greenstone rising in ridges. The soil is sandy, and in many places clayey, with a pretty close grassy sward. Straggling spruce trees begin to skirt the banks of the river about eighteen or twenty miles from the sea.

COPPER MOUNTAINS.

The Copper Mountains rise perhaps eight or nine hundred feet above the bed of the river, and at a distance present a somewhat soft outline, but on a nearer view they appear to be composed of ridges which have a direction from W.N.W. to E.S.E. Many of the ridges have precipitous sides, and their summits, which are uneven and stony, do not rise more than two hundred or two hundred and fifty feet above the vallies, which are generally swampy and full of small lakes. The only rocks noticed when we crossed these hills on the late journey, were clay-slate, greenstone, and dark red sandstone, sometimes containing white calcareous concretions, resembling an amygdaloidal rock. On our first journey down the Coppermine River, we visited a valley, where the Indians had been accustomed to look for native copper, and we found there many loose fragments of a trap rock, containing native copper, green malachite, copper glance, and iron-shot copper green; also trap containing greenish-gray prehnite with disseminated native copper, which, in some specimens, was crystallized in rhomboidal dodecahedrons. Tabular fragments of prehnite, associated with calc-spar and native copper, were also picked up, evidently portions of a vein, but we did not discover the vein in its original repository. The trap-rock, whose fragments strewed the valley, consists of felspar, deeply coloured by hornblende. A few clumps of white spruce trees occur in the vallies of the Copper Mountains, but the country is in general naked. The Coppermine River makes a remarkable bend round the end of these hills.

After quitting the Copper Mountains, and passing a valley occupied by a chain of small lakes in lat. 67° 10′, long. 116° 45′, we travelled over a formation whose prevailing rocks are spotted sandstone and conglomerate, and which forms the *height of land* betwixt Bear Lake and the Coppermine River. The ascent to this height from the eastward is gradual, but the descent towards Bear Lake is more rapid. The country is broken and hilly, though the height of the hills above the sea is perhaps inferior to that of the Copper Mountains. The vallies through

which the small streams that water the country flow, are narrow and deep, resembling ravines, and their sides are clayey. The ground is strewed with gravel.

The *sandstone* has very generally a purplish colour, with gray spots of various magnitudes. It is fine-grained, hard, has a somewhat vitreous lustre, and contains little or no disseminated mica.

The *conglomerate* consists of oval pebbles of white quartz, sometimes of very considerable magnitude, imbedded in an iron-shot cement. Many of the pebbles appear as if they had been broken and firmly re-united again. The conglomerate passes into a coarse sandstone.

Porphyry and granite form hills amongst the sandstone strata.

The *porphyry* has a compact basis, like hornstone, of a dull brown colour, which contains imbedded crystals of felspar and quartz, and occasionally of augite. It forms dome-shaped and short conical hills.

The *granite* is disposed in oblong ridges, with small mural precipices. It has, generally, a flesh-red colour, and contains some specks of augite, but little or no mica. The granite and porphyry were observed only on the east side of the height of land, the brow of which, and its whole western declivity, is formed of sandstone. Boulders of granite and porphyry, precisely similar to the varieties which occur *in situ* on the height of land, are common on the beach at Fort Franklin, and on the banks of the Mackenzie above Bear Lake.

To the westward of the height of land, the country on the banks of Dease River is more level, and few rocks *in situ* were seen, until within five or six miles of Bear Lake, where the stream flows through a chasm, whose sides are composed of a soft, fine-grained red sandstone, like that which occurs in the vale of Dumfries, in Scotland. Several ravines here have their sides composed of fine sand, inclosing fragments of soft sandstone.

About three miles from the mouth of Dease River we came to a limestone formation, which has been already noticed in the account of the geological structure of the shores of Great Bear Lake.

EASTERN CHAIN OF PRIMITIVE ROCKS.

The preceding part of the paper describing the rock formations which were noticed on the route of the expedition from Great Slave Lake down the Mackenzie

along the shores of the Arctic Sea, the Coppermine, Great Bear Lake, and Great Bear River, being a distance of three thousand miles, I shall, by way of supplement, mention very briefly some of the more southern deposits.

