Public Documents of Maine:

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

PUBLIC OFFICERS AND INSTITUTIONS

FOR THE YEARS

1872-73.

AUGUSTA:
SPRAGUE, OWEN & NASH, PRINTERS TO THE STATE.
1873.

ANNUAL REPORTS

OF THE

Trustees, Farm Superintendent and Treasurer

OF THE

MAINE STATE COLLEGE OF AGRICULTURE

AND THE

MECHANIC ARTS.

1872.

PUBLISHED AGREEABLY TO A RESOLVE APPROVED FEBRUARY 25, 1871.

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TRUSTEES.

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TRUSTEES' REPORT.

To the Members of the Legislature of Maine:

GENTLEMEN:—The Trustees of the College of Agriculture and the Mechanic Arts respectfully submit their annual report.

A review of the year just ended inspires new hopes and expectations in the minds of the Trustees and officers of the College, as to its future usefulness and efficiency.

The modified and enlarged course of instruction determined on in the autumn of 1871, has been provided for as fully as the means at command would allow, and is, it is believed, generally approved by the friends of practical education. The several departments of instruction have been in charge of competent men. For a detail of the methods and results of instruction in these departments, you are respectfully referred to the report of President Allen, in subsequent pages.

The number of students has been largely increased. Seventy-one now respond to the "roll-call." Of these, fifty-seven belong to the two lower classes. The Freshman class, now numbering thirty-two, is almost certain to be increased considerably at the beginning of the next term. Perhaps not more than one in ten of the young men connected with the Institution would ever have attempted to obtain a liberal education but for the facilities offered at the State College. We have accommodations for one hundred and twenty-five students. There is scarcely a doubt but these will be fully appropriated within the next two years.

The students have promptly and cheerfully performed the tasks assigned them, whether of study or of *work*. Four years of experience and observation have confirmed the conviction of the Trustees and officers that manual labor is a most valuable necessary auxiliary to study and health. A member of the class which graduated at Orono, in August, declared publicly, that he had performed the most study when he had worked hardest. Mr. Cornell, in speaking of the students of Cornell University, on a

recent occasion, said that "the hardest workers are the best scholars." The Trustees only regret that they cannot furnish more labor.

The farm is in competent and faithful hands, and is exhibiting unmistakable indications of improvement. A house for the family of the President was imperatively needed and has been built. It will be ready for occupancy by mid-winter.

An institution proposing to afford facilities for a thorough practical and scientific training, and passing its inceptive stages, is constantly developing new wants. These, the Trustees have endeavored to provide for prudently. They have authorized expenditures only when the necessity seemed imperative. Yet, as the report of the Treasurer will show, a debt has been contracted. There are, also, future requirements to be provided for. Among those more immediately pressing, is a barn, plainly and substantially built, and of size sufficient to answer the requirements of the farm for years to come. A work-shop of moderate size and cost, where the students can do various kinds of work and acquire facility in the use of tools, would be very useful. A house for a professor is urgently needed. Reference to the report of the Professor of Civil Engineering, will show that additional instruments for field work are necessary to the highest efficiency in that department. Additional apparatus is needed in the departments of Chemistry and Natural History.

A barn, such as needed, would cost		$8,000
A work-shop and tools		2,000
A house for a Professor's family		3,000
For farm improvements and improvements on College grounds there will needed		3,000
For instruction, in addition to the revenue derived from Congressional fund		1,000
Apparatus for the several departments		1,000
Add to this the debt incurred in behalf of the College as shown by Treasurer's Report	$5,451	
Bills unpaid at the date of said report, about	2,549	8,000
Total		$26,000

Respectfully submitted.

ABNER COBURN, *President.*

PRESIDENT ALLEN'S REPORT.

To the Trustees of the Maine State College of Agriculture and the Mechanic Arts.

The year past has been marked by a more extended and general interest manifested by the people of this State in the success of the institution, by a constant increase in the number of the students at the College, and by the graduation of the first class.

We are confident that the people of this State have only to be fully informed of the aims and design of the State College, to appreciate the methods of instruction used, and to see somewhat of the results in the character impressed on the pupils, and they will certainly give their most cordial support to the grand enterprise of affording the best facilities for securing a liberal education to those who are to engage in the industrial pursuits of life.

During the year the attention of the public has been called to the institution by addresses delivered at different times, and by the aid of the press. The attendance of the students at the sessions of the Board of Agriculture has not only been interesting and profitable to themselves; it has also awakened more interest for the college on the part of those who attended these gatherings. The uniformly good deportment of the students on these occasions has reflected credit on the institution.

In pursuing the course of instruction, with the means at our disposal, the constant endeavor has been made to impart to all who have availed themselves of the privileges of the institution, a thorough knowledge of the sciences most necessary to be known by the industrial classes, and to show the application of these sciences to the arts of life. Especial attention has therefore been given to those sciences which are closely connected with agriculture and kindred pursuits. Much time and care has been devoted to the studies of chemistry, botany, zoölogy, human and comparative anatomy, and physiology. Superior facilities of acquiring a thorough knowledge of the higher mathematics have been

afforded to all; while those who are seeking to qualify themselves as civil engineers have been required to put in practice the principles they have learned in the recitations, by actual surveys in the field.

While endeavors are put forth to impart a thorough training in scientific studies, literary culture has not been neglected. Exercises in English composition and declamation accompany the recitations in rhetoric, and studies in history, physics, natural science and law are pursued by means of lectures and recitations.

English Literature, Mental and Moral Science.

In the department of English during the past year, there has been much difficulty in adjusting the instruction to the exact wants of the students. As our conditions of admission do not demand the training in classical studies which other colleges require; and as the imperfect preparation for the scientific studies of the course, which most of the students manifest when entering upon their college life, lays such a heavy pressure upon them, we find it difficult to adjust our requirements to the full demands of the course of study on the one side, and the deficiences of too many of the students on the other. The only remedy is a gradual rise in the standard of qualifications for admission, so that the candidates shall make a better preparation in the high schools, academies or seminaries before entering the college. After the exercises in rhetorical praxis, the students should be required to read thoroughly some of the best historical works and give a written analysis of what they have read. But our library is altogether inadequate for such work; and the students find themselves too much pressed with their scientific studies and manual labor to give much attention to careful reading. If they were more advanced in the elementary principles of science when they enter the college, there would be the needed time; and if the friends of the institution would replenish our library with the standard works in English literature, the students would reap large benefits from such studies. And here I would present the grateful acknowledgments of the faculty and students for the timely donation of $500 for books by the President of your Board, Hon. Abner Coburn, and hope that this example may be followed by many others.

During the year I have heard recitations from the Freshmen in rhetorical praxis; from the Juniors in rhetoric two terms, in logic,

in English literature; from the Seniors in American literature, in history of civilization, in mental and moral philosophy, in political economy, in Constitution of the United States, and have given lectures to this class on rural and international law. In addition to these studies, I have had charge of the declamations and the correction of the compositions.

Department of Mathematics and Physics.

This has continued under the efficient superintendence of Prof. M. C. Fernald, who has labored with his usual energy and success. The recitations have been, from the Freshmen, two terms in Algebra and one term in Geometry; from the Sophomores, two terms in Physics; from the Juniors, in Analytical Geometry, in Differential and Integral Calculus; from the Seniors in Descriptive and in Practical Astronomy. The recitations in Physics and Astronomy have been accompanied with carefully prepared lectures, illustrated with experiments in which the valuable philosophical apparatus belonging to the College has been of great service.

For the purposes of practical Astronomy and for ascertaining the latitude and longitude of different places, various excursions have been made by the Professor and select members of his class.

It is a matter of regret that the County Commissioners did not locate on the College grounds, one of the meridional lines authorized by the State to be established, as this would have furnished to our students some educational advantages.

Department of Civil Engineering.

Prof. Pike gives the following report of his work:

"The department of Civil Engineering has now been in operation about a year and a half, and during that time the first class that entered the college has graduated. Of this class three members graduated as Civil Engineers. During their course, they executed between thirty and forty drawings apiece, some of them being very complicated; made a railroad survey of about a mile in length; designed a number of beams, bridges, retaining walls and arches; besides solving many smaller problems, and doing a large amount of field work. This class labored under the disadvantage of not having a systematic course in civil engineering during their Junior year, but they displayed an energy and ability which did much in making up the deficiency. These gen-

tleman have, I believe, all obtained employment in their profession. The present Senior class had a regular course during their Junior year and it is hoped they will show the benefit of it in the quality and amount of work performed, which thus far has been very satisfactory.

"The wants of the department, most of which are immediate and imperative, are as follows:—The stock of instruments for field work is entirely inadequate for the needs of the department. At present we are obliged to give much less field work than we should if better equipped. In the spring the Sophomore class will enter upon the study of surveying, and unless we have more instruments, they will get very little of the practice which makes the study of any value. We also feel very much the need of correct models of bridges, arches, machines, &c., to serve as examples of design and for use in drawing. There should also be a set of good plates of Stereotomy and general mechanical drawing. As we have none of these at present, we are obliged to depend on our own productions. Most of these wants are urgent and it is hoped that it may be found possible to supply them and thus put the department on a proper basis, so far as apparatus is concerned."

Department of Chemistry and the Modern Languages.

The class in Chemistry, continuing through the three terms of the Sophomore year, has been much profited by the thorough instruction of Prof. Packard.

The first term is devoted to the study of general Chemistry. Qualitative and quantitative analysis engross the attention of the class for the two remaining terms. The nature of the science, the skill of the teacher, the practical direction of the studies and the facilities of our laboratory, where each one in the class works out his own experiments, combine to render this department the most popular among the students. There is need of some new apparatus in this department. Among the most pressing wants are a microscope and a spectroscope.

Prof. Packard has had charge also of the classes in French and German. The Sophomores commence the study of the French language in their second term, and continue through the first term of the Junior year. German is an elective study. A small part of our students find time to attend to this language and accomplish all that is required in the regular courses of study. We

much regret the loss of Prof. Packard from this important department. He has resigned his place in our faculty, to fill a professorship in his Alma Mater.

Department of Natural History.

On account of the limited number of our teachers, many studies are crowded into this department. The Freshmen commence their recitations to Prof. C H. Fernald with Physical Geography. The second term they enter upon the study of plants, and prosecute the study of Systematic and Structural Botany, with the Elements of Agriculture, through the first term of the Sophomore year. Each member of the class is required to collect, classify and preserve a hundred specimens of plants for the use of the college. The Flora of the surrounding country has been thoroughly explored, and many rare specimens have been obtained. Duplicates will serve for purposes of exchange for those plants not found in this locality. Thus in a few years the College will be furnished with a large and valuable herbarium. In connection with these studies Floriculture has been practically taught. All the members of the class have been furnished with flower-seeds, and a portion of ground was assigned them, which they were required to cultivate according to their individual taste. The unpaid labor seemed at first quite irksome, but when the students saw the bloom of so many varied plats, they were highly pleased with the result. The Sophomores receive from Prof. Fernald instruction in Free Hand Drawing. In the Junior year, instruction is given, by means of recitations and lectures in Anatomy, Physiology and Zoölogy; while the Seniors recite in Comparative Anatomy, Mineralogy and Geology. The sum appropriated to this department for furnishing the needed apparatus has not been fully expended. Many valuable additions have been made to our collections in natural history and to the cabinet of minerals during the year, by the industry of the professor and the kindness of friends. We trust that more abundant gifts will be furnished to enrich our cabinet from those who have in their possession valuable minerals and specimens in natural history.

Military Instruction.

By the act of Congress endowing Industrial Colleges, military instruction is required to be given. Under the care of Captain

Deane, great interest has been awakened among the students in personal, squad, company and battalion drill. Two companies have been organized, and officers chosen by the students. They have procured a neat uniform, similar to that of the cadets at West Point, and have been solicitous in all things to keep up the standard of high military discipline. In addition to the required weekly drill under the military instructor, the students have spent much time in voluntary exercises. The precision of their movements and their soldierly appearance, have elicited for the Coburn Cadets the most flattering commendations from those who have witnessed their evolutions. If the State would furnish assistance in procuring uniforms, the bounty would be well bestowed.

Commercial Department.

A course of lessons in Book-Keeping and commercial forms has been given by Prof. John Perley. This important part of education is alike useful to the farmer and mechanic, as well as to every one who wishes for success in the business of life; and no one without it can justly lay claim to a liberal education. The teacher's long and successful experience is of great value to the students.

Manual Labor.

Provision has been made so that students may enjoy the benefit of daily manual labor. By this means the expenses of the student are lessened, the health is preserved and the taste and ability for productive industry are fostered. To some extent also, this remunerated labor is educational. Those who pursue the usual course of college studies without work, after graduation seldom engage in industrial pursuits. The four years spent in study without labor remove alike the inclination and the ability to engage in the duties of the farm and shop.

During the year a thousand dollars have been paid to the students for farm work, and for permanent improvements on the premises, besides what they have earned for special services which have been charged in incidental expenses. In place of remunerated labor, the upper classes have employed, under the direction of a professor, the three required hours of daily work in the field or in the laboratory pursuing their studies, and thus acquiring a practical education.

A part of the work performed on the farm has been devoted to

the prosecution of experiments for the promotion of agriculture. Few farmers possess the facilities for conducting accurate experiments, which settle principles and increase the general knowledge of the science of agriculture. No one supposes that these carefully conducted experiments will be attended with immediate pecuniary returns. The object of the inquiry is to settle vexed questions of practice, and to establish firmly the great principles that underlie all successful efforts in farming. The whole community reaps the benefit of these experiments. For a more full detail of this department, we refer you to the report of the Farm Superintendent. As there are no shops for mechanical work a large portion of the time the students cannot be employed in manual labor.

Admission of Students.

Thirty-two were admitted this year into the Freshmen Class, and others have signified their intention to unite with the class at the beginning of the next term. By an act of the last Legislature female students are admitted to share the privileges of this institution. Only one has thus far availed herself of the opportunity. The arrangements for labor in the female department have not yet been completed. There will be little difficulty in finding sufficient employment for a limited number, in the lighter work of horticulture, in the laundry and kitchen of the boarding house, and in the dairy of the farm.

Commencement.

The day which had so long been looked forward to, as the great event in the history of student life, and which had been the occasion of so much solicitude to the friends of the institution, dawned bright and beautiful. The graduation of the first class marks an epoch in the history of the college which will be remembered with satisfaction as a successful manifestation of what can be accomplished in giving a liberal and practical education to those who are to engage in industrial pursuits. This small class is an earnest of the abundant harvest of trained workers in the great field of productive toil. The exercises of the day were creditable to the institution, and the commencement parts gave great satisfaction to the large audience.

The degree of Bachelor of Science has been conferred on Geo. O. Weston, who completed the studies in the Agricultural course;

on E. J. Haskell and E. D. Thomas who completed the studies in the Elective Course; the degree of Civil Engineeer has been awarded to B. F. Gould, G. E. Hammond and H. Hilliard who completed the course in Civil Engineering.

The cordial interest of the people in this vicinity and the gratification which many visitors from different parts of the State have expressed in the aims and methods of the Maine State College, will lead, we hope, to more substantial proofs of sympathy on the part of individuals and the Legislature. The cabinet and library should be enriched. More buildings are needed, and a greater endowment should be secured to enlarge the sphere of usefulness of the institution and to accommodate the increasing number of students.

C. F. ALLEN, *President.*

FARM SUPERINTENDENT'S REPORT.

The experimental feeding of swine, for the purpose of testing the comparative value of cooked and uncooked meal in the production of pork, of which mention has been made and results have been given in Reports of 1870 and '71, has been continued through several months of this year.

The pigs selected to feed were three White Chesters, from the same litter, seven and one-half weeks old. They were placed separately, in adjoining and well sheltered pens, having small, open yards attached, in which a constant supply of fresh earth was provided. The pigs were weighed at the commencement of the experiment, Tuesday, June 25th, and the same day of each following week, until the close of the experiment, September 17th. The meal fed was carefully weighed and prepared each morning. The raw meal was mixed with cold water, and fed cold. The cooked meal was thoroughly boiled with water, and fed warm. An equal amount of meal was fed to each pig daily, and the quantity was gradually increased so as to fully keep pace with the demands of their appetites.

Judging, from the experience of last year, and the results of four weeks feeding this year, that the pigs would not make a profitable growth when fed with meal and water only, four quarts of swill (milk and water) were fed to each pig daily, in addition to the feed of meal, from the commencement of the fifth week, until the close of the experiment. A more satisfactory increase in weight was obtained from this food, while the comparative results, as between cooked and uncooked meal, continued nearly the same.

In estimating the cost per pound of the increase in live weight, the meal fed is reckoned worth seventy-five cents per bushel of fifty pounds, and the swill (milk and water) is valued at one cent a quart. No charge is made for the expense incurred in cooking meal.

	No. of pig.	No. of times fed during the day.	Raw or cooked meal.	No lbs. meal fed per week.	No. qts. swill fed during the week.	Cost of food consumed.	Lbs. of gain or loss in weight during week.	Cost per pound of increase in weight.
				lbs. oz.				
End of first week.....	1	2	cooked	6 14	..	10 31	no g'n	.....
do do	2	3	cooked	6 14	..	10 31	½	20 62
do do	3	3	raw	6 14	..	10 31	1	10 31
End of second week.....	1	2	cooked	8 12	..	13 12	1½	8 75
do do	2	3	cooked	8 12	..	13 12	3	4 37
do do	3	3	raw	8 12	..	13 12	2	6 56
End of third week.....	1	2	cooked	9 8	..	14 25	1	14 25
do do	2	3	cooked	9 8	..	14 25	loss 1	.....
do do	3	3	raw	9 8	..	14 25	1½	9 50
End of fourth week.....	1	2	cooked	10	..	15 00	½	30 00
do do	2	3	cooked	10	..	15 00	2	7 50
do do	3	3	raw	10	..	15 00	1½	10 00
End of fifth week.....	1	2	raw	8 12	28	41 12	6	6 85
do do	2	3	raw	8 12	28	41 12	7	5 87
do do	3	3	cooked	8 12	28	41 12	4½	9 13
End of sixth week.....	1	2	raw	9	28	41 50	7½	5 53
do do	2	3	raw	9	28	41 50	7½	5 53
do do	3	3	cooked	9	28	41 50	8	5 18
End of seventh week.....	1	2	raw	9 10	28	42 43	8½	4 99
do do	2	3	raw	9 10	28	42 43	9	4 71
do do	3	3	cooked	9 10	28	42 43	8½	4 99
End of eighth week.....	1	2	raw	9 14	28	42 81	6	7 13
do do	2	3	raw	9 14	28	42 81	6½	6 59
do do	3	3	cooked	9 14	28	42 81	6	7 13
End of ninth week.....	1	2	cooked	10	28	43 00	7	6 14
do do	2	3	cooked	10	28	43 00	7½	5 73
do do	3	3	raw	10	28	43 00	8	5 37
End of tenth week.....	1	2	cooked	10 8	28	43 75	6½	6 73
do do	2	3	cooked	10 8	28	43 75	8½	5 15
do do	3	3	raw	10 8	28	43 75	9	4 86
End of eleventh week.....	1	2	cooked	12 4	28	46 37	6½	7 13
do do	2	3	cooked	12 4	28	46 37	3½	13 25
do do	3	3	raw	12 4	28	46 37	4½	10 30
End of twelfth week.....	1	2	cooked	14	28	49 00	7½	6 53
do do	2	3	cooked	14	28	49 00	8½	5 76
do do	3	3	raw	14	28	49 00	10	4 90

	No. of pig.	Times fed per day.	Cooked or raw food.	Pounds eaten in 4 weeks.	Qts. swill eaten in 4 weeks.	Value of food.	Lbs. of gain.	Cost per lb. of increase.
During first period of 4 weeks	1	2	cooked	35 2	...	52 68	3	17 56
do do	2	3	cooked	35 3	...	52 68	4½	11 71
do do	3	3	raw	35 2	...	52 68	6	8 78
During second period 4 weeks	1	2	raw	37 4	112	167 87	28	5 99
do do	2	3	raw	37 4	112	167 87	30	5 59
do do	3	3	cooked	37 4	112	167 87	27	6 21
During third period 4 weeks	1	2	cooked	46 12	112	182 12	27½	6 62
do do	2	3	cooked	46 12	112	182 12	28	6 50
do do	3	3	raw	46 12	112	182 12	31	5 87

Raw meal fed three times a day during twelve weeks, produced one pound of increase in live weight, at an average cost of 6 75-100 cents.

Cooked meal fed three times a day during twelve weeks, produced one lb of increase in live weight, at an average cost of 8 14-100 cents.

The increase in live weight produced by feeding raw meal twelve weeks, is to the increase in live weight obtained by feeding a like amount of cooked meal in the same time, as 100 to 82.

Experiment showing the effect of different fertilizers in the cultivation of Lane's Imperial Sugar Beet for cattle, conducted and reported by E. F. Hitchings, student.

The soil on which the beets were sown is a clay loam and had been fairly and evenly manured from the stable. The plat was laid out in rows two and one-half feet apart and one hundred and nine feet in length; each row containing about one square rod. The fertilizers were sown in the line of the rows and well raked in. The ground was then marked in lines drawn at right angles with the rows, one foot apart, and the seeds were sown at the point of intersection and covered with the hand. The seeds were sown May 22d and came up well. July 2d the beets were thinned out and the missing ones were supplied, leaving the plants one foot apart, 109 plants in a row. Care was taken to supply the places of beets that were missing from the best of the surplus plants in the same row. At the time of thinning, a comparison was made between the rows, which is given in the table. In consequence of the excessively wet spring, it was not possible to prepare the ground sufficiently early to obtain the best results. The gain of one month in the time of sowing, would undoubtedly have given a much larger yield.

No. of row.	FERTILIZERS.		AT TIME OF THINNING.		RESULTS.
	Name.	Weight in lbs.	Comparison	Number Missing.	Weight in lbs.
1	Nothing	.....	1.	8	194
2	Prepared Fish, (1)	2½	9.	4	311
3	Kainite, (3)	2½	2.	5	276
4	Superphosphate	2½	10.	4	334
5	Nothing	.....	2.	8	284
6	Prepared Fish and Kainite	1¼ each.	3.	10	291
7	Kainite and Superphosphate	1¼ "	3.5	7	299
8	Fish and Superphosphate	1¼ "	4.	11	305
9	Nothing	.....	4.	16	268
10	Dry and ground Seaweed, (11)	2½	5.	30	255
11	Seaweed and prepared Fish	1¼ each.	4.	20	282
12	Seaweed and Superphosphate	1¼ "	6.	6	296
13	Nothing	.....	4.	16	255
14	Seaweed and Kainite	1¼ each.	4.	23	238
15	Nothing	.....	4.5	29	242
16	Prepared Fish	2½	8.	24	264
17	Kainite	2½	7.	10	257
18	Superphosphate	2½	9 5	7	349
19	Prepared Fish and Kainite	1¼ each.	4.	14	303
20	Kainite and Superphosphate	1¼ "	3.5	16	291
21	Prepared Fish and Superphosphate.	1¼ "	9.	7	302
22	Dry and ground Seaweed	2½	5.	16	234
23	Seaweed and prepared Fish	1¼ "	5.5	20	259
24	Seaweed and Superphosphate	1¼ "	6.	29	247
25	Seaweed and Kainite	1¼ "	5.	14	251

Experiment having for for its object the determination of the relative value of various fertilizers when used in the cultivation of potatoes; conducted by W. H. Jordan, Class of '75.

The land on which the potatoes were planted is a moist clay loam with an easterly exposure. It had been in grass for many years, and yielded less than one-half ton of white weed per acre the previous year. The sod was turned in October '72 to the depth of seven inches. The rows were ninety-one feet long, and three feet apart, each row containing one square rod; distance between hills eighteen inches, sixty hills in a row. Medium and large sized Orono potatoes were used for seed at the rate of eight bushels to the acre. Two lots were planted in the same manner side by side, that from the comparison of results more reliable conclusions might be reached. The first lot was planted May 30th; the second lot June 3d. No difference was observed in the time of their breaking ground. They were noticed June 20th, July 3d; also at various other times, and the relative growth of the tops was noted. There was little difference in the time of blossoming or of the decay of the tops.

No. of row.	FERTILIZER.	Lbs. per row of Fertilizer.	Relative growth of vine.	1st Lot.	2nd Lot.
				Lbs. potatoes per row.	Lbs. potatoes per row.
1	Nothing	.....	7	37	32½
2	Prepared Fish (1)	5	7	44⅔	43
3	do do	2½	7	43	44½
4	Chloride of Potassium (2)	5	8	41 1-5	45⅔
5	do do	2½	8	49	51½
6	Kainite (3)	5	8	46⅔	51½
7	Nothing	.....	7	38⅔	38
8	Kainite	2½	8	45	53½
9	Prepared Fish and Chloride of Potassium	2½ each.	9	57⅓	66½
10	Prepared Fish and Kainite	2½ "	9	58½	68
11	Ground Feldspar—raw (4)	5	7	31⅔	49
12	do do do	2½	7	31½	44½
13	Nothing	.....	7	32	47½
14	Ground Feldspar—roasted (5)	5	7	32⅔	43
15	do do do	2½	7	33	46
16	Ground Feldspar (raw) and Prepared Fish	2½ each.	7	32⅔	53½
17	Ground Feldspar (roasted) and Prepared Fish	2½ "	7	31	48
18	Feldspathic Phosphate	5	8	31½	48½
19	Nothing	.....	7	26½	43
20	Feldspathic Phosphate (6)	2½	8	28	51
21	Feldspathic Phosphate and Prepared Fish	2½ each.	8	27½	55
22	Ground Granite—Sangerville (7)	5	8	27½	44
23	do do do	2½	8	29	50
24	Ground Granite and Prepared Fish	2½ each.	8	37	52
25	Nothing	.....	7	29½	54

Experiment to determine the relative value of fertilizers—(Con.)

