fizzled. Others blamed regional temperaments for the heightened expectations. "Our Yankee proneness to exaggeration," thought the Boston Patriot, "was manifested in a ludicrous manner on the occasion of the late eclipse." Southerners agreed: "Our eastern brethren are, as usual, up in arms about the matter - they talk of a convention. Truth to say, expectations were scarcely realized. On such occasions, people now-a-day show a shockingly morbid appetite they look for portentous signs, for ghastly gleanings of fiery comets, the rushing up, with dire intimations of the `northern lights,' and expect to see `clouds of dark blood to blot the sun's broad light, / And angry meteors shroud the world in night.'"

However much the eclipse disappointed, it served as metaphor and omen. Edward Everett, senator from Massachusetts, reported that



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"a motion was made in the House of Representatives to adjourn over till Monday in consequence of the darkness which was to prevail." The motion did not pass, and Everett quipped, "After sitting so frequently when there is darkness inside the House, it would be idle I think to fly before a little darkness on the face of the heavens." The United States Gazette, which feverishly opposed the re-election of President Andrew Jackson, joked that "the solar eclipse has not attracted as much attention here, as the late curious obscuration of one of the smaller stars in the constellation, Jupiter Jackson." With greater sobriety, the editor of the Philadelphia Gazette observed that "the affairs of the Eastern hemisphere ... have reached a thrilling and portentous crisis. An irresistible spirit of reform seems burning with occult but mighty energy among the nations.... An eclipse in Europe at the present time might be considered as an omen. In this country, where it has lately occurred, the sunshine of regulated freedom appears alone to rest."

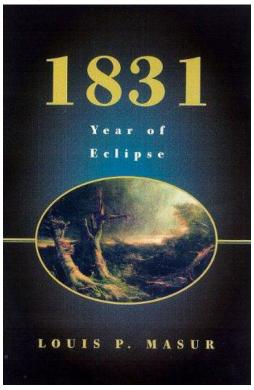
Unmoved by editorial, ministerial, astronomical, or political pronouncements and predictions, on the day of the eclipse some Philadelphians went ice-skating. The coldest winter in decades had frozen the Delaware River, and thousands of citizens chose to pass the day in recreation. The Saturday Bulletin reported, "It is probable that fifteen thousand persons were amusing themselves by sliding and skating on the river, while the numerous booths, or travelling dram-shops which were located at short distances apart, throughout the whole city front, were observed to do a brisk business in hot punch, smoked sausages, crackers, and ten-for-a-cent cigars. Sober citizens, whom we have observed never exceed a regular dog-trot, while walking our streets, were now capering around with the agility of a feather in a whirlwind."

One artist drew the scene. On February 12, Edward William Clay set up his easel by the Delaware River and produced an image of citizens at play. Men of all classes slip and swirl, some into one another's arms, as they skate the day away. To the right, a rough-hewn citizen warms himself with a drink; a woman looks on contentedly. A black man, in stereotypical comic fashion, slides helplessly away, his hat lost. All is movement and motion, energy and action. But the sky is gray, the light is pale, and



FRIEND MARIA MITCHELL

dusk is approaching.



Louis P. Masur titled his book 1831: YEAR OF ECLIPSE: That's apparently short for 1831: YEAR OF THE ECLIPSED ECLIPSE. Now is somebody going to write a history book titled 1957: YEAR OF THE THIRD WORLD WAR THAT DIDN'T HAPPEN AS EXPECTED?

Although nothing whatever was visible to the naked eye at any point north of the Gulf Coast (where a brief minor "nibble" might possibly have been noted by some extraordinarily attentive observer), Maria Mitchell, age 12, assisted her father in his attempts to use his amateur astronomical equipment to view the moon as it passed, invisible to the naked eye, close by but at no point touching upon the disk of the sun. Although it is of record that this attempt was made (they were attempting to determine the exact longitude of Nantucket Island), I very much doubt that —so close to the solar brilliance—they would have been able by the use of available instruments to make any readings at all.

Louis P. Masur to the contrary notwithstanding, here are the salient events that might have (but did not) create scholarly monographs entitled perhaps 1806: YEAR OF ECLIPSE or perhaps 1868: YEAR OF ECLIPSE:

Date	Type	Size	Length	Name
May 3, 1375 BCE	Total	1.029	02m05s	Ugarit Eclipse
June 5, 1302 BCE	Total	1.080	06m24s	Early Chinese Eclipse
April 16, 1178 BCE	Total	1.060	04m34s	Homer's "Odyssey"
April 20, 899 BCE	Annular	0.959	03m05s	China's "Double-Dawn" Eclipse