The first I have to speak of is the chain of primitive rocks to which I have alluded in page xxix. as extending for a very great distance in a north-west direction, and inclining in the northern parts slightly towards the Rocky Mountain Chain. Dr. Bigsby, in his account of the geology of Lake Huron says, that "The primitive rocks on the northern shores of that lake are part of a vast chain, of which the southern portion, extending probably uninterruptedly from the north and east of Lake Winipeg, passes thence along the northern shores of Lakes Superior, Huron, and Simcoe, and after forming the granitic barrier of the Thousand Isles, at the outlet of Lake Ontario, spreads itself largely throughout the state of New York, and there joins with the Alleghanies, and their southern continuations." It is not my intention to say any thing further of the rocks in the districts of which Dr. Bigsby speaks, although in travelling from the United States to Lake Winipeg the expedition passed over them. That zealous geologist has already given, in various publications, many interesting and accurate details of the formations on the borders of the great lakes;—an account of those which lie some degrees farther to the north is inserted in the second volume of the Geological Transactions,—and there are some notices of them in the Appendix to the narrative of Captain Franklin's First Journey. My object at present is, merely to trace the western boundary of the primitive rocks in their course through the more northerly parts of the American continent.

I have already quoted Sir Alexander Mackenzie's original and important remark, of the principal lakes in those quarters being interposed betwixt the primitive rocks and the secondary strata, lying to the westward of them—Lake Winipeg is an instance in point. It is a long, narrow lake, and is bounded throughout on its east side by primitive rocks, mostly granitic, whilst its more indented western shore is formed of horizontal limestone strata. The western boundary of the primitive rocks, extending on this lake about two hundred and eighty miles, has nearly a north-north-west direction. From Norway Point, at the north end of the lake, to Isle à la Crosse, a distance of four hundred and twenty miles in a straight line, the boundary has a west-north-west direction. For two hundred and forty miles from Isle à la Crosse to Athabasca Lake, the course of the primitive rocks is unknown to me; but from Athabasca Lake to

M'Tavish's Bay, in Great Bear Lake, a distance of five hundred miles, their western edge runs about north-west-by-west, and is marked by the Slave River, a deep inlet on the north side of Great Slave Lake, and a chain of rivers and lakes, (including Great Marten Lake,) which discharge themselves into that inlet.

Captain Franklin on his first voyage crossed this primitive chain nearly at right angles to its line of direction, in proceeding from Hudson's Bay to Lake Winipeg—it was there two hundred and twenty miles wide.

The hills composing the chain are of small elevation, none of them rising much above the surrounding country. They have mostly rounded summits, and they do not form continuous ridges; but are detached from each other by vallies of various breadth, though generally narrow, and very seldom level. The sides of the hills are steep, often precipitous. When the vallies are of considerable extent, they are almost invariably occupied by a lake, the proportion of water in this primitive district being very great; from the top of the highest hill on the Hill River, which has not a greater altitude than six hundred feet, thirty-six lakes are said to be visible. The small elevation of the chain may be inferred from an examination of the map, which shows that it is crossed by several rivers, that rise in the Rocky Mountains, the most considerable of which are the Churchill and the Saskatchewan, or Nelson River. These great streams have, for many hundred miles from their origin, the ordinary appearance of rivers, in being bounded by continuous parallel banks; but on entering the primitive district, they present chains of lake-like dilatations, which are full of islands, and have a very irregular outline. Many of the numerous arms of these expansions wind for miles through the neighbouring country, and the whole district bears a striking resemblance, in the manner in which it is intersected by water, to the coast of Norway and the adjoining part of Sweden. The successive dilatations of the rivers have scarcely any current, but are connected to each other by one or more straits, in which the water-course is more or less obstructed by rocks, and the stream is very turbulent and rapid. The most prevalent rock in the chain is gneiss; but there is also granite and mica-slate, together with numerous beds of amphibolic rocks.

LIMESTONE OF LAKE WINIPEG.

To the westward of the chain of primitive rocks, through a great part, if not through the whole of its course, lies an extensive horizontal deposit of limestone.

Dr. Bigsby, in the Geological Transactions, has described, in detail, the limestone of Lake Huron, and is disposed to refer "the cavernous and brecciated limestone of Michilimackinac to the magnesian breccia, which is in England connected with the red marl;" whilst the limestones of St. Joseph, and the northern isles, he considers as more resembling the well-known formation of Dudley, in Staffordshire. The limestone of Thessalon Isle, in which there occurs the remarkable species of orthoceratite which he has figured, he describes as decidedly magnesian. I observed this orthoceratite in the limestone strata of one of the isles forming the passage of La Cloche in Lake Huron. The limestone deposits of Lake Winipeg and Cape Parry exactly resemble that of La Cloche in mineralogical characters, and in containing the same orthoceratite which was also found by Captains Parry and Lyon at Igloolik.