No. of row.	FERTILIZER.	Lbs. per row of Fertilizer.	Relative growth of vine.	1st Lot. Lbs. potatoes per row.	2nd Lot. Lbs. potatoes per row.
26	Ground Raw Bone (8).....	5	8.5	34⅓	59½
27	do do	2½	8.	34½	63½
28	Ground Raw Bone and Kainite	2½ each.	9.5	55	57½
29	Ground Raw Bone and Ashes.....	2½ "	8.	45½	62
30	Tobacco Fertilizer (9).....	5	10.	54½	72½
31	Nothing	.....	7.	34	49½
32	Tobacco Fertilizer.....	2½	9.	41½	62
33	Upton and Shaw's Phosphate (10)...	5	9.	33½	57½
34	do do do	2½	9.	37	64
35	Dried and Ground Seaweed (11)....	5	9.	46½	53
36	do do do	2½	9.	45¼	55½

The following is given (with the exception of one slight change) precisely as reported by the student having the experiment in charge:

Potato Experiment.

This experiment was conducted by the undersigned at the State College, during the season of 1872. Sixty-seven varieties of potatoes were planted in very poor soil, dressed with six cords of stable manure per acre. The land was broken up in the fall; the potatoes were planted eighteen inches apart, in drills three and a half feet apart, covered and hoed by hand. They were planted the 28th and 29th of May, hoed the first week in July, and dug the second week in October. The rust attacked them early, and they rotted considerably. Ten hills of each variety were planted, one piece in a hill, and the varieties were as follows:

VARIETY.	YIELD			
	Large.		Small.	
	Lbs.	Oz.	Lbs.	Oz.
Andes	16	8	1	0
Bermuda.....	10	8	1	7
Black Diamond.....	9	0	4	12
Breese's Prolific.....	10	8	3	4
Buckeye	9	8	2	4
Coffin's Seedling.....	7	8	0	14
Calico.....	8	12	1	14
Callao	12	0	2	1
Central City.....	10	0	0	9
Chenery.....	10	8	5	7
Cinnamon Garnet	10	8	2	7
Chamberlain's Seedling	7	8	1	0
Colesbrook's Seedling	9	4	1	
Concord	10	0	3	
Cowhorn Seedling...	6	3	2	

Experiment—(Continued.)

VARIETY.	YIELD.			
	LARGE.		SMALL.	
	Lbs.	Oz.	Lbs.	Oz.
Cuzco	10	4	2	10
Dana's Seedling	3	8	1	0
Dover Seedling	11	8	1	9
Dover	10	12	0	9
Early Golden	8	8	1	12
Early Henry	7	12	2	0
Early June	12	0	2	8
Early Prince	11	8	1	8
Early Peachblow	5	0	4	0
Granite State	14	8	0	13
Stevens	7	8	1	4
Excelsior	10	0	1	8
Fluke	7	4	1	0
Garnet Chili	14	8	1	8
Gleason	11	0	1	8
Johnson	8	10	2	0
Goodrich Seedling, V	8	0	2	0
Goodrich Seedling, W	9	8	0	12
Goodrich Seedling, Y	12	0	2	0
Goodrich Seedling, Z	12	12	1	4
Harrison	15	8	3	0
Jones' Seedling	14	0	0	8
King of the Earlies	12	8	1	12
Lapstone Kidneys	12	0	0	13
Orono	8	8	2	4
Pale Blush Pinkeye	7	8	1	4
Jackson White	10	8	1	4
Patterson's Blue	11	0	0	8
Pinkeye Rustycoat	9	0	2	12
Prairie Seedling	15	4	0	0
Prince Albert	11	0	1	6
Rochester Seedling	6	8	0	14
Snowball	9	12	1	4
Shaw	9	4	1	0
Seedling of Garnet Chili	11	0	3	0
Titicaca	12	8	2	1
Union	11	0	2	9
Utica Pinkeye	14	0	1	4
Vanderveer	13	8	0	10
Western Chief	12	0	2	4
White Mountain	6	4	2	12
White Chili	3	8	4	0
Willard Seedling	11	0	1	12
White Rock	7	8	4	8
Worcester Seedling	9	0	3	12
Early Benton	15	4	3	6
English Blossom	8	12	0	8
Common Peachblow	8	4	2	9
Early Peachblow, No. 2	6	12	0	8
Hamilton	10	8	0	4
Kenduskeag	6	8	1	4
General Green	12	8	1	8

Another experiment was tried by cutting and planting Orono potatoes in different ways, with the following results:

		Large.		Small.	
		Lbs.	Oz.	Lbs.	Oz.
1	Large, cut in four pieces	12	0	2	8
2	Medium, cut in two pieces	11	12	3	4
3	Small, whole	10	12	0	15
4	Medium, whole	13	8	1	4
5	Large, whole	12	0	2	6
6	Seed ends, cut through the center	12	12	1	0
7	Butt ends, " "	10	8	2	8
8	Medium, cut in two pieces, planted two inches deep	13	0	1	12
9	" " " " four inches deep	12	4	1	4
10	" " " " six inches deep	13	4	1	0
11	" " " " eight inches deep	12	0	1	8
12	Medium, two pieces in a hill	14	4	1	12
13	" one piece in a hill	11	12	1	0
14	Eyes	3	0	1	4
15	One potato, weighing four ounces, in a hill	16	0	2	0
16	" " six ounces, in a hill	13	8	3	0
17	" " eight ounces, in a hill	13	4	3	1
18	" " ten ounces, in a hill	12	0	2	4
19	" " twelve ounces, in a hill	14	12	3	10

These were all planted one piece in a hill, with the exception of No. 12. Those planted two and four inches deep came up at the same time; those planted six inches deep, two days later; those planted eight inches deep, five days later. All blossomed at the same time. Those raised from the eyes were very small. The potatoes raised from the first fourteen lots, are to be planted next year. Ten hills of each kind were planted.

All of which is respectfully submitted.

S. H. Clapp, Class of '75.

Experiments on Grass.

The results given below were obtained by applying the manures to a sod of timothy and witch grass, on a light, sandy loam. The turf was not sufficiently even to render a test by weight reliable, hence the per cent. of increase is given as estimated at the time of mowing the grass. The fertilizers were sown the middle of May, at the rate of four hundred pounds per acre:

Prepared Fish	(1)	increase of	50	per cent.,	grass was	very rusty.
Grass Fertilizer	(15)	"	25	"	"	slightly rusty.
Upton and Shaw's Phosphate	(10)	"	20	"	"	not rusty.
Cumberland Superphosphate	(16)	"	20	"	"	not rusty.
Tobacco Fertilizer	(9)	"	15	"	"	slightly rusty.
Seaweed	(11)	"	5	"	"	bright.
Ground Bone	(8)	"	0	"	"	fresh and bright.
Ground Granite	(7)	"	0	"	"	-

Applied to the sod of a moist clay, at the same rate per acre as above:

Prepared Fish	(1)	gave an increase of	50	per cent.,	grass was very rusty.
Grass Fertilizer	(15)	"	40	"	" slightly rusty.
Tobacco Fertilizer	(9)	"	15	"	" slightly rusty.
Seaweed	(11)	"	10	"	" bright.

Trial plats of fodder corn were planted June 15th. The land was a moist clay loam, sown last year to turnips, and received a liberal amount of stable manure, which was well worked into the soil before applying the special manures. The ground was first furrowed with Chandler's horse hoe, the fertilizers were then strown in the furrow and mixed with the earth, after which the corn (White Southern) was sown in the furrow, at the rate of four bushels to the acre, and covered with a hoe. Phosphates and seaweed were applied at the rate of six hundred pounds to the acre. Of the ashes and hen manure, sixty bushels per acre were used. During the earlier part of the season, the largest growth was produced by the superphosphates, the Cumberland decidedly taking the lead. Later in the summer, the corn to which the hen manure had been applied, pushed ahead and finally gave the best results. The corn was cut and weighed September 10th and 11th.

Hen manure	(12)	gave a weight of	58,410	pounds per acre.
Cumberland Superphosphate	(16)	"	56,149	"
Tobacco Fertilizer	(9)	"	52,188	"
Stove Ashes	(13)	"	51,905	"
Seaweed, dried and ground	(11)	"	50,207	"
Furnace Ashes	(14)	"	45,399	"
Upton and Shaw's Sup. Phos.	(10)	"	40,590	"
No special manure		"	34,084	"

NOTES ON THE MANURES.

(1)—This was pressed herring chum, mingled with sulphuric acid sufficient to neutralize all the ammonia as fast as formed; allowed to heat and partially decompose. When used, it contained 35 per cent. water, and about 8 per cent. ammonia. Cost in Portland $30 per ton.

(2)—Contained 80 per cent. of the salt. Cost in New York, 3¾ cents per lb.

(3)—Cost in New York $35 per ton. Contained 32 per cent. sulphate of potash, 12 per cent sulphate of magnesia.

(4)—From Topsham—containing 16 per cent. potash. The rock is simply ground.

(5)—Same rock, roasted before grinding.

(6)—Consisting of equal proportions of ground feldspar, mineral phosphate, and sulphuric acid of 45°, B.

(7)—From Sangerville. Reported to have been used there with remarkable results.

(8)—Raw bone coarsely ground. Cost $55 per ton in Bangor.

(9)—Prepared by Cumberland Bone Company for use on Connecticut River. It differs from the bone superphosphate prepared by the same company in that it contains a greater proportion of potash salts.

(10)—Prepared by Upton & Shaw, Boston, Mass. Cost in Boston $55 per ton.

(11)—Prepared by L. Maddocks, Boothbay, Me. Price $40 per ton.

(12)—Sweepings of the hen-house, of which, at least one-fourth part in weight, was gypsum, used to prevent the escape of ammonia.

(13)—From equal proportions of second growth hard and soft wood. Usually sold at one shilling per bushel.

(14)—From furnaces where slabs and waste lumber, mostly spruce and hemlock, are burned. These ashes are subjected to intense and long continued heat, and by many are considered worthless. Cost, 8 cents per bushel.

(15)—Grass fertilizer. Prepared by Cumberland Bone Company, as a top-dressing for grass land. Price in Portland, $55 per ton.

(16)—Cumberland Superphosphate. Prepared by Cumberland Bone Company. Price in Portland, $55 per ton; and wherever superphoshate is elsewhere mentioned, unless otherwise specified, the article made and sold by the Cumberland Bone Company, Portland, is to be understood.

Lime Ashes.

Ashes from the lime kilns of Rockland and vicinity are frequently offered for sale as a valuable fertilizer. They are the ashes of the fuel (wood and coal) consumed in burning the lime, together with the waste lime that becomes mingled with them. The following analysis by R. L. Packard, Professor of Chemistry, will help those interested to decide the question so often asked, "Are lime ashes of any value?" The sample analyzed was taken from a quantity bought for use on the college farm, which cost in Bangor 40 cents per barrel of 200 lbs.

Carbonate of lime (same thing as air slacked lime)	60 per cent.
Sulphate of lime (gypsum)	25 "
Magnesia	3 "
Potash	a trace.

Stock of the Farm.

Thoroughbred Shorthorn. One bull, Napoleon I., two and one-half years old.

Grade Shorthorn. One cow, four years old; two heifers, three years old; two heifers, two years old.

Thoroughbred Jersey. Two bulls. Slasher, two and one-half years old; Penobscot, one year old. One bull calf, Butternut—83½, H. R.

Grade Jersey. Three yearling heifers, three heifer calves.

Horses.

Four team horses are owned by the College, which are employed on the farm during the larger part of the year. They are hired to work in the woods the present winter in the care of trustworthy men.

Swine.

Eight white Chester; one pair of Essex pigs.

Sheep.

Two South Down; eighteen grade South Down.

Implements.

No important additions have been made to the farm implements, either by purchase or gift. A V shaped harrow, furnished with self-clearing, revolving teeth, patented by J. F. Chase of Portland, was left at the farm for trial. It was tested on newly plowed witch grass turf, and fulfilled the claim of the inventor, that it would "do good work, and free itself from loose turf and roots."

The most efficient implements used upon the farm to pulverize the soil and to reduce it to the best condition for receiving seed, are French's Cultivator and Niswitz's Harrow. The use of the latter was kindly given to the farm, by J. S. Bennock, Esq., of Orono. The lack of improved farm implements is sufficiently great to afford large opportunity for liberal friends to present substantial tokens of their interest in the welfare of the institution.

Products of the Farm.

Sixty tons of hay, two acres fodder corn, eighty-three bushels Excelsior oats, one hundred sixty-four bushels of barley, sixty-two bushels of Lost Nation wheat, two hundred fifty bushels of potatoes, three hundred and twenty bushels of ruta bagas, sixty-three bushels of English turnips, two hundred and seventy bushels mangel wurzel and sugar beets, twenty bushels turnip beets, twenty bushels carrots and parsnips, eight hundred merchantable cabbages, fifteen hundred weight Turban and Hubbard squashes. Other vegetables in sufficient quantity to supply the boarding-house and farm house, have been grown in the garden.

The increase of twenty tons of hay over the crop of last year, was largely from newly seeded ground and land previously used as pasture. The old mowing fields produced very little more than was cut from them last year. The growth of the fodder corn was large—not less than twenty-five tons of green fodder per acre.

Nine bushels of oats were sown on three acres of land. The straw lodged and rusted badly, and the yield was very light. Portions of the field of oats were dressed with furnace ashes, (14) eighty bushels per acre, and with seaweed, (11) 600 lbs. per acre. From another part of the field the surface earth had been removed to the depth of two feet; trial plats containing one square rod of oats grown under each of these conditions were measured off and weighed.

		lbs oz.		lbs. oz.
Where no manure was used the yield was	straw,	9—12	oats,	2—12
Where seaweed (11) was used the yield was	"	17— 9	"	3—13
Where furnace ashes (14) was used the yield was	"	19—10	"	4— 9
Where the surface earth had been removed the y'ld was	"	6— 1	"	1—15

The wheat was grown from three bushels sowing on the north end of the College lawn The land, a clay loam underdrained with tiles, was planted with potatoes last year. One acre received six cords of stable manure at the time of planting the potatoes, and the same amount and kind of dressing was harrowed in before sowing the wheat. On the other acre only superphosphates were used with the potatoes, and six hundred pounds of Grass Fertilizer (15) were sown and rolled in with the wheat. Several years since, clay taken from the cellars of the college buildings was hauled upon a portion of this field to level the inequalities of the surface. The wheat growing on this clay was about one week later in maturing; and as the kernel commenced to form, the straw

began to lodge, and yielding readily to the force of wind and rain, was after a few days lying flat on all that part of the field, while the wheat growing where there was no clay, remained standing.

One square rod of loam, manured from the stable, produced 9 lbs. 10 oz wheat, 26 lbs. 13 oz. straw.

One square rod of clay, lying seven inches in depth over the soil and manured from the stable, produced 10 lbs. 10 oz. of wheat, 26 lbs. 5 oz. of straw.

One square rod of loam, manured with superphosphates, produced 7 lbs. 10 oz. wheat, 12 lbs. 14 oz. straw.

One square rod of clay, lying 18 inches deep above the surface of the soil, and manured with superphosphates, produced 11 lbs. 14 oz. wheat, 28 lbs. 5 oz. straw.

The potatoes were raised on two and one half acres of moist clay loam. The yield was small and many of them rotted. The varieties planted were the Early Rose, Orono, Excelsior, Chamberlain, and Coffin potatoes. The last three mentioned, are seedlings of the Orono. The Excelsior is a potato of excellent quality and yields well; but for the fact that it requires a season of more than the average length to attain full maturity, it would be entirely superior to the Orono. The Chamberlain potato is in most respects like the Orono. The Coffin potatoes grew ill-shaped, and the larger portion of them rotted.

About three hundred bushels of the rutabagas were grown on land that was planted to potatoes last year. To prepare the ground for the turnips, it was plowed and thoroughly harrowed; furrows were then drawn, three feet apart, and filled with manure from the hog yards. The furrow slice was turned back upon the manure with a plow, and well raked down, and the seeds were sown upon it, with a machine. Three varieties of rutabagas were sown. The Purple Top rutabaga excelled the others in greatness of size and uniformity of shape, and was fully equal to them in flavor and appearance.

Lane's Imperial Sugar Beet and the Norbitan Giant Mangel Wurzel, were the most productive, among seven varieties of seed sown.

Of ten different varieties of cabbages grown in the gardens, the Schweinfurt was the first to be ready for market, but the tender leaves of the loosely formed heads were too easily penetrated by the cabbage worm. The Early Brunswick proved

to be the most valuable as an early market cabbage. Although it came to maturity two weeks later than the Schweinfurt, the heads were compact, of good size, and would bear handling. The Marblehead Mammoth grew large on rich ground, but is rather coarse, and requires a long season to make full growth. For reliable standards, under ordinary cultivation, the Stone Mason and Drumhead cabbages are preferred.

A building, eighteen feet by fifty-two, containing two rooms for keeping tools and implements, and affording room besides to shelter the carts and team wagons of the farm, has been put up and nearly finished. The building, fifteen feet by thirty-eight, in which the swine are kept, had so fallen into decay as to be open and unsafe. This has been thoroughly repaired. The unsound condition of the upright timbers rendered it necessary to splice each one. New sills and floor timbers were put in, and an entire new double floor, of boards and planks, was laid. The pens were rebuilt with improvements, and the exposed side and ends were lined up on the inside with boards nailed to the studding, and the intervening spaces were filled with sawdust. Some necessary repairs have been made on the roof of the long barn, near the College buildings. The main floor of this barn has been relaid and fastened. Floor timbers have been put in through the easterly half of the building and covered with a floor of planks. Over this floor, timbers for the support of a scaffold have been framed in, leaving the space underneath the scaffold open to the main floor, to be used by the students as a drill room in stormy weather. All the timbers used in repairing the floors and scaffolds of this barn, were cut from the forest, hewn, fitted and framed by the students.

A part of the materials for making a much needed picket fence, to enclose the pasture lying along by the river, in front of the College, has been prepared, and several rods of it are already built. Other minor improvements in the farm buildings and implements have been made.

Aside from the work done by the Superintendent, Foreman and two teamsters, all the labor of the farm and of erecting and repairing farm buildings, has been done by the students of the College. In consequence of the limited means placed at the disposal of the Superintendent, it has not been possible to furnish employment to all the students, and many desirable improvements are waiting the advent of more prosperous days. The students

have been generally faithful in performing their tasks. There is a great difference in their efficiency as workers, some of them being entirely unused to manual labor, while others of them are young men whose physical powers are well trained and inured to work. The average price paid for their labor, little, if at all, exceeds the amount that would be paid to skilled laborers for doing the same work.

TREASURER'S REPORT.

To the Trustees of the State College of Agriculture and the Mechanic Arts:

GENTLEMEN:—The receipts and expenditures of the College since my last report, Dec. 1, 1871, have been as follows:

General Account.

1871.	RECEIPTS.		
Dec. 6,	Interest received from bank deposits for the last year		$107 54
1872.			
Nov. 25,	do. do. do.		131 19
			238 73
	Balance transferred to new account		5,106 71
			$5,345 44
1871.	EXPENDITURES.		
Dec. 1,	Balance last year's account		$4,009 58
" 6,	Paid revenue stamps used by the Treasurer the last year		2 12
	Paid Insurance College Buildings, viz:		
	D. M. Howard, Insurance Agent	$384 32	
	Bangor Mutual Insurance Company	161 50	
	Union Insurance Company	274 12	
			819 94
1872.			
Mar. 15,	Paid S. L. Goodale, expenses as Trustee		75 50
	S. F Perley, expenses as Trustee		56 50
" 16,	L. Oak, expenses as Trustee and member of Ex. Committee		221 45
May 11,	S. F. Dike, do. do. do.		85 35
Aug. 29,	A. W. Reed, in part for express wagon		75 00
			$5,345 44

Construction Account.

1871.	RECEIPTS.		
Dec. 1,	Balance account as rendered to date		$4,257 22
1872			
Mar. 2,	Received of State Treasurer for Legislative appropriation		18,000 00
Jan. 26,	Received for note of the Treasurer, indorsed by a part of the Trustees	$6,350 00	
	Less discount and stamps	345 79	
	Said note falls due March 10, 1873.		6,004 21
			$28,261 43
1872.	EXPENDITURES.		
Feb. 19,	Paid P. B. Graves for labor, &c		$29 10
Mar. 2,	note of the Treasurer, indorsed by Trustees, (same credited in Treasurer's account Sept. 2, 1872)		10,000 00
" 15,	J. R. Farrington, to pay sundry bills		136 79

Construction Account—(Continued.)

1872.		
Mar. 19,	Paid Fogg & Bridges, hardware	$236 66
	Estate S. H. Dale, cement	76 88
	A. Leighton, materials and work	139 07
	Muzzy Iron Works, hardware	49 14
" 20,	Dole & Fogg, lumber	101 68
" 25,	P. D. & E. Webster, lumber	239 28
Apr. 15,	J. R. Farrington, gravel	103 13
" 20,	W. H. Pennell, steam heating apparatus	400 00
May 2,	Jones & Co., stone masonry	46 80
" 6,	Wilson and Prescott, drain tile	11 48
" 24,	A. H. Reed, furniture	200 00
June 5,	C. B. Brown, on contract for President's house	1,000 00
July 5,	" " " "	1,500 00
" 8,	William Lunt, boarding workmen	9 50
" 27,	G. W. Merrill, furniture	129 76
" 30,	A. B. Mosher, transportation	20 70
	David McMillan, masonry, President's house	500 00
Aug. 20,	Jones & Son, granite for same	148 40
Sept. 13,	C. B. Brown, on contract for President's house	1,000 00
Oct. 2,	Edwin Drew, cisterns	60 00
" 10,	W. S. Townsend, furniture	325 95
" 15,	S. L Goodale, trees, shrubs, &c	21 90
" 18,	David McMillan, masonry for President's house	300 00
" 26,	J. R. Farrington, improvements of college grounds	100 00
Nov. 12,	A. H. Roberts & Son, mats	11 24
" 20,	C. B. Brown, on contract for President's house	1,000 00
		$17,897 46
" 25,	Balance to new account	10,363 97
		$28,261 43

Congressional Endowment Account.

1871.	RECEIPTS	
Dec. 4,	Received from State Treasurer for interest on bonds	$2,145 00
1872		
Jan. 4,	for coupons on Bangor Bonds.....$180 00	
	less government tax..... 4 50	
		175 50
Jan. 8,	three months' interest on bonds of St. P. & S. C. R. R. Co.	250 00
Mar 5,	from State Treasurer, interest on bonds	1,398 00
Apr. 6,	Clerical error in last annual account	281 00
	Received three months' interest on bonds St. P. & S. C. R. R. Co.	250 00
June 25,	from State Treasurer, interest on bonds	2,145 00
July 5,	three months' interest on bonds St. P. & S. C. R. R. Co.	250 00
Aug. 20.	from State Treasurer, interest on bonds	990 00
" 26,	for coupons on Bangor Bonds	180 00
Oct. 5,	three months' interest on bonds St. P. & S. C. R. R. Co.	250 00
Nov. 25,	from State Treasurer, interest on bonds	390 00
		$8,704 50
	Balance to new account	4,359 22
		$13,063 72
1871.	EXPENDITURES.	
Dec 1,	Balance last year's account	$1,935 42
" 2,	Paid Pres. C. F. Allen, three months' salary	500 00
	Prof M. C. Fernald, three months' salary	450 00
" 16,	Capt. James Dean, military instruction	43 50
1872.		
Jan. 15,	J. H. Farrington, three months' salary	225 00

Congressional Endowment Account—(Continued.)