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June 15, 763 BCE	Total	1 060	04m59s	Assyrian Eclipse
· ·				2 1
April 6, 648 BCE	Total		05m02s	Archilochus's Eclipse
May 28, 585 BCE	Total		06m05s	Herodotus/Thales Eclipse (Medes vs. Lydians)
May 19, 557 BCE	Total	1.026	02m22s	The Siege of Larisa
October 2, 480 BCE	Annular	0.932	07m58s	Xerxes's Eclipse
August 3, 431 BCE	Annular	0.984	01m04s	Peloponnesian War
March 21, 424 BCE	Annular	0.943	04m38s	8th Year of Peloponnesian War
November 24, 29 CE	Total	1.022	01m59s	Crucifixion of Christ?
March 19, 33 CE	Total	1.058	04m06s	Crucifixion of Christ?
April 30, 59 CE	Total	1.019	01m50s	Plinius's Eclipse
March 20, 71 CE	Hybrid	1.007	00m35s	Plutarch's Eclipse
June 6, 346 CE	Total	1.059	03m58s	no name
July 19, 418 CE	Total	1.046	03m52s	no name
November 24, 569 CE	Total	1.036	03m17s	Eclipse Preceding Birth of Mohammad
January 27, 632 CE	Annular	0.984	01m40s	Death of Mohammad's Son Ibrahim
December 7, 671 CE	Annular	0.924	10m18s	no name
May 5, 840 CE	Total	1.076	05m46s	Emperor Louis's Eclipse (Treaty of Verdun)
May 14, 1230	Total	1.060	03m17s	Major European Eclipse
May 3, 1715	Total	1.063	04m14s	Edmund Halley's Eclipse
August 5, 1766	Annular	0.943	05m15s	Captain Cook's Eclipse
June 16, 1806	Total	1.060	04m55s	Tecumseh's Eclipse
August 18, 1868	Total	1.076	06m47s	King of Siam's Eclipse
July 29, 1878	Total	1.045	03m11s	Pike's Peak Eclipse
January 22, 1879	Annular	0.970	03m03s	Zulu War Eclipse
April 17, 1912	Hybrid	1.000	00m02s	The "Titanic" Eclipse
May 29, 1919	Total	1.072	06m51s	Einstein's Eclipse (Test of General Relativity)
January 24, 1925	Total	1.030	02m32s	NYC's Winter Morning Eclipse
August 31, 1932	Total	1.026	01m45s	Great Maine Eclipse



FRIEND MARIA MITCHELL



October: Regular as clockwork, the return of the comet which had been observed by the Reverends Increase Mather and Cotton Mather through Harvard College's "3 foote and a halfe with a concave ey-glasse" reflecting telescope in 1682, the comet which is known as "Halley's" to commoners and as "P/Halley" to others.



Halley has caught the attention of mankind so often because only it has long durations of visibility, **and** great brightness outside twilight and often at large elongations from the sun, **and** only brief interruptions of visibility by the sun's glare, **and** occasional spectacular approaches to the earth For all this to be possible its natural adequate brightness is requisite but not sufficient (some of its comrades may have more of it); the real key is a combination, unique to it, of orbital features.

HARVARD OBSERVATORY

It would be during this appearance of <u>Halley's Comet</u> that it would first be hypothesized that the outgassing from comets must be shoving them around, perturbing their orbital motion, and also, Newton to the contrary notwithstanding, causing them to lose mass toward their eventual disintegration.¹

This time, Maria Mitchell and her father recorded the movements of this periodic comet.

^{1.} All the initial calculations of the magnitude and directionality of this phenomenon, however, would prove to have been way, way off.



MARIA MITCHELL

This is what Halley's Comet looked like, the last time it passed us. We have records of the appearances of this comet on each and every one of its past 30 orbits, which is to say, we have spotty records of observations before the 240 BCE return the sightings record begins to be complete. The Babylonians recorded seeing it in 164 BCE and again in 87 BCE, and then it was recorded as being seen in 12 BCE, 66 CE, 141 CE, 218 CE, 295 CE, 374 CE, 451 CE, 530 CE, 607 CE, 684 CE, 760 CE (only by Chinese), 837 CE, 1066, 1835, and 1986 and we are confidently awaiting sightings in 20<mark>61 and 2134 even though due to a close</mark> conjunction with the earth we are presently unable to calculate what orbit it will have by the date of that approach. Each time P/Halley orbits in out of the Kuiper belt beyond the planets Neptune and Pluto and whips around the sun, it has been throwing off about one 10,000ths of its mass into a streaming tail, which means that this comet which we know to have been visiting us for at the very least the past 3,000 years or so is only going to be visiting us for perhaps another half a



EDMOND HALLEY



HALLEY'S COMET



million years or so!



FRIEND MARIA MITCHELL

This magazine illustration would undoubtedly have been somewhat exaggerated:





MARIA MITCHELL



From this year until 1842, <u>Maria Mitchell</u> would function as the 1st librarian of the Nantucket Atheneum (in its original building, the one in which <u>Frederick Douglass</u> would lecture on August 11, 1841, the building which, along with most of its contents, would be destroyed in the great <u>Nantucket</u> fire of 1846).



FRIEND MARIA MITCHELL



Lecture Season: The Winter Lecture Season at the Odeon Theatre at the corner of Federal and Franklin streets in



MARIA MITCHELL

Boston:

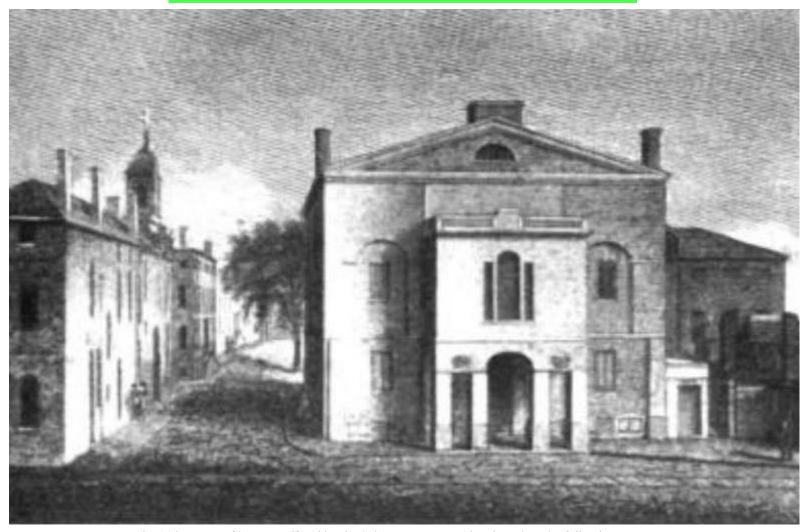
4th Season of The Lowell Institute

Prof. J. Lovering, A.M., <u>Astronomy</u> 24 lectures

Prof. Jared Sparks, LL.D. 12 lectures

Prof. J. Walker, D.D. 12 lectures

Prof. B. Silliman, LL.D. 24 lectures



The 14th course of lectures offered by the Salem Lyceum may be viewed on the following screen.