The colour of the limestone of Lake Winipeg is very generally yellowish-white, passing into buff, on the one hand, and into ash-gray on the other. A reddish tinge is also occasionally observed. Much of it has a flat fracture, with little or no lustre, and a fine-grained arenacious structure. A great portion of it, however, is compact, and has a flat conchoidal and slightly splintery fracture. This variety passes into a beautiful china-like chert. Many of the beds are full of long, narrow vesicular cavities, which are lined sometimes with calc-spar, but more frequently with minute crystals of quartz.

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The beds of this formation seldom exceed a foot in thickness, and are often very thin and slaty. The arenacious and cherty varieties frequently occur in the same bed; sometimes they form distinct beds. The softer kinds weather readily into a white marl, which is used by the residents to whitewash their houses. Wherever extensive surfaces of the strata were exposed, as in the channels of rivers, they were observed to be traversed by rents crossing each other at various angles. The larger rents, which were sometimes two yards or more in width, were, however, generally parallel to each other for a considerable distance.

Professor Jameson enumerates *terebratulæ, orthoceratites, encrinites, caryophyl-*

lites, and *lingulæ*, as the organic remains in the specimens brought home by Captain Franklin on his first expedition. Mr. Stokes and Mr. James De Carle Sowerby have examined those which we procured on the last expedition, and found amongst them *terebratulites*, *spirifers*, *maclurites*, and *corallines*. The maclurites belonging to the same species, with specimens from Lakes Erie and Huron, and also from Igloolik, are perhaps referrible to the *Maclurea magna* of Le Sueur.

1015 1019 Mr. Sowerby determined a shell, occurring in great abundance in the strata at Cumberland-house, about one hundred and twenty miles to the westward of Lake Winipeg, to be the *Pentamerus Aylesfordii*.

The extent to the westward of the limestone deposit of Lake Winipeg is not well known to me; but I have traced it as far up the Saskatchewan as Carlton House, and its breadth there is at least two hundred and eighty miles. For about one hundred miles below Carlton House, the river Saskatchewan flows betwixt banks from one to two hundred feet in height, consisting of clay or sand, and the beds of limestone are exposed in very few places. The plains in the neighbourhood of Carlton abound in small lakes, some of which are salt. The country which the Saskatchewan waters for one hundred and ninety miles before it enters Lake Winipeg, is of a different kind. It is still more flat than that about Carlton, and is so little raised above the level of the river, that in the spring-floods the whole country is inundated, and in several places the river sends off branches which reunite with it after a course of many miles. In this quarter the soil is generally thin, and the limestone strata are almost everywhere extensively exposed. To the southward of Cumberland House, the Basquiau Hill has considerable elevation. I had not an opportunity of visiting it; but in the flat limestone strata, near its foot, there are salt springs, from which the Indians sometimes procure a considerable quantity of salt by boiling; and there are several sulphureous springs within the formation.

I observed no beds of conglomerate in it, and no sandstone associated with it; but the extensive plains which lie betwixt Carlton House and the Rocky Mountains are sandy, and beds of sandstone are said to be visible in some of the ravines.

The line of contact of the limestone with the primitive rocks of Lake Winipeg, is covered with water; but at the Dog's-Head, and near the north end of Beaver Lake, they are exposed within less than a mile of each other. To the southward of the Dog's-Head in Lake Winipeg, and in a few other quarters, some schistose

rocks, belonging to the transition series, are interposed between the two formations.

Before quitting the formations of Lake Winipeg, I may remark, that the height of that lake above the sea is perhaps equal to that of Lake Superior, which is eight hundred feet.

LIMESTONE OF THE ELK AND SLAVE RIVERS.

