

The
PALIMPSEST

FEBRUARY 1925

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THE EDITOR

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THE PURPOSE OF THIS MAGAZINE

THE PALIMPSEST, issued monthly by the State Historical Society of Iowa, is devoted to the dissemination of Iowa History. Supplementing the other publications of this Society, it aims to present the materials of Iowa History in a form that is attractive and a style that is popular in the best sense—to the end that the story of our Commonwealth may be more widely read and cherished.

BENJ. F. SHAMBAUGH

Superintendent

THE MEANING OF PALIMPSESTS

In early times palimpsests were parchments or other materials from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the records of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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KATE SHELLEY

THE PALIMPSEST

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Kate Shelley

Late in the afternoon of July 6, 1881, heavy, black clouds rolled up from the horizon and the gloom pre-saging a violent storm swept over the Des Moines Valley. Farmers hastened their evening chores while anxious housewives hurried to bring in their washing and see that the chickens had found shelter. As the dense cloud-veil spread over the sky, twilight deepened into the darkness of night which was made blacker in contrast to the vivid illumination of the lightning flashes. Nearer and nearer came the ominous rumble and crash of the thunder until it made the windows rattle. Then down came the rain in sheets.

In a little cottage up the valley of Honey Creek beside the Chicago and North Western Railroad about half a mile from the Des Moines River, the Shelley children watched the appalling storm until "fright took possession" and drove them from the

windows "through which the lightning flashed dreadful pictures of destruction." The creek became a raging torrent, and the turbulent waters rose until they threatened the stable half way down the slope where the stock had taken refuge. Something had to be done. Kate, who was fifteen, the oldest of the children, dashed out into the rain, waded through the water that was pouring down the hillside, let out the horses and cows to take care of themselves, and rescued some little pigs that had climbed on a pile of hay for safety.

The storm continued with unabated violence during the long evening and on into the night. At the Shelley home there was no inclination to retire. While the younger children dozed, Kate and her mother remained alert and vigilant — apprehensive of danger. Honey Creek, filled with fence posts and uprooted trees, was still rising. They feared that the railroad bridge across the creek a quarter of a mile up the track could not withstand the flood, and they knew the long wooden trestle across the Des Moines River must be under a terrific strain.

The spring and early summer had been unusually rainy, so that the river had stood for days at high-water mark. Railroad embankments had been undermined and bridge piling had loosened. M. J. Shelley, an emigrant from Tipperary, Ireland, had been section foreman before he died in 1878, and well his family knew the perils of the railroad on such a night as the sixth of July, 1881.

It must have been after eleven o'clock when Kate and her mother heard the rumble of a train crossing the Des Moines River bridge. It was the "pusher", an engine stationed at Moingona to serve as an auxiliary in pulling heavy trains up the grade on either side of the river. The crew, consisting of Ed Wood, George Olmstead, Adam Agar, and Patrick Donahue, had been ordered to "run to Boone and return to Moingona regardless of all trains." The engine came backing down the track with the brakeman and section foreman standing on the running board behind the tender looking for washouts. Past the Shelley house they went and onto the swaying Honey Creek bridge. Twice Kate heard the engine bell toll distinctly, "and then came the horrible crash and the fierce hissing of steam" as the engine plunged down with her crew into twenty-five feet of rapid, swirling water.

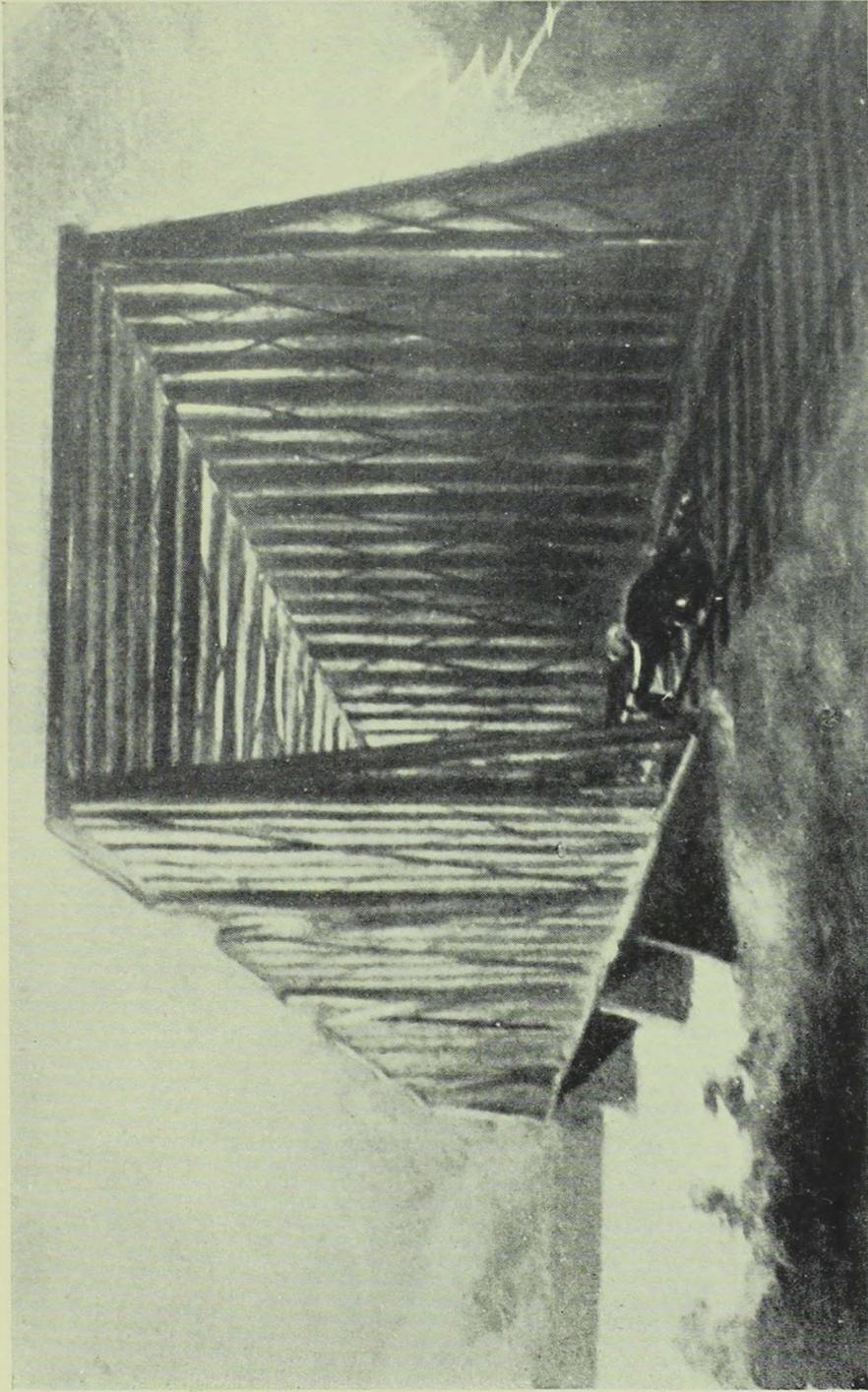
"Oh, mother", Kate exclaimed, "they have gone down." The storm and all else was forgotten. "It seemed as still as death; as silent as the grave." Kate decided that she must go to help the men and stop the passenger that would soon be due at Moingona — the midnight express from the west. Many lives were in her hands that night. The remonstrances of her mother were of no avail. She felt she simply had to go. Attired in an old skirt and jacket, she caught up a straw hat, improvised a lantern by hanging a little miner's lamp in an old lantern frame, and started out into the night and the