FRIEND MARIA MITCHELL

(click here)



MARIA MITCHELL

The Salem Lyceum — 14th Season

John Quincy Adams Government

William Mitchell

Astronomy, Comets (1st lecture)

William Mitchell

Astronomy, Comets (2nd lecture)

Humphrey Moore March of Mind

Reverend George B. Cheever of Salem

Gothic Architecture

L.F. Tasistro

Master Spirits of English Poetry

Benjamin Sears Germany

Charles Francis Adams, Sr. Shakspeare (1st lecture)

Charles Francis Adams, Sr. Shakspeare (2nd lecture)

Dr. Fitch

Music as a Fine Art

Henry Giles

Byron (1st lecture)

Henry Giles

Byron (2nd lecture)

George Bancroft

Spirit of the Age

Richard Henry Dana, Jr.

Woman

James E. Murdock

Human Voice, with Illustrations

Edwin Jocyln of Salem

Spirit of Teaching

Richard Henry Dana, Jr.

Desdemona

John C. Park

Character of the Pilgrims

George H. Colton

American Indians

James E. Murdock

The Passions

Henry Giles

Elliott, the Corn Law Rhymer



FRIEND MARIA MITCHELL

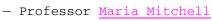
1843

Friend Maria Mitchell, an astronomer, had stopped wearing clothing made of cotton in protest against human slavery. She was disowned by her Nantucket Island monthly meeting of the Religious Society of Friends for "questioning" upon acknowledging that her "mind was not settled on religious subjects." Eventually she would affiliate as a Unitarian.





"It seems to me that if anything would make me an infidel, it would be the threats lavished against unbelief."







MARIA MITCHELL



July 13, Monday: A fire broke out in a hat store on Main Street in downtown Nantucket, and within a few hours many of the town's homes and businesses, including the Athenaeum at which Maria Mitchell had been librarian and at which Frederick Douglass had lectured –along with most of its contents– were consumed. In a few years, when the California gold rush would begin, there would be no reason why a quarter of the town's male occupants should not go there to try to rebuild their fortunes. By 1850 many of the vessels of the once-great Nantucket whaling fleet would lie rotting along the banks of the San Francisco harbor, providing a beginning to the extension of the town into the Tenderloin flats along the waterfront to the east of Telegraph Avenue. Even today, when a new foundation is begun in this district, often the timbers of a Nantucket whaler are disclosed. In the whaling industry, with the arrival of the railroad there in the 1840s, New Bedford harbor would become preeminent.



FRIEND MARIA MITCHELL

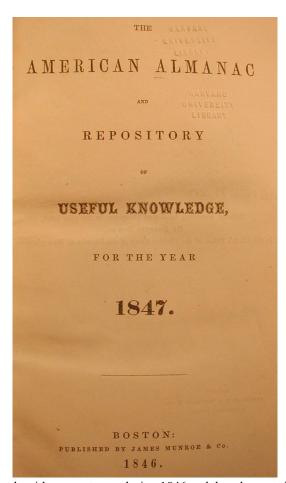
1847

THE **PROVIDENCE ALMANAC** FOR 1847.

THE RHODE-ISLAND ALMANAC FOR 1847. By Isaac Bickerstaff. Providence, Rhode Island: Hugh H. Brown.

The Boston <u>almanac</u> for this year contained a <u>comet</u> list attributed to Professor <u>Benjamin Peirce</u> of <u>Harvard College</u>. This list contained no predictions of future returns, listing only previous visits and orbital calculations.

ASTRONOMY



(Professor Peirce's list ends with a comet seen during 1846 and thus does not include the comet discovered by Maria Mitchell on October 1st, 1847.)



MARIA MITCHELL

October 1, Friday: On Nantucket Island, the parents of former Friend Maria Mitchell, who had been read out of her monthly Quaker meeting in 1843 at the age of 25 on account of her tendency toward "questioning," had a noisy party going with their friends and Maria couldn't sleep, so she went up onto the roof of the Pacific National Bank of which her dad was head cashier, to look at the sky through her telescope. Five degrees from Polaris, the north star, she detected a spot which did not belong on the standard star map. She had discovered a telescopic comet (Comet 1847 VI, the modern designation of which is C/1847 T1). The only previous woman to discover a comet had been Caroline Herschel, who had noticed one that was visible to the naked eye. Maria would be honored in America and Europe, with the King of Denmark presenting her with a gold medal.

ASTRONOMY



FRIEND MARIA MITCHELL



<u>Maria Mitchell</u> of <u>Nantucket Island</u>, who had in the previous year discovered a new comet, was selected to become a member of the American Academy of Arts and Sciences in Boston — she would be the 1st woman to be so honored.²



(Almost a century would pass before a 2d woman would make the grade.)