The next formation I have to mention is one which appears to possess most of the characters ascribed by German geologists to the zechstein. It extends from the north side of the Methy carrying-place down the Clearwater, Elk, and Slave Rivers, and along the south shore of Great Slave Lake to the efflux of the Mackenzie. The line I have traced was the route of the expedition, and is also very nearly that of the eastern boundary of the limestone. Primitive rocks occur in Lake Mammawee, Athabasca Lake, and on the Stony River; and on several parts of the Slave River they are separated from the limestone only by the breadth of the stream. On Great Slave Lake, the Stony Island, on the north-east side of the mouth of Slave River, is composed of granite, whilst the limestone strata are exposed at Fort Resolution on the south-west side.

The limestone in this extensive tract is commonly in thin and nearly horizontal beds, and much of it exactly resembles in mineralogical characters the dolomite and chert of Lake Winipeg. It is interstratified with thin beds 1027, 1028 of soft white marl; and in a few places with a marly sandstone.

Extensive beds of stinkstone also occur, and many beds of limestone containing fluid bitumen in cavities. The bitumen is in such quantity, in some quarters, as to flow in streams from fissures in the rock; and in an extensive district, around Pierre au Calumet on the Elk River, slaggy mineral pitch fills the crevices in the soil, and may be collected in large quantities by digging a well.

A calcareous breccia also exists in various places, particularly on the Slave River. Springs depositing from their waters sulphur, and sulphate of lime, slightly mixed with sulphate of magnesia, muriate of soda, and iron, are common and copious. A few miles to the westward of the Slave River, there is a ridge

of hills several miles long, and about two hundred feet high, having several beds of compact, grayish gypsum exposed on its sides. From the base of this hill there issue seven or eight very copious, and many smaller springs, whose waters deposit a great quantity of very fine muriate of soda by spontaneous evaporation. The collected rivulets from these springs form a stream which is, at its junction with the Slave River, sixty yards wide and eight or ten feet deep.

1020 to 1026 The organic remains in this deposit, according to a list kindly furnished by Mr. Sowerby, consist of *spirifers*, one of which is
1029 to 1032 the *spirifer acuta;* several new *terebratulæ*, of which one resembles the *T. resupinata*, a *cirrus*, some crinoidal remains, and corals.

At the union of Clearwater and Elk Rivers, the limestone beds are covered to the depth of one hundred and fifty feet with bituminous shale.

I have stated, that on Slave River this limestone formation succeeds immediately to primitive rocks, but I am not acquainted with the rocks that lie to the eastward of it on the Elk River. The traders report that there are extensive deposits of sandstone on the eastern arm of the Athabasca Lake, and, perhaps, these sandstones extend nearly to Clearwater River. Sand covers the limestone on that river to the depth of eight or nine hundred feet, and the fragments of sandstone in it are large, numerous, and not worn.

The quantity of gypsum in immediate connection with extremely copious and rich salt springs, and the great abundance of petroleum in this formation, together with the arenacious, soft, marly, and brecciated beds interstratified with the dolomite, and above all, the circumstance of the latter being by far the most common and extensive rock in the deposit, led me to think that the limestone of the Elk and Slave Rivers was equivalent to the zechstein of the continental geologists. My opinion, however, on this subject is, from a total want of practical acquaintance with the European rock formations, of little weight; and several eminent geologists are, after an examination of the organic remains and mineralogical characters of the specimens brought home, inclined to consider the formation as analogous to the carboniferous or mountain-limestone of England.

As to the limestone formation of Lake Winipeg, I have no doubt of its identity with that occurring in the islands at the passage of La Cloche, in Lake Huron, and also with that at Cape Parry and at Cape Krusenstern, on the coast of the Arctic Sea. It is probable, also, that these four deposits belong to the same epoch

with the limestone of Elk and Slave Rivers, although they differ in containing little or no petroleum. It is proper to mention, however adverse it may be to the opinion I have ventured to hint at above, of these extensive horizontal deposits of limestone being referable to the zechstein, that the limestone of Lake Huron is generally considered as belonging to the mountain-limestone; and Professor Jameson, from a review of the organic remains occurring in the Lake Winipeg deposit, considered that it also belonged to that formation. The formation of Cape Lyon may be, with less danger of mistake, referred to the transition or mountain-limestone.

No. II.

METEOROLOGICAL TABLES,

ARRANGED FROM THE REGISTERS KEPT AT FORT FRANKLIN BY THE OFFICERS OF THE EXPEDITION,

BY

JOHN RICHARDSON, M.D., F.R.S., &c.

Surgeon and Naturalist to the Expedition.

TABLE I.