storm to do her duty as she saw it, knowing that mother and the children were praying God to keep her from harm.

The entire valley was flooded by that time, and the yard of the Shelley home resembled "the inside of a huge oval bowl" filled with water which extended to the railroad track. Unable to go directly to the railroad and thence up the track to the wreck at the bridge, Kate climbed the bluff back of the house, made a semi-circular detour to the southwest until she reached a place where the wagon road came through a cut in the bluffs and crossed the railroad. Once on the track she ran to the broken bridge.

Upon arriving at the scene of the wreck she saw by the lightning that two of the men, Wood and Agar, had chanced to clamber upon some convenient trees in the midst of the swelling flood and thus escape drowning for the time being. The other two were lost. One of the men called to her again and again but in the tumult she could not understand what he said.

Unable to render aid to the ill-fated crew and realizing that the midnight train would soon be due, she turned westward and hastened as fast as she could go toward Moingona in an effort to save the lives of the passengers on board the approaching train. Moingona was only a mile and a quarter away, but the Des Moines River with its long wooden bridge, trembling from the incessant rush of the high water, lay between her and the little village.



THE DES MOINES RIVER BRIDGE

After a temporary lull the storm had burst out anew. The thunder and lightning were frightful, while the rain came in gusts and torrents. To attempt to reach Moingona across the raging Des Moines seemed almost certain death: to hesitate might mean the death of hundreds of passengers on the train speeding to destruction. That was the thought that kept pounding at Kate's consciousness as she ran along the track. If she could only get there in time. What if the train should catch her on the bridge? What if the train should go thundering by in the darkness? She pictured the engine plunging into Honey Creek and the coaches piling up in the water. In imagination she could almost hear the screams of the people. She must hurry — hurry. How hard the wind blew! Sometimes it almost took her off her feet. There seemed to be no strength left in her. But she must go on!

Drenched to the skin, trembling, and breathless she reached the river. Never before had she seen the water so high. It was roaring by almost level with the track. The muddy river was filled with debris — even big trees uprooted by the wind and carried away by the water were sweeping headlong toward Des Moines. Across the seething flood stretched the long bridge that seemed just on the point of joining the general rush down stream.

Pedestrians had never been invited to use the bridge and as a method of discouraging such a practice some of the planking had been removed. The

ties were a full pace apart and studded thickly with twisted, rusty spikes. There was danger in crossing during fair weather and in daylight, but to attempt the feat in pitch darkness with the wind blowing a gale, rain pouring on the slippery ties, and a raging torrent below was an exploit to daunt the courage of any man.

Unchecked by the timbered bluffs of Honey Creek Valley, the wind swept the river bridge with terrific force. As Kate hesitated a moment to catch her breath and appraise the situation, a gust more violent than usual extinguished the feeble light of her lantern and left her in inky darkness relieved only by the lightning. A feeling of terror seized her, but at the thought of the drowning men back at the broken bridge and the oncoming express she dropped to her knees and began to crawl slowly, laboriously across the long, wind-swept trestle. Guided by the rails, she felt her way from tie to tie. Again and again her skirt caught on a nail and she all but lost her balance. Now and then a sharp pain shot through her hands and knees as a protruding spike or splinter gouged into her flesh. As each flash of lightning displayed the angry, swirling water only a few feet below, she almost fell between the ties from dizziness.

Halfway over a piercing flash of lightning revealed an enormous tree rushing down upon the very spot where she was clinging. In the instant of vision she noticed that the earth was still hanging to the

roots of the tree. Momentary panic brought her upright on her knees as she clasped her hands in terror and in prayer, for it seemed inevitable that the shock would carry out the bridge. But the monster glided between the piers with a rush, the branches scattering foam and water over the girl as they passed.