Maria Mitchell is also claimed, on the internet, to be the initial female member of the American Physical Society — but if that is true it is passing strange that the website of the American Physical Society makes no mention of any such membership.

^{2.} The botanist Elizabeth Agassiz had persuaded her husband Professor Louis Agassiz of Harvard College to sponsor the nomination. But when push would come to shove, upon her installation in 1850 at the Charleston meeting, she would discover on the document that she was merely an "honorary" member of the society. Is an honorary member a real member? –Well, no, not exactly, I don't suppose.



MARIA MITCHELL

\$200 Reward.

RANAWAY from the subscriber, on the night of Thursday, the 30th of Sepember.

FIVE NECRO SLAVES,

To-wit: one Negro man, his wife, and three children.

The man is a black negro, full height, very erect, his face a little thin. He is about forty years of age, and calls himself Washington Reed, and is known by the name of Washington. He is probably well dressed, possibly takes with him an ivory headed cane, and is of good address. Several of his teeth are gone.

Mary, his wife, is about thirty years of age, a bright mulatto woman, and quite stout and strong.

The oldest of the children is a boy, of the name of FIELDING, twelve years of age, a dark mulatto, with heavy evelids. He probably wore a new cloth cap.

MATILDA, the second child, is a girl, six years of age, rather a dark mulatto, but a bright and smart

looking child.

MALGOLM, the youngest, is a boy, four years old, a lighter mulatto than the last, and about equally as bright. He probably also were a cloth cap. If examined, he will be found to have a swelling at the navel.

Washington and Mary have lived at or near St. Louis, with the subscriber, for about 15 years.

It is supposed that they are making their way to Chicago, and that a white man accompanies them, that

they will travel chiefly at night, and most probably in a covered wagon.

A reward of \$150 will be paid for their apprehension, so that I can get them, if taken within one hundred miles of St. Louis, and \$200 if taken beyond that, and secured so that I can get them, and other reasonable additional charges, if delivered to the subscriber, or to THOMAS ALLEN, Esq., at St. Louis. Mo. The above negroes, for the last few years, have been in possession of Thomas Allen, Esq., of St. Louis.

WM. RUSSELL.

ST. LOUIS, Oct. 1, 1847.



FRIEND MARIA MITCHELL

1849

A 7th edition of Ormsby McKnight Mitchel, A.M.'s revision to <u>Elijah Hinsdale Burritt</u>, A.M.'s The Geography of the heavens, and class book of <u>Astronomy</u>; accompanied by a celestial atlas. By Elijah H. Burritt, A.M. Fifth edition. With an introduction by Thomas Dick, LL.D., author of the "Christian Philosopher," &c (New York).

Benjamin Apthorp Gould started the <u>Astronomical Journal</u>. He would publish this until 1861, and then resume publication in 1885 (the journal still exists).

In this year, <u>Maria Mitchell</u> became the 1st woman to be employed fulltime by the US Nautical Almanac — she was to become a Computer (that's a job title, like Janitor or Comptroller or Typewriter or Engineer), and assist in computation of the ephemerides of Venus.



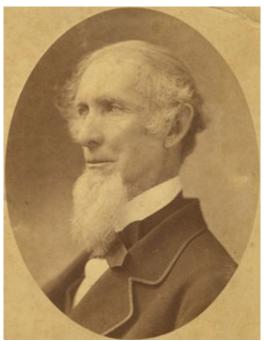
<u>Maria Mitchell</u>'s younger brother <u>Henry Mitchell</u> joined the US Coastal Survey (he would map the waters of Nantucket and the harbor of New-York, and during the civil war would help map the coast of North Carolina).



MARIA MITCHELL

1850

<u>Dr. Josiah Clark Nott</u> and Ralph Hermon Major argued against the prevailing "miasma" theory in Yellow Fever Contrasted with Bilious Fever: Reasons for Believing It a Disease Sui Generis – Its Mode of Propagation – Remote Cause – Probable Insect or Animalcular Origin (Oxford: Blackwell Scientific).



<u>Professor Samuel George Morton</u> became President of the Academy of Natural Sciences.

George Robins Gliddon's INDIGENOUS RACES OF THE EARTH (in conjunction with Dr. Josiah Clark Nott and others). Also, his ANCIENT EGYPT.



FRIEND MARIA MITCHELL

<u>George Robins Gliddon</u>, the American vice-consul to Alexandria, Egypt in 1832, had organized a small shipment of mummies from a friend in <u>Egypt</u>.



In this year this collection if antique desiccated human corpses was placed on exhibit in Boston, and would be viewed by, among others, <u>Henry Wadsworth Longfellow</u>, the Reverend Professor <u>Jared Sparks</u>, Doctor Oliver Wendell Holmes, and Professor <u>Louis Agassiz</u>.

While at the AAAS meeting of scientists in Charleston arguing on behalf of the idea that the races of man were separately created, Professor <u>Agassiz</u> found he was much, much more welcome than the Hoars of Concord had been in 1844, when they had visited this port to protest the systematic imprisonment of innocent free northern

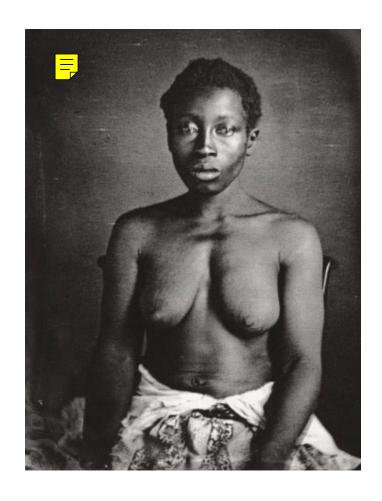


black sailors. The good people of Charleston knew a kindred white soul when they saw one. Agassiz was trustworthy, he was a friend, they knew what conclusions he would arrive at after seeing the evidence: he was invited to visit their plantations and to inspect their black slaves. He commissioned a series of daguerreotypes of type specimens, and then these shockingly invasive and unsettling photographs lay in a box at the Peabody Museum of Archaeology and Ethnology for many, many years, until they were rediscovered in 1977 — long after the Harvard institution had conveniently forgotten all about the rabid "scientific" racism of one of its illustrious father figures.