The following Table exhibits the temperature of the Air and principal Atmospherical Phenomena observed at Fort Franklin for one year, from the commencement of September 1825, to the end of August 1826, with the exception of the month of June.

From September to the end of May the temperatures were registered hourly, from seven in the morning to midnight, and at four in the morning. An observation was also made in the spring at sunrise. The means for the twenty-four hours were calculated from eighteen, and sometimes from twenty, hourly observations, by interpolating the remaining hours. This interpolation could be made without hazard of material error, because the descent of the temperature was generally gradual from midnight to sunrise, and the mean so obtained is evidently more correct than it would have been, had the length of the intervals between the observations at midnight, four and seven in the morning, not been taken into the account.

The temperatures were registered at the observatory, a building of rough deal,

about one hundred yards from the Fort, thirty feet above the surface of Great Bear Lake, and guessed to be about two hundred and thirty feet above the level of the sea.

The thermometer which was used was a coloured spirit one, made by Newman, and was selected from ten by the same maker, because, on several trials, it gave nearly the mean temperature of the whole. All the thermometers corresponded at the zero point, but they varied from each other as the temperature decreased, and at 45° below zero, they differed eight or nine degrees. They disagreed also in their ascending scales, but to a less amount. The thermometer that was chosen, agreed very nearly with one made by Dollond, which was regularly noted for the purpose of comparison.

In the month of May the sun rose, and set so far to the northward, that it was difficult to find a situation for the thermometer which was not heated by its rays, and the following contrivance was therefore adopted. The bulb and lower part of the scale of a mercurial thermometer was inclosed in a brass cylinder, an inch and a half in diameter, having a cover and a bottom of the same material, fitted loosely to allow a free passage to the air. The brass cylinder was shut up in another cylinder of tinned iron, four inches in diameter which also gave free admission to the air. This apparatus was constructed to obviate the effect of solar and terrestrial radiation, and it answered the purpose; for even when the sun shone bright on the outer case, the inclosed thermometer indicated as low, and frequently a lower temperature, than one hung in the most shady spot that could be selected.

The temperatures of the first twenty days of June were noted at the Fort, but the book in which they were inserted was unfortunately stolen by the Esquimaux. To supply this defect in the calculation of the mean annual temperature, the mean temperature of that month has been assumed to be + 48°, which cannot, at the utmost, be more than one or two degrees from the truth.

Mr. Dease, who accompanied the Expedition to Fort Norman on the 22nd of June, returned to Fort Franklin on the 9th of July; and from that period to the end of August, he had the kindness to register the temperatures every three hours with the mercurial thermometer, inclosed in the metal cylinders as above described. The temperatures of the first eight days of July are supplied from observations made on the Mackenzie. It is proper to notice, that Mr. Dease having lent his watch to the Eastern Detachment of the Expedition, the hours at which his temperatures were registered were in some degree uncertain, particularly when the sun was obscured.

ABSTRACT of METEOROLOGICAL JOURNAL for SEPTEMBER 1825, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	+ 39·81	+ 46·0	+ 35·0			
2	+ 36·79	+ 41·2	+ 32·0			
3	+ 39·48	+ 43·0	+ 34·0			Note.—The Thermometer was hung about three feet from the ground on the north side of the Observatory, until the month of May. It was a red-coloured spirit one, made by Newman.
4	+ 41·42	+ 50·0	+ 30·0			
5	+ 45·04	+ 50·0	+ 41·0			
6	+ 44·03	+ 50·0	+ 35·7			
7	+ 38·32	+ 42·6	+ 35·0			
8	+ 47·41	+ 52·5	+ 43·4			
9	+ 45·92	+ 55·0	+ 38·0			
10	+ 46·83	+ 55·0	+ 37·0			
11	+ 44·92	+ 53·5	+ 45·3	N.N.E., Calm.	1	Gloomy and rainy.
12	+ 43·15	+ 45·0	+ 40·5	Calm.	....	Misty. Rainy.
13	+ 43·92	+ 47·8	+ 41·5	Calm.	....	Rainy and misty.
14	+ 44·53	+ 48·2	+ 42·0	Calm. N.E.	1	Rainy and misty.
15	+ 42·68	+ 48·8	+ 38·0	N.W., N.E.	1—2	Fine and clear.
16	+ 42·71	+ 48·0	+ 38·0	S.E.	8	Clear.
17	+ 44·98	+ 50·6	+ 39·0	East.	4	Ditto.
18	+ 48·01	+ 52·7	+ 43·2	S.E.	7	Cloudy.
19	+ 45·45	+ 54·0	+ 38·5	.....	....	.....
20	+ 47·59	+ 60·5	+ 36·8	N.E.	3	Cloudy.
21	+ 46·74	+ 49·9	+ 43·1	N.W.	1	Rainy.
22	+ 43·13	+ 46·3	+ 39·5	North.	6	Cloudy.
23	+ 40·49	+ 43·8	+ 37·7	Calm and E.N.E.	5	Foggy, afterwards very clear.
24	+ 44·69	+ 52·6	+ 39·0	East.	5	Very clear.
25	+ 43·98	+ 49·5	+ 39·7	E.S.E.	2	Showery.
26	+ 41·19	+ 44·5	+ 38·7	N.W.	3	Cloudy and hazy.
27	+ 40·40	+ 45·0	+ 37·8	N.W. and E.b.S.	1—5	Rainy, afterwards cloudy.
28	+ 36·29	+ 37·7	+ 35·4	N.E.	2	Rainy with snow at times.
29	+ 36·53	+ 39·4	+ 34·0	E.b.S.	4	Cloudy with snow showers.
30	+ 36·29	+ 40·6	+ 33·7	W.b.N.	2	Clear.
Means.	+ 42·92	+ 48·12	+ 38·08			