1872.		
Jan. 19,	Paid J. R. Farrington, for farm expenses	$100 00
Mar. 2,	Pres. C. F. Allen, three months' salary	500 00
	Prof. C. H. Fernald, three months' salary	350 00
	" W. A. Pike, three months' salary	350 00
	" M. C Fernald, three months' salary	450 00
	" R. L. Packard, three months' salary	375 00
Mar. 15,	J. R. Farrington, farm purposes	300 00
" 16,	John Perley, lessons in bookkeeping	80 00
" 19,	Samuel Johnson, services as clerk	140 00
Apr. 2,	Prof. M. C. Fernald, periodicals, &c	50 00
" 3,	E. & N. A. Railway Co., transportation of coal	21 50
" 5,	B. A. Burr, printing catalogues, &c	63 35
" 15,	J. R. Farrington, three months' salary	225 00
May 18,	" " farm purposes	200 00
" 29,	Prof. M. C. Fernald, three months' salary	450 00
June 11,	" C. H. Fernald, three months' salary	375 00
	" W. A. Pike, three months' salary	375 00
	Pres. C. F. Allen, three months' salary	500 00
	S. L. Boardman, Dr. Holmes' Library	100 00
	E. & N. A. Railway Co., transportation	12 00
	Prof. R. L. Packard, three months' salary	375 00
July 16,	J. R. Farrington, three months' salary	225 00
	" " farm purposes	300 00
	Prof. R. L. Packard, chemical department	25 89
Aug 6,	" " in part for salary	187 50
	" W. A. Pike, in part for salary	187 50
	" C. H. Fernald, in part for salary	100 00
" 10,	J. R Farrington, farm purposes	300 00
	" " improvements of college grounds	100 00
" 31,	Prof. R. L. Packard, balance due on his quarter's salary	187 50
	" W. A. Pike, balance due on his quarter's salary	187 50
	" C. H. Fernald, balance due on his quarter's salary	275 00
Sept. 2,	Capt. James Dean, military instruction	43 85
" 5,	Prof. M. C. Fernald, three months' salary	450 00
	Pres. C. F Allen, three months' salary	500 00
" 13,	J. R. Farrington, farm purposes	150 00
Oct. 4,	Prof. C. H. Fernald, expenses incurred in collecting and preserving zoological specimens	38 72
" 15,	Prof. M. C. Fernald, seal press plate for diplomas, &c	84 49
" 18,	J. R. Farrington, three months' salary	225 00
" 26,	" " farm purposes	200 00
Nov. 23,	Prof R. L. Packard, three months' salary	375 00
	" W. A. Pike, three months' salary	375 00
		$13,063 72

The foregoing statement shows that the General Account is overdrawn..		$5,106 71
The Congressional Endowment Account		4,359 22
		$9,465 93
The Construction Account has to its credit a balance of	$10,363 97	
There will have to be placed to its debit the amount of the note due March 10, 1873, (as will appear by reference to that account.)	6,350 00	
This, when paid, will show a balance to its credit of		4,013 97
Which amount deducted from the aggregate deficiency of the two first named accounts will leave a balance of indebtedness of		$5,451 96

This is to be provided for, in addition to the amounts required to complete the President's house and pay any other outstanding liabilities of the College.

The President of your Board, Ex-Governor Coburn, placed in the hands of your Treasurer, on the 17th day of August last, five hundred dollars, as a donation for the use of the library. This has been kept as a separate fund, and one-half of the amount has been expended for the purpose indicated by its liberal donor.

The income from the investments of the College funds for the ensuing year may be estimated at $8,463.67.

Respectfully submitted,

ISAIAH STETSON, *Treasurer.*

NOVEMBER 25, 1872.

CATALOGUE

OF THE

OFFICERS AND STUDENTS

OF THE

Maine State College of Agriculture and the Mechanic Arts,

ORONO, MAINE, 1872-'3.

FACULTY.

REV. CHARLES F. ALLEN, D. D., President and Professor of English Literature, Mental and Moral Science.
MERRIT C. FERNALD, A. M., Professor of Mathematics and Physics.
ROBERT L. PACKARD, A. M., Professor of Chemistry, French and German.
WILLIAM A. PIKE, C. E., Professor of Civil Engineering.
CHARLES H. FERNALD, A. M., Professor of Natural History.
JOSEPH R. FARRINGTON, Farm Superintendent.
X. A. WILLARD, A. M , Lecturer on Dairy Farming.
JAMES J. H. GREGORY, A. M., Lecturer on Market Farming and Gardening.
CAPT. JAMES DEANE, Military Instructor.
JOHN PERLEY, Instructor in Book Keeping and Commercial Forms.
REV. A. W. REED, Steward.

STUDENTS.

SENIOR CLASS.

Eaton, Russell William.....Norridgewock.
Hamlin, George Herbert.....Sidney.
Holt, Fred William.....Hampden.
Oak, John Marshall.....Garland.
Reed, Charles Emery.....Orono.
Scribner, Frank Lampson.....Manchester.
Thayer, Harvey Bates.....Garland.

JUNIOR CLASS.

Allen, William Albert.....Orono.
Balentine, Walter.....Waterville.
Gerrish, Willie Herbert.....Portland.
Gurney, John Irvine.....Foxcroft.
Hunter, Rodney David.....Clinton,
Reed, William Henry.....Springfield.
Ramsdell, Louise Hammond.....Atkinson.

SOPHOMORE CLASS.

Bates, Solomon Wheaton.....Somerset Mills.
Bumps, Wilbur.....Bangor.
Clapp, Samuel Harvey.....Damariscotta.
Coburn, Lewis Farrin.....Brunswick.
Colesworthy, Charles Franklin.....Portland.
Dole, William Butler.....Bangor.
Durham, Charles Frederic.....Monroe.
Goodale, Alfred Montgomery.....Saco.
Ham, Benson.....Charleston.
Hitchings, Edson Fobes.....Waterville.
Jones, Freeland.....Bangor.
Jordan, Whitman Howard.....New Gloucester.
Mayo, Edward Doliver.....S. W. Harbor.
Mitchell, Allen Gilman.....Madison
Mitchell, Albert Eliphalet.....Madison.
Moore, Fred Lampson.....Sebec.
Rogers, Luther Woodman.....Stillwater.
Sewall, Minott Wheelwright.....St. Albans
Shaw, George Moore.....Augusta.
Soule, Sidney Smith.....Freeport.
Southard, Louis Carver.....Boston, Mass.
Spratt, George Wilbur.....Bangor.
Spring, Charles Herbert.....Brownfield.
Webb, Wesley.....Unity.
Work, Edgar Alexander.....Bangor.

FRESHMEN CLASS.

Abbott, Edmund.....Winterport.
Allen, Charles Plummer.....Maysville.
Bacon, Francis Henry.....Biddeford.
Blanding, Edward Mitchell.....Saco.
Baker, George Haskell.....Castine.
Carver, Russell Albion.....Dixfield.
Crosby, Oliver.....Dexter.
Dike, James Edward.....Sebago.
Dike, Willis Oliver.....Sebago.
Estabrooke, Horace Melvin.....Linneus.
Farrington, Arthur Manley.....Orono.
Gurney, Frank Parish.....Foxcroft.
Haines, William Thomas.....Levant.
Haseltine, Frank Adlam.....Dexter.
Haskell, Newall Prince.....New Gloucester.
Hopkins, Eugene.....Oldtown.
Hubbard, Philip Wadsworth.....Hiram.
Lewis, Albert Augustus.....Orono.
Linnell, James Warren.....Exeter.
Long, Herbert Augustine.....Machias.
Moody, George Jameson.....S. Windsor.
Mudgett, Webster.....Albion.

FRESHMEN CLASS, (CONTINUED.)

Parks, George Daniel.....Richmond.
Pierce, Hayward.....Frankfort.
Pillsbury, Edward Butler.....Belfast.
Rines, Randall Hight.....Hartland.
Robinson, Walter Franklin.....Hartford.
Rogers, Charles Wilson.....Richmond.
Shaw, Edward Carter.....New Gloucester.
Stevens, William Lewis.....West Waterville.
Whitaker, Frank Pierce.....Albion.
Williams, John Howard.....Orono.

SUMMARY.

Seniors	7
Juniors	7
Sophomores	25
Freshmen	32
Total	71

DESIGN OF THE INSTITUTION.

It is the design of the Maine State College of Agriculture and the Mechanic Arts to give to the young men of the State who may desire it, at a moderate cost, the advantages of a thorough, liberal and practical education. It proposes to do this by means of the most approved methods of instruction, by giving to every young man who pursues the course of study, an opportunity practically to apply the lessons he learns in the class-room, and by furnishing him facilities for defraying a part of his expenses by his own labor.

By the act of Congress donating public lands for the endowment and maintenance of such Colleges, it is provided that the leading object of such an Institution shall be, "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts."

While the course of study fully meets this requisition, and is especially adapted to prepare the student for agricultural and mechanical pursuits, it is designed that it shall be also sufficiently comprehensive, and of such a character as to secure to the student the discipline of mind and practical experience necessary for entering upon other callings or professions.

CONDITIONS OF ADMISSION.

Candidates for admission to the Freshmen Class must be not less than fifteen years of age, and must pass a satisfactory examination in Arithmetic, Geography, English Grammar, History of the United States, and Algebra as far as Quadratic Equations.

Although the knowledge of Latin is not required as a condition of admission, yet the study of that language is earnestly recommended to all who intend to enter this institution.

Candidates for advanced standing must sustain a satisfactory examination in the preparatory branches, and in all the studies previously pursued by the class they propose to enter.

Satisfactory testimonials of good moral character and industrious habits will be rigidly exacted.

COURSES OF INSTRUCTION.

Four full Courses are provided, viz: A Course in Agriculture, a Course in Civil Engineering, a Course in Mechanical Engineering, and an Elective Course. The studies of the several Courses are essentially common for the first two years.

Branches marked thus (E.) are Elective, and from them students may select, with the advice of the Faculty, to make up the required number (three) of daily exercises.

FIRST YEAR—FIRST TERM. Physical Geography; Meteorology; Algebra, Robinson; Rhetorical Praxis, Day; English Analysis.

SECOND TERM. Physics, Ganot; general properties of bodies, hydrostatics, pneumatics, acoustics; Algebra, Robinson. Book-Keeping and commercial forms; botany, Gray.

THIRD TERM. Physics, Ganot; heat, light, electricity. Geometry, Loomis. Botany, Gray & Darlington. Horticulture.

English Composition and Declamation and the Reading of Ancient and Mediæval History, regular exercises throughout the year. Lectures on Physics, Meteorology, Physical Geography, Botany, Horticulture, and Agriculture, its importance and its relations to other pursuits.

SECOND YEAR—FIRST TERM. Chemistry, Elliot & Storer. Geometry, Loomis. Botany, Gray. Horticulture. Elements of Agriculture, Waring.

SECOND TERM. (E.) Chemistry, (qualitative analysis.) (E.) History of France. Trigonometry; plane, spherical. Mensuration. French, Magill. Free Hand Drawing.

THIRD TERM. (E.) Chemistry, (quantitative analysis). (E.) History of England, Elizabethan Age. Surveying, Gillespie; with chain, with compass, computing areas, dividing land, levelling, topographical drawing. (E.) Navigation. French, Magill.

English Composition and Declamation, and Free-hand Drawing, regular exercises throughout the year. Lectures on Chemistry, on Structural, Physiological and Systematic Botany; on Horticulture, including Market Gardening and the Culture of the Small Fruits, and on Practical Agriculture.

THIRD YEAR—COURSE IN AGRICULTURE—FIRST TERM. Human Anatomy, Physiology and Hygiene, Dalton. Origin, preparation and analysis of soils, fertilizers, ashes, &c. French, Magill.

SECOND TERM. Zoology, Tenney. Farm Implements, mechanical cultivation of the soil. Farm Drainage, Waring. (E.) Rhetoric, Haven. (E.) German.

THIRD TERM. Mechanics, Peck. Dairy Farming, Flint. Entomology, Packard. (E) Logic. (E.) German. (E) English Literature.

Lectures on Human Anatomy and Zoology, Drainage, Dairy Farming, Beneficial and Injurious Insects, and English Literature.

THIRD YEAR—COURSE IN CIVIL ENGINEERING—FIRST TERM. Human Anatomy, Physiology, and Hygiene, Dalton. Analytical Geometry, Loomis. Engineering; Hencks' field book, survey of roads and railways. Computation of Earthwork and Masonry. Mechanical Drawing. French, Magill.

SECOND TERM. (E.) Zoology. Differential Calculus, Loomis. Descriptive Geometry, Watson. Mechanical Drawing. Engineering, Rankine. Construction of roads, railways, and canals. Hydraulics. (E) Rhetoric, Haven. (E.) German.

THIRD TERM. Integral Calculus, Loomis. (E.) Descriptive Astronomy, White. The earth, the sun, the moon, gravitation, planets, comets, nebulæ. Descriptive Geometry, Watson. Mechanics, Rankine. Drawing. Plans, profiles, elevations, sections, &c. (E) Logic. (E.) German. (E.) English Literature.

Lectures on Physiology, Zoology, Astronomy and English Literature.

THIRD YEAR—COURSE IN MECHANICAL ENGINEERING. Same as Course in Civil Engineering, third year.

FOURTH YEAR—COURSE IN AGRICULTURE—FIRST TERM. Animal Physiology, Carpenter. Stock Breeding, Goodale. Sheep Husbandry, Veterinary Art. (E.) German. (E.) English Literature. (E.) History of Civilization.

SECOND TERM. Constitution of the United States. Mineralogy, Dana. Cultivation of the Cereals. Landscape Gardening. Rural Architecture. (E.) Mental and Moral Philosophy. (E.) International Law.

THIRD TERM. Political Economy. Geology, Dana. Rural Economy of England and the United States. Rural Law. (E.) Mental and Moral Philosophy. (E.) International Law.

Lecture on Mineralogy, Geology, Stock Breeding, Cultivation of Grasses and Cereals, and Rural Law.

FOURTH YEAR—COURSE IN CIVIL ENGINEERING—FIRST TERM. Practical Astronomy, Coffin. Time, latitude, longitude. (E.) Animal Physiololgy. Engineering, Rankine. Theory of structures, field practice. Stereotomy. Applications to masonry and carpentry. Drawing. Plans, profiles, elevations, sections, &c. (E.) German. (E.) English Literature. (E.) History of Civilization.

SECOND TERM. Constitution of the United States. Mineralogy, Dana. Engineering, Rankine; strength of materials, structures of stone, [foundations, retaining walls, arches, bridges,] hand machinery, water wheels. Applications to masonry and carpentry. Drawing; plans, profiles, elevations, sections and machinery. (E.) Mental and Moral Philosophy. (E.) International Law.

THIRD TERM. Political Economy. Geology, Dana. Engineering, Rankine; structures of wood, framing, structures of iron, boilers, steam engines, field practice. Drawing; plans and specifications. (E.) Mental and Moral Philosophy. (E.) International Law.

FOURTH YEAR—COURSE IN MECHANICAL ENGINEERING—FIRST TERM. (E.) Practical Astronomy; time, latitude, longitude. (E) Animal Physiology, Carpenter. Applied Mechanics, Rankine; principles of mechanism, materials, construction and strength of machinery, measurement of effect of machines, brakes, fly-wheels, governors, &c. Descriptive Geometry, Watson; applications to masonry, carpentry and machinery. Drawing; machinery. (E.) German. (E.) English Literature. (E) History of Civilization.

SECOND TERM. Constitution of the United States. Mineralogy, Dana. Building Materials; stones, bricks, mortars and cements. Hand Machinery, Rankine; cranes, derricks, pumps, &c., cutting tools, water wheels. Descriptive Geometry, Watson; applications to masonry, carpentry, and machinery, modeling. Drawing; Machinery. (E.) Mental and Moral Philosophy. (E) International Law.

THIRD TERM. Political Economy. Geology, Dana. Steam Engines, Rankine; stationary, locomotive, marine. Power and Strength of Boilers Drawing, plans and specifications, projects of machinery, mills, &c. (E.) Mental and Moral Philosophy. (E.) International Law.

English Composition and Original Declamation, regular exercises during the last two years of each course. Instruction will be given, at stated times, in Military Tactics.

ELECTIVE COURSE. Students in the Elective Course will pursue the required studies common to all the other courses, and may select from the other courses and the *elective* studies, to make up their full course.

SPECIAL COURSE. Students may be received for less time than the full course, and may select from the studies of the first, second or third terms of any year, such branches of study as they choose, provided they are qualified to pursue them successfully.

Students in the Special Course will not be entitled to a Degree, but certificates of proficiency may be given them.

DEGREES CONFERRED. The full course in Civil Engineering entitles to the Degree of

Civil Engineer; the full course in Mechanical Engineering, to the Degree of Mechanical Engineer; the full course in Agriculture, or the full Elective Course to the Degree of Bachelor of Science.

SPECIAL FEATURES OF THE COURSE.

The prominence given to the Natural Sciences, and the practical element associated with nearly all departments of study, cannot fail to render the course especially valuable.

Nearly a year will be devoted to Botany and Horticulture, commencing early in the spring, and continuing till late in autumn. This course will embrace a thorough drill in Botanical Analysis; the study of plants as to their relative importance and geographical distribution; the study of those having commercial or medical value; of those which are cultivated for ornament, and also those which are detrimental, as weeds and poisonous plants. In the gardens to be provided, the student will learn practically the operations and processes in the department of Horticulture.

A year and a half will be devoted to Chemical Physics and Chemistry, commencing with the third term of the first year. The course in Chemistry proper will include General, Analytical and Agricultural Chemistry. Under Analytical Chemistry will be taken up General Analysis, Use of Blow-pipe, Analysis of Minerals, Analysis of Soils, Ashes of Plants, Fertilizers and Farm Products.

Each student will devote two hours a day to Analysis, under the direction of the Professor of Chemistry, thus acquiring facility in conducting experiments, and securing a practical knowledge of the methods employed in chemical investigations.

Under Agricultural Chemistry will be considered Composition of Soils, Relations of Air and Moisture to Vegetable Growth, Food of Plants, Chemical Changes during Vegetable Growth, Chemistry of Farm Processes, Methods of Improving Soils, and various other topics which may properly be treated of under this department.

Other departments of science will be studied and taught, so far as may be, with special reference to their practical bearing, or their relations to Agriculture and the Useful Arts.

LABOR.

It is a peculiarity of the College that it makes provision for labor, thus combining practice with theory, manual labor with scientific culture. Students in this Institution are required to labor a certain portion of each day, not exceeding three hours, for five days in the week.

The labor is designed to be as much as possible educational, so that every student may become familiar with all the forms of labor upon the farm and in the gardens and workshops.

Students will learn the use of tools and acquire a fitness for mechanical pursuits, under competent instructors, in the workshops to be provided for the study and practice of the Mechanic Arts.

Students receive compensation for their labor according to their industry, faithfulness and efficiency, the educational character of the labor being also taken into account. The maximum amount paid will be thirty cents for three hours labor.

MILITARY.

Thorough instruction is given in Military Science by a competent Officer. The instruction extends through the whole College Course and embraces personal, squad, company and battalion drill. The students are enrolled in companies, and choose their officers. Arms are furnished by the State. The uniform of the students is similar to that of Cadets at West Point.

LOCATION.

The College has a pleasant and healthful location intermediate between the villages of Orono and Upper Stillwater, and about a mile from each. Stillwater River, a tributary of the Penobscot, flows a short distance in front of the buildings, forming the western boundary of the college farm, and adding much to the beauty of the surrounding scenery.

The European and North American Railroad, over which trains pass several times each day, has a station at the village of Orono. The College is within nine miles of the city of Bangor, and is consequently easily accessible from all parts of the State.

FARM AND BUILDINGS.

The College Farm contains three hundred and seventy acres of land of high natural productiveness and of great diversity of soil, and is therefore, well adapted for the experimental purposes of the Institution.

White Hall, the building first erected, contains eighteen rooms, and affords excellent accommodations for a limited number of students. The lower rooms of this building are appropriated to general and class purposes.

The new Hall contains forty-eight rooms. The Boarding House connected with the College buildings, is open to students. With these new buildings, the Institution furnishes desirable accommodations for one hundred and twenty-five students.

The Chemical Laboratory contains two apparatus rooms, a lecture room, a cabinet, a library and weighing room, a recitation and rooms for analytical and other purposes, and is in all respects admirably adapted to the wants of the Chemical and Mineralogical departments.

APPARATUS.

The College is furnished with new and valuable apparatus for the departments of Physical Geography, Natural Philosophy and Chemistry, and for Surveying and Civil Engineering, to which additions will be made as the exigencies of the several departments require. Models have been obtained from the United States Patent Office that serve for purposes of instruction.

LIBRARY.

The Library already contains over a thousand volumes, some of which have been obtained by purchase, while others have been kindly presented to the College. The Holmes Library recently secured is a valuable addition to this department. It is earnestly hoped that so important an auxiliary in the education of those who are to be students in the College will not be disregarded by the people of the State, but that liberal contributions will be made to this collection of books, not only of Agricultural and Scientific works, but also of works of interest to the general reader.

READING ROOM.

The Reading Room is supplied with a number of valuable newspapers and periodicals. Grateful acknowledgement is herewith made for the following named papers generously sent by the proprietors to the College :

Sunrise, Presque Isle, Maine.
Piscataquis Observer, Dover, Maine.
American Sentinel, Bath, Maine.
Maine Farmer, Augusta, Maine.
Maine Standard, Augusta, Maine.

Somerset Reporter, Skowhegan, Maine.
Aroostook Times, Houlton, Maine.
Kennebec Journal, Augusta, Maine.
New England Farmer, Boston, Mass.
York County Independent, Saco, Maine.
Bangor Weekly Courier, Bangor, Maine.
Maine Democrat, Biddeford, Maine.
Santa Barbara Press, Santa Barbara, Cal.
New York Weekly Witness, New York.
Ohio Farmer, Cleveland, Ohio.
Southern Farmer, Memphis, Tenn.
Official Gazette, U. S. Patent Office, Washington.
Burr's Fifty Cent Monthly, Bangor, Maine.

The following are furnished by Subscription:

Scientific American.
Journal, Royal Agricultural Society, England.
American Journal of Science.
Appleton's Journal.
Scribner's Monthly.
Van Nostrand's Engineering Magazine.
Atlantic Monthly.
Boston Journal of Chemistry.
Chemical News.

CABINET.

A room in the Chemical Laboratory has been fitted up with cases for Minerals, and several hundred specimens have been presented to the College. A donation from the Smithsonian Institute has recently enriched this department, and the valuable private Cabinet of Prof C. H. Fernald is placed in this room, and is accessible to the students. All specimens presented will be properly credited and placed on exhibition. Rocks illustrating the different geological formations, and minerals, found within the State, are particularly solicited.

LITERARY SOCIETIES.

Flourishing societies have been organized by the students of the College, which hold weekly meetings for declamations, discussions, and other literary exercises.

PUBLIC WORSHIP.

All students are required to attend daily prayers at the College, and public worship on the Sabbath at some one of the neighboring churches, unless excused by the President.

EXPENSES, AND MEANS OF DEFRAYING THEM.

Tuition is free to students from all parts of the State. Those from other States will be charged twelve dollars per term. Room rent is free, and each room is furnished with a bedstead, mattrass, table, sink and chairs. All other bedding and furniture must be supplied by the students, who will also furnish their own lights. Board, washing and fuel will be furnished at cost. The price of board has been, hitherto, three dollars per week, the fuel and washing fifty cents per week. These bills, with those for incidental expenses, are payable at or before the close of each term.

The terms are so arranged that the long vacation occurs in the winter, that students may have an opportunity to teach during that time. By means of the amount thus earned, together with the allowance for labor, the industrious and economical student can cancel the greater part of his college expenses.

GENERAL STATEMENT.

Students are required to make their own beds and sweep their own rooms.

Each student is required, at the commencement of his college course, to deposit with the Treasurer of the College a bond for $100, signed by responsible sureties, to secure the payment of his board bill and any incidental charges.

Strict conformity to college regulations and requirements is the only condition of continued membership of the College.

Candidates for the next class should make early application.

CALENDAR.

1872. Aug. 29—Thursday, First Term commenced.
" Nov. 26 and 27—Tuesday and Wednesday, Examination. First Term closes. Vacation of ten weeks.
1873. Feb. 6—Thursday, Second Term commences.
" April 29 and 30—Tuesday and Wednesday, Examination. Second Term closes. Vacation of one week.
" May 8—Thursday, Third Term commences.
" Aug. 4 and 5—Monday and Tuesday, Examination.
" Aug. 5—Tuesday, Exhibition Junior and Sophomore Classes.
" Aug. 6—Wednesday, Commencement.
" Aug. 7—Thursday, Examination for admission to College. Vacation of three weeks.
" Aug. 26—Examination for admission to College.
" Aug. 28—Tuesday, First Term commences.
" Nov. 25 and 26—Tuesday and Wednesday, Examination. First Term closes. Vacation of ten weeks.

DONATIONS.

TO THE CABINET.

Smithsonian Institution—Collection of shells from Oregon, Panama, U. S. Exploring Expedition, etc. Collection of building stones.

22 specimens of fossils and minerals, from F. E. L. Beal, C. E., Boston, Mass.

12 specimens of minerals and clays from Illinois, by P. Barnes.

10 specimens of ores from Lake Superior, by Lieut. J. Sumner Rogers.

Walrus tusk and whale's tooth, by Mrs. H. B. Reed, Bangor, Me.

Sword-fish sword and sturgeon, by Rev. Theo. Hill, West Waterville, Me.

Itacolumite, from Georgia, by Dr. A. C. Hamlin, Bangor, Me.

Utica slate, from New York, by Hon. X. A. Willard.

Specimens of slate, from the Maine Slate Co., Skowhegan, Me.

Paper made from poplar wood, by J. W. Lang, Brooks, Me.