EVOLUTIONARY ETHICS



MARIA MITCHELL





FRIEND MARIA MITCHELL



"Scientists have power by virtue of the respect commanded by the discipline. We may therefore be sorely tempted to misuse that power in furthering a personal prejudice or social goal — why not provide that extra oomph by extending the umbrella of science over a personal preference in ethics or politics?"



- Stephen Jay Gould
BULLY FOR BRONTOSAURUS
NY: Norton, 1991, page 429

Coincidentally, this was the year in which the astronomer <u>Maria Mitchell</u> was installed as an honorary member of the American Association for the Advancement of Science.³

Subsequent to the death of his 1st wife, Professor <u>Agassiz</u> remarried with the writer Elizabeth Cabot Cary of Boston, a promoter of education for females. During this year he prepared his volume LAKE SUPERIOR.

^{3.} How could she, not only as a woman but also as an abolitionist, have been acceptable to these good ol' white racist boys? —Did they maybe notice that she wore a skirt but neglect to notice that she was wearing nothing made of cotton cloth because such cotton cloth was a product of the slave system? No, that wasn't what it was, what it was was that she was not becoming a member, but only an honorary member. On her printed certificate, signed by the scientist Asa Gray, the salutation "Sir" had needed to be struck through and above it penned the substitute "Madam," which is not particularly problematic, but also, the word "fellow" had needed to be struck through — and what had been substituted for this was the invidious descriptor "honorary member." — There's a big difference between an honorable member and an honorary member, and the difference is that a woman is not a real human being because an honorary member is not a real member. The lady scientist has eyes and can see a comet and a tongue and can report a comet, but she lacks a penis and therefore cannot interfere with processes of reality formation.



MARIA MITCHELL

1851

March: Martin Robison Delany, who had been expelled from the Harvard Medical School by Dr. Oliver Wendell Holmes, Parkman Professor of Anatomy and Physiology, upon protest from white students over the color of his skin, at this point shook the dust of Boston from off his sandals.



The itinerant preacher Daniel Foster accepted a temporary position filling the pulpit of the Trinitarian Church in Concord, Massachusetts (while living in Concord and for several years afterward, Deborah "Dora" Swift Foster would frequent the <u>Thoreau</u> home and become best friends with Sophia Thoreau).

<u>William Mitchell</u>'s article <u>THE ASTRONOMICAL OBSERVATORY OF HARVARD UNIVERSITY</u> appeared in the <u>Christian Examiner</u> (this would soon be bound as a 16-page pamphlet by Wm. Crosby and H.P. Nichols of 111 Washington Street, Boston and John Wilson & Son, Printers, 22 School-street, Boston).

ASTRONOMY

COMMITTEES OF EXAMINATION.

XI. For Examination in Natural History.

Hon. Thomas Russell,
Nathaniel T. Allen, Esq.
George P. Bradford, Esq.
Thomas M. Brewer, M.D.
Samuel Cabot, M.D.
J. Eliot Cabot, Esq.
William G. Russell, Esq.
Strafford Tenney, Esq.
Benjamin M. Watson, Esq.
William Wesselhæft, M.D.

Charles L. Flint, Esq.
Augustus A. Gould, M.D.
Henry Wheatland, M.D.
Horace Gray, Jr., Esq.
Samuel Kneeland, Jr., M.D.
Rev. John L. Russell.
Theodore Lyman, Esq.
Henry D. Thoreau, Esq.
William W. Wheildon, Esq.

XII. For Visiting the Observatory.

Hon. William Mitchell,
Hon. Josiah Quincy, LL.D.
Hon. James Savage, LL.D.
Hon. Jared Sparks, LL.D.
Hon. Robert C. Winthrop, LL.D.

Robert T. Paine, Esq. J. Ingersoll Bowditch, Esq. Henry C. Perkins, M.D. David Sears, Jr., Esq.



FRIEND MARIA MITCHELL

July 7, Monday: Henry Thoreau went with Sexton Anthony Wright to view the universe through Perez Blood's telescope. Just for the fun of it, I will illustrate this with a depiction, prepared in this very year by H. Dassel, which is not of Thoreau peering through Blood's telescope but of the astronomer Maria Mitchell, peering presumably through her father's telescope on the roof of his bank at the comet she had discovered (see following screen).



July 7, Monday: The intimations of the night are divine methinks. men might meet in the morning & report the news of the night. What divine suggestions have been made to them I find that I carry with me into the day often some such hint derived from the gods Such impulses to purity -to heroism -to literary effort even as are never day-born.

One of those morning's which usher in no day –but rather an endless morning –a protracted auroral season –for clouds prolong the twilight the livelong day-

And now that there is an interregnum in the blossoming of the flowers so is there in the singing of the birds-The golden robin is rarely heard -& the bobolink &c.