ABSTRACT of METEOROLOGICAL JOURNAL for October 1825, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+ 32°·10	+ 36°·0	+ 28°·1	N.W.	2	Clear.
2	+ 28·90	+ 34·5	+ 24·0	N.E. South.	2—1	Clear.
3	+ 31·44	+ 34·4	+ 28·0	N.N.W.	1	Gloomy. Snow showers.
4	+ 31·36	+ 33·2	+ 29·0	S.E.	4	Clear.
5	+ 31·22	+ 35·8	+ 27·1	S.E.	3	Clear.
6	+ 35·19	+ 40·3	+ 27·0	E.b.S.	3—7	Cloudy and hazy.
7	+ 35·02	+ 38·8	+ 30·2	N.N.E.	1	Rain and snow.
8	+ 26·02	+ 29·2	+ 22·6	N.W.	3	Clear.
9	+ 23·93	+ 29·0	+ 19·8	N.W.	1	Clear.
10	+ 21·80	+ 29·6	+ 13·4	N.W.	4	Clear.
11	+ 23·71	+ 32·0	+ 12·7	S.E.	3	Clear. Fine. 3h. 18 P.M.
12	+ 24·00	+ 31·5	+ 16·7	N.W.	4	Cloudy.
13	+ 25·21	+ 28·3	+ 20·7	S.E.	7	Cloudy.
14	+ 24·01	+ 29·0	+ 19·0	N.W.	1	Cloudy. Snow showers.
15	+ 26·76	+ 28·0	+ 24·8	E.S.E., South.	7	Cloudy.
16	+ 21·53	+ 24·6	+ 15·4	N.E.	2	Cloudy, with snow.
17	+ 11·74	+ 14·9	+ 9·5	N.W.b.N.	2	Cloudy.
18	+ 9·53	+ 10·8	+ 8·0	West.	3	Cloudy. ☽ at 7h. 6m. A.M.
19	+ 9·34	+ 11·5	+ 6·8	W.S.W.	1	Cloudy.
20	+ 18·28	+ 20·9	+ 12.2	S.E.	4	Gloomy. Snow.
21	+ 20·02	+ 21·5	+ 18·0	S.E., N.W.	2	Snow.
22	+ 18·08	+ 20·5	+ 16·0	S.S.E.	2	Partially cloudy.
23	+ 18·20	+ 20·5	+ 17·0	S.b.E., N.W.	2	Cloudy. Snow.
24	+ 17·11	+ 22·5	+ 10·9	N.W., West.	1	Cloudy. Snow.
25	+ 17·50	+ 22·0	+ 11.0	N.W., South.	1	Cloudy. Small snow showers. Hail.
26	+ 8·27	+ 21·4	− 8·0	N.W., N.N.W.	2	Gloomy. Snow showers. ○ at 10h. 2m.
27	− 10·66	− 4·5	− 16·0	Calm. W.N.W.	3	Clear.
28	− 1·47	+ 7·2	− 18·0	S.E. E.S.E.	5—7	Cloudy.
29	+ 10·55	+ 14·4	+ 6.5	South.	3	Partially cloudy.
30	+ 16·48	+ 20·0	+ 12·0	S.S.E., S.b.W.	1	Cloudy.
31	+ 23·23	+ 31·0	+ 15·0	Calm.	....	Cloudy.
Means.	+ 20·28	+ 24·80	+ 14·18			