South Sea Islander's sword, by G. S. Bean, Bangor, Me.

Specimen of fossiliferous rock, by C. H. Cochrane, Dover, Me.

Specimens of minerals and a stuffed alligator, by A. M. Goodale, Saco, Me.

Jaw of a porpoise, by John M. Oak, Garland, Me.

Section of bark from one of the "Big Trees," Cal., by Freeland Jones, Bangor, Me.

Humming bird's nest, by Leander H. Blossom, Turner, Me.

Specimen of granite from Dix Island, Me., by George M. Shaw, Augusta, Me.

Collection of bird's eggs, by Willie H. Gerrish, Portland, Me.

Collection of bird's eggs, by Sidney S. Soule, Freeport, Me.

Indian implements, by Eugene Hopkins, Oldtown, Me.

TO THE LIBRARY.

Smithsonian Institution—Eight volumes Smithsonian Contributions; eight volumes Miscellaneous Collections; eighteen volumes Smithsonian Reports; two volumes Meteorology.

Superintendent of the U. S. Coast Survey—Thirteen volumes Coast Survey Reports.

Hon. Hannibal Hamlin—Twelve volumes Public Documents.

Hon. John A. Peters—Seven volumes Public Documents.

Commissioner of Agriculture—Seven volumes Department of Agriculture Reports.

Hon. S. L Goodale—Fifteen volumes Agricultural Reports of different States.

TO THE HORTICULTURAL DEPARTMENT.

Thirty Swiss poplars—Hon. S. L. Goodale, Saco, Me.

One thousand Gladiolus bulbs—George Crafts, Brookline, Mass.

Twenty varieties flower seeds—Department of Agriculture.

TO THE FARM.

From Cumberland Bone Company, Portland, Maine—One barrel Tobacco Fertilizer, one keg Ground Feldspar (raw), one keg Ground Feldspar (roasted), one keg Feldspathic Phosphate, one keg Chloride Potassium, one keg Kainite.

From Luther Maddocks, Boothbay, Me.—Ten bags (1 ton) Dried and Ground Sea Weed.

From Leonard Knowlton, E. Sangerville, Maine—One cask Ground Granite.

From Dr. N. R. Boutelle, Waterville, Maine—Jersey Bull Calf, Butternut, H. R. 831.

From Ira Dole, Brewer—One pair Light Brahma Fowls.

From L. A. Dow, Waterville, Maine—One pair Essex Pigs.

FOR THE MONTH OF JANUARY, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR.				RAIN AND SNOW.				CLOUDS.						WINDS.						THERMOMETER.		BAROMETER.				FORCE OR PRESSURE OF VAPOR IN INCHES.			RELATIVE HUMIDITY OR FRACTION OF SATURATION.			Day of Month
									7 A. M.		2 P. M.		9 P. M.		7 A. M.		2 P. M.		9 P. M.				BAROMETER HEIGHT REDUCED TO FREEZING POINT.									
	7 A. M.	2 P. M.	9 P. M	Mean.	Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	Amount of cloudiness.	Kind of clouds.	Amount of cloudiness.	Kind of clouds.	Amount of cloudiness.	Kind of clouds	Direction.	Force.	Direction.	Force.	Direction.	Force.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M	Mean.	7 A. M.	2 P. M	9 P. M.	7 A. M.	2 P. M.	9 P. M.	
1	30.0	35.2	19.0	28.1	.....	.....	.....	.....	8	Cir. st.	3	Cir. cu.	0	.....	W.	1	N. W.	3	N. W.	3	35.5	19 0	29.743	30.018	30.246	30.001	.161	.126	.079	97	61	77	1
2	3.5	13 0	3.0	6.5	.....	.....	.....	.....	1	St.	0	.....	0	.....	N. W.	1	N. W.	2	N. W.	1	19 0	3 0	30.422	30 446	30.430	30 433	.044	.034	.050	87	44	100	2
3	-0.8	12.2	15.8	9.1	Night.	.....	.....	.....	8	St.	10	St.	10	St.	N. E.	1	N. W.	1	N.	1	15.8	-1.4	30 398	30.372	30.288	30.353	.039	.061	.081	94	81	91	3
4	20.0	34.6	31 8	28.8	.....	Night.	.710	3.00	10	Nim.	10	Nim.	10	Nim.	N. E.	1	S. E.	3	N. E.	2	34.8	15 8	30 155	29 900	29 835	29.963	.108	.201	.174	100	100	97	4
5	26 3	30.0	26.5	27.6	.....	.....	.....	.....	10	St.	10	St.	10	St.	N. E.	3	N.	3	N. E.	3	32.0	26.0	29.852	29 740	29 693	29.762	.134	.152	.138	94	91	96	5
6	21 8	34.5	5.7	20.7	.....	.....	.....	.....	9	St.	10	St.	0	.....	.....	0	N. W	1	N.	4	34.5	5 7	29.470	29.358	29.574	29.467	.112	.149	.049	96	74	88	6
7	-8.4	-1.4	2.7	-2.4	.....	.....	.....	.....	9	St.	0	.....	0	.....	N. W.	4	N. W.	5	N. W.	3	5.7	-9.2	29 650	29.648	29.783	29.694	.030	.033	.042	100	81	86	7
8	1.2	14.8	7.0	7.7	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	3	N. W.	2	N. W.	1	15.0	1.0	30.054	30.043	30.015	30 037	.039	.058	.052	85	68	91	8
9	0.3	18.4	15.7	11.5	.....	*	.....	.....	7	Cir. st	8	St.	10	St.	S.	1	S.	1	N. E.	1	21.0	-1.0	30 026	29 837	29.775	29.879	.043	.066	.078	100	65	88	9
10	16.5	25.7	20.6	20.9	.....	.....	.....	.....	0	.....	3	Cir. cu.	10	St.	N. W.	1	N. W.	3	N. W.	1	26.2	14 4	29.816	29.818	29.880	29.838	.076	.098	.101	83	70	91	10
11	20 4	27.0	24.0	23.8	Night.	.....	.....	.....	10	St.	8	St.	10	St.	S E.	1	S. E.	2	S E.	2	27 0	20 2	29.952	29.860	29.738	29.850	.091	.095	.103	81	64	80	11
12	35 0	33.2	27.0	31.7	.....	9 A M.	.100	.....	10	Nim.	9	Cir. cu.	0	.....	S.	2	W.	3	W.	1	35 7	23 3	29.272	29 382	29 501	29 385	.198	.125	.096	97	66	64	12
13	31.2	37 5	29.8	32.8	.....	Night.†	.....	.....	9	St.	9	St.	10	St.	S. W.	1	S W.	1	S. W.	1	38.0	25.7	29.509	29.511	29.534	29.518	.156	.140	.138	89	62	84	13
14	16.3	15.0	5.2	12 2	.....	.....	.....	.....	8	St.	2	Cir.	0	.....	N E	3	N.	3	N. W.	2	29 8	5.2	29.760	29.769	29 800	29.776	.071	.051	.053	78	59	95	14
15	-2 3	13.2	2.0	4.3	.....	.....	.....	.....	0	.....	0	.....	0	.....	N.	1	N W.	1	N. W.	1	13.5	-2 7	29.819	29.825	29.838	29 827	.039	.048	.045	100	59	94	15
16	-1.0	14.4	12.0	8.5	Night.	.....	.....	.....	1	St.	5	Cir. st.	8	Cir. st.	S.	1	S. W.	1	S. W.	1	17 0	-1 8	29.990	30.006	30 024	30.007	.041	.056	.067	100	67	90	16
17	15.8	23 3	23.2	20.8	.....	Night.	.762	7 00	10	Nim.	10	Nim.	10	Nim.	N E.	3	N. E	4	N. E.	4	26 0	11 5	29.928	29.762	29 589	29.760	.089	.125	.123	100	100	100	17
18	18.5	24.2	24.0	22.2	.....	.....	.....	.....	4	Cir. st.	6	Cir. & st.	0	.....	N. W.	4	S. W.	3	S. W.	2	25 3	17.4	29.510	29 545	29.615	29 537	.077	.071	.104	76	55	80	18
19	26.8	31.3	27.0	28.4	Night.	.....	.....	.....	9	St.	10	St.	10	St.	W.	2	N. W.	2	N. W.	1	32 0	23 0	29.810	29.897	29.899	29.869	.102	.140	.132	70	71	90	19
20	30.4	33.7	32.8	32.3	.....	7½ A. M.	.610	6 00	10	Nim.	10	St.	9	St.	S. W.	1	.....	0	S.	2	33.7	26.3	29.503	29.337	29 471	29.437	.176	.173	.171	100	89	91	20
21	25.4	27 6	16.0	23.0	.....	.....	.....	.....	4	Cir. st	1	Cir.	0	.....	N. W.	2	N. W.	1	N. W.	1	32.8	16 0	29 533	29.557	29.551	29 547	.113	.091	.074	82	61	83	21
22	17.5	31.2	26.0	24 9	.....	.....	.....	.....	9	Cir. st.	4	Cir. st.	10	St.	.....	0	S.	2	.....	0	34.0	13.0	29.640	29.629	29.604	29.624	.095	.108	.126	100	61	94	22
23	31.0	37.0	14.0	27.3	.....	8½ P. M.†	.....	.....	10	St.	6	Cir. st.	2	St.	S. E.	2	S. W.	4	N. W.	4	38 2	14.0	29.482	29.327	29.520	29.443	.164	.157	.047	95	81	58	23
24	4.3	9.3	2.3	5.3	.....	7 A. M.†	.....	.....	10	Nim.	10	St.	1	St	N. W.	3	N. W.	4	N. W.	5	14.0	2.3	29.553	29.373	29 424	29.450	.048	.047	.042	92	72	86	24
25	-4 0	11.0	7.7	4.9	.....	.....	.....	.....	1	St.	3	Cir. & st.	0	.....	S. W.	2	S. W.	3	S. W.	2	11.3	-4 5	29.411	29 343	29 333	29.362	.028	.043	.055	79	60	89	25
26	9.8	17 8	12 2	13.3	.....	.....	.....	.....	4	Cir.	1	Cir.	0	.....	S. W.	3	W.	3	W.	2	18.2	4.3	29.264	29.276	29.313	29.284	.045	.048	.058	66	49	77	26
27	14.4	24.4	22.0	20.3	.....	.....	.....	.....	7	Cir. & st.	7	Cir st.	8	St	S. W.	2	S.	3	S. W.	2	25.0	10.8	29.397	29.426	29.493	29.439	.066	.074	.093	78	56	79	27
28	12 0	26.0	11 3	16.4	.....	.....	.....	.....	9	St.	3	Cir.	5	St.	N.	1	.....	0	.....	0	27.8	11 3	29.539	29 503	29.496	29.513	.072	.092	.065	96	66	90	28
29	14.2	24 2	14.3	17.6	.....	.....	.....	.....	5	Cir. & st.	10	St.	2	St.	S. E.	1	N. E.	2	N.	3	26 5	10.0	29 385	29 310	29.410	29.368	.083	.071	.078	100	55	95	29
30	1.3	13.6	3.7	6.2	.....	.....	.....	.....	0	.....	0	.....	0	.....	S. W.	1	N. W.	4	N. W.	1	14.3	1 0	29.788	29.747	29 846	29.794	.040	.051	.047	85	63	92	30
31	-4.0	15.2	7.5	6.2	.....	.....	.....	.....	9	St.	1	Cir.	1	St.	.....	0	N. W.	1	N. W.	1	15.2	-4.0	29.854	29.834	29.831	29.840	.029	.065	.054	81	75	87	31
Sums.	.....	.....	.....	.....	.....	.....	2.182	16.00																								Sums.
Means	.....	.....	.....	17° 45	.....	.....	.....	.....	6.5	.....	5.5	.....	4.3	.....	.....	....	N. W. & W.	.48	.....	....	24°.99	9°.54	.....	.....	.....	29.712	.084	.092	.084	90	68	87	Means
									Mean ...		5.4						S. W. & S.	.23		Max	38°.2	-9°.2	Min		Max...	30.446	Mean..	.087		Mean.	82		
																	S. E. & E.	.05							Min...	29.264	Max...	.201		Max..	100		
																	N. E. & N.	.24									Min...	.028		Min ..	49		

* Earthquake at 8 P. M. † Very light snow squall.

FOR THE MONTH OF FEBRUARY, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M	9 P. M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds.	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P. M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P. M.	9 P. M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M.	9 P. M.	Day of Month
1	-8.5	14.7	3.0	3.1	.....	.....	.....	.....	2	St.	1	Cir.	2	St.	S. E.	1	N. W.	1	N. W.	1	15.2	-9 2	29.940	29.978	30.072	29.997	.025	.047	.043	87	56	86	1
2	-4.2	21.5	5.0	7.4	.....	.....	.....	.....	2	Cir. st.	0	.....	0	.....	N. E.	1	N. W.	1	S. W.	1	22 4	-4.5	30.180	30 216	30.300	30.232	.036	.078	.049	100	67	90	2
3	-9.5	21.3	20.3	10.7	5 P. M.	.....	.....	.....	3	St.	10	St.	10	Nim.	N. W.	1	N. E.	1	N. E.	3	24.0	-9 8	30 382	30.229	29 962	30.191	.028	.090	.109	100	79	100	3
4	19.4	20.5	*17.0	19.0	.....	5 P. M.	.978	9.50	10	Nim.	10	Nim.	0	.....	N. E.	4	N. E.	3	N. W.	3	22.7	17.0	29.300	29.094	29 459	29 284	.105	.102	.081	100	93	87	4
5	17.0	33.2	26 8	25.7	.....	.....	.....	.....	2	St.	1	Cir.	0	.....	N. W.	1	S W.	2	S. W.	2	35.8	16 4	29.760	29.860	30.032	29 884	.086	.125	.119	92	66	82	5
6	20.2	38 4	35.8	31.5	5 P. M.	Night.	.210	.....	9	St.	9	St.	10	Nim.	.....	0	S. W.	1	S.	1	38.5	16.7	30.143	29.839	29.674	29.885	.106	.138	.210	97	59	100	6
7	18 7	18.3	9.0	15 3	.....	.....	.....	.....	2	Cu. st.	2	Cir. cu.	0	.....	N. W.	2	N. W.	4	N. W.	1	35.8	9.0	29.977	30.155	30 315	30.149	.078	.068	.060	77	68	93	7
8	-2.0	18.3	15.4	10 6	.....	.....	.....	.....	6	St.	8	Cu st.	0	.....	S.	1	S.	2	N. W.	1	21.7	-2.0	30.359	30 232	30 077	30.223	.035	.060	.088	87	61	100	8
9	-2.0	28.5	10 5	12.3	.....	.....	.....	.....	0	.....	0	.....	0	.....	E.	1	N.	2	N	1	29.3	-2 2	30.183	30.169	30.149	30.167	.039	.095	.059	100	60	86	9
10	5 6	30.0	20.8	18.8	.....	.....	.....	.....	7	St.	4	St.	1	St.	N. E	1	N E.	1	N. W.	1	31.0	4.8	30 072	30.012	30 000	30.028	.052	.113	.088	93	67	78	10
11	*11 4	35.0	30.0	25.5	.....	.....	.....	.....	2	Cir. st.	7	Cir. st.	2	St.	N. E.	1	N.	1	N.	1	35.0	11.0	29 973	29.852	29.859	29.895	.064	.082	.130	88	40	78	11
12	10.5	34.0	27 5	24.0	.....	.....	.....	.....	2	Cir. st.	0	.....	0	.....	N.	1	S.	1	.....	0	37.5	10.6	29.853	29.826	29.857	29.845	.062	.085	.115	90	43	76	12
13	10 0	25.2	24.0	23.1	.....	.....	.....	.....	0	.....	1	Cir. st.	1	St.	.....	0	N. W.	1	S.	1	27 5	8.7	29.912	29.835	29.826	29.858	.060	.123	.099	90	59	78	13
14	25.2	38.7	†33.2	30.7	9 A. M.	.....	.....	.....	10	Cir. st.	10	Nim.	10	Nim.	S. E.	1	S. E.	5	S. E	3	34.3	23 2	29 588	29.324	29.226	29.379	.127	.166	.190	94	87	100	14
15	20 5	28.6	20.3	22.1	.....	10 A. M.	.300	3.00	10	Cir. st.	9	Cir. st.	10	Cir. st.	S.	2	N. W.	1	N. W.	1	34.0	19.2	29 335	29.291	29.279	29.302	.094	.107	.109	85	78	100	15
16	24.8	33 0	26.3	28.0	.....	.....	.....	.....	8	St. & cir.st.	1	Cir.	1	Cir.	N. W.	4	N. W.	4	N. W.	3	33.3	19.0	29 152	29.140	29.266	29.186	.094	.105	.099	70	56	70	16
17	8.0	25.0	15 5	16.2	.....	.....	.....	.....	1	St.	0	.....	0	.....	N. W.	1	N. W.	3	N. W.	1	27 8	8.0	29 532	29.557	29.760	29.616	.042	.097	.040	67	72	45	17
18	-3.0	29 8	19.5	15.4	.....	.....	.....	.....	0	.....	0	.....	1	St.	N. W.	1	N. W.	2	N. W.	1	32 0	-3.0	29 792	29.767	29.766	29 775	.050	.045	.042	100	28	40	18
19	0.0	33.8	20.0	17 9	.....	.....	.....	.....	2	St.	1	St.	1	St.	S. E.	1	S. E.	2	.....	0	34.2	-1.5	29 895	29.845	29 845	29.862	.043	.069	.073	100	36	67	19
20	-1.3	35 8	23.0	19.2	.....	.....	.....	.....	2	St.	1	St.	0	.....	S. W.	1	S.	1	S.	1	37.0	-1.4	29.865	29.785	29.692	29 781	.040	.082	.082	100	39	66	20
21	24 5	40.0	23 5	29.3	.....	.....	.....	.....	8	Cir. st.	1	Cir. st.	6	Cu. st.	S.	2	S.	2	S. W.	1	40.0	22 5	29.404	29.271	29 335	29.337	.129	.093	.084	97	38	67	21
22	15 0	14.6	1.0	10.2	.....	.....	.....	.....	9	St.	9	St.	0	.....	N.	1	N.	3	N. W.	3	23 5	1 0	29.372	29 425	29.537	29.445	.074	.045	.034	86	54	77	22
23	-9.7	6.2	10.0	2.2	Night.	Night.	.100	1.00	0	.....	0	.....	10	St.	N.	2	N. W.	2	S. W.	2	10 0	-9.7	29.730	29.731	29 708	29.723	.027	.042	.046	100	71	69	23
24	14.7	29 8	20.5	21.7	.....	.....	.....	.....	10	St.	7	Cir. st.	2	St.	N. E.	1	N.	1	N.	1	29.8	10.0	29.626	29.577	29.550	29.584	.085	.120	.073	100	73	66	24
25	23.7	37 6	33.6	31.6	1 P. M.	Night.	.115	.....	....	Fog.	10	Nim.	10	Nim.	N. E.	1	N. E	1	N. E.	1	37.6	20.5	29.480	29.307	29.276	29 354	.127	.226	.193	100	100	100	25
26	16 3	10 3	9.2	11.9	.....	.....	.....	.....	9	St.	5	Cir. st.	2	St.	N. W.	4	N. W.	4	N. W.	4	33 6	9 2	29.321	29.341	29 344	29.335	.075	.050	.060	83	73	91	26
27	-1.0	11 0	14.2	8.1	.....	.....	.....	.....	3	Cir. st.	9	St.	6	St.	N. W.	4	N. W.	4	N. W	4	14 2	-1.0	29 335	29.268	29.298	29.300	.036	.057	.053	87	80	64	27
28	11.2	22 0	16.2	16.5	.....	.....	.....	.....	10	St.	8	Cu. st.	4	St.	N. E.	3	N. W.	3	N. W.	3	23.8	11.0	29.338	29.382	29 461	29.394	.058	.074	.068	80	62	75	28
29	3.5	18.4	10.5	10.8	.....	.....	.....	.....	0	.....	2	Cir.	1	St.	N. W.	3	N. W.	3	N. W.	2	19.2	3.2	29 541	29.521	29.521	29.528	.035	.047	.051	68	47	73	29
30																																	30
31																																	31
Sums.	.....	.....	.....	.....	.....	.....	1.703	13.50																									Sums.
Means	.....	.....	.....	17°.89	.....	.....	.....	.....	4 4	.....	4.3	.....	3.1	.....	.....	....	N. W. & W.	.53	.....	...	28°.99	7°.13	.....	.....	.....	29 708	.066	.091	.088	90	61	77	Means
										Mean	3.9						S. W. & S.	.15		Max	40°.00	-9° 80	Min.		Max...	30·382	Mean..	.082		Mean.	76		
																	S. E. & E	.09							Min...	29.140	Max...	.226		Max..	100		
																	N. E. & N	.23									Min...	.025		Min...	28		

* Very brilliant Aurora from 6½ P. M. to 8½ P. M. † Lunar halo at 9 P. M.