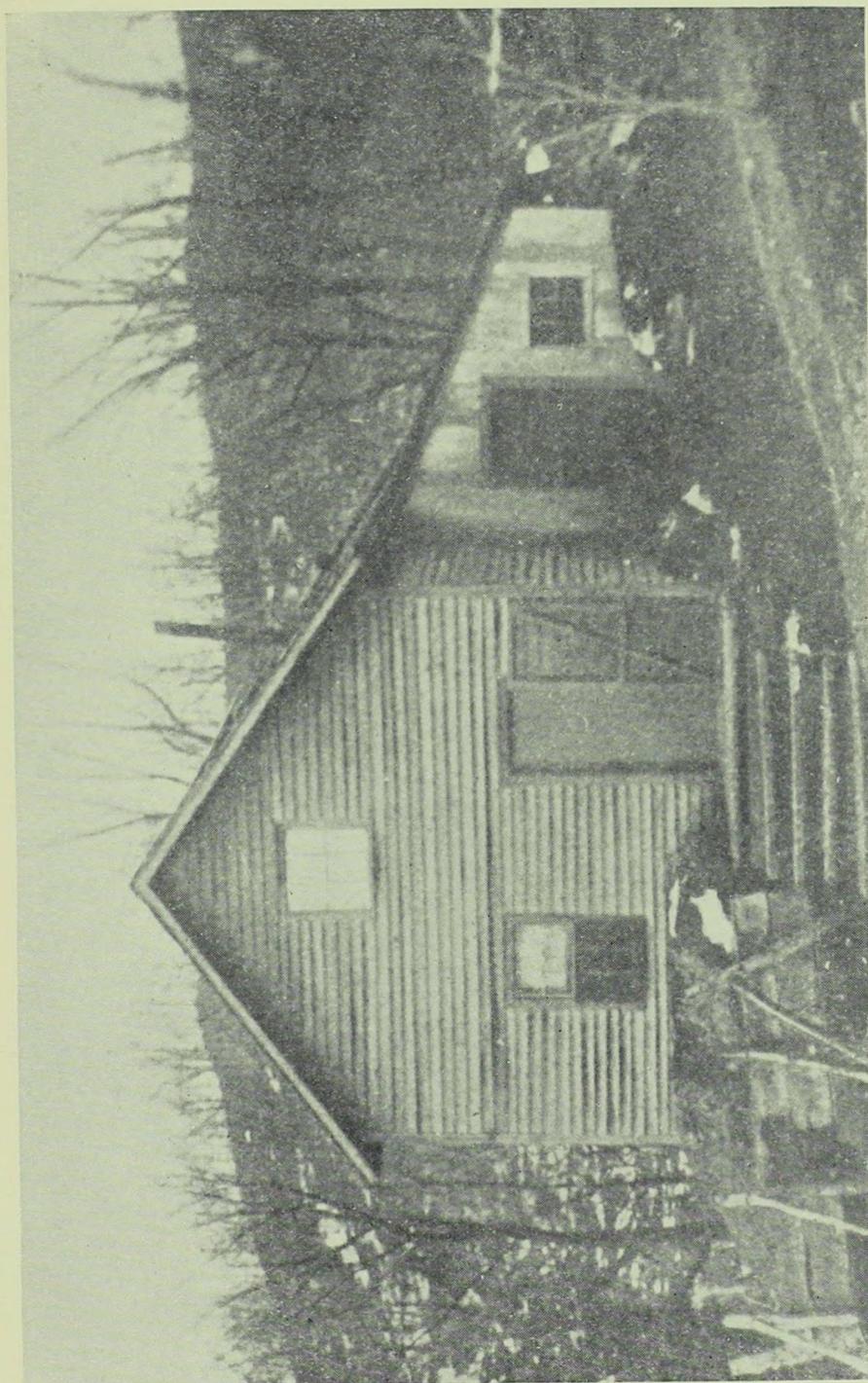
Finding herself still unharmed she resumed her painful progress. It seemed as though she had been on that bridge for hours. She could scarcely remember when she started, while the beginning of the storm and her rescue of the little pigs earlier in the evening seemed years ago. Each minute stretched out interminably, and the impression grew upon her that the end of the bridge was constantly receding. At last, however, she felt the solid ground beneath her. Standing erect, she stopped to breathe for a moment and then set out on the run to the station a quarter of a mile away. It was getting late and her strength was failing fast.

How she finally arrived and told her story Kate Shelley could never remember. She only recalled that someone said, "The girl is crazy." Then one of the railroad men recognized her and the dreadful import of her message was realized. The whistle of an engine in the yards aroused the town. In a few minutes men with ropes and other equipment were ready to go to the rescue of Wood and Agar at the Honey Creek bridge. Kate accompanied the rescue party across the river on the engine, guided them

along the bluff to the track above the washout, and thence back to the scene of the disaster on the east bank of the creek where the survivors of the wreck could be helped. After many efforts a rope was cast to Wood who made it fast to his tree and then came ashore hand over hand. Agar could not be reached until the water began to subside, when he too was taken from his refuge completely exhausted from his long exposure.

During the days that followed the sixth of July, rest or relaxation was not to be considered. On Thursday, eager crowds visited the scene of the tragedy and filled the Shelley house. Newspaper reporters arrived on the second day, burdened with questions and insistent upon exploring the whole neighborhood lest some dramatic detail should be overlooked. Saturday passed in much the same manner but on Sunday, when Donahue's body was found in a corn field, the excitement subsided. It was then that Kate Shelley's strength gave way. For three months she was confined to her bed, but at last her natural vitality triumphed.

Restored to health, Kate found that the sun shone on a brighter world for her. She was no longer the unknown girl dwelling in a poor little home beside the railroad. News of her heroism had been flashed abroad, and almost instantly she had become one of the famous women of her time. Press comments concerning her bravery were wide-spread. Poems were composed, dramatic readings produced, and



THE HOME OF KATE SHELLEY

editorials written — all presenting the story of her courage and character.

Probably the best known poem inspired by the daring act of the modest Irish girl was written by Eugene J. Hall. It closes with the following stanza:

Ah! noble Kate Shelley, your mission is done;
Your deed that dark night will not fade from our gaze.
An endless renown you have worthily won;
Let the Nation be just and accord you its praise.
Let your name, let your fame and your courage declare
What a *woman* can do and a *woman* can dare!

She was literally showered with letters filled with testimonials of gratitude and praise. Some contained verses in her honor, others eulogized her in prose, while there was no end of hair-raising, heart-throbbing descriptions of her adventure. There were letters of sympathy, letters requesting a photograph, a fragment of her dress, or a splinter from the bridge, and letters offering glowing opportunities for investing her fortune.

Numerous gifts and tokens of esteem were bestowed upon her. The school children of Dubuque gave her a medal. The *Chicago Tribune* raised a fund to help the Shelley family out of debt. As an emblem of appreciation of her "brave and humane action", and in recognition of her "efforts to save the lives of railway passengers and employes during the terrible storm of the night of July 6, 1881," the Nineteenth General Assembly of Iowa passed an act in 1882 authorizing the Senator and Representative

of Boone County, together with the Governor of the State, to procure and present her with a gold medal bearing an appropriate inscription. The legislature also appropriated two hundred dollars in cash to be given to Miss Shelley. A drinking fountain erected in a Dubuque park was dedicated to her. The employees of the North Western Railroad gave her a gold watch and chain, while the company issued her a life pass over the road.