ABSTRACT of METEOROLOGICAL JOURNAL for November 1825, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	+ 27·00	+ 32·5	+ 21·5	East.	3	Misty. Cloudy.
2	+ 11·11	+ 22·8	− 0·5	N.W.	6—1	Cloudy. Snowy.
3	+ 2·39	+ 8·5	− 3·0	N.W.; W.S.W.; N.W.	2	Clear. ☾ A.M.
4	− 2·74	+ 8·0	− 17·5	N.N.W.; N.W.	5	Clear.
5	− 15·73	− 8·0	− 20·5	N.W.; W.N.W.	2	Fine.
6	− 1·72	+ 3·1	− 13·8	S.E.	5	Cloudy. Small snow.
7	+ 3·18	+ 5·0	+ 1·5	S.E.; E.S.E.	7	Cloudy.
8	+ 5·51	+ 8·0	+ 1·1	E.S.E; S.E.	4	Snow, afterwards clear.
9	− 8·17	− 2·0	− 13·6	West; N.W.	1	Clear. P.M.
10	+ 6·81	+ 14·0	− 3·4	East.	6	Cloudy. Small snow.
11	+ 1·94	+ 5·7	+ 0·3	W.N.W.	6	Cloudy. Snow showers.
12	− 6·40	− 1·2	− 11·0	N.N.W.; N.W.	1	Clear, afterwards cloudy.
13	− 8·99	− 3·0	− 19·1	N.W.	3	Clear.
14	− 10·42	− 0·1	− 22·0	E.N.E; S.E.	2—7	Cloudy. Snow showers.
15	− 1·96	+ 1·5	− 7·5	Calms. W.N.W.	1	Partially cloudy.
16	+ 1·08	+ 3·8	− 4·7	East; E.S.E.	5	Partially cloudy. ☽ P.M.
17	+ 10·99	+ 18·0	+ 3·0	East.	8	Sleet. Snow.
18	+ 11·42	+ 17·5	+ 1·0	West. N.W.	1—7	Snow. Cloudy.
19	+ 7·19	+ 12·5	− 1·0	N.E.; S.E.	1	Cloudy.
20	+ 6·16	+ 10·2	+ 2·0	Calm.	..	Fine.
21	+ 5·07	+ 10·0	0·0	S.S.W.; East.	4	Cloudy. Snow showers.
22	+ 4·30	+ 7·6	+ 1·5	E.b.N.	7	Gloomy.
23	+ 5·54	+ 9·5	+ 1·7	East.	5	Gloomy.
24	+ 9·48	+ 10·0	+ 8·2	Ditto.	4	Gloomy. Snow.
25	+ 4·64	+ 8·0	+ 2·0	Ditto.	6—7	Much snow. ○ A.M.
26	− 6·11	+ 1·5	− 12·0	Ditto.	3—6	Clear occasionally.
27	− 8·74	− 4·5	− 11·9	Ditto.	8—3	Clear.
28	− 6·29	− 5·0	− 8·0	Ditto.	3—8	Clear. Parahelia and Halos.
29	+ 12·11	+ 28.5	− 5·0	E.b.N.	2—6	Cloudy.
30	+ 23·65	+ 29·4	+ 19·2	S.W.; N.N.W.	1	Cloudy.
Means.	+ 2·79	+ 8.89	+ 3·72			