FOR THE MONTH OF MARCH, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M.	9 P. M	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force.	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P. M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P. M.	9 P. M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M	9 P. M.	Day of Month
1	11.2	23 2	20.0	18.1	Night.	.....	.....	.....	10	St.	9	St.	10	St	N. E	1	N.	1	N. E.	2	23.5	10.2	29.614	29.607	29.613	29.611	.058	.091	.084	80	73	78	1
2	11 3	29.5	23.8	21.5	.....	7½ A. M.	.104	1.00	8	Cu. st.	9	Cir. st.	3	St.	N. E.	1	N.	2	N.	3	30 0	10 8	29 853	29.707	29.600	29.720	.053	.136	.081	74	83	63	2
3	15.0	28.4	26.0	23.1	.....	.....	.....	.....	10	St.	4	Cir. st.	4	St.	N. E.	2	N.	2	N.	1	30.6	14.3	29.456	29.481	29 594	29.510	.063	.120	.120	73	77	85	3
4	4.7	32.3	30 2	22.4	2½ P. M.	.....	.....	.....	2	Cir. st.	8	Cu. st.	10	Nim.	N. E.	1	S. W.	3	S.	2	32.5	4 4	29.630	29.538	29.413	29 527	.054	.156	.168	100	85	100	4
5	-2.0	-7.0	-11.3	-6.8	.....	6½ A. M.	.517	5.00	5	St.	2	Cir. st.	7	St.	N. W.	4	N. W.	4	N. W.	3	30.2	-11 3	29.257	29.248	29.320	29.275	.039	.028	.025	100	88	100	5
6	-10 7	-3.7	-9.7	-8 0	.....	.....	.....	.....	7	St.	8	St.	1	St.	S.	3	S. W.	2	N. W.	1	-3 5	-13 0	29 314	29.370	29.570	29 418	.026	.037	.027	100	100	100	6
7	-7.7	13.8	17.7	7.9	.....	.....	.....	.....	0	.....	4	Cir. & st.	3	St.	N. W.	1	N. W.	3	N. W.	3	18.2	-16 5	29.652	29 638	29.616	29.635	.025	.036	.074	80	45	76	7
8	12 8	20.8	16.0	16 5	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	3	N. W.	4	N W.	3	22.8	12.3	29.630	29.609	29.671	29.637	.055	.067	.052	71	63	57	8
9	-1.0	29.3	25.2	17.8	Night.	.....	.....	.....	0	.....	3	Cir.	10	St.	N. W.	1	N. W.	1	.....	0	31 0	-1.0	29 877	29 869	29.918	29.888	.041	.068	.101	100	42	75	9
10	29.7	34.6	32.3	32.2	.....	Night.	1.800	4 00	10	Nim.	10	Nim.	10	Nim.	N E.	1	N. E.	1	N. E.	3	35.0	24.0	29.719	29 361	28 988	29.356	.165	.201	.183	100	100	100	10
11	32.2	37 0	28 3	32.5	.....	.....	.....	.....	8	St.	8	St.	2	St.	N. W.	1	N.	2	N. W.	1	37.0	28 3	29 445	29.745	29.929	29.706	163	.146	.123	90	66	79	11
12	10.7	11.4	8.4	10.2	5 P. M.	Night.	.207	2 00	10	St.	10	St.	10	Nim.	N. E.	3	N. E.	4	N. E.	4	28.3	8.4	30 064	29 992	29.933	29 996	.060	.056	.063	86	76	100	12
13	6.6	25.7	16.6	16 3	.....	.....	.....	.....	5	Cir. st.	0	.....	0	.....	N.	3	N. W.	1	N. W.	1	26 0	6.6	29.977	29.919	29.916	29 937	.051	.076	.068	95	55	73	13
14	22.3	36.5	27.2	28.7	Night.	.....	.....	.....	8	St.	2	Cir.	6	Cir. st.	S E.	1	N. W.	1	N. W.	1	36.8	16 0	29.879	29 839	29 927	29.882	.103	.095	.113	86	44	76	14
15	23.3	22.0	6.6	17.3	.....	3 P. M.	.565	5 50	10	Nim.	10	Nim.	1	St.	N. E.	1	N. W.	4	N. W.	4	27.2	6 6	29.579	29 332	29.493	29.468	.125	.094	.050	100	79	86	15
16	2.0	22.0	15.3	13.1	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	3	N. W.	3	N. W.	2	22 6	2.0	29 712	29.699	29.687	29.699	.036	.037	.052	78	32	62	16
17	9.3	29.4	20 4	19.7	.....	.....	.....	.....	1	Cir.	3	Cir.	3	Cir. st.	S. E.	1	S. W.	3	S. W.	1	31.0	9 3	29.713	29 609	29.485	29.602	.061	.109	.087	93	67	79	17
18	9.3	28.2	14.4	17.3	.....	.....	.....	.....	6	Cir. st.	4	Cu. st.	0	.....	S. W.	1	S. W.	2	S W.	2	30 3	9.0	29.372	29.374	29 600	29 449	.066	.067	.047	100	44	57	18
19	11.3	24.7	19.0	18.3	6 A. M.	1½ P. M.	.228	2.50	10	Nim.	7	Cu. st.	1	Cir.	S E.	1	N.	1	N. W.	1	24 7	10.8	29 607	29.321	29.374	29 434	.065	.104	.074	90	78	72	19
20	8.0	5.0	5.8	6.3	.....	.....	.....	.....	0	.....	6	Cu. st.	10	St.	N. W	2	N. W.	4	N. W.	3	19.0	4.5	29 493	29.465	29.459	29.472	.039	.034	.045	62	62	81	20
21	1 2	16.2	6.0	7.8	.....	.....	.....	.....	0	.....	4	Cir.	0	.....	N. W.	3	N. W.	4	N. W.	2	16.2	1.0	29.513	29.507	29 627	29.549	.030	.053	.045	65	58	81	21
22	8.5	22.6	14.0	15.0	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	1	N. W.	3	N. W.	1	22.6	4.6	29.736	29.710	29.862	29.769	.045	.040	.052	71	33	63	22
23	2.0	31.8	27.0	20.3	Night.	.....	.....	.....	3	Cir.	6	Cir st.	10	St.	S. E.	1	S. W.	2	S. E.	1	33.0	0.0	29 927	29.798	29.598	29.774	.047	.110	.123	100	61	84	23
24	21.2	32.4	27 6	27.1	.....	10½ A. M.	1.140	12 00	10	Nim.	9	Cu. st.	0	.....	N. E.	3	N. E.	3	N. W.	1	40.0	20.5	29.437	29.663	29.867	29.656	.111	.107	.106	97	58	71	24
25	22.2	39.8	28.0	30.0	.....	.....	.....	.....	1	St.	0	.....	2	Cir. st.	N. W.	1	N.	1	N. W.	1	44 0	20 3	30 202	30 183	30 187	30.191	.094	.106	100	79	43	65	25
26	21.6	42.5	34.0	32.7	.....	.....	.....	.....	10	St.	7	Cir. st.	10	St.	N.	1	E.	2	S E.	1	36.0	19 8	30.198	30.159	30 096	30.151	.102	.102	.139	89	37	71	26
27	31 2	36.0	33.4	33.5	6 A. M.	8 P. M.	.115	1.00	10	Nim.	10	Nim.	10	St.	E.	1	S.	1	S	1	39.8	31.0	30.017	29 939	29 909	29.955	.148	.174	.191	84	82	100	27
28	29 3	39 8	30.4	33.2	.....	.....	.....	.....	10	St.	0	.....	8	.....	N. W.	1	N. W.	2	N. W.	1	39.8	28.2	29.867	29 811	29 816	29 831	162	.095	.080	100	39	47	28
29	21.5	35.8	27 2	28.2	.....	.....	.....	.....	9	St.	10	St.	0	.....	N. E	1	.....	0	N. W.	1	35.8	19.8	29 865	29.791	29 833	29 830	.091	.118	.101	79	57	68	29
30	15.4	34.3	24.0	24.6	.....	.....	.....	.....	0	.....	3	Cir. cu.	1	St	N. W.	1	N. W.	2	N. W.	2	37.0	12 5	29.847	29.846	29 945	29 879	.085	.069	.079	97	35	61	30
31	17.0	25.4	22.0	21.5	10 A. M.	.....	.558	5 00	10	St.	10	Nim.	10	Nim.	N.	1	N. E.	2	N. E.	2	29.2	15 6	29.979	29.812	29.443	29 945	.081	.119	.118	86	87	100	31
Sums.	.....	.....	.....	.....	.....	.....	5 234	38 00																										Sums.
Means	.....	.....	.....	19°.30	.....	.....	.....	.....	5.6	.....	5.4	.....	4 3	.....	.....	.....	N. W. & W	.52	.....	....	29° 01	10°.00	.....	.....	.....	29 702	076	.092	.089	87	63	78	Means
										Mean	5.1						S. W. & S.	.13		Max	44°.0	-16°.5	Min.		Max...	30.202	Mean..	.086		Mean.	76		
																	S. E. & E	.05							Min...	28.988	Max...	.191		Max..	100		
																	N. E. & N.	.30									Min...	.025		Min..	32		

FOR THE MONTH OF APRIL, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M	9 P. M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds.	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P. M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P. M.	9 P. M	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M.	9 P. M.	Day of Month
1	24.2	31 0	27 0	27.4	.....	Night.	.268	2.50	10	Nim.	10	Nim.	10	Nim.	N. E.	1	S. W.	1	S. W.	1	34.0	21.5	29.254	29.219	29 220	29 231	.130	.137	.147	100	79	100	1
2	27.7	38.7	33.8	33 4	.....	.....	.....	.....	3	Cir.	8	Cu. st.	10	St.	N. W.	3	N. W.	4	N. W.	3	39.0	25.4	29.393	29.518	29.649	29 520	.127	.118	.154	86	46	79	2
3	26 5	40.8	33.4	33.6	8½ P. M.	Night.	.050	.50	1	Cir.	9	Cu. st.	10	Nim.	N. W.	2	N. W.	3	S. W.	1	41.8	24.3	29.672	29 651	29 680	29.668	.100	097	.163	70	38	85	3
4	32.0	41.5	36.3	36.6	.....	.....	.....	.....	8	Cu. st.	8	Cir. cu.	8	Cu. st.	N. W.	1	N.	3	N. W.	1	42 3	30 0	29.790	29.790	29.835	29.805	.152	.086	.119	82	33	54	4
5	26 3	43 2	32.0	33 8	.....	.....	.....	.....	1	Cir.	0	.....	0	.....	N.	1	W.	1	S. W.	1	43.7	25 8	29.886	29.858	29.861	29 868	.102	.070	.126	72	25	69	5
6	28.8	42 1	32.0	34.3	.....	.....	.....	.....	10	St.	7	Cir. cu.	0	.....	N. E.	1	W.	2	E.	1	45.5	25.5	29 854	29.835	29.892	29 860	.117	.143	.144	74	53	79	6
7	24 0	46.5	35.4	35.3	.....	.....	.....	.....	2	Cir. st.	6	Cir st.	1	St.	.....	0	S.	2	S. W.	1	46 8	26.0	29 996	30.017	30 050	30.021	.120	.130	.137	93	41	66	7
8	36 2	41.2	40.3	39.2	.....	.....	.....	.....	10	St.	10	St.	10	St.	S. W.	1	S.	1	S.	1	48.4	33.0	30 003	29 987	29.910	29.967	.161	.232	.239	75	89	95	8
9	39.2	43.7	37.7	40.2	2 P. M.	*	.....	.....	10	St.	10	Nim.	10	Nim.	N. E.	1	N. E	1	N. E.	1	43.7	36.2	29.838	29.753	29.667	29.753	.229	.254	.226	95	90	100	9
10	35.2	41.3	41.0	39.2	.....	4 P. M.	1.100	.....	10	St.	10	Nim.	9	St.	S.	1	S W.	1	S. W.	2	43.0	34.0	29 454	29.278	29 359	29 364	.206	249	.190	100	96	74	10
11	37.4	41.0	34 0	37.5	.....	.....	.....	.....	4	Cir. & st.	1	Cir.	0	.....	S. W.	2	N. W.	3	N. W.	3	42.0	34.0	29 532	29.623	29 862	29.672	.131	.109	.112	59	42	57	11
12	32.5	47.3	38.3	39.4	Night.	.....	.....	.....	0	.....	3	Cir.	5	Cir. st.	N. W.	2	S. W.	2	S. W.	1	48.6	31.2	30 042	30.042	29.980	30 021	.098	.108	.146	53	33	63	12
13	38.0	48.3	42 4	42.9	.....	10 A. M.	2.30	.....	10	St.	0	.....	6	Cu. st.	S.	1	S. W.	2	N. W.	2	49.0	35.7	29.730	29.602	29.600	29.644	.201	.256	.171	88	76	63	13
14	35.0	42 0	35 8	37.6	.....	.....	.....	.....	3	Cir.	8	Cir cu.	2	Cir. st.	S. W.	1	N. W.	3	N. W.	2	42 6	32.0	29.554	29.551	29.570	29.558	.128	.113	.151	63	42	75	14
15	32.3	44.3	35.0	37 2	...	.....	.....	.....	0	.....	2	Cir. cu.	5	Cir. cu.	N. W.	3	N. W.	3	N. W.	2	45.0	31.4	29.679	29.652	29.634	29.655	.113	.125	.153	62	43	75	15
16	33.4	45 3	36.6	38.4	.....	.....	.....	.....	10	St.	9	Cu. st.	8	Cir. cu.	N. E.	2	N E.	3	N. E.	2	45 3	31 7	29.627	29.617	29 715	29.653	.137	.129	.110	72	43	51	16
17	35.5	47.2	38 0	40 2	.....	.....	.....	.....	0	.....	0	.....	3	Cir.	N W.	3	N. W.	3	N. W.	1	47.2	32 0	29 859	29.809	29.768	29 812	.101	.087	.103	48	27	45	17
18	31 3	49.3	37.8	39.5	.....	.....	.....	.....	0	.....	0	.....	1	Cir. st.	S.	1	N. W.	3	S. W.	3	49.6	27.2	29.776	29.648	29.605	29.676	.133	.099	.129	76	28	54	18
19	36 2	53 0	37 0	42.1	.....	.....	.....	.....	0	.....	0	.....	0	.....	S.	1	S. W.	3	S.	1	53.4	28 0	29 571	29 557	29.578	29.569	.182	.160	.132	85	40	60	19
20	35 2	61 3	46 5	47.7	.....	†	.....	.....	0	.....	4	Cir.	0	.....	S. E	1	S. W.	1	S. W.	1	63.0	29 3	29.750	29.790	29.854	29 798	.160	.201	.232	78	37	73	20
21	40 3	58 2	44.3	47.6	.....	.....	.....	.....	7	Cir. st.	0	.....	0	.....	N. E	1	S. W.	1	S.	1	62 2	36 8	29.920	29.844	29.786	29 850	.194	.253	.221	78	52	76	21
22	38.7	67.5	43.2	46.5	5½ P. M.	Night.	.180	.....	4	Cir.	9	St.	10	Nim.	E.	1	S.	3	S. E.	2	60 0	33 4	29 757	29.693	29.635	29 695	.203	.302	.256	86	64	92	22
23	32 8	39.4	33 0	35.1	Night.	.....	.....	.....	8	Cir. st.	7	Cu. st.	0	.....	N. W.	3	N W.	3	N. W.	2	43 2	30 0	29.725	29 730	29.829	29 761	.131	.187	.154	70	78	82	23
24	36.3	52.2	41 4	43.3	.....	7½ A. M.‡	.030	.....	10	Nim.	6	Cu. st.	6	Cu. st.	S. E	3	S. W.	3	N. W.	2	52 8	30.4	29.802	29.756	29.758	29 772	.214	.254	.229	100	65	88	24
25	38 4	54.2	42.0	44 9	3 P. M.	.....	.....	.....	2	Cir.	6	St.	10	Nim.	S. W.	1	S. W.	2	S. E.	1	54.5	31.6	29.921	29 848	29.801	29.857	.189	.154	.244	81	37	91	25
26	39.8	56.3	43.3	46.5	.....	8 A. M.§	.070	.....	10	Nim.	4	Cir. st.	2	St.	S.	1	S. W.	2	.....	0	56 3	37.0	29.707	29.457	29.351	29 505	.215	.286	.250	87	63	89	26
27	44.0	51 5	44.2	46.6	.....	.....	.....	.....	0	.....	1	Cir. cu.	0	.....	N. W.	3	N. W.	4	N.	2	51.7	41.4	29.498	29.493	26 643	29 545	.108	.120	.131	37	31	45	27
28	38.2	51.0	44.7	44 6	.....	.....	.....	.....	0	.....	2	Cir. cu.	1	Cir. st.	N. W.	3	N.	4	N. W.	3	51.6	34 3	29 756	29.709	29 727	29.731	.125	.117	.120	54	31	40	28
29	43.8	52.4	48.0	48.1	.....	.....	.....	.....	3	Cir. cu.	7	Cu. st.	8	St.	N. E.	3	N. E.	2	N. E.	1	55.2	40.5	29 849	26 953	30.108	29 970	.149	.178	.193	52	45	58	29
30	43 6	59.7	44.2	49 2	.....	.....	.....	.....	6	Cir. st.	5	Cir. st.	9	St.	N. W.	1	N. W.	1	S. E.	1	60.3	41 2	30.200	30.134	30.088	30.141	.201	.212	.199	71	41	69	30
31																																	31
Sums	.....	.....	.....	.....	.....	.....	1.928	3.00																									
Means	.....	.....	.....	40°.26	.....	.....	.....	.....	4 7	.....	5.1	.....	4.8	.....	.....	.....	N. W. & W.	.48	.....	...	48°.72	31°.49	.....	.....	.....	29 731	.152	.165	.169	75	50	72	Sums. Means
									Mean		4.9						S. W. & S.	31		Max	63°.00	20° 00	Min.		Max...	30 200	Mean..	.162		Mean.	66		
																	S. E. & E	.05							Min...	29.219	Max...	.302		Max..	100		
																	N. E. & N.	.16									Min...	.070		Min...	25		

* Thunder shower in the night. † Ice left the Penobscot river at Bangor. ‡ Slight shower at 10 P. M. § Slight shower at 6½ P. M.

FOR THE MONTH OF MAY, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M.	9 P. M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force.	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P. M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P. M	9 P. M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M	9 P. M.	Day of Month
1	43.0	57.4	43 7	48.0	.....	.....	.....	.....	8	Cir. st.	4	St.	10	St.	S. E.	1	S. W.	4	S.	3	57.4	41.0	30 089	30 014	29.934	30 012	.218	.196	.229	78	42	72	1
2	46 3	50.7	47 5	48.2	9 A. M.	.....	.....	.....	10	St.	10	Nim.	10	Nim.	S.	2	S.	3	S.	2	55 0	42.2	29.849	29 748	29.739	29.779	.258	.331	.329	82	89	100	2
3	46 3	51 0	43.3	46 9	.....	Night.	.850	.....	10	Nim.	10	Nim.	10	Nim	S. E.	1	N. E.	1	N. E.	1	53 4	43 3	29.747	29 678	29.646	29.690	.307	.356	.281	98	95	100	3
4	43.0	51.4	45.2	46 5	3 P. M.	.....	.....	.....	7	Cu. st.	10	Cir st.	10	Nim.	N.	1	N. E.	2	N. E.	2	51.4	41.8	28.739	29.736	29 773	29.749	.265	.098	.290	96	26	96	4
5	38 0	46.2	40.2	41 5	.....	Night.	.940	.....	10	Nim.	10	Nim.	10	Nim.	N. E	2	N. E.	2	N. E.	3	46.2	37.0	29 776	29.727	29.674	29.726	.229	.272	.250	100	87	100	5
6	40.7	46.0	46.2	44.3	8½ P. M.	.....	.....	.....	10	St.	7	Cu. st.	10	Nim.	N. E.	2	N. E.	2	N. E.	3	46.2	37.0	29 776	29.727	29.674	29.726	.229	.272	.250	100	87	100	5
7	45.5	54.3	46 8	48 9	.....	10 A. M.	.330	.....	10	Nim.	6	Cir. cu.	0	.....	N. E.	2	N. E.	1	N. E.	1	50.5	39.4	29.687	29.717	29.716	29 707	.232	.231	.240	91	74	77	6
8	48.2	68.3	56.0	57.5	.....	.....	.....	.....	5	Cir. st.	4	Cu. st.	1	St.	S. W.	1	N. W.	1	N. W.	1	55 3	43.0	29.693	29.743	29.765	29 734	.305	.312	.251	100	74	79	7
9	51.4	56.2	48.3	52.0	.....	*	.....	.....	7	Cir. & st.	7	Cu. st	5	St.	.....	0	S. E.	2	S E.	2	69.0	41.4	29.770	29.773	29.865	29.803	.282	.310	.263	84	45	59	8
10	61 5	56.5	46.0	54.7	.....	†	.....	.....	2	Cu. st.	7	Cu. st.	1	St.	N. W.	2	N. W.	3	N. W.	2	56 2	46.7	29.880	29.719	29.560	29.720	.285	.336	.282	75	75	82	9
11	45.2	50.0	41.8	45.7	12 M.‡	Night.‡	.040	.....	4	Cir. st.	8	St.	7	Cir. st.	N. W.	1	S. W.	3	S. E.	2	61.5	44.0	29.556	29.860	30.034	29 817	.324	.203	.192	59	44	62	10
12	43 8	58 0	52 4	51 4	.....	§	.....	.....	10	St.	5	Cir. & st.	8	St.	S. W.	1	S W.	2	S. W.	1	58.0	34 0	30.162	30.130	30 043	30.112	.237	.251	.190	79	69	72	11
13	46.7	63.8	53.0	54.5	.....	.....	.....	.....	8	Cir. cu.	6	Cir. st.	7	Cu. st.	N. E.	3	N. E.	1	S. W.	1	60 6	36.5	29.804	29 696	29 679	29.726	.262	.365	.355	92	76	90	12
14	48.2	62.5	53.3	54.7	.....	.....	.....	.....	8	Cir. st.	2	Cir. st.	5	Cir. & st.	N. E.	2	N. E.	1	N. W.	1	64 0	42.8	29 705	29.680	29.721	29 702	.187	.205	.295	59	32	73	13
15	48.6	64.0	53.0	55.2	.....	.....	.....	.....	0	.....	4	Cu. st.	9	Cu. st.	N. W.	1	S. W.	2	N. W.	3	63 2	45 3	29.911	29 907	29.962	29.927	.163	.249	.161	48	44	40	14
16	43.5	40.8	44 0	42.8	...	.....	.....	.....	0	.....	10	St.	10	St.	N. E.	3	N. E.	4	N. E.	3	64.0	45 7	29.973	29 965	29.891	29.943	.216	.137	.158	63	23	39	15
17	48.0	54.4	47.0	49.8	.....	.....	.....	.....	8	Cu. st.	9	Cu. st.	7	Cir. st.	N. E.	3	N. E.	3	N. E.	1	53.0	40 2	29.944	29.778	29.766	29.829	.110	.166	.195	39	65	68	16
18	45 3	64 0	47 0	52.1	.....	.....	.....	.....	10	Cir. st.	2	Cir cu.	0	.....	N. E.	1	S. W.	2	S. W.	3	56.4	43.2	29.777	29.767	29.769	29.771	.212	.210	.249	63	50	77	17
19	49.2	70.0	55 2	58.1	Night.	.....	.....	.....	0	.....	5	Cir. cu.	10	St.	S. E.	1	S. W.	3	S.	1	64 0	38.0	29.801	29.677	29.682	29 720	.247	.243	.225	82	41	70	18
20	54.0	57.0	54.3	55.1	.....	Night.	.830	.....	10	Nim.	10	Nim.	10	Nim.	S. E.	1	S.	1	S. W.	1	71.8	38 8	29.634	29.548	29.499	29.560	.273	.400	.352	78	55	81	19
21	50.0	58 3	50 3	52.9	.....	.....	.....	.....	8	Cir. cu.	10	Cu. st.	7	Cu. st.	N. E.	2	N. E.	1	N.	1	57.4	53.8	29 267	29.244	29.247	29.253	.389	.416	.380	93	89	90	20
22	48.8	67.3	51.7	55 9	.....	.....	.....	.....	0	.....	4	Cir. cu.	1	Cir.	S. W.	1	S. W.	1	S.	1	59 0	47.3	29 429	29.555	29.734	29 573	.322	.370	.297	89	76	81	21
23	48.4	48.8	50.3	49.2	7 A. M.	Night.	.330	.....	10	Nim.	10	Nim.	10	Nim.	S.	2	S. E.	2	S. E.	1	68.8	42 5	29 839	29.857	29.840	29 845	.304	.359	.292	88	54	76	22
24	51.7	60.2	53.7	55.2	.....	.....	.....	.....	9	St.	8	Cir. st.	8	St.	N. W.	1	N. E.	2	N. E.	1	53.4	45 0	29.836	29.691	29.586	29 704	.300	.320	.365	88	93	100	23
25	53.0	56.2	48.8	52 7	1½ P. M.	Night.	.040	.....	10	Cu. st.	10	Nim.	10	Nim.	S.	3	S.	2	S E.	2	61 0	47.8	29.669	29.674	29.700	29.681	.344	.341	.326	90	66	79	24
26	55.2	67.4	57.5	60.0	.....	.....	.....	.....	1	Cir.	1	Cir.	4	Cir.	N. W	3	N. W.	2	S.	1	58 8	48.8	29.719	29.680	29 620	29 673	.335	.383	.345	83	85	100	25
27	56 0	71.0	53.6	60 2	Night.	.....	.....	.....	2	Cir.	3	Cir.	4	Cir. st.	N. E.	1	N. E.	2	.....	0	70.3	48 4	29.675	29.710	29.736	29.707	.250	.246	.315	57	37	67	26
28	51.4	59.4	50 2	53.7	.....	11 A. M.	.380	.....	10	Nim.	8	Cir. cu.	8	St.	S. E.	1	.....	0	S. E.	3	71.0	53 6	29 739	29 717	29.702	29.719	.349	.295	.314	78	39	76	27
29	52.3	61 0	55.0	56.1	4 A. M.	5 A. M.	.040	.....	5	Cir cu.	5	Cir. cu.	9	St.	S. W.	2	N. W.	2	N. W.	2	62 0	49.3	29.637	29 622	29 631	29 630	.342	.352	.332	90	69	91	28
30	53.7	65.4	54.0	57.7	.....	.....	.....	.....	4	Jir. st.	2	Cir. cu.	9	St	N. W.	2	W.	2	S.	2	62 3	47.0	29.661	29.666	29.774	29.700	.330	.291	.269	84	54	62	29
31	52.5	57.3	53.8	54.5	1 P. M.	5 P. M.	.140	.....	6	Cir. st.	10	Cir. st.	8	Cir. st.	S.	1	N. E.	2	N.	1	69.4	49.6	29 846	29.832	29.834	29.837	.291	.295	.329	70	47	79	30
																					58.2	50.0	29 783	29.716	29.721	29.740	.308	.397	.332	76	84	80	31
Sums.	.....	.....	.....	.....	.....	.....	3.920	.....																										Sums.
Means	.....	.....	.....	52°.13	.....	.....	.....	.....	6.5	.....	6.6	.....	7.0	.....	.....	....	N. W. & W.	.19	.....	....	60° 08	44°.10	.....	.....	.....	29.745	.273	.288	.280	79	61	78	Means
										Mean	6.7						S. W. & S.	.32		Max	71°.80	34°.00	Min.		Max...	30.162	Mean..	.280		Mean.	73		
																	S. E. & E	.12							Min...	29.244	Max...	.416		Max..	100		
																	N. E. & N.	.37									Min...	.098		Min ..	23		

* Slight sprinkling of rain several times during the day. † Brilliant Aurora in the evening. ‡ Light shower. § Luna halo in the evening.