I rejoice when in a dream I have loved virtue & nobleness.

Where is Grecian History? It is when in the morning I recall the intimations of the night. The moon is now more than half full.⁴ When I come through the village at 10 o'clock this cold night –cold as in May -the heavy shadows of the elms covering the ground with their rich tracery impress me as if men had got so much more than they had bargained for -not only trees to stand in the air, but to checquer the ground with their shadows- At night they lie along the earth. They tower -they arch -they droop over the streets like chandeliers of darkness. In my walk the other afternoon I saw the sun shining into the depths of a thick pine wood, checkering the ground like moonlight –and illuminating the lichen-covered bark of a large white-pine, from which it was reflected Through the surrounding thicket as from another sun-; This was so deep in the woods that you would have said no sun could penetrate thither.

I have been tonight with Anthony Wright to look through Perez Bloods Telescope a 2nd time. A dozen of his Bloods neighbors were swept along in the stream of our curiosity. One who lived half a mile this side said that Blood had been down that way within a day or two with his terrestrial or day glass looking into the eastern horizon the hills of Billerica Burlington –and Woburn– I was amused to see what sort of respect this man with a telescope had obtained from his neighbors –something akin to that which savages award to civilized men – though in this case the interval between the parties was very slight. Mr Blood with his scull cap on his short figure -his north European figure made me think of Tycho Brahe- He did not invite us into his house this cool evening -men nor women- Nor did he ever before to my knowledge

TYCHO BRAHE

I am still contented to see the stars with my naked eye Mr Wright asked him what his instrument cost He answered - "Well, that is something I dont like to tell. (stuttering or hesitating in his speech a little, as usual) It is a very proper question however" - "Yes," said I, "and you think that you have given a very proper answer."

Returning my companion Wright the sexton told me how dusty he found it digging a grave that afternoon for one who had been a pupil of mine -for two feet he said, notwithstanding the rain, he found the soil as dry as ashes.

With a certain wariness, but not without a slight shudder at the danger oftentimes, I perceive how near I had come to admitting into my mind the details of some trivial affair, as a case at court- And I am astonished to observe how willing men are to lumber their minds with such rubbish -to permit idle rumors tales incidents even of an insignificant kind -to intrude upon what should be the sacred ground of the thoughts Shall the temple of our thought be a public arena where the most trivial affair of the market & the gossip of the teatable is discussed –a dusty noisy trivial place –or shall it be a quarter of heaven itself –a place consecrated to the service of the gods -a hypaethral temple. I find it so difficult to dispose of the few facts which to me are significant that I hesitate to burden my mind with the most insignificant which only a divine mind could illustrate. Such is for the most part the news -in newspapers & conversation. It is important to preserve the mind's chastity in this respect. Think of admitting the details of a single case at the criminal court into the mind -to stalk profanely through its very sanctum sanctorum for an hour -ave for many hours--to make a very barroom of your mind's inmost apartment -as if for a moment the dust of the street had occupied you -aye the very street itself with all its travel passed through your very mind of minds -your thoughts shrine -with all its filth & bustle [possibly "hustle"]- Would it not be an intellectual suicide? By all manner of boards & traps

- 4. The moon would have been half full on the 4th.
- 5. I don't know when the first time was.



MARIA MITCHELL





FRIEND MARIA MITCHELL

threatening the extreme penalty of the divine law excluding trespassers from these grounds it behoves us to preserve the purity & sanctity of the mind. It is so hard to forget what it is worse than useless to remember. If I am to be a channel or thorough [thoroughfare] –I prefer that it be of the mountain springs –& not the town sewers— The Parnassian streams There is inspiration—the divine gossip which comes to the ear of the attentive mind—from the Courts of Heaven—there is the profane & stale revelation of the barroom & the police Court. The same ear is fitted to receive both communications—only the character of the individual determines to which source chiefly it shall be open & to which closed. I believe that the mind can be profaned by the habit of attending to trivial things so that all our thoughts shall be tinged with triviality. They shall be dusty as stones in the street— Our very minds shall be paved and macadamized as it were—its foundation broken into fragments for the wheels of travel to roll over. If we have thus desecrated ourselves the remedy will be by circumspection—& wariness by our aspiration & devotion to consecrate ourselves—to make a fane of the mind. I think that we should treat ourselves as innocent & ingennuous [ingenuous] children whose guardians we are—be careful what objects & what subjects we thrust on its attention of the street.

Even the facts of science may dust the mind by their dryness –unless they are in a sense effaced each morning or rather rendered fertile by the dews of fresh & living truth. Every thought that passes through the mind helps to wear & tear it & to deepen the ruts which as in the streets of Pompeii evince how much it has been used. How many things there are concerning which we might well deliberate whether we had better know them. Routine –

6. Henry Thoreau would use some of the material from this day in regard to his "we should live in eternity rather than in time" theme, in his early lecture "WHAT SHALL IT PROFIT":

[Paragraph 81] If we have thus desecrated ourselves,—as who has not?—the remedy will be by wariness and circumspection, by devotion and aspiration to reconsecrate ourselves—and make once more a fane of the mind. We should treat our minds—that is, ourselves—as innocent and ingenuous children, whose guardians we are, and be careful what objects and what subjects we thrust on their attention. Read not the Times. Read the Eternities. Even the facts of science may dust the mind by their dryness, unless they are in a sense effaced each morning, or rather rendered fertile by the dews of fresh and living truth. Knowledge does not come to us by details, but in flashes of light from heaven. Yes, every thought that passes through the mind helps to wear and tear it, and to deepen the ruts, which, as in the streets of Pompeii, evince how much it has been used. How many things there are concerning which we might well deliberate whether we had better know them—had better let their peddling carts be driven even at the slowest trot or walk—over that bridge of glorious span by which we trust to pass at last from the furthest brink of time to the nearest shore of eternity. Conventionalities are as bad as impurities. By an undue attention to routine, manners, and so forth, the mind is insensibly dissipated and impoverished—robbed of its simplicity and strength and, in short, emasculated.