The story of Kate Shelley appealed deeply to Miss Frances E. Willard. Soon after the event she wrote to her friend, Mrs. Isabella W. Parks, wife of the president of Simpson College, offering to contribute twenty-five dollars toward providing the means of a college education for such a deserving girl. Mrs. Parks raised enough money for the expenses of a year and Miss Shelley attended Simpson during the terms of 1883 and 1884. But she found college study very difficult and, being needed at home, she decided to give it up.

In 1903 she accepted employment as station agent at Moingona — a position which she held until a short time before her death on January 21, 1912. Twice each day during all those years she went from her home to the little depot, crossing the new iron bridge that had replaced the one over which she crawled on that fateful July night so many years before. Trains always stopped at her little cottage when she was on board. At the time of her funeral the company sent a special train to her home for the

convenience of the family and hundreds of friends.

On the main line of the North Western Railroad between Boone and Ogden and about four miles north of the village of Moingona, a fine new bridge now spans the Des Moines River. This structure, one of the longest and highest of its kind, is widely known as the Kate Shelley bridge — a fitting monument to perpetuate the memory of the famous Iowa heroine.

J. A. SWISHER

The Eclipse of 1869

The Man in the Moon wears a long black dunce cap of enormous dimensions, which he always keeps pointing away from the sun. Frequently, on his journeys round the world, as if in a mood for flirtation, he draws the apex of his cap across the face of Old Lady Earth in a great sweeping curve. With marvelous rapidity the great moon shadow travels thousands of miles and then passes off into space and invisibility.

Such a lunar flirtation is more commonly known as a total eclipse of the sun. That is to say, the moon travels in a direct line between the sun and the earth and so close to the earth that it completely covers the sun. The result is that the umbra, or the moon's dunce cap, makes a great shadow path which moves at the rate of two thousand miles or more an hour across the surface of the earth.

To an observer stationed in this path the sun is completely hidden for a very brief period varying from a fraction of a second to nearly eight minutes. The average duration of the "total phase" is about three minutes, so that the whole time consumed in a century throughout the world could be computed in hours. Making allowances for bad weather, unfavorable time of day, and inaccessible locations, it would be safe to assert that less than one full day in

a hundred years is available for the observation of total eclipses. Although expeditions have gone to the ends of the earth, astronomers have been greatly handicapped in securing scientific information on account of the limited opportunity of making observations.

The width, length, and location of the shadow path — the region in which the sun is totally eclipsed — depends upon the relative distances between the earth, moon, and sun as well as the obliqueness with which the line of centers strikes the earth. It might be a mere phantom line or it might be, “under the rarest combination” of circumstances, a hundred and sixty-eight miles wide. The shadow arc might fall anywhere in the world — indeed, as a rule the Man in the Moon is a bit shy in his attentions for he seems to favor the most inaccessible and out-of-the-way places. Sometimes, however, as on January 24, 1925, he throws discretion to the winds and boldly treats populous regions to an astronomical thrill that they will not experience again in centuries.

Only once since the occupation of Iowa by white men has a total solar eclipse been visible within the borders of this State. On Saturday, August 7, 1869, occurred an eclipse that is memorable both on account of the local interest it created and the unusual opportunities afforded for scientific observation. Not until 1999, astronomers say, will such a phenomenon again be observed in Iowa.

Beginning in the Pacific Ocean east of Japan shortly after sunrise, the shadow path swept northward in a long graceful curve to Alaska, whence it took a southeasterly direction, crossed western Canada, entered the United States in Montana, and reached the outskirts of civilization in northwestern Iowa. Passing across central and southeastern Iowa, Illinois, southern Indiana, Kentucky, Tennessee, Virginia, and North Carolina, the eclipse ended in mid-Atlantic late in the evening after having travelled nearly half way around the earth.

The United States Navy coöperated with the Coast and Geodetic Survey in sending a costly expedition to Alaska to make observations. Numerous parties, both private and official, representing many academic and scientific institutions, made elaborate preparations to study the eclipse all along the path through the settled portion of the United States, while thousands watched the phenomenon through smoked glass or improvised telescopes. Iowa was almost ideally situated. The sun would be near the zenith at the time of the eclipse, atmospheric conditions would probably be most favorable at that time, and facilities were available for the transportation of instruments and other necessary equipment. Several prominent astronomers established temporary observatories in different parts of the State, and it was in Iowa that some of the most important scientific work was done.

The Franklin Institute of Philadelphia, coöper-

ating with Professor J. H. C. Coffin of the United States Navy and Superintendent of the Nautical Almanac, took up headquarters at Burlington, whence small parties were sent to Mount Pleasant, Ottumwa, and Oskaloosa. This was chiefly a photographic expedition, whose principal object was to secure as many photographs as possible during the progress of the eclipse.

At Des Moines Lord Sackville A. Cecil of England collaborated with Lieutenant Commander William Harkness of the United States Naval Observatory of Washington. The Naval Observatory likewise established a station at Cedar Falls and another at St. Louis for the purpose of determining accurately the extreme northern and southern limits of totality. Professor James C. Watson of the University of Michigan was at Mount Pleasant, while at Jefferson a party of scientists, including such famous astronomers as Sir Robert Faulkner of London, James Douglas and Commodore Ash of Montreal, and Henry Vail of Philadelphia, conducted important experiments. The purpose of working at so many different places was to avoid adverse local weather conditions if possible. The activities of the various parties were so well coördinated, however, by previous arrangements, that there was very little duplication of effort.

Professor Coffin came to Burlington several weeks before the eclipse to make preparations and determine the exact latitude and longitude of the place.

The Franklin Institute party, numbering fifteen in all, were given free transportation from Philadelphia to Burlington. They brought a car load of apparatus which included two Munich equatorial telescopes of six-inch aperture equipped with clock work to move them with the sun, a Dolland four-inch telescope equatorially mounted, several spectroscopes, and considerable photographic apparatus. The larger telescopes were borrowed from Philadelphia High School and Pennsylvania College at Gettysburg, while the smaller instrument belonged to Pennsylvania University. Upon arriving at Burlington the city council extended the courtesy of the city to the "distinguished astronomers who come here to represent the United States government." Some of the men remained in Burlington but the others proceeded to the stations farther west where they had been assigned.