FOR THE MONTH OF JUNE, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A.M.	2 P.M.	9 P.M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A.M. Amount of cloudiness.	Kind of clouds.	2 P.M. Amount of cloudiness.	Kind of clouds.	9 P.M. Amount of cloudiness.	Kind of clouds.	WINDS. 7 A.M. Direction.	Force.	2 P.M. Direction.	Force.	9 P.M. Direction.	Force	THERMOMETER Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A.M.	2 P.M.	9 P.M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A.M.	2 P.M.	9 P.M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A.M.	2 P.M.	9 P.M.	Day of Month
1	52.4	57.4	51.3	53.7	1½ P.M.*	.....	.....	.....	2	Cir.	9	Nim.	10	St.	N.	2	S. W.	2	.....	0	64.0	48.3	29 769	29.730	29 727	29.742	.283	.316	.323	72	67	85	1
2	47 3	53 5	46.3	49.0	.....	12 M.	1.070	.....	10	Nim.	9	Cu st.	3	Cir. & st.	N. E.	3	N. E	3	N.	1	55.4	46 3	29.707	29.762	29.854	29.774	.327	.302	.270	100	74	86	2
3	45.2	55 6	47.2	49 3	.....	.....	.....	.....	8	Cir. st.	3	Cu. st.	0	.....	N. E.	2	N. E	3	N.	1	56 4	43.0	29 905	29 891	29.862	29.886	.218	.210	.295	72	47	91	3
4	48 0	63 5	51.4	54.3	Night.	.....	.....	.....	2	Cir. cu.	2	Cu. st.	9	Cu. st.	E.	1	S. W.	3	S.	2	63.8	37.3	29.836	29.676	29 617	29.710	.284	.320	.326	85	55	86	4
5	49 4	56.7	52.0	52.7	.....	9 A. M.	..270	.....	10	Nim.	9	Cu. st.	9	St.	S. E	1	N. E.	2	N. E.	2	58.5	49.0	29.641	29.648	29.645	29 645	.348	.312	.308	98	68	79	5
6	53 3	66.0	58.2	59 2	3 P. M.	.....	.....	.....	10	Nim.	8	Cu. st.	10	Nim.	N. E	1	S. E.	1	E.	1	66 5	50.4	29 640	29.645	29.671	29.652	.407	.376	.434	100	59	89	6
7	53.4	62.0	57 0	57 5	.....	7 A. M.	.150	.....	10	Nim.	10	St.	1	St	N. E.	1	N.	1	.....	0	65 7	53.0	29.732	29.750	29 733	29.738	.409	.414	.412	100	75	89	7
8	59.4	58.6	57.5	58.5	1 P. M.	.....	.....	.....	10	St.	10	Nim.	10	Nim.	S. E.	1	N. E.	1	N. E.	1	62 6	55.8	29.722	29 666	29.580	29.656	.433	.462	.474	86	94	100	8
9	58 0	69.4	62.5	63.3	.....	7½ A. M.	.440	.....	10	Nim.	6	Cir. cu.	1	Cir. st.	N. E.	1	N. W.	1	N. W.	1	72.4	55.4	29.581	29.577	29.592	29.583	.452	.457	.500	94	64	88	9
10	58 5	59.2	54.5	57.4	5½ A. M.	.....	.....	.....	10	Nim.	10	Nim.	10	Nim.	S. E.	2	S. E.	3	S. E.	2	62 5	53 5	29.631	29.590	29.487	29.569	.451	.504	.411	92	100	97	10
11	55.2	74.3	63.2	64 2	11 A. M.	6 A. M. / 1 P. M.	.860 & .040	.....	10	St.	4	Cu. st.	1	Cir. st.	.....	0	N. W.	2	N. W.	1	74.8	52 3	29.478	29 449	29 502	29.476	.430	.564	.435	99	66	75	11
12	60.2	78 2	64.7	67.7	†	.....	.090	.....	2	Cir.	3	Cu. st.	0	Cu. st.	N. W.	1	N. W.	2	N. W.	3	79.3	59.0	29.611	29.597	29.563	29 590	.429	.553	.462	82	58	76	12
13	63.4	73.0	64.4	66 9	Night †	7½ A. M. / Night.	.110	.....	0	.....	4	Cir. cu.	9	St.	N. W.	2	S. W.	3	S. E.	2	74 2	61.5	29 651	29 658	29.638	29.649	.350	.308	.428	60	38	71	13
14	56.0	67.5	62 0	61.8	6 P. M.	.....	.090 & .050	.....	10	Nim.	7	Cir. cu.	10	Nim.	S. E.	1	W.	1	S. W.	1	68.4	55.0	29.565	29 548	29.541	29.551	.449	.406	.498	100	75	89	14
15	61.5	73 5	62.2	65 7	.....	.....	.....	.....	0	.....	3	Cir. cu.	5	Cir st.	N. W.	2	W.	2	W.	1	75.3	56 2	29.567	29.559	29.660	29.595	.442	.307	.435	81	37	78	15
16	63 0	74.7	61 5	66.4	.....	.....	.....	.....	1	Cir.	5	Cir. cu.	5	Cir.	N. W.	1	N. W.	1	W.	1	76.0	58.4	29 806	29.798	29 847	29 817	.386	.344	.442	67	40	81	16
17	61.7	76 0	65.2	67 6	.....	.....	.....	.....	3	Cir.	3	Cu. st.	5	Cir. st.	N.	2	N. W.	2	N. W.	1	78 0	56.0	29 926	29.938	29.905	29.923	.385	.367	.449	71	47	72	17
18	65 0	78 0	64.4	69.1	.....	‡	.020	.....	1	Cir.	6	Cir cu.	3	Cir.	N. W.	1	N. W.	2	N. W.	1	79.3	58 5	29 990	29.946	29.937	29.958	.420	.342	.419	68	36	69	18
19	62.7	80 8	66.4	70.0	.....	.....	.....	.....	3	Cir.	1	Cir. cu.	5	Cir. st.	.....	0	N. W.	1	S.	3	81.2	57 8	29.977	29 936	29.929	29.947	.482	.505	.487	85	48	75	19
20	66.5	78.0	63.5	69.3	.....	.....	.....	.....	2	Cir.	1	Cu. st.	1	St.	S.	2	S. W.	3	S.	3	78.0	58 0	29.985	30.040	30 008	30.011	.496	.522	.454	76	54	78	20
21	64.8	83.7	66.2	71.6	.....	.....	.....	.....	1	Cir. st.	2	Cir. st.	3	Cu. st.	S.	3	S. W.	3	S.	3	84.0	58.6	29 971	29.872	29 841	29 895	.496	.750	.533	81	65	83	21
22	67 0	84.2	70.0	73 7	.....	.....	.....	.....	3	Cir. st.	2	Cir.	2	St.	W.	1	W.	2	.....	0	85.2	62 0	29 858	29.827	29.825	29 837	.546	.459	.622	83	39	85	22
23	65.2	81 8	62.5	69.8	.....	.....	.....	.....	10	St.	2	Cu. st.	1	St.	.....	0	S.	2	S.	1	81.8	62.5	29 892	29 870	29.853	29 872	.611	.645	.460	92	59	81	23
24	64.4	76.7	65.0	68.7	.....	.....	.....	.....	10	St.	7	Cir. cu.	10	St.	S.	2	S.	2	.....	0	77 3	61.2	29.885	29.851	29.841	29 859	.530	.624	.526	88	64	85	24
25	66.0	82.8	67 8	72.2	Night.	.....	.....	.....	10	Cir. st.	7	Cir. cu.	10	St.	S.	1	S.	1	S.	1	84.2	64 0	29.861	29.833	29 865	29.853	.552	.553	.590	86	49	87	25
26	63.2	69 2	63.8	65.4	.....	3 P. M.	.530	.....	10	Nim.	10	Cu. st.	10	St.	S.	1	S. E.	1	S. E.	1	71.0	62 8	29.978	29 963	29 943	29 961	.530	.568	.532	91	80	90	26
27	65 2	77.7	64.4	69 1	.....	.....	.....	.....	10	Cir. st.	3	Cir. cu.	1	St.	S.	1	S.	1	S. E.	2	78.2	63.0	29 940	29 926	29.924	29 930	.546	.620	.523	88	65	87	27
28	62.4	69 8	61.8	64.7	.....	.....	.....	.....	10	St.	10	St.	10	St.	S. E.	2	S. E.	3	S. E.	1	69.8	58 8	29 943	29.868	29 853	29.888	.499	.596	.501	88	82	88	28
29	63.2	80.8	71.2	71.7	.....	.....	.....	.....	....	Fog.	0	.....	0	.....	E.	1	W.	1	W.	1	84.0	59.7	29 850	29 821	29 782	29.818	.531	.675	.671	91	65	86	29
30	76.0	90.4	69.2	78.5	6¼ P. M.	7 P. M.§	.750	.....	0	.....	4	Cir. cu.	2	Cu. st.	W.	1	S. W.	2	W.	1	90.6	69.2	29.820	29.765	29 765	29.783	.652	.720	.661	73	50	93	30
31																																		31
Sums.	.....	.....	.....	.....	.....	.....	4.470	.....							.....	....	N. W. & W.	.27	.....	...														Sums.
Means	.....	.....	.....	64°.30	.....	.....	.....	.....	5 9	.....	5.3	.....	5.4	.....	.....	....	S. W. & S.	34		Max	73°.28	56°.22	.....	.....	.....	29 772	.445	.467	.463	85	61	84	Means
										Mean	5.5						S. E. & E	.19			90°.6	37°.3	Min.		Max...	30 040	Mean..	.459		Mean.	77		
																	N. E. & N	.20							Min...	29.449	Max...	.750		Max..	100		
																											Min...	.210		Min...	36		

* Thunder showers during afternoon, with hail at 4.40 P. M.—stones ¼ to ½ inch in diameter. † Shower in preceding night ‡ Shower between 2 and 3 P. M. § Thunder shower.

FOR THE MONTH OF JULY, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M.	9 P. M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force.	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P. M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P. M.	9 P. M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M.	9 P. M.	Day of Month
1	75.0	88.8	72.3	78.7	5¾ P. M.	.....	.....	.....	5	Cir. st.	4	Cir. cu.	10	Nim.	N. W.	1	N. W.	....	N. E.	1	89.3	67.8	29.693	29.590	29.566	29 616	.704	.660	.793	81	49	100	1
2	57.0	64.8	64.2	62 0	.....	12 M.	.340	.....	10	Nim.	10	St.	8	St.	N. E	3	E.	1	S. E.	2	68 0	36 2	29.667	29.706	29.721	29 698	.436	.509	.533	94	83	89	2
3	64.8	64.4	61.0	63.4	.....	.....	.....	.....	9	St.	9	St.	10	St.	S. E.	3	S.	3	S E.	3	67.2	57.0	29.753	29 743	29.692	29.729	.512	.453	.489	84	75	91	3
4	64.0	88.5	70 8	74.4	3½ P. M.*	5 P. M.	.120	.....	10	St.	6	Cu. st.	9	St.	S.	3	N. E.	3	N. E.	3	98.7	59 6	29.575	29.531	29.559	29.555	.556	.772	.701	92	57	90	4
5	68.4	86.0	76 3	76.9	4 A. M.	7½ A. M.	.080	.....	10	Nim.	3	Cir cu.	1	St.	S. E.	2	S. W.	3	N. W.	2	86.4	63 2	29 627	29 602	29.626	29.618	.636	.762	.771	92	61	63	5
6	70 3	81.2	69.8	73 8	.....	.....	.....	.....	1	Cir.	2	Cir. cu.	1	St.	N. W.	2	N. W.	2	N. W.	1	82.5	68 0	29 763	29.773	29 774	29.770	.662	.407	.553	90	39	76	6
7	71.0	81.0	71.4	74 5	.....	.....	.....	.....	2	Cir.	3	Cu. st	0	.....	N. W.	2	N. W.	3	N. W.	1	81 6	63 6	29.858	29 833	29.867	29.853	496	.428	.463	65	41	60	7
8	64.2	80.2	63.2	69.2	5 P. M.†	.....	.....	.....	0	.....	3	Cu. st.	9	St.	N.	1	S. W.	1	.....	0	82.0	59 0	30 047	30 025	30 009	30 027	.462	.539	.507	77	52	88	8
9	66 2	81.4	67 4	71.7	.....	.....	.....	.....	1	Cir.	2	Cir. cu.	3	Cu. st.	.....	0	N. W.	3	S. W.	3	82 0	59 8	30 040	29 989	29 916	29 982	.540	.657	.528	84	61	81	9
10	71.5	81 3	70.5	74 4	6 P. M.	6½ P. M.	.020	.....	5	Cir. cu.	5	Cir st.	9	Cu. st.	S. W.	3	S.	4	S.	2	82.7	65 2	29.882	29.744	29.674	29.777	.649	.774	.662	84	73	91	10
11	71.2	83 0	70.0	74.7	.....	.....	.....	.....	6	Cir. st.	3	Cir. cu.	2	Cir.	.....	0	N. W.	3	S. W.	1	83 0	67 7	29 618	29.593	29.597	29 603	.668	.513	.487	87	45	66	11
12	67.0	81 6	69.5	72.7	9.05 P.M.*	10 P. M.	.280	.....	3	Cir.	4	Cir.	7	Cu. st.	.....	0	S W.	3	S. W.	1	81.6	59 0	29 595	29 579	29.561	29 578	.496	.577	.540	75	53	75	12
13	59 3	71.0	56 2	62.2	.....	.....	.....	.....	0	.....	2	Cir.	0	.....	N. E.	3	N. W.	3	N. W.	1	72.5	56 2	29 753	29.745	29 856	29.785	.480	.446	.319	97	59	71	13
14	61.8	76.7	65 0	67.8	.....	.....	.....	.....	4	Cir. st.	3	Cir.	0	.....	S. W.	1	S. W.	2	S. W.	1	77 8	52 4	29.902	29.812	29 795	29.836	.366	.334	.490	66	36	78	14
15	65.5	84.7	70 2	73.5	.....	.....	.....	.....	7	Cir. st.	2	Cir.	1	Cir.	.....	0	S. W.	2	S. W.	1	85.0	61 3	29.802	29.700	29 680	29 727	.586	.769	.619	93	57	84	15
16	71 4	88.5	78.7	79.5	.....	.....	.....	.....	0	.....	0	.....	10	Cir. st.	S. W.	1	S. W.	2	S.	2	90.0	64 0	29.641	29.607	29 606	29.618	.651	.750	.662	85	56	68	16
17	69.6	74 0	70.0	71.2	5 A. M.	7 A. M.	.020	.....	10	Nim.	10	St.	10	St.	S.	1	S.	1	S.	1	76 8	69.0	29.638	29 671	29 731	29 680	.664	.660	.658	92	79	90	17
18	65 4	73.8	62 0	67.1	4 A.M. 7 P.M	5 A. M.	.010	.....	10	St.	10	Cir. st.	10	St.	S.	1	S. E.	2	S. E.	3	75.6	64.8	29.779	29.761	29 747	29 762	.584	.626	.508	93	75	91	18
19	62.0	82.3	69.3	71.2	.....	6 A. M.	.370	.....	10	Nim.	4	Cir. cu.	3	Cir.	S. E.	1	N. W.	2	N. W.	2	83.0	60 2	29 673	29.652	29 682	29.669	.508	.598	.560	91	54	78	19
20	62.2	78.7	65.5	68 8	.....	.....	.....	.....	0	.....	2	Cir. cu.	2	Cir. st.	.....	0	S. W.	2	S. W.	1	79.0	55 0	29.786	29.771	29 759	29.772	.433	.366	.445	77	36	71	20
21	64.6	76.8	67 4	69 6	.....	.....	.....	.....	1	Cir.	5	Cir. st.	10	St.	.....	0	S.	4	S	4	79 0	56.8	29 848	29 823	29 757	29 809	.482	.378	.458	79	41	68	21
22	64.2	66 8	59.2	63.4	8 A. M.	7½ P. M.	.160	.....	10	St.	10	Cu. st.	8	St.	S.	2	S.	2	N. W.	1	67.4	59.2	29.653	29.574	29 561	29 596	.481	.518	.473	80	79	94	22
23	56.2	72 3	63 0	63 8	.....	.....	.....	.....	0	.....	4	Cir. cu.	7	St	N. W	3	N. W.	3	N. W.	1	74.0	52 6	29 718	29.700	29.694	29 701	.477	.292	.416	75	37	72	23
24	59 5	74 5	60.2	64.7	5½ A. M / 8 P. M.	8 A. M. / Night.	.080 / .140	..... /	10	Nim.	4	Cir. st.	10	Nim.	S E.	1	S. W.	1	S.	1	76 0	56.6	29 710	29 694	29.674	29.693	.457	.422	.475	90	49	91	24
25	59.0	72 5	61.8	64.4	.....	.....	.....	.....	0	.....	4	Cir.	0	.....	N. W.	1	W.	3	N. W.	1	73 2	56.3	29.749	29 760	29 830	29 780	.409	.308	.438	82	38	80	25
26	57.3	72.0	58 8	62.7	9½ P. M.	Night.	.180	.....	3	Cir.	8	Cir st.	10	St.	S. E.	1	S.	3	S.	1	72 6	49 0	29.869	29 753	29.693	29 772	.409	.416	.418	87	53	84	26
27	57 3	67.3	58.8	61.1	.....	.....	.....	.....	10	Nim.	2	Cir cu.	0	.....	S.	1	N. W.	2	N. W.	2	72.0	55 8	29 614	29 582	29 659	29 618	.436	.552	.436	88	83	88	27
28	59.0	71.4	62.2	64.2	Night.	Night.	.250	.....	0	.....	2	Cir. st.	2	Cir. st.	N. W.	2	N.	3	N. W.	1	72.8	52.0	29.775	29 766	29 803	29 781	.439	256	.448	88	33	80	28
29	58 3	65.5	64.5	62.8	6¾ P. M.‡	5½ A. M. / 5 P. M.	.610 / .020	.....	10	St.	9	St.	10	Nim.	N. E.	1	.....	0	S. E.	1	69 6	55 6	29.860	29.852	29 803	29.838	.427	.509	.606	88	81	100	29
30	59.2	66.2	59 0	61.5	1½ P. M.§			.....	6	Cir. st.	6	Cir. cu.	1	St.	N. E.	3	N. W.	2	N. W.	1	71.5	57 2	29.689	29 696	29 709	29.698	.427	.506	.331	85	79	66	30
31	58.2	72 0	60.2	63.5	.....			.....	2	Cir.	0	.....	1	St.	W.	3	N. W.	1	N. W.	1	72.0	52.7	29.722	29.706	29.701	29.710	.325	.436	.336	67	55	64	31
Sums	.....	.....	.....	.....	.....	.....	2.680	.....																										Sums.
Means	.....	.....	.....	68°.69	.....	.....	.....	.....	5.0	.....	4.5	.....	5.3	.....	.....	....	N. W. & W.	.34	.....	....	78°.54	59° 19	.....	.....	.....	29.736	.511	.522	.519	84	57	80	Means
										Mean	4.7						S. W. & S.	.42		Max	90°.0	49°.0	Min.		Max...	30.047	Mean..	.517		Mean.	74			
																	S. E. & E	.13							Min...	29.531	Max...	.793		Max..	100			
																	N. E. & N.	.11									Min...	.256		Min ..	33			

* Thunder shower. † Slight sprinkling of rain. ‡ Thunder. § Slight shower.

FOR THE MONTH OF AUGUST, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A.M	2 P.M	9 P.M.	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A.M. Amount of cloudiness.	Kind of clouds.	2 P.M. Amount of cloudiness.	Kind of clouds.	9 P.M. Amount of cloudiness.	Kind of clouds.	WINDS. 7 A.M. Direction.	Force.	2 P.M. Direction.	Force.	9 P.M. Direction.	Force	THERMOMETER Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A.M.	2 P.M.	9 P.M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A.M.	2 P.M	9 P.M	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A.M	2 P.M.	9 P.M	Day of Month
1	61 2	74 7	59 5	65.	.....	.....	.....	.....	0	... .	0	.....	0	.....	N. W.	2	N. W.	3	.....	0	74 7	55.0	29 756	29.742	29.743	29 747	.404	.236	.427	75	28	84	1
2	56 3	76 5	64 3	65 7	Night.	.....	.....	.....	1	Cir.	5	Cir. st.	10	St.	S W.	1	N W.	2	.....	0	76 8	50 8	29 822	29 804	29 798	29.808	.402	.307	.525	88	34	87	2
3	56 4	61 8	56 0	58.	.....	Night.	.200	.....	10	Nim.	10	St.	10	Nim.	N. E.	1	N. E.	1	N. E.	1	64 3	56.0	29 867	29 873	29 886	29.875	.392	.44	.420	86	80	94	3
4	59 7	66 2	58 8	61.(	.....	.....	.....	.....	10	St.	10	St.	1	St	.....	0	.....	0	.....	0	67 2	55.2	29 942	29 967	29.990	29 966	.454	.484	451	88	75	91	4
5	57 5	77.5	61.5	65 5	.....	.....	.....	.....	3	Cir.	3	Cir cu.	0	.....	N. W.	1	N. W.	1	N. W.	1	77 7	54 8	30 063	30 000	29 985	30 016	.453	.467	.467	95	50	85	5
6	63.5	81 6	61 8	69.0	3¼ P. M.	4½ P. M.	.120	.....	4	Cir. st.	4	Cir. cu.	0	.....	.....	0	S.	3	S. W.	1	82 0	55 7	30 002	29.936	29.935	29 958	.485	610	.472	83	57	80	6
7	63 7	83 6	71.4	72 9	.....	.....	.....	.....	0	.....	0	.....	1	St.	.....	0	N. W.	1	S.	3	83 6	59 0	29 952	29 918	29 903	29 924	.533	.590	.650	90	52	85	7
8	70 5	83 2	74 0	75 9	....	1 P. M.*	.....	.....	0	.....	6	Cir. cu.	3	Cir. st.	.....	0	W.	2	S. W.	2	85 0	67 4	29 939	29 906	29 889	29 91.	.631	.603	.698	86	54	83	8
9	72 0	84 3	74 2	76 8	.....	.....	.....	.....	2	Cir.	0	.....	0	.....	.....	0	W.	3	S. W.	2	90 3	68 2	29 926	29.845	29.852	29 874	.668	.619	.665	85	53	79	9
10	71 8	83 3	70.4	75 2	6¾ P M.*	.....	.....	.....	1	Cir. st.	1	Cir. cu	10	Nim.	S W.	3	S. W.	3	N.	1	83 5	69 3	29.860	29 839	29 766	29.822	.686	.723	.684	88	63	93	10
11	68 0	79.2	69 2	72 1	Night.	.....	.....	.....	7	Cir. cu.	6	Cir. cu.	5	Cir. st.	N.	2	N.	1	S. W.	1	79 7	65 8	29 899	29 880	29 881	29.887	.567	.583	.640	82	58	90	11
12	63 8	76.0	66 5	68 8	.....	5 A. M.	.270	.....	10	St.	7	Cu. st.	1	Cir st.	E.	1	.....	0	S.	2	77 8	61.2	29.928	29 896	29 884	29 803	.555	.622	587	94	69	90	12
13	64 0	74 2	66 5	68 2	8 A. M.	Night.	.710	.....	10	St.	8	Cir. st.	10	St.	W.	1	N E.	1	.....	0	74.2	61.7	29 898	29 835	29 782	29 838	.562	.668	.615	94	79	95	13
14	67 5	76 5	70 0	71 3	Night.	.....	.....	.....	7	Cir. st.	2	Cir.	8	Cir. st.	N.	1	S. E.	1	.....	0	76 8	64.2	29.746	29.784	29 823	29 781	.619	.597	.617	92	65	88	14
15	64 5	72 5	69 0	68.7	7¼ P. M.*	{ 6 A. M.	450 & .280	.....	10	St.	10	St.	10	Nim.	N. E	3	N. E.	2	N. E.	2	72.5	63.7	29.824	29 782	29 788	29 798	.556	.680	.682	92	85	96	15
16	66 8	73.0	66 5	68 8	6 P. M.	{ Night.	.....	.....	9	St.	8	Cir. st.	10	Nim.	N. E.	2	N. E	1	S. E.	1	73 8	66 5	29 896	29.947	29 979	29 941	.573	.504	.615	86	62	95	16
17	65.0	76.3	67 8	69 7	.....	5¼ P. M	1 370	.....	10	Nim.	7	Cir. cu.	3	Cir. st.	S. E	2	S.	2	N.	1	76 6	64.7	29 910	29 761	29 770	29 814	.617	.739	.630	100	82	94	17
18	64.9	81 7	67 8	71 5	Night.	.....	.....	.....	....	Fog.	2	Cu. st.	1	Cir.	N. W.	1	S. W.	1	.....	0	82.7	62.0	29 900	29 883	29 879	29 887	.574	.673	.591	93	62	87	18
19	66.3	81.2	67.8	71.8	.....	6 A. M.	.10(	.....	10	St.	2	Cir. cu.	2	Cir.	S. W.	1	N. W	3	.....	0	81.5	64 2	29 900	29.897	29 935	29.911	.600	.513	.545	93	48	8	19
20	65 2	79 7	64 2	69 7	.....	.....	.....	.....	1	Cir.	0	.....	10	St.	N. W.	1	N. W.	1	S. E.	1	79 7	63 5	30.075	30 062	30 047	30 061	.520	.42	.536	84	40	89	20
21	60 (	75 3	62 7	66.2	.....	.....	.....	.....	. .	Fog.	1	Cir cu.	1	St.	S. E.	1	S W.	3	S. E.	3	75.6	59 3	30.053	29 971	29 932	29 985	.498	.458	52	94	52	91	21
22	64 0	68 2	66 2	66.1	7 A. M.	Night.	.610	.....	10	Nim.	10	Nim.	10	Nim.	S. E	1	E.	3	E	2	68.2	60 0	29.845	29 718	29 650	29.738	.516	.690	.60(	92	100	95	22
23	65.2	81 5	68 8	71.8	.....	.....	.....	.....	0	.....	2	Cir. cu.	0	.....	N. W.	1	N. W.	1	N. W.	3	81 5	59 2	29 626	29 612	29 689	29 652	.604	.38(	.394	97	36	56	23
24	55 2	77 7	66.0	66.3	.....	.....	.....	.....	....	Fog.	1	Cir. cu.	1	St.	N. W.	1	S. W.	3	S.	1	79.5	55 2	29 817	29 792	29 790	29 800	.413	.437	.529	95	46	83	24
25	63.7	81.2	68 5	71.1	... .	†	.....	.....	5	Cir st.	6	Cir. st.	7	Cu. st.	S E.	1	S. W.	2	.....	0	81 8	60 7	29.823	29 794	29 788	29 802	.514	.555	.610	83	52	87	25
26	63.2	81.2	64 5	69 6	.....	.....	.....	.....	3	Cir. st.	3	Cu. st.	2	Cu st.	.....	0	S.	2	S.	1	81.7	61 8	29 819	29 779	29.776	29 791	.534	.574	.55'	92	54	92	26
27	64.8	70 7	58 7	64 7	9¼ A. M.*	4½ P. M.	1.190	.....	10	St.	10	Nim.	0	.....	S.	3	S. W.	2	N. W.	1	70 8	58 7	29 663	29 618	29 60	29.629	.579	.750	.479	94	100	97	27
28	58 4	72 5	58 4	63 1	.....	.....	.....	.....	0	.....	2	Cu. st.	0	.....	N. W.	2	N. W.	2	N. W.	2	73 4	53 8	29 708	29 695	29 773	29 725	.394	.345	.447	81	43	91	28
29	53 2	69.0	54 0	58.7	.....	.....	.....	.....	1	Cir.	1	Cir.	0	.....	N.	1	N. W.	1	N. W.	1	69 7	45.2	29 870	29 829	29 813	29 837	.345	.306	.348	85	43	83	29
30	53 7	52 2	57 0	54.3	7¼ A. M.	Night.	.930	.....	10	St.	10	Nim.	10	Nim.	S.	1	S. E.	2	S. E.	4	57 0	49.4	29 720	29 611	29 277	29 536	.371	.391	.466	90	100	100	30
31	54.2	65.2	55.4	58.3	.....	.....	.....	.....	1	Cir.	9	Cu. st.	3	St.	W.	1	S. W.	2	S. W.	1	66 3	51 0	29 395	29.389	29.389	29 391	.367	.393	.377	87	63	86	31
Sums	.....	.....	.....	.....	.....	.....	6.230	.....																										Sums.
Means	.....	.....	.....	67°.63	.....	.....	.....	.....	4 7	.....	4.7	.....	4.2	.....	.....	....	N. W. & W	.30	.....	...	76° 32	59° 46	.....	.....	.....	29 823	.517	.528	.545	89	61	88	Means
										Mean	4.5						S. W. & S	36		Max	90°.3	45° 2	Min.		Max.	30 075	Mean..	.530		Mean.	79		
																	S E. & E	.18							Min...	29.277	Max...	.750		Max..	100		
																	N. E. & N	.16									Min...	.236		Min...	28		

* Thunder. † Vivid lightning in the west and northwest during the evening.