1.["The Times" was presumably the London <u>Times</u>.]

2.I [Bradley P. Dean] emend the essay copy-text by omitting 'Conventionalities are at length as bad as impurities.', which appears after this sentence in the essay but which appears without the words 'at length' as the penultimate sentence of this paragraph in the extant reading-draft manuscript.

3.I [Bradley P. Dean] emend the manuscript copy-text by expanding '&c' to 'and so forth'.

The poet W.H. Auden has in 1962 brought forward a snippet from this day's entry as:

THE VIKING BOOK OF APHORISMS, A PERSONAL SELECTION BY W.H. AUDEN...

Pg	Topic	Aphorism Selected by Auden out of Thoreau
353	Reason and Thought	We should treat our minds as innocent and ingenious children whose guardians we are — be careful what objects and what subjects we thrust on their attention.



MARIA MITCHELL

conventionality manners &c &c —how insensibly and undue attention to these dissipates & impoverishes the mind—robs it of its simplicity & strength emasculates it. Knowledge doe[s] not cone [come] to us by details but by lieferungs from the gods. What else is it to wash & purify ourselves? Conventionalities are as bad as impurities. Only thought which is expressed by the mind in repose as it wer[e] lying on its back & contemplating the heaven's—is adequately & fully expressed— What are side long—transient passing half views? The writer expressing his thought—must be as well seated as the astronomer contemplating the heavens—he must not occupy a constrained position. The facts the experience we are well poised upon—! Which secures our whole attention!

The senses of children are unprofaned their whole body is one sense—they take a physical pleasure in riding on a rail—they love to teter—so does the unviolated—the unsophisticated mind derive an inexpressable pleasure from the simplest exercise of thoughts.

I can express adequately only the thought which I *love* to express.— All the faculties in repose but the one you are using –the whole energy concentrated in that.

Be ever so little distracted –your thoughts so little confused – Your engagements so few –your attention so free your existence so mundane –that in all places & in all hours you can hear the sound of crickets in those seasons when they are to be heard. It is a mark of serenity & health of mind when a person hears this sound much –in streets of cities as well as in fields. Some ears never hear this sound –are called deaf. Is it not because they have so long attended to other sounds?



FRIEND MARIA MITCHELL

1858

In this year and the following one, the Hawthornes would be traveling and sojourning in Europe. First they 7. Thoreau would later use this comment pertaining to his "different drummer" theme, in his early lecture "WHAT SHALL IT PROFIT":

[Paragraph 79] Not without a slight shudder at the danger, I often perceive how near I had come to admitting into my mind the details of some trivial affair,—the news of the street; and I am astonished to observe how willing men are to lumber their minds with such rubbish,—to permit idle rumors and incidents of the most insignificant kind to intrude on ground which should be sacred to thought. Shall the mind be a public arena, where the affairs of the street and the gossip of the tea-table chiefly are discussed? Or shall it be a quarter of heaven itself,—an hypæthral temple, consecrated to the service of the gods? I find it so difficult to dispose of the few facts which to me are significant, that I hesitate to burden my attention with those which are insignificant, which only a divine mind could illustrate. Such is, for the most part, the news in newspapers and conversations. It is important to preserve the mind's chastity in this respect. Think of admitting the details of a single case of the criminal court into our thoughts, to stalk profanely through their very sanctum sanctorum for an hour, ay, for many hours! to make a very bar-room of the mind's inmost apartment, as if for so long the dust of the street had occupied us,—the very street itself, with all its travel, its bustle, and filth had passed through our thoughts' shrine! Would it not be an intellectual and moral suicide?

[Paragraph 80] By all kinds of traps and sign-boards, threatening the extreme penalty of the divine law, exclude such trespassers from the only ground which can be sacred to you. It is so hard to forget what it is worse than useless to remember! If I am to be a thoroughfare, I prefer that it be of the mountainbrooks, the Parnassian streams, and not the town-sewers. There is inspiration, that gossip which comes to the ear of the attentive mind from the courts of heaven. There is the profane and stale revelation of the bar-room and the police court. The same ear is fitted to receive both communications. Only the character of the hearer determines to which it shall be open, and to which closed. I believe that the mind can be permanently profaned by the habit of attending to trivial things, so that all our thoughts shall be tinged with triviality. Our very intellect shall be macadamized, as it were,—its foundation broken into fragments for the wheels of travel to roll over; and if you would know what will make the most durable pavement, surpassing rolled stonesspruce blocks—and asphaltum—you have only to look into some of our minds which have been subjected to this treatment so long.