On arriving at their destination the first efforts of the scientists were directed toward the selection of a suitable site for making their observations and the housing of their equipment. In some instances an advance agent did this work of reconnoitering. An elevated position was usually selected, from which the view would be unobstructed by trees or other objects, and to obviate the interference of a low-lying haze or fog during the precious moments of totality. There was also some hope that a glimpse of the fleeting shadow of the moon might be caught from the heights, by those who might have time to

watch for it. Nor was an elevated position entirely necessary for the observance of the eclipse, which occurred in mid-afternoon at an hour when the sun was plainly visible from almost any convenient spot. Indeed, in Des Moines, the observatory was located on the site of the present courthouse which is on the flood plain of the Des Moines River. The eclipse stone marking the exact latitude and longitude of the spot still remains in the courthouse yard.

At Burlington a square of open ground was selected on South Hill, then owned by H. W. Starr and now included in South Hill Park. A suitable shelter for the telescopes and other paraphernalia was erected near the southwest corner of the tract. This building, which was typical of those constructed elsewhere, contained a main room ten by twelve feet in dimensions. That portion of the roof covering the telescopes was portable, so that it might be lifted off, set aside, and replaced again at the close of the day's operations. As pictures were also to be taken at this station two small dark rooms and a larger developing room were provided at one end in addition to the main room. These cramped quarters served as laboratories for the photographers, whose work in those days of wet plates was of a very exacting nature, requiring the highest type of training and skill. It was necessary to coat each plate with a special gelatine preparation, which in turn was impregnated with the silver nitrate solution, placed in the plate-holder in one dark room, passed out to the

operators who exposed the plate in the camera and returned it to another dark room where it was developed, passed through the fixing bath, washed twice, flowed with glycerine, and placed in the rack to dry.

These photographic parties consisted of four or five men — one or two who prepared the plates, one who operated the camera, another who timed the exposure, and the last who operated the developing room in which the process was completed. The very highest grade of work on the part of each man was required to insure the success of the entire undertaking, as a blunder on the part of any one of them might prove disastrous. They drilled themselves in team work, so that during the eclipse they might work with the alertness and precision of a machine gun crew. So well did they coöperate that at Burlington forty-one perfect negatives were secured out of forty-two exposures made. Indeed, the dark-room operators were the heroes of the occasion. Some of them journeyed hundreds of miles at their own expense for the purpose of observing the eclipse, and returned again to their homes, scarcely having caught so much as a glimpse of the total phase of that marvelous phenomenon, except for that which came to them through the medium of the precious sensitized plates with the development of which they were intrusted.

Miss Maria Mitchell, a noted astronomer of Vassar College, brought to Burlington a class of eight girls interested in the eclipse. Dressed in the height

of fashion, with their wide hoop skirts and tiny parasols, and schooled in ladylike demeanor, they lent a touch of romance to the occasion. No doubt they won the admiration of the young gallants of Burlington and became objects of envy on the part of neglected local maids.

At Jefferson, several days were employed in making a minute topographical survey of the vicinity before a site was selected east of the old fair grounds, on a hilltop beyond what is now the north end of Chestnut Street. The observatory building in Ottumwa was erected on a high prominence in a plot proffered by John Devans. For years thereafter the place was known locally as "Observatory Hill", in the vicinity of High Point Chapel on Elm Street.

At Oskaloosa a small party of scientists went out into the open country adjacent to town, keeping their instruments in a small brick dwelling a short distance west of "Oskaloosa College", while another local party viewed the eclipse from the roof of a new three-story skyscraper which had just been completed at the northwest corner of the public square.

It is not known for certain just where the main parties were located in Mount Pleasant. Some of the visitors stayed at the home of their old friend, J. H. Whiting, at the corner of Lincoln and Henry streets and made use of the flat deck roof of his dwelling for their instruments. Prof. E. C. Pickering, of the Massachusetts Institute of Technology,

connected with the party sent out by the Nautical Almanac, conducted his experiments from the corner room on the third floor of the four-story Brazelton House which afforded an unobstructed view to the west. On the roof above, astronomers labored at one corner, while at another place sat a small group of religious fanatics, "arrayed in their ascension robes of spotless white", silently awaiting the end of the world.

At Cedar Falls observations were in charge of Dr. Asa Horr, of Dubuque, President of the Iowa Institute of Science and Arts, assisted by Wm. I. Anderson and W. W. Wormood. As the object of this party was to determine the extreme northern limit of totality, a line perpendicular to the path of the eclipse was established with the greatest of care, passing through the cupola of the old Soldiers' Orphans' Home. Using this cupola as a starting point, competent observers were stationed at intervals of one-half mile in both directions. It was their duty to obtain the exact duration of totality in seconds, by means of a stop watch. Thus the approximate dividing line between the total and partial phase of the eclipse could be determined.

W. S. Gilman, of New York, equipped with a four-inch telescope, made observations for the Washington naval observatory at St. Paul Junction, near Sioux City. At Cherokee, J. Blickensderfer took amateur time observations with unusual care, using a telescope with a three and three-tenths inch aper-

ture. William Pilger of Burlington, who still resides at 715 Elm Street, used to good advantage a two-inch telescope on North Hill. In Linn County J. W. McClellan, superintendent of the public schools at Marion, made some valuable investigations on his own responsibility, toward ascertaining the north line of totality. He determined that this line ran diagonally through section 16, township 85, range 6, west of the Fifth Principal Meridian.

In every community and at almost every fireside for weeks in advance the coming eclipse was a common topic of conversation in Iowa. The event was also freely discussed in the columns of the newspapers, and much valuable information as well as some misinformation was disseminated concerning nature's free exhibition. The interest created by witnessing the eclipse started more than one young Iowan upon a career of science.

In nearly every city, groups of citizens met for the purpose of viewing the phenomenon. Such telescopes as were available were used, while field glasses and surveyors' instruments were likewise pressed into service. Many watched the eclipse with the aid of a piece of colored glass, amber or violet being commonly employed, while the "rank and file" used only a smoked glass made by coating a fragment of broken window pane with the soot from a lighted candle or the flame of a kerosene lamp. These makeshifts sufficed to shield the eye from the intense light of the sun, and in fact afforded the ob-

server about as good a view of the eclipse as might have been obtained with more elaborate paraphernalia.