FOR THE MONTH OF SEPTEMBER, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR.				RAIN AND SNOW.				CLOUDS.						WINDS.						THERMOMETER.		BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT.				FORCE OR PRESSURE OF VAPOR IN INCHES.			RELATIVE HUMIDITY OR FRACTION OF SATURATION.			Day of Month
									7 A. M.		2 P. M.		9 P. M.		7 A. M.		2 P. M.		9 P. M.													
	7 A. M.	2 P. M.	9 P. M.	Mean.	Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	Amount of cloudiness.	Kind of clouds.	Amount of cloudiness.	Kind of clouds.	Amount of cloudiness.	Kind of clouds	Direction.	Force.	Direction.	Force.	Direction.	Force.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	
1	57 2	63 6	55 3	58.7	.....	.....	.....	.....	5	Cir. st.	8	Cu. st.	1	St.	N. W.	3	N. W.	3	S. W.	2	64 0	51.8	29 517	29.528	29 620	29 555	.339	.339	.339	72	58	78	1
2	57.3	69.1	53.5	60.0	.....	.....	.....	.....	7	Cu st.	2	Cir. cu.	0	.....	S. W.	3	N. W.	3	N. W.	1	70.0	53.0	29.620	29 536	29 569	29 575	.389	314	.315	82	44	77	2
3	52 0	57 5	48 0	52 5	5 A. M.	1 P. M.	.090	.....	10	St.	10	St.	1	St.	N.	3	N. E.	4	N. W.	1	58 4	48 0	29 631	29 629	29 642	29.634	.340	.249	.297	87	53	89	3
4	49 7	60.4	49 3	53 3	.....	.....	.....	.....	0	.....	3	Cu. st	0	.....	N. W.	2	N. W.	3	N. W.	1	62.2	43.7	29 680	29 663	29 678	29 674	.262	.234	.250	73	46	71	4
5	45 2	66 0	58 2	56 5	.....	.....	.....	.....	0	.....	2	Cir cu.	0	.....	N. W.	1	S. W.	3	W.	1	66 5	41 4	29 715	29 680	29 694	29 696	.255	.250	428	84	39	88	5
6	45 8	69 5	57 7	57 7	.....	.....	.....	.....	....	Fog.	3	Cir. cu	0	... .	.....	0	S. W.	2	S. W.	1	70 0	44 6	29 803	29 786	29 808	29.799	.309	.448	.456	100	62	96	6
7	58 8	64 3	62 0	61 7	2¼ P. M.	Night.	.040	.....	10	St.	10	St.	10	St.	S.	2	S.	3	S.	3	66 5	57 2	29 840	29.817	29 717	29 791	.472	.558	.523	95	93	94	7
8	64 5	82 3	69 7	72.2	6¼ P. M *	Night.	.210	.....	0	.....	4	Cu. st.	3	St.	.....	0	N. W.	1	S. W.	1	84 3	61.5	29 678	29.651	29 647	29.659	.583	.630	.688	96	57	95	8
9	56 6	67.2	52.0	58.6	.....	.....	.....	.....	3	ir st.	1	Cir st.	1	St.	N.	1	N. W.	2	N. W.	1	67 7	52 0	29.858	29 854	30 049	29 920	.406	.330	.339	89	50	89	9
10	46 0	66 4	54 8	55.7	.....	.....	.....	.....	1	Cir.	2	Cir. cu.	3	St.	N. W	1	N. W.	1	S. E.	2	67.5	44 0	30 171	30 151	30 141	30 154	.206	.329	.393	86	51	91	10
11	55 2	61 5	56 4	57.7	.....	.....	.....	.....	6	Cir. st.	10	St.	8	St.	S.	2	S	4	S E.	2	63 3	52 8	30 161	30.124	30 115	30 133	.396	.367	.392	91	67	86	11
12	58 5	69 0	61.7	63.1	.....	.....	.....	.....	10	St.	10	St.	8	St	S. E.	2	S. E.	3	S. E.	3	69.2	56.0	30.075	30 030	30 012	30 039	.421	.495	.464	86	70	84	12
13	60 0	72 2	64.2	65 5	8 P. M.	.....	.....	.....	2	St.	9	St.	10	Nim.	S E.	2	S. E.	3	S E.	2	73 0	58 8	29 987	29 955	29 902	29 948	.440	.563	.560	85	71	94	13
14	63 8	67.8	60.4	64 0	.....	8½ A. M.	.210	.....	10	Nim.	10	St.	9	Cu. st.	S. E.	1	.....	0	N. E.	2	69 4	60.4	29.893	29 865	29 900	29.886	.592	.545	.439	100	80	82	14
15	49 2	64.5	54 2	56 0	.....	.....	.....	.....	1	Cir.	1	Cir.	8	St.	N. W.	1	N. E.	2	N. E.	2	64 8	46 0	30.008	29 957	29 984	29 983	.299	.313	.324	85	52	77	15
16	51 3	56.5	56 2	54 7	6 A M.	3 P. M.	.040	.....	10	Nim.	10	Nim.	10	St.	N E.	2	N. E.	1	N. E.	1	58 0	50 7	29 949	29 8 2	29 876	29 902	.344	.419	.400	91	92	88	16
17	53 2	63 3	57 5	58 0	.....	.....	.....	.....	10	St.	5	Cu. st.	10	St.	N E.	1	N. W.	1	N. E.	1	63 3	51.4	29.872	29 849	29 825	29.849	.345	.394	.429	85	68	91	17
18	52 3	65 0	53 2	56.8	.....	.....	.....	.....	10	St.	6	Cu. st.	2	Cir. st.	N. E.	1	N.	1	S.	1	65.0	51.2	29.795	29 754	29 749	29.766	.357	468	.378	91	76	93	18
19	54.2	57 8	53 2	55 1	2½ P. M.	Night.	.510	.....	10	St.	10	St.	10	Nim.	S.	1	N. E.	1	E.	1	59 4	51 7	29.752	29 676	29 531	29 654	.392	.425	.406	93	89	100	19
20	54 0	56 5	53 8	54 8	12 M.	8½ P. M.	.340	.....	4	Cir. st.	10	Nim.	6	St.	N. W.	2	N. W.	1	S.	3	60 0	52.0	29.417	29 409	29.405	29.412	381	.458	.364	91	100	88	20
21	52 3	59.3	52 6	54 7	.....	.....	.....	.....	10	St.	1	Cir.	0	.....	N. W.	3	N. W.	3	N. W.	2	60 7	50 8	29.550	29 581	29 670	29 600	.304	.246	.282	77	48	71	21
22	47 3	69 8	62 2	59.8	.....	.....	.....	.....	1	Cir.	0	.....	0	.....	S.	1	S.	2	.....	0	71.0	44 0	29.760	29 721	29 764	29.748	.293	.429	.498	90	59	89	22
23	57 3	66 3	55 4	59 7	Night.	.....	.....	.....	2	Cir.	0	.....	5	Cir.	N E.	1	.....	0	S. E.	1	68 8	49 3	30 017	30.050	30 104	30.057	.397	.342	.399	84	53	91	23
24	54.0	66 2	52 8	57.7	†	8 A. M.	.920	.....	10	Nim.	6	St.	1	St.	N. E.	1	S E.	3	S	1	67 3	52.8	30.172	30 166	30 154	30 164	.418	.428	.350	100	67	88	24
25	56 6	68 5	61 5	62 2	.....	.....	.....	.....	....	Fog.	10	St.	10	St.	.....	0	S. E.	3	S. E.	2	68.5	52.0	30.103	30.049	29 984	30 045	.446	.387	.520	96	79	95	25
26	64 8	68 0	63 5	65 4	4 A. M.	5½ A. M.	.630	.....	10	St.	10	Cu st.	10	St.	S.	3	S.	3	S E	3	69 8	60 3	29.911	29 893	29.858	29 887	.585	.584	.520	95	85	89	26
27	61.4	62 3	60.7	61 5	8½ A. M.	Night.	.510	.....	10	St.	10	Nim.	10	Nim.	S E.	2	S. E.	2	S. E.	1	63 5	60.7	29 829	29 790	29 772	29.797	.512	.526	.531	94	94	100	27
28	53.7	62 7	50 0	55.5	.....	.....	.....	.....	9	St.	0	.....	0	.....	N W.	1	N. W.	1	N. W.	1	64.3	50 0	29 790	29 796	29 883	29.825	.377	.302	.309	91	53	86	28
29	44 0	65.3	52 2	53.8	Night.	Night.	.050	.....	4	Cir. st.	6	Cir. st.	8	Cu. st.	N. W.	1	S.	2	S.	1	65 3	42.8	29.981	29 917	29 884	29 927	.276	.361	.358	96	58	92	29
30	54.0	62.2	60 0	58.7	.....	.....	.....	.....	9	St	10	St.	10	St.	S.	1	S. E.	3	S.	1	63.2	51.0	29.850	29 775	29.769	29.798	.397	.511	.493	95	91	95	30
31																																	31
Sums	.....	.....	.....	.....	.....	.....	3.550	.....																									Sums.
Means	.....	.....	.....	58°.70	.....	.....	.....	.....	5.8	.....	6.0	.....	5.1	.....	.....	.....	N. W. & W	.27	.....	...	66°.1	51° 38	.....	.....	.....	29.829	.385	.408	.415	89	67	88	Means
										Mean	5 6						S. W. & S	.30		Max	84°.3	41°.4	Min		Max...	30.172	Mean ..	.403		Mean.	81		
																		S E. & E	.27						Min...	29.409	Max ..	.688		Max..	100		
																		N. E. & N.	.16								Min...	.234		Min ..	39		

* Thunder. † Thunder in the morning.

FOR THE MONTH OF OCTOBER, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A.M.	2 P.M	9 P.M.	Mean	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A.M. Amount of cloudiness.	Kind of clouds.	2 P.M. Amount of cloudiness.	Kind of clouds.	9 P.M. Amount of cloudiness.	Kind of clouds.	WINDS. 7 A.M. Direction.	Force.	2 P.M. Direction.	Force.	9 P.M. Direction.	Force	THERMOMETER Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A.M	2 P.M.	9 P.M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A.M.	2 P.M	9 P.M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A.M	2 P.M.	9 P.M.	Day of Month
1	59 0	60 7	53.7	57 8	4 P.M.	.....	.....	.....	10	St.	10	St.	10	Nim.	.....	0	S.	1	N. E.	1	61.4	53 7	29 766	29 692	29 621	29.693	.477	.460	.413	95	88	100	1
2	49.5	55 5	45 3	50 1	.....	11½ A.M.	1.250	.....	10	Nim.	8	Cu. st.	0	.....	N E.	3	N. W.	4	S. W.	2	56 0	45 3	29 381	29 383	29 431	29.398	.354	.288	.224	100	65	74	2
3	43 3	58.4	46 0	49 2	.....	.....	.....	.....	1	St.	6	Cir cu.	3	St.	S W.	3	S. W.	3	S. W.	1	58 8	42 7	29 497	29 475	29 464	29 479	.206	.229	.261	71	47	84	3
4	42 0	56 0	46 2	48 1	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	2	N. W.	2	N. W.	1	58 3	41 2	29 608	29 678	29 868	29 718	.251	.179	.22	94	40	71	4
5	34 8	54 7	44 2	44 6	*	.....	.....	.....	....	Fog.	0	.....	1	St.	.....	0	S. W.	2	S. W.	2	56 0	31.5	30 106	30.137	30 127	29.123	.196	.227	.243	97	53	84	5
6	52 8	62 5	58.7	58 0	.....	.....	.....	.....	10	St.	6	Cu st.	8	St.	S.	3	S. E.	2	S. E.	3	62 5	43.0	30 000	30 013	29 972	30.015	.350	.392	.434	88	69	88	6
7	58 0	64.2	59.2	60.5	.....	.....	.....	.....	4	Cir st.	8	Cu. st.	2	St.	S.	2	S.	4	S W.	1	66 0	56.4	29 966	29 944	29 880	29 930	.429	.469	.430	91	78	87	7
8	59 0	53 8	50 4	54.4	4 A.M.	8 P.M.	1.070	.....	10	Nim.	10	Nim.	10	St	S E.	1	S. E.	1	S W.	2	59 2	50.4	29 754	29 716	29.724	29 731	.500	.415	.324	100	100	89	8
9	44 8	57.2	46 0	49.3	.....	.....	.....	.....	0	.....	1	Cir.	0	.....	N. W.	1	N. W.	1	N. W.	1	57 5	42 7	29 805	29 805	29 791	29 800	.230	.250	.257	77	52	82	9
10	44 0	60 0	54 2	52 7	Night.	Night.	060	.....	0	.....	2	Cir st.	10	St.	N. W.	1	S. W.	3	N. E.	1	63 2	41 8	29.702	29 572	29 564	29 613	.284	30.7	.392	98	71	93	10
11	40 3	47 7	36 3	41 4	.....	.....	.....	.....	6	Cu. st.	6	Cu. st.	0	.....	N. E	2	N W	3	N. W.	2	48.4	36 3	29.652	29.745	29 880	29 759	.215	.163	.179	86	49	83	11
12	30 3	47 0	35 0	37.4	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	1	N. W.	1	N. W.	1	47.0	29.4	30.008	29 989	29 972	29 990	.166	.179	.17.	95	55	85	12
13	34.0	48 7	42.2	41.6	5½ P.M.	.....	.....	.....	10	St.	9	Cu. st.	10	Nim.	N. E.	1	N. E.	1	N. E.	1	49.2	29 2	29 979	29.897	29 766	29.881	.190	.189	.269	100	55	100	13
14	53 7	55 0	47.4	52 0	... .	10 A.M.	1.060	.....	10	Nim.	7	Cu. st.	6	Cir. st.	S E	2	S.	2	S. E	2	55 0	41 4	29 294	29 279	29 327	29 300	.385	.321	.292	96	74	89	14
15	40 8	47 8	41 0	43.2	.....	.....	.....	.....	2	Cir. st.	8	Cu st.	4	Cir st.	S. W.	1	S. W.	3	S. W.	1	47.8	40 2	29 417	29 506	29 683	29 535	.233	.157	.190	91	47	74	15
16	44.0	50 3	41.2	45 2	6½ A.M.	5 P.M.	.260	.....	10	Nim.	10	Nim.	3	Cir. st.	S.	1	S. W.	4	N. W.	3	51.0	39 8	29 730	29 690	29 895	29 772	.241	305	.232	84	84	89	16
17	32 3	48 5	38 6	39 8	.....	.....	.....	.....	. .	Fog.	3	Cir cu.	8	Cir. st.	.....	0	S E.	1	S. W.	1	50.3	31 5	30 211	30 245	30.192	30.216	.183	.225	.217	100	66	93	17
18	45.0	50.2	48 7	48.0	11 A.M.	.....	.....	.....	9	St.	10	Nim.	10	Nim.	S. E	2	S E.	2	S E.	1	51.0	37 3	30 068	29 912	29 836	29.937	.270	.338	.344	90	93	100	18
19	45.5	43 8	36.6	42 0	9 P.M.	3 P.M. Night.	950 & .110	.....	10	Nim.	10	Nim.	10	Nim.	N. E.	1	N E.	3	N. E.	3	48 7	36 6	29 744	29 662	29 657	29.688	.305	243	.217	100	85	100	19
20	35.8	46.2	39.7	40 6	.....	.....	.....	.....	2	Cir. st.	0	.....	0	.....	N. W.	3	N W.	3	N. W.	2	47.0	35.3	29 667	29.665	29.711	29.681	.158	.137	.147	75	44	60	20
21	32 4	51.0	40 4	41 3	.....	.....	.....	.....	2	St.	0	.....	0	.....	S. W.	1	S W.	1	S.	1	52.3	30.7	29.886	29 900	29 953	29.913	.163	.220	.238	88	59	95	21
22	34 6	62.7	46 3	47.9	.....	.....	.....	.....	2	St.	3	Cir.	3	St.	S. W.	1	S. W.	1	S.	1	63.4	32.0	30 034	30 007	30 009	30 017	.192	.372	.301	96	65	96	22
23	46 3	59 7	46 3	50 8	5½ P.M.	9½ P.M.	.180	.....	6	Cir. st.	7	Cir. st.	10	Nim.	S.	1	S. W.	1	N. W.	1	60 0	46 0	30 030	30 037	30 168	30 078	.302	.371	.307	96	72	98	23
24	33.6	48 8	35 4	39.3	.....	.....	.....	.....	1	St.	0	.....	0	.....	N	1	N. W.	1	N. W.	1	50 8	33 3	30 392	30 352	30 316	30.353	.185	.162	.180	96	47	90	24
25	29 2	54 5	41.2	41 6	... .	.....	.....	.....	....	Fog.	2	Cir. st	4	St.	S E.	1	S.	1	S.	1	54 5	28.7	30 281	30 186	30.130	30 199	.161	.198	.232	100	47	90	25
26	43 0	52.5	49 0	48 2	4 P.M.	.....	.....	.....	7	Cir st.	10	Cir. st.	10	Nim.	N E.	1	N. E.	1	N. E.	1	52.5	40 3	29 989	29 853	29 705	29 849	.26.	.265	.348	94	66	100	26
27	47.8	48.0	42 2	46 0	.....	6 A.M.	.870	.....	10	St.	10	St.	9	Cu. st.	N E.	3	N. E.	3	N E	3	49.2	42 2	29.481	29.511	29 755	29 582	.320	.299	.191	96	89	73	27
28	28.3	41 0	30 5	33 3	.....	.....	.....	.....	0	... .	0	.....	0	.....	N. E.	1	N E.	3	N. E.	1	41.8	28 0	30 031	30 100	30 217	30 116	.138	.115	.125	88	45	73	28
29	26.2	45 2	30.8	34.1	.....	.....	.....	.....	1	Cir.	0	.....	0	.....	N.	1	N.	2	N.	1	45.6	23 0	30 358	30 361	30 394	30 371	.118	.108	.163	83	36	95	29
30	25.8	49 2	33.8	36 3	.....	.....	.....	.....	1	St.	0	.....	0	.....	N.	1	N.	1	N.	1	49 8	24.0	30.423	30.326	30 253	30 334	.122	.189	.178	88	54	92	30
31	29 2	52.0	49.7	43.6	9½ P.M.	.....	.200	.....	5	Cir. st.	8	Cir. st.	10	St.	N.	1	N. E.	3	N. E.	2	52 7	25.2	30.114	29.908	29.742	29 921	.154	.183	.148	96	47	41	31
Sums.	.....	.....	.....	.....	.....	.....	6 010	.....																										Sums.
Means	.....	.....	.....	45°.75	.....	.....	.....	.....	4 5	.....	5.0	.....	4.5	.....	.....	....	N. W & W	.23	.....	...	53°.78	27°.39	.....	.....	.....	29 838	.249	.259	.254	92	63	86	Means
										Mean	4.7						S. W. & S	34		Max	66°.0	23° 0	Min.		Max..	30 423	Mean .	.254		Mean.	80		
																	S E. & E	12							Min...	29 279	Max...	.500		Max..	100		
																	N. E. & N	.31									Min...	.108		Min..	36		

* White frost—first of the season.