1. Compare I Corinthians 3:16.





MARIA MITCHELL

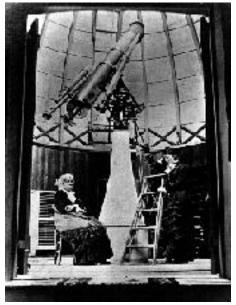
would travel through France and then go by sea to the Italian peninsula. Before the Hawthorne family left Paris, they made the acquaintance of Maria Mitchell there. The Hawthornes went together with Maria to Rome, where she would be their neighbor during the greater part of their stay. They would be in Rome from January into May, where Nathaniel Hawthorne would draft out an English romance. While staying in Rome, Hawthorne would become friendly with a sculptor from Salem named Louisa Lander. She would soon ask to be permitted to do a marble bust of him, and he would visit her studio some fourteen times, usually alone, as she prepared a clay model for this bust. Then the sculptor went off to New England in search of fresh commissions and the Hawthornes went off to Firenze for the summer, and when they would return to Rome in the fall, Hawthorne would begin work on THE MARBLE FAUN.



FRIEND MARIA MITCHELL

1859

A 5-inch <u>Alvan Clark</u> refractor telescope was purchased with funds contributed by the women of America (in part through the influence of Elizabeth Palmer Peabody upon some of her wealthy female friends), and presented to <u>Maria Mitchell</u>.



ASTRONOMY



"The needle is the chain of woman, and has fettered her more than the laws of the country."

- Professor Maria Mitchell



WHAT I'M WRITING IS TRUE BUT NEVER MIND YOU CAN ALWAYS LIE TO YOURSELF



MARIA MITCHELL

1865

At a college he was starting in Cambridge, Matthew Vassar hired the astronomer <u>Maria Mitchell</u> to be Professor of Astronomy and Director of the Observatory.



ASTRONOMY

CAUTION: OBJECTS VIEWED THROUGH A TELESCOPE CAN APPEAR CLOSER THAN THEY ACTUALLY ARE — After teaching at Vassar College for some time, Professor Mitchell would discover to her dismay that despite her reputation and experience, she had been receiving less pay than a number of junior male faculty members. Insisting on a salary increase, she would get it — but the record is silent as to whether that salary increase was such as to create actual parity of reward between her and the male Vassar faculty of equivalent standing.



FRIEND MARIA MITCHELL



A decade after the opening of the fossil oil fields of Pennsylvania, the last whaler sailed from Nantucket Island.

The astronomer Maria Mitchell was made a member of the American Philosophical Society.

THE FUTURE IS MOST READILY PREDICTED IN RETROSPECT





MARIA MITCHELL

1873

There was a new edition of Hiram Mattison's edition of <u>Elijah Hinsdale Burritt</u>'s A PLAN OF THE SOLAR SYSTEM EXHIBITING ITS RELATIVE MAGNITUDES AND DISTANCES (New York: Mason Brothers).

ASTRONOMY

The astronomer Maria Mitchell co-founded an Association for the Advancement of Women.

The firm of <u>Alvan Clark</u> & Sons of Cambridge MA provided a 24-inch lens for the <u>US Naval Observatory</u> in Washington DC (this telescope is still operational).

GEORGE BASSETT CLARK
ALVAN GRAHAM CLARK



NOBODY COULD GUESS WHAT WOULD HAPPEN NEXT





FRIEND MARIA MITCHELL



Due to poor health, Maria Mitchell retired from being Professor of Astronomy at Vassar College.

CHANGE IS ETERNITY, STASIS A FIGMENT



MARIA MITCHELL



June 28, Friday: The American astronomer Maria Mitchell died in Lynn MA.



FRIEND MARIA MITCHELL

1902

The Maria Mitchell Association was formed.



A few months before completing nurse training at White Plains Hospital, <u>Margaret Louise Higgins</u> got married with the architecturally trained <u>William Sanger</u> (the couple initially settled in Hastings, a New York suburb where the husband would find employment as a draftsman, and would produce three children).



MARIA MITCHELL

1908

The Maria Mitchell Observatory was created at Nantucket.





FRIEND MARIA MITCHELL

1968

The Loines Observatory was added to the Maria Mitchell Observatory at Nantucket.





MARIA MITCHELL

2013

August 1, day: Google commemorated the 195th birthday of Maria Mitchell:



"NARRATIVE HISTORY" IS FABULATION, HISTORY IS CHRONOLOGY



FRIEND MARIA MITCHELL

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"It's all now you see. Yesterday won't be over until tomorrow and tomorrow began ten thousand years ago."

 Remark by character "Garin Stevens" in William Faulkner's INTRUDER IN THE DUST



Prepared: January 14, 2014



FRIEND MARIA MITCHELL

ARRGH AUTOMATED RESEARCH REPORT

GENERATION HOTLINE



This stuff presumably looks to you as if it were generated by a human. Such is not the case. Instead, someone has requested that we pull it out of the hat of a pirate who has grown out of the shoulder of our pet parrot "Laura" (as above). What these chronological lists are: they are research reports compiled by ARRGH algorithms out of a database of modules which we term the Kouroo Contexture (this is data mining). To respond to such a request for information we merely push a button.



FRIEND MARIA MITCHELL

Commonly, the first output of the algorithm has obvious deficiencies and we need to go back into the modules stored in the contexture and do a minor amount of tweaking, and then we need to punch that button again and recompile the chronology — but there is nothing here that remotely resembles the ordinary "writerly" process you know and love. As the contents of this originating contexture improve, and as the programming improves, and as funding becomes available (to date no funding whatever has been needed in the creation of this facility, the entire operation being run out of pocket change) we expect a diminished need to do such tweaking and recompiling, and we fully expect to achieve a simulation of a generous and untiring robotic research librarian. Onward and upward in this brave new world.

First come first serve. There is no charge. Place requests with <Kouroo@kouroo.info>. Arrgh.