At Keokuk many house-top parties assembled to witness the eclipse; an especially notable one taking advantage of the broad roof of the Estes House, while at least one group went far afield to secure a suitable hill for their observations. Like distant pastures, each hill beyond seemed a little higher, and so the party strayed on and on through "fields of fragrant clover" until the eclipse was upon them before they realized it. Without a moment's delay they were compelled to set up their instruments hastily upon the spot where they were, having passed many superior locations.

While the eclipse was in progress the sky changed from its usual azure to a livid purple or violet tint. "The color of the surrounding objects", one authority stated, became "yellowish or of a light olive or greenish tinge", and the figures of persons assumed an "unearthly cadaverous aspect". The reflections of the sun falling through the leaves and branches of the trees upon the ground or upon the sides of buildings, changed gradually from their usual circular form to the shape of the crescent, caused by the moon overlapping the sun. As the eclipse advanced, a marked decrease in temperature was noticed. At Des Moines a drop of 13° Fahrenheit was registered by J. R. Eastman and at Mount Pleasant the temperature fell from 40.8° centigrade

to 24.7° centigrade, while at Cedar Falls a light dew was precipitated as a result of the cooling of the atmosphere. Just before the moment of totality strong air currents were felt — also the result of the rapid cooling of the air within the area of the shadow path.

A few minutes before obscurity, as well as at the close of the total phase, remarkable wavering “shadow bands” were observed. From an elevated position, the moon’s shadow could be seen sweeping across the landscape and in an instant enveloping all in its uncanny darkness. At Keokuk, a local observer reported that he was able to discern one of the brighter stars for a period of ten minutes after the close of the total phase.

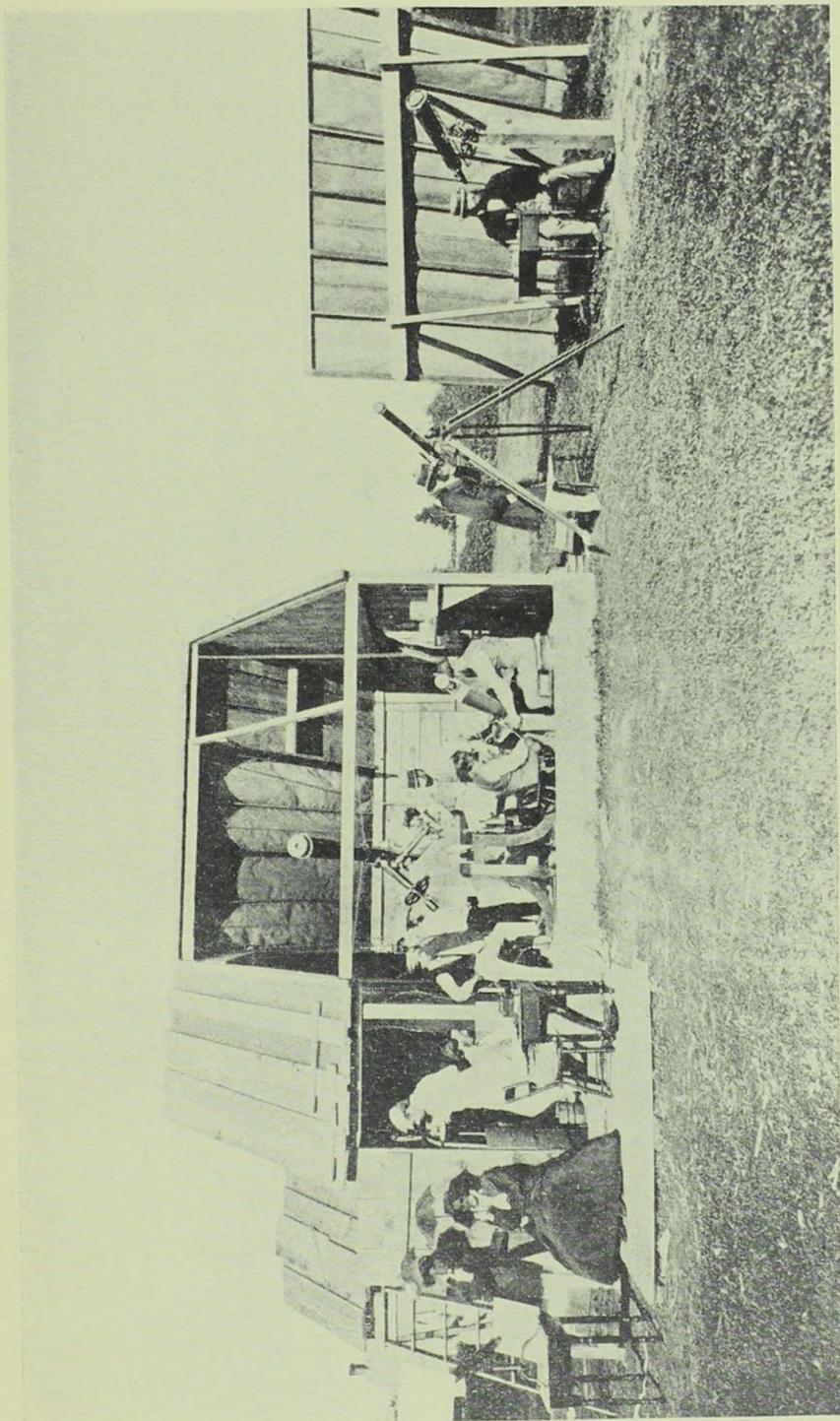
The darkness, however, was somewhat less intense than that which prevails at night in the presence of a full moon, though it appeared greater on account of the sudden transition from day to night. The twilight of the eclipse resembled but little the darkness of night. It was attended by unnatural, ubiquitous gloom tinged with green, red, or yellowish crimson. The sky in Iowa was clear and bright at the time so that no light was reflected from clouds to destroy the full effect.

At Des Moines the duration of the total phase, as registered by T. H. Safford of Dearborn Observatory, was two minutes and fifty-two seconds. A discrepancy of from six to twenty-two seconds was noted in the time of the various phases as calculated

at Washington years in advance. A part of this difference might be accounted for by an error in securing the time, which was taken by telegraph from Springfield, Illinois.