FOR THE MONTH OF NOVEMBER, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A.M.	2 P.M	9 P.M	Mean	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A.M. Amount of cloudiness.	Kind of clouds.	2 P.M. Amount of cloudiness.	Kind of clouds.	9 P.M. Amount of cloudiness.	Kind of clouds	WINDS. 7 A.M. Direction.	Force.	2 P.M. Direction.	Force.	9 P.M. Direction.	Force.	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A.M	2 P.M	9 P.M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A.M.	2 P.M	9 P.M	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A.M.	2 P.M.	9 P.M.	Day of Month
1	42.8	44 8	41.2	42.9	.....	.....	.....	.....	10	Nim.	10	Nim.	10	Nim.	N E	1	N. E.	3	N. E.	3	44.8	41 2	29.500	29 409	29 395	29.435	.276	.297	.259	100	100	100	1
2	37 0	38.2	33.3	36 2	*	.....	.....	.....	10	Nim.	10	Nim.	7	Nim.	N. E.	3	N. E.	3	N. E.	2	41.2	33.3	29 499	29 659	29 722	29 627	.220	.216	.190	100	93	100	2
3	33.5	36 5	34 0	34.7	.....	Night.	2.100	1.00	10	St.	10	St.	10	Nim.	N. E.	1	N. E.	3	N. E.	1	36 7	33 0	29 770	29.747	29 729	29 749	.186	.184	.196	97	85	100	3
4	27 7	35 6	27 0	30.1	.....	.....	.....	.....	4	Cir. & st.	6	Cir cu.	0	.....	N.	2	N. E.	3	N.	1	36.2	27 0	29 914	30.036	30 089	30 013	.139	.135	.138	92	64	94	4
5	23.8	44 0	30 0	32 6	.....	.....	.....	.....	0	.....	0	.....	0	.....	S E.	1	N. W.	1	N. W.	1	45.0	23.2	30.158	30.150	30 154	30 154	.128	.150	.167	100	54	100	5
6	27 4	43.2	43 4	38.0	9¼ P. M.	.....	.....	.....	7	Cir. st.	10	St.	10	St.	S. W.	1	S. W.	1	S E.	3	44.2	24 0	30.176	30 097	29 939	30 071	.142	.233	.248	95	83	87	6
7	42 5	47 0	37.2	42.2	.....	Night.	2.400	.....	10	Nim.	10	Nim.	10	Nim.	S. E.	1	S. E.	2	N. E.	5	47 0	27 2	29.704	29 250	28.712	29.222	.265	.323	.222	97	100	100	7
8	39.8	45.4	40 4	41 9	.....	.....	.....	.....	6	Cir. st.	9	Cu. st.	2	Cir. st.	W.	4	S W.	4	S. W.	3	45 4	36 7	28.910	29 000	29 157	29.024	.137	.164	.154	55	54	61	8
9	40.2	42 2	40 0	40.8	.....	.....	.....	.....	10	St.	10	St.	6	Cu. st.	S. W.	3	N. W.	4	N. W.	3	42 4	40 0	29.351	29 468	29.601	29 473	.142	.146	.149	57	54	60	9
10	35.7	40.4	33.2	36.4	.....	.....	.....	.....	9	St.	8	Cu. st.	2	Cir.	N. W.	2	N.	3	N. W.	1	40.8	33 2	29.826	29 864	29 985	29 892	.174	.131	.145	83	52	76	10
11	27.6	43 0	35.0	35 2	Night.	.....	.....	.....	2	Cir.	3	Cir.	8	Cir. st.	W.	1	S. W.	1	S. W.	1	43.3	27 2	30 078	30.060	30.037	30.058	.133	.159	181	88	56	90	11
12	41 3	45 6	47 0	44.6	.....	Night †	.930	.....	10	Nim.	10	St.	10	Nim.	S. E.	1	S. E.	1	S. E.	3	47.0	34.6	30.007	29 892	29.682	29 860	.249	.267	.323	96	87	100	12
13	40.7	45.2	33.7	39.9	.....	.....	.....	.....	0	.....	3	Cir. st.	8	Cir. st.	N. W.	3	N. W.	1	N. E.	1	45.6	33 7	29.711	29 854	29 953	29 839	.161	.124	.147	63	41	76	13
14	28 0	38.8	35 2	34.0	6 P. M.	.....	.....	.....	9	Cir. st.	10	St.	10	Nim.	S. E.	1	S E.	1	S. E.	1	39.3	25 0	29 943	29 831	29 604	29 792	.145	.192	.206	94	81	100	14
15	39 0	38 8	29 8	35 9	.....	7½ A. M.	.430	.....	10	Nim.	5	Cir. st.	0	.....	S. W.	2	N W.	3	N. W.	1	39 2	29 8	29 275	29.489	29 707	29 490	.238	.109	.166	100	46	100	15
16	25.6	40.0	29.0	31.5	.....	.....	.....	.....	2	Cir. st.	0	.....	0	.....	W.	1	N. W.	1	N. W.	1	40 0	24.0	29 877	29 891	29 873	29 880	.117	.118	.145	85	48	92	16
17	25.2	33.3	27.4	28 6	.....	.....	.....	.....	1	St.	7	Cu. st.	0	.....	N W.	1	N. W.	3	S. E.	1	34.3	24 6	29.882	30.029	30.210	30 040	.133	.147	.124	98	78	86	17
18	23.8	34.7	30.7	29 7	.....	.....	.....	.....	9	Cu st.	8	Cu. st.	10	St.	S. E.	1	S. E.	3	S. E.	1	36.2	23 4	30.252	30.086	29.969	30 102	.122	.166	.144	96	82	84	18
19	23 2	36.2	31 0	30.1	.....	.....	.....	.....	5	Cir. st.	3	Cir. cu.	10	St.	S E.	1	S. W.	1	S. E.	1	37.7	23.2	29 836	29 768	29 764	29 789	.121	.127	.171	97	59	98	19
20	32 0	35 2	26.0	31.1	9½ A. M.	11½ A. M.	.025	.25	10	St.	10	St.	0	.....	S.	1	S.	1	N. W.	2	36 4	26 0	29 710	29.570	29 668	29 649	.172	.176	.130	95	86	93	20
21	12.4	27 8	28 2	22 8	.....	.....	.....	.....	0	.....	0	.....	1	St.	N. W.	2	S. W.	2	S. W.	2	28 8	12.4	29 985	29.990	29.943	29.972	.070	.068	.115	92	45	75	21
22	30 5	37.0	33.2	33.6	9½ P. M.	.....	.....	.....	8	St.	8	Cir. st.	10	St.	S. W.	2	N E.	1	N. E.	2	37 6	28 2	29.900	29.863	29.731	29.831	.122	.110	.152	71	50	80	22
23	28 0	31.8	27.3	29 0	.....	6 A M.	.420	5.00	10	St.	9	St.	10	St.	N. W.	2	N. W	2	N.	1	33.2	27.3	29 654	29.780	29.822	29 752	.145	.164	.143	94	92	96	23
24	31 2	39.2	35 6	35 3	.....	.....	.....	.....	10	St.	9	Cir. st.	10	St.	N. W.	1	W.	1	S. W.	1	40.4	27 0	29 925	29 960	29 983	29 956	.175	.175	.163	100	73	78	24
25	35 4	44 4	40.2	40.0	.....	.....	.....	.....	10	St.	10	St.	2	St.	E.	1	S. E.	3	S W.	3	44 6	35 0	29 909	29.614	29 518	29.680	.190	.259	.183	92	89	73	25
26	31 0	35.3	31 2	32 5	Night.	Night.	.150	1.75	3	Cir st.	2	Cir. st.	10	St.	S. W.	2	N. W.	2	N. E.	1	40.2	30.7	29.846	29 882	29 836	29.855	.137	.111	.166	79	54	95	26
27	25.8	30 2	28 6	28 2	.....	.....	.....	.....	7	Cir. cu.	4	Cir. st.	9	St.	N.	1	N. W.	2	S.	1	31 2	25 4	29 834	29 884	29 911	29 876	.136	.111	.145	98	65	92	27
28	26 0	30 4	21 3	25 7	.....	.....	.....	.....	5	Cir. st.	2	Cu. st.	0	.....	.....	0	N. W.	1	W.	1	31.0	21 3	30.016	30 060	30 093	30.056	.132	.078	.109	94	45	96	28
29	23.4	28.9	35 5	29.3	1 P. M.	Night.	.600	2 00	10	St.	10	Nim.	10	Nim.	N.	1	E.	2	N. E.	1	35 5	21.0	30.153	29 633	29.270	29.685	.122	.159	.208	97	100	100	29
30	21.3	23.0	16.8	20 4	.....	.....	.....	.....	6	Cir. st.	3	Cu.	0	.....	S. W.	4	S. W.	4	S. W.	3	36.2	16.8	29.106	29.300	29.392	29.266	.106	.084	.072	93	69	74	30
31																																	31
Sums.	.....	.....	.....	.....	.....	.....	7.055	10.00																									Sums.
Means	.....	.....	.....	33°.77	.....	.....	.....	.....	6.8	.....	6.6	.....	5.8	.....	.....	....	N. W. & W	29	.....	....	39°.35	28°.18	.....	.....	.....	29 770	.158	.163	.169	90	69	89	Means
										Mean	6 4						S. W. & S.	.25	Max	47°.0	12°.4	Min		Max...	30.252	Mean..	.163		Mean.	83		
																	S E. & E	.20						Min...	28.712	Max ..	.323		Max..	100		
																	N. E. & N.	.26								Min...	.068		Min ..	41		

* Snow during the evening—the first of the season.

† Strong gale (7) between 1 and 4 A. M. of 13th day; wind S. E., changing before morning to S. W. and W.

FOR THE MONTH OF DECEMBER, 1872.

Day of Month	THERMOMETER IN THE OPEN AIR. 7 A. M.	2 P. M.	9 P. M	Mean.	RAIN AND SNOW. Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain or melted snow in gauge, in inches.	Depth of snow, in inches.	CLOUDS. 7 A. M. Amount of cloudiness.	Kind of clouds.	2 P. M. Amount of cloudiness.	Kind of clouds.	9 P. M. Amount of cloudiness.	Kind of clouds	WINDS. 7 A. M. Direction.	Force.	2 P. M. Direction.	Force.	9 P. M. Direction.	Force.	THERMOMETER. Maximum.	Minimum.	BAROMETER. BAROMETER HEIGHT REDUCED TO FREEZING POINT. 7 A. M.	2 P. M.	9 P M.	Mean.	FORCE OR PRESSURE OF VAPOR IN INCHES. 7 A. M.	2 P M	9 P. M.	RELATIVE HUMIDITY OR FRACTION OF SATURATION. 7 A. M.	2 P. M.	9 P. M.	Day of Month
1	11.7	25.5	24.7	20.6	.....	.....	.....	.....	6	Cir. st.	7	Cir. & st.	3	St.	S. W.	3	S. W.	2	S.	1	26.2	10.3	29 531	29.682	29 804	29 672	.063	095	.106	84	69	79	1
2	27.0	34.3	32.0	31.1	Night.	.....	.....	.....	10	Nim.	9	Cu st.	10	St	E.	1	.....	0	E.	1	36 1	26 0	29.702	29 623	29.609	29.645	.141	.171	.178	96	86	98	2
3	33.6	35 0	35 0	34.5	Night.	11½ A. M.	.300	2.00	10	Nim.	10	Nim.	10	St.	N. W.	1	W.	1	S. W.	1	35 8	30.0	29.218	29 386	29.627	29 410	.193	.178	.166	100	88	82	3
4	32 0	27.1	22.3	27.1	.....	3 P. M.	.400	.....	10	Cir. st.	2	Cu st	6	St.	.....	0	N. W	2	W.	1	35 0	22.3	29 678	29.844	29.985	29 836	.152	083	.114	85	56	90	4
5	19 8	36.4	35.0	30.4	7¾ P. M.	Night.	.150	1.50	9	St.	10	St. & cu.	10	Nim.	S. W.	1	S. W.	1	S E.	1	36.7	17.0	30.053	30 015	29.964	30.011	.088	.173	.191	82	80	94	5
6	20.2	38 4	25.0	27.9	.....	.....	.....	.....	8	St.	6	Cir. st.	7	Cir. st.	S. W.	1	S. W.	1	N. W.	1	38.4	18.7	29.942	29.866	29.995	29.934	.106	.196	.107	97	84	79	6
7	14 9	24.2	13.7	14 3	.....	.....	.....	.....	5	Cir. st.	4	Cir. cu.	3	Cir. st.	N. W.	1	W.	1	S.	1	27 9	13.7	30.088	30.057	30.032	30 059	.075	.088	.073	87	68	91	7
8	23.6	33.4	33.1	30.0	1 P. M.	.....	.....	.....	10	Cir. st.	10	Nim.	10	Nim.	S.	1	S.	1	S.	3	34 4	13.1	29 892	29.749	29.554	29 732	.115	.159	.177	92	82	97	8
9	32 9	31 0	29.4	31.1	.....	11 A. M.	.450	4.00	10	Nim.	10	St.	10	Nim.	N.	1	N. E.	1	N. E.	1	34.0	29.4	29.336	29.279	29.148	29.254	.184	.155	.155	98	89	96	9
10	13 8	14.8	11.0	13.2	*	.....	.....	.....	10	Nim.	8	Cir cu.	0	.....	N. W.	4	N. W.	1	N. W.	1	30.9	11 0	29 056	29 229	29 522	29 269	.078	.069	.068	96	81	96	10
11	8.0	17.4	6.1	10.5	.....	.....	.....	.....	1	Cir. st	0	.....	0	.....	N. W.	2	N. W.	2	N. W.	1	18 1	6.1	29 806	29.898	30 027	29.910	.061	.073	.046	98	75	86	11
12	-4.4	8.1	6.3	3.3	.....	.....	.....	.....	0	.....	7	Cir. & st.	10	St.	S.	1	N. W.	1	N.	1	10.2	-5.0	30.165	30.074	29.956	30 065	.035	.047	.050	100	76	88	12
13	3 9	15.7	7.7	9.1	.....	.....	.....	.....	6	Cir. st.	0	.....	0	.....	N. W.	1	N. W.	1	S. W.	1	17 3	2.5	29 720	29.684	29.717	29.707	.042	.055	.038	82	62	62	13
14	18.8	28.1	23.5	23.5	.....	.....	.....	.....	4	Cir. st.	3	Cir. cu.	2	St.	S. W.	1	W.	2	S. W.	1	30.0	6.7	29.710	29 756	29.905	29.790	.080	.118	.102	78	77	81	14
15	25.0	35.6	21 9	27.5	.....	.....	.....	.....	10	Cir. & st.	4	Cir. st.	0	... .	S.	1	W.	1	N. W.	3	35.9	21 2	29.699	29.496	29.794	29.663	.123	.155	.082	91	74	69	15
16	8.6	21 0	19.2	16.3	10 P. M.	.....	.....	.....	6	Cir. cu.	9	Cir. cu.	10	St.	S. W.	1	.....	0	.....	0	23.4	7.5	30.019	29.996	29.934	29.983	.049	.080	.085	76	71	82	16
17	18.9	28.0	15.8	20.9	.....	6 A. M.	.365	4.00	10	St,	4	Cu.	0	.....	N. W.	1	N. W.	2	S. W.	1	29.0	15 8	29.819	29.888	30.107	29.938	.080	.092	.061	78	60	69	17
18	-3.4	15 6	23.4	11.9	3¼ P. M.	Night.	.350	4.00	9	St.	10	St.	10	Nim.	S.	1	E.	1	N. E.	1	23.9	-4.0	30.174	30.030	29.735	29.980	.027	.070	.109	72	79	87	18
19	19.3	19.0	0.1	12.8	.....	... .	.....	.....	0	.....	3	Cir. cu.	10	St.	N. W.	1	N. W.	1	N.	1	24.4	0.1	29.829	30.238	30.363	30.147	085	.059	.028	82	57	64	19
20	14.5	21.9	14.3	16.9	Night.	.....	.....	.....	10	Nim.	10	Nim.	10	St.	E.	4	E.	4	N. W.	1	22.9	0.0	30.182	29.802	29.591	29.858	.064	.101	.060	77	86	73	20
21	17.6	22.8	3.4	14 9	.....	7½ P. M.	.450	5.00	9	St.	4	Cir. cu.	2	St.	W.	1	W.	1	.....	0	23.6	3.4	29.695	29.896	29 944	29.845	.087	.076	.033	90	62	65	21
22	19.0	14.2	0.0	11 1	6 A. M.	12 M.	.500	5.00	10	Nim.	6	Cir cu.	0	.....	N. E.	2	N. W.	4	W.	1	21.1	0.0	29.624	29.628	29 888	29.713	.094	.060	.030	91	73	70	22
23	-9.2	10.0	5 1	1.9	8½ A. M.	8 P. M.	.150	1.50	7	Cir. st.	10	Nim.	2	St.	S E.	1	N. E.	1	W.	2	10.7	-10.0	29.973	29.696	29.656	29.742	.017	.059	.049	60	87	90	23
24	-2.7	-1.2	-10.1	-4 6	.....	.....	.....	.....	3	St.	0	.....	0	.....	W.	1	W.	3	W.	1	5.1	-10.1	29 939	30.035	30 147	30 042	.019	.028	.026	50	68	97	24
25	-20.0	-5.5	-10.0	-11.8	.....	.....	.....	.....	4	St.	4	Cir. cu.	0	.....	W.	1	W.	1	W.	1	-5 3	-23.0	30.194	30.154	30.167	30.152	.011	.022	.023	64	66	84	25
26	-12.6	-4.3	-2.0	-6.3	7¾ P. M.	.....	.....	.....	9	St	10	Cir. st.	10	Nim.	S. W.	1	N.	1	N.	2	-2.0	-15 4	30.023	29.926	29.518	29 822	.020	.024	.034	85	68	87	26
27	2.0	7.1	2.7	3.9	.....	8½ A. M.	.100	1.00	10	Nim.	10	Cir. cu.	10	St.	N.	1	N. W.	1	N. W.	2	8.0	-3 6	29 391	29.366	29.333	29.363	.040	.044	.040	83	75	81	27
28	-5.4	-2 4	-2.9	-3.6	.....	.....	.....	.....	4	St.	1	Cu.	0	.....	W.	1	W.	1	S. W.	1	2.7	-6.1	29 521	29.702	29.933	29.719	.019	.017	.027	58	44	72	28
29	-10.1	4.4	0.9	-1.6	.....	.....	.....	.....	2	Cir. st.	1	Cir. cu.	0	.....	W.	1	W.	1	N. W.	1	5.2	-15.4	30.046	30 040	30.071	30 052	.015	.034	.033	59	64	74	29
30	-5 0	9.1	-0.2	1.3	.....	.....	.....	.....	0	.....	0	.....	0	.....	N. W.	1	N. W.	1	N. W.	1	10.1	-7 3	30.151	30.191	30.236	30.193	.019	.035	.032	56	53	75	30
31	-12.3	2.4	1.3	-2.9	11¼ A. M.	6 P. M.	.250	2.50	9	Cir. st.	10	Nim.	9	St.	W.	1	N.	1	N. W.	1	3.6	-14.8	30.212	30.017	29.980	30.069	.016	.029	.035	64	61	77	31
Sums	.....	.....	.....	.....	.....	.....	3.615	32.50																									Sums.
Means	.....	.....	.....	13°.39	.....	.....	.....	.....	6.8	.....	5.9	.....	5.0	.....	.....	....	N. W. & W.	.55	.....	....	21°.07	4°.52	.....	.....	.....	29.822	.071	.085	.076	81	72	82	Means
										Mean	5.9						S. W. & S.	.23		Max	38°.4	-23°.0	Min		Max...	30.363	Mean ..	.077		Mean.	78		
																	S. E. & E.	.11							Min...	29.056	Max...	.196		Max..	100		
																	N. E. & N.	.11									Min...	.011		Min ..	44		

* Penobscot river closed to navigation.

SUMMARY---1872.

MONTHS.	THERMOMETER IN THE OPEN AIR.											RAIN AND SNOW.		CLOUDS.	WINDS.				BAROMETER.			FORCE OR PRESSURE OF VAPOR, IN INCHES.			RELATIVE HUMIDITY OR FRACTION OF SATURATION.		
	Mean of hottest day.		Mean of coldest day.		Highest temperature.		Lowest temperature.		Mean of maximum temperature.	Mean of minimum temperature.	Mean of three daily observations.	Amount of rain or melted snow in gauge—inches.	Amount of snow—inches.	Mean percentage of cloudiness.	PER CENT. OF DIRECTION AND FORCE.				BAROMETER HEIGHT REDUCED TO FREEZING POINT.								
	Day.	Temperature.	Day.	Temperature.	Day.	Temperature.	Day.	Temperature.							N. W. and W.	S. W. and S.	S. E. and E.	N. E. and N.	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.
		°		°		°		°	°	°	°																
January	13	32.8	7	-2.4	23	38.2	7	-9.2	24.99	9.54	17.45	2.182	16.00	.54	.48	.23	.05	.24	30.446	29 264	29.712	.201	.028	.087	100	49	82
February	25	31.6	23	2.2	21	40.0	3	-9.8	28.99	7.13	17.89	1.703	13.50	.39	.53	.15	.09	.23	30.382	29.140	29.708	.226	.025	.082	100	28	76
March	27	33 5	6	-8.0	26	44.0	7	-16.5	29.01	10.00	19.30	5.234	38.00	.51	.52	.13	.05	.30	30.202	28.988	29.702	.191	.025	.086	100	32	76
April	30	49 2	1	27.4	20	63.0	7	20.0	48.72	31 49	40.26	1.928	3.00	.49	.48	.31	.05	.16	30 200	29.219	29.731	.302	.070	.162	100	25	66
May	27	60.2	5	41.5	19	71.8	11	34.0	60.08	44.10	52.13	3.920	.....	.67	.19	.32	.12	.37	30.162	29.244	29.745	.416	.098	.280	100	23	73
June	30	78.5	2	49.0	30	90.6	4	37 3	73.28	56.22	64 30	4.470	.....	.55	.27	.34	.19	.20	30.040	29.449	29.772	.750	.210	.459	100	36	77
July	16	79.5	27	61.1	16	90.0	26	49.0	78.54	59.19	68.69	2.680	.....	.47	.34	.42	.13	.11	30.047	29.531	29.736	.793	.256	.517	100	33	74
August	9	76.8	30	54.3	9	90.3	29	45.2	76.32	59.46	67.63	6.230	.....	.45	.30	.36	.18	16	30.075	29.277	29.823	.750	.236	.530	100	28	79
September	8	72.2	3	52.5	8	84.3	5	41.4	66.16	51.38	58.70	3.550	.....	.56	.27	.30	.27	.16	30.172	29.409	29.829	.688	.234	.403	100	39	81
October	7	60.5	28	33.3	7	66.0	29	23.0	53.78	37.39	45.75	6.010	.....	.47	.23	.34	.12	.31	30.423	29.279	29 838	.500	.108	.254	100	36	80
November	12	44.6	30	20.4	12	47.0	21	12.4	39.35	28.18	33.77	7.055	10.00	.64	.29	.25	.20	.26	30.252	28.712	29.770	.323	.068	.163	100	41	83
December	3	34.5	25	-11.8	6	38.4	25	-23.0	21.07	4.52	13.39	3.615	32.50	.59	.55	.23	.11	.11	30.363	29.056	29.822	.196	.011	.077	100	44	78
	July		Dec.		June		Dec.																				
Year	16	79° 5	25	-11°.8	30	90°.6	25	-23°.0	50°.02	33°.22	41° 60	48.577	113.00	.53	.37	.28	.13	.22	30.446	28.712	29.766	.793	.011	.258	100	23	77

REGISTER OF

METEOROLOGICAL OBSERVATIONS

FOR THE YEAR 1872,

TAKEN AT THE

Maine State College of Agriculture and the Mechanic Arts,

BY PROF. M. C. FERNALD.

Latitude, 44° 53′ 10″ N. Longitude, 68° 38′ 57″ W. Elevation above the Sea, 134 feet.

EXPLANATIONS AND DEDUCTIONS

FROM THE FOLLOWING TABLES.

The hours of observation are the same as those adopted by the Smithsonian Institution, viz : 7 A. M. ; 2 P. M., and 9 P. M.

The amount of cloudiness is indicated by numbers ranging from 0 to 10 ; 0 indicating no clouds ; 5, the sky one-half covered ; 10, the sky wholly covered.

The kinds of clouds are donated by the following abreviations :

St.—*stratus*, spread in sheets.

Cu.—*cumulus*, piled in heaps.

Cir.—*cirrus*, drawn out into thin filaments.

Nim.—*nimbus*, rain-cloud proper.

Cir. st., *cirro-stratus*. *Cu. st.*, *cumulo-stratus*. *Cir cu.*, *cirro-cumulus*.

The force of wind is marked according to the following scale :

1.	Very light breeze	2	miles per hour.
2.	Gentle breeze	4	" "
3.	Fresh breeze	12	" "
4.	Strong wind	25	" "
5.	High wind	35	" "
6.	Gale	45	" "
7.	Strong gale	60	" "
8.	Violent gale	75	" "
9.	Hurricane	90	" "
10.	Violent hurricane	100	" "

Since mercury expands by heat and contracts by cold, the observed height of the mercury in the barometer is *corrected* in every case, *i. e.*, reduced to the height at which it would stand were the temperature 32 degrees, Fahrenheit.

The figures in the columns headed " Force or pressure of vapor," show the height at which a column of mercury is maintained by the weight of the moisture of the air.

The numbers in the columns headed " Humidity," &c., show the relative amount of moisture existing in the air at the temperature and the time when the observation is made, 100 representing all the moisture the air is capable of containing at that temperature, or complete saturation.

From the tables, it appears that the warmest day of the year was the 16th of July, when the mean temperature was 79°.5 ; and the coldest day the 25th of December, when the mean temperature was 11°.8 below zero.

The highest temperature (90°.6) recorded during the year was on June 30th, and the lowest temperature (23°.0 below zero,) on the 25th of December.

The range of temperature between the two extremes is 113°.6, which is 4°.4 greater than the corresponding range of temperature for 1871.

A comparison of the *several months* of the year with corresponding months of 1871, in regard to temperature, is given below.

January,	4°.11	warmer	than	the	corresponding month of 1871.
February,	2°.10	colder	"	"	"
March,	15°.35	"	"	"	"
April,	0°.59	"	"	"	"
May,	1°.48	warmer	"	"	"
June,	2°.31	"	"	"	"
July,	1°.64	"	"	"	"
August,	1°.80	"	"	"	"
September,	4°.00	"	"	"	"
October,	1°.93	colder	"	"	"
November,	4°.77	warmer	"	"	"
December,	4° 04	colder	"	"	"

It will be perceived that during the months of May, June, July, August and September, the average temperature was 2°.25 higher than that of the corresponding period of last year. To this circumstance, (of higher temperature,) together with the generous rain-fall during the same period, are doubtless largely due the more abundant crops of 1872 as compared with those of 1871.

The months of March and December were, in a marked degree, colder than the corresponding months of 1871, the month of March being nearly 9° colder than March, 1870, and more than 15° (as shown above,) colder than March, 1871.

The ice left the Penobscot river at Bangor on the 20th of April, thirty-seven days later in the season than last year.

The earliest frost noted, destructive to plants, was on the morning of the 5th of October.

The mean temperature for the year was 0°.32 lower than the mean temperature of 1871, and 2°.66 lower than that of 1870.

The rain-fall was larger by nearly seven inches than the rain-fall of 1871. The months of most copious rains, were June, August, October and November, while no month of the year was without a fair supply.

The amount of snow was 32.5 inches greater than that of the preceding year.

A shower of hail occurred on the afternoon of June 1st, the stones ranging from ¼ to ½ an inch in diameter, and doing injnry to fruit trees then in blossom.

A strong gale of wind, with rain, prevailed from 1 to 4 A. M., on the 13th of November.

A slight shock of an earthquake was felt about 8 P. M., on the 9th of January.

The most brilliant auroras of the year occurred February 4th, July 27th, August 4th and 8th, September 9th, October 28th, and December 14th.

The prevailing wind during the year was from the northwest. The barometer indicated the greatest pressure of the atmosphere in January ; the least, in November. The least mean pressure was during the month of March ; the greatest, during the month of September.

For other facts in regard to temperature, winds, clouds, rains, snow, &c., see tables and summary.