It is safe to say that of all the phenomena of the heavens, there is none that has so engaged the attention of mankind as have solar eclipses. In ancient times, their prediction and observance was made a matter of state policy in order to operate upon the fears of the ignorant and impose upon them a superstitious regard for the occult wisdom of their rulers. Even among civilized and enlightened people a total eclipse of the sun is an awe-inspiring spectacle, capable of filling all who are privileged to witness it with a feeling of wonder and foreboding. In this respect the eclipse of 1869 was no exception to the rule, particularly in rural or frontier communities such as Iowa.

Live stock early sensed the approach of the eclipse, and the cattle went bellowing about in an uneasy, restless manner seeming to fear the approach of some impending danger. As the eclipse advanced, they gathered in groups as if in preparation for nightfall or made their way toward stable or shed according to their custom. Birds flocked together and, flying ceaselessly back and forth, uttered shrill calls to each other as if in conference before autumn migration. Chimney swifts, circling about their chimneys, finally dropped in one by one as for the night. Poultry also became noticeably



THE BURLINGTON OBSERVATORY

disturbed by the weird effect of the oncoming darkness. Old hens ran about frantically, clucking their alarm to their distracted chicks, and gathered their broods under their wings as if making ready for the unexpected night. Chickens, turkeys, and other barnyard fowl sought their roosts, wondering no doubt who moved up the clock and compelled them to go to bed on half empty gizzards. In some instances dogs, creeping close to their masters, barked or howled pitifully. Finally, as darkness advanced and the temperature fell, the chirp of the crickets added to the weirdness of the scene and the call of the whip-poor-will came from the distant woodland.

Fifty years earlier in Iowa the eclipse of 1869 would have witnessed naked savages dancing in circles, furiously beating their tom toms, shooting burning arrows at the great, open-mouthed dragon about to devour their sun, or chanting incantations imploring the intercession of the Great Spirit. Instead, it is alleged, strong, rugged, self-relying, often blasphemous pioneer men suddenly became reverent. Some of the women of more timid nature became hysterical, while crying children tugged frantically at their mothers' aprons. Older children in the country, who were playing or gathering berries in the timber, ran "straight for home", stopping neither for rail fences, bushes, nor creeks in their haste to reach a haven of refuge, while the "town kids", more sophisticated than their country cousins, exhibited great hilarity, emulating in their

vociferous yelling the cheers of their elders on the house tops.

The occasion was not without its humorous aspect and many amusing incidents are told. A corpulent old colored mammy seen running up an alley toward her home in a very disheveled condition was asked where she was going in such haste. She paused long enough to shout, "The good Lord hab' sent fo' us an' I'se a gwi'an." An observer at Mount Pleasant narrates the case of a man who went about town for days beforehand, denouncing the impiety of the scientific preparations, asserting that the astronomers were profanely attempting "to pry into God's secrets", and that He had "veiled His sun in order to baffle them". The cloudy weather which continued up to the day of the eclipse seemed to give some support to his opinion, but, notwithstanding his declaration that "God would keep His rain a-going" and prevent the use of their "irreligious telescopes", the day was perfectly clear. Another local prophet announced that "the eclipse was a judgment upon the world for its abominations, and that the path of its shadow over the earth would be marked by utter blight."

The eclipse made a deep impression on those who viewed it. Important family events were often spoken of as occurring so long before or after the great eclipse. Only a few, perhaps, of those who witnessed the event remember the exact date, or even the year, but nine out of ten in speaking of the

subject begin by saying, "That was the time when the chickens went to roost". Of all the impressions associated with the eclipse, that was the one thing most indelibly stamped upon their memories.

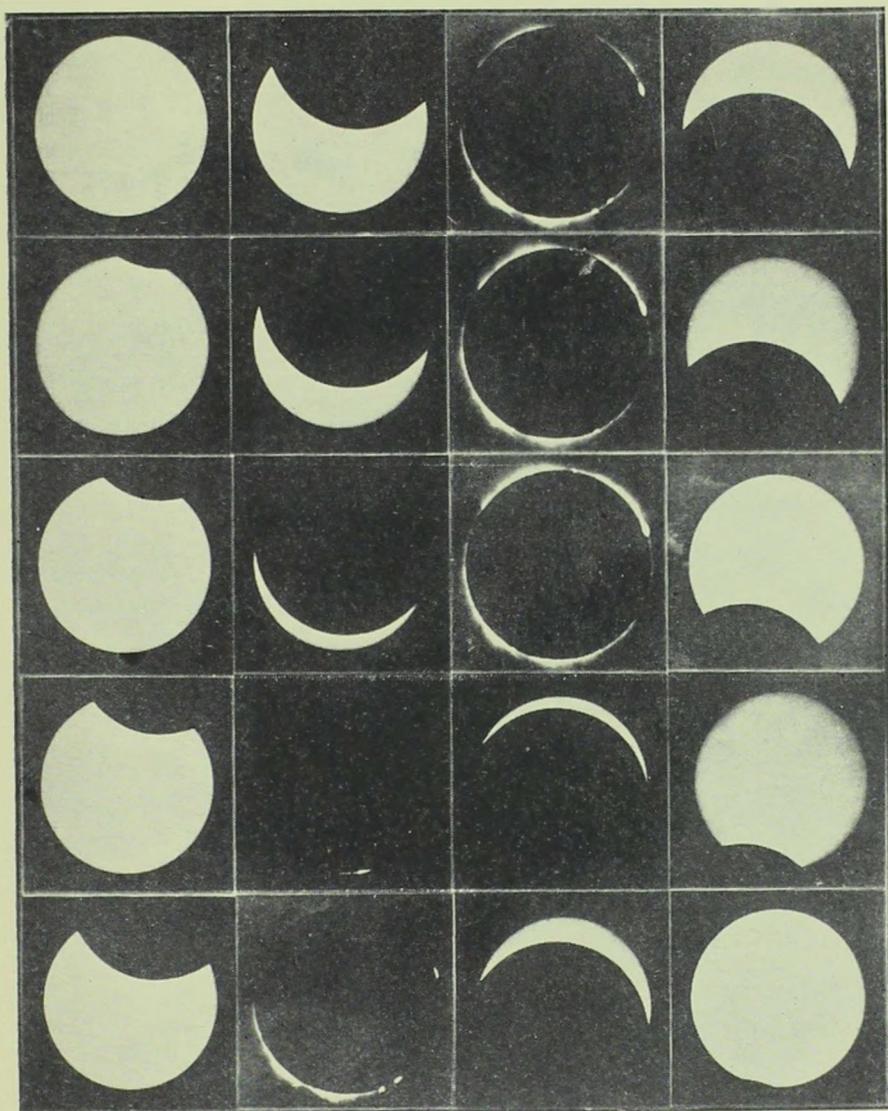
The eclipse of 1869 is chiefly noteworthy for the scientific discoveries that were made. Conditions for observation were almost ideal in Iowa. The sky was clear and totality occurred in the afternoon when the sun was in a very desirable position. Photography, crude as it was, probably contributed most in revealing new information to physicists, astronomers, and chemists. The Hover Brothers of Mount Pleasant working under the direction of Professor Pickering, J. C. Browne and W. J. Baker at Ottumwa, and Mr. Libby of Keokuk obtained clear pictures of the corona — the first ever taken in America. Partly from these photographs and from other data it was definitely ascertained that the corona is a permanent object definitely associated with the body of the sun. The existence of coronium, a hypothetical element in the corona, was described by William Harkness at Des Moines and Professor C. A. Young at Burlington. Young also observed that the principal corona lines coincided with certain aurora "iron" lines.

At Ottumwa, the first authentic photograph of the phenomenon known as Baily's Beads was secured. This is an illusion observed just before the precise moment of totality, and is caused by the light from the narrow rim of the sun being broken into small

sections by the mountains of the moon. The light, shining down the valleys of the moon, appears as a "strand of a glorious necklace of pearls".

But while the scientists were making the best of the splendid opportunities for which they had made such elaborate preparations, thousands of men and women, unconcerned with astronomical problems or the interpretation of the spectacular event, watched with reverence and fascination the obedience of the two great luminaries to the eternal laws that govern them.

BEN HUR WILSON



THE ECLIPSE OF 1869

THIS PHOTOGRAPH WAS TAKEN AT BURLINGTON. THE TRANSIT BEGINS IN THE UPPER LEFT-HAND CORNER AND PROGRESSES FROM TOP TO BOTTOM IN COLUMNS FROM LEFT TO RIGHT.

Comment by the Editor

THE LEGACY OF LITERATURE

Fortunate is the nation, the commonwealth, or the community that is of good repute in literature; for the manners and morals of a people are ever at the mercy of popular writers. The ephemeral scribbling of any presumptive dilettante in general vogue does far more to determine the reputation of a class or a community than dusty archives and dreary scholarship. To a person unfamiliar with the real activities and nature of the inhabitants of a country the accounts he reads are as gospel. It might be all very well if he perused only impartial depictions; but what can be hoped for the man who learns about Russia from Oswald Villard, who gets his impressions of France out of *Punch*, or who pictures Iowans through the myopic vision of a Carl Van Vechten. H. L. Mencken has no monopoly of prejudice.

What does it matter that false prophets seem to be prevalent? Their influence may be as transient as their popularity. But what a catastrophe it would be if some should survive, to go editioning down through the ages and screaming their egregious libels to all succeeding generations.

The only reassurance is that the literature which lives, like other forms of art, must be essentially true. Shakespeare may have misrepresented certain individuals, exaggerated racial characteristics, and distorted history; but he portrayed humanity with such insight and fidelity that he vitalized his characters. If he did Macbeth injustice, if he made Portia's Moorish suitor strikingly ineligible it was because their words and actions were true enough to be convincing. As the great English dramatist has dictated the popular conception of British kings, so Homer established the character of Grecian heroes, Dumas made the reign of Louis XIII synonymous with romance, and Tolstoi fixed opinion of Russian peasant life unalterably. Let it be repeated: fortunate are the people of good repute in literature, for in the writings of the masters they find eternal life.

If a country is jealous of its reputation, let it give more attention to its novelists, dramatists, and poets than to its historians. Fiction and verses are widely read — history is not, except in story form among school children. It is from the epics that the great achievements of the race are gleaned, the lyrics sing of the exuberance of life in other times, while the novels and dramas carry an abiding message of human hopes and passions. Histories can be revised, but the impressions derived from *Uncle Tom's Cabin* are likely to be indelible.

A HAWKEYE LITERATURE

Longfellow immortalized Miles Standish, Evangeline, Paul Revere, and even a village blacksmith. But how many persons beyond the borders of Iowa have heard the story of Quimby's daughters or Bill Johnson's courtship; what poet has sung of the prairie mothers; and who can recall the midnight warning of the Moingona maiden. Though innumerable verses and dramatic recitals of Kate Shelley's exploit are alleged to have been written, considerable inquiry and diligent research have disclosed only one poem. The rest have been lost it seems.

In these traditionless times the deeds and the character of a people survive only in their literature, and woe to the Commonwealth without creative writers, for its cherished ideals will perish. Herbert Quick has recreated the character, the habits of thought, and the typical conduct of three generations of Iowans. He has also revealed the materials available for literary use. The field is rich and there should be others as faithful and gifted as he — poets and dramatists — to weave the colorful stories of prairie life into the enduring tapestry of true literature.

In an essay first published in 1809 Fisher Ames declared that of all human passions the desire to secure the respect and admiration of mankind, being the most constant, acts with the greatest force. In

ancient Greece, he wrote, "to excel in arms was the first of all claims to the popular admiration" and poetry was the best vehicle of "reaching the hearts and kindling the fervid enthusiasm of the multitude." But in America wealth appears to be the chief measure of regard and consequently is the principal object of pursuit. "Our inclinations cling to gold." Financially capable of living in comparative leisure, our people have suppressed all taste for the arts in their quest for commercial gain, so that literary "coruscations are confined, like the northern light, to the polar circle of trade and politicks, or, like a transitory meteor, blaze in a pamphlet or magazine." Forsooth, could Fisher Ames have been visioning the people of Iowa who have literary resources and plenty of wealth, but no leisure?

J. E. B.

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