ABSTRACT of METEOROLOGICAL JOURNAL for DECEMBER 1825, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+ 13°78	+ 27°5	+ 4°0	N.W.b.W.	1	Fine. Clear.
2	+ 10·23	+ 22·0	— 1·0	E.N.E.	1—9	Gloomy. Hazy.
3	+ 17·61	+ 25·8	+ 5·8	N.W.; S.W.	1	Clear and fine.
4	+ 12·04	+ 25·2	+ 1·5	N.W.	4	Clear.
5	— 6·75	+ 1·4	— 22·5	N.W.	6	Partially cloudy.
6	— 14·35	— 5·2	— 22·4	North; N.E.	1—3	Cloudy.
7	— 20·41	— 14·1	— 27·0	W.S.W.; W.N.W.	2	Hazy.
8	— 24·71	— 20·5	— 29·3	N.W.	2	Fine. Clear.
9	— 36·21	— 30·8	— 42·6	N.W.	1	Clear. A.M.
10	— 21·98	— 13·0	— 39·0	East.	7	Gloomy, low clouds.
11	— 9·56	— 6·5	— 13·0	S.E., East.	4	Cloudy.
12	— 8·32	— 7·3	— 10·0	N.W.	4	Partially cloudy.
13	— 6·57	— 4·6	— 7·7	S.E.	5	Cloudy; gloomy. Snow.
14	— 2·31	— 1·0	— 7·0	E.S.E.	4	Cloudy.
15	— 3·70	— 0·5	— 7·8	S.E.; E.N.E.	1	Partially cloudy.
16	— 7·44	— 4·6	— 10·6	N.W.	5—7	Snow & much drift. ☽ P.M.
17	— 11·93	— 6·5	— 25·8	N.W.	3	Clear.
18	— 19·22	— 9·2	— 29·3	East.	2	Cloudy.
19	— 5·47	— 1·0	— 11·0	East.	3	Cloudy.
20	— 8·20	— 2·0	— 14·6	N.W.	1—8	Snow. Much drift.
21	— 15·32	— 10.0	— 19·5	N.W.	2—6	Snow. Much drift.
22	— 20·24	— 18·0	— 25·2	N.W.	4	Snow.
23	— 33·91	— 26·3	— 41·4	N.W.; West.	4	Clear blue sky.
24	— 40.97	— 36·0	— 45·6	North.	2	Clear blue sky.
25	— 43·98	— 39·0	— 47·5	N.E.	2	Cloudy. ○ A.M.
26	— 37·95	— 33·5	— 43·0	West.	1	Clear.
27	— 31·83	— 25·0	— 36·0	N.W.	1	Clear.
28	— 26·73	— 20·5	— 31·7	N.W.	2	Partially cloudy.
29	— 12·86	— 8·0	— 20·6	N.W.	2	Partially cloudy.
30	— 9·71	— 5·0	— 17·0	W.N.W.	1	Snow.
31	— 17·81	— 7·4	— 33·8	N.W.	3	Cloudy.
Means.	— 13·96	— 8·18	— 21·63			

ABSTRACT of METEOROLOGICAL JOURNAL for JANUARY 1826, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	−43°·60	−35°·2	−49°·0	N.W.	2	Clear. ☾ A.M.
2	−43·03	−36·8	−47·0	East.	4	Clear blue sky with low haze.
3	−20·89	− 8·8	−39·7	Variable and Calm	2	Snow.
4	−23·21	−13·0	−30·5	East.	3	Clear.
5	−26·65	−24·0	−30·5	East.	3	Small snow. Haze.
6	−33·04	−25·6	−37·6	East; N.E.	2	Clear.
7	−27·33	−11·4	−42·0	N.W.	2—8	Snow and drift. ☽ A.M.
8	−17·74	−14·0	−30·0	N.W.	7—4	Gloomy low clouds. Much drift.
9	−26·37	−20·0	−32·6	N.W.; N.E.	2—1	Partially cloudy.
10	−35·36	−31·0	−38·7	N.W.	2	Clear.
11	−27·32	−20·0	−35·2	N.W.	1	Clear.
12	−32·80	−20·5	−38·0	N.W.; East.	2	Clear.
13	−15·58	−11·8	−20·5	East.	1	Clear, afterwards cloudy, with snow showers.
14	−15·05	− 5·0	−26·5	East.	6	Heavy snow storm.
15	−11·27	− 3·0	−15·2	W.S.W.	4	Heavy snow. ☽ P.M.
16	−10·89	− 8·7	−13·0	N.W.	5—8	Gloomy low clouds.
17	−15·33	−10·3	−22·6	N.W.	6	Gloomy. Much drift.
18	−32·90	−24·0	−37·5	N.W.	5	Cloudy.
19	−33·52	−29·6	−37·4	N.W.; East.	2	Cloudy.
20	−24·72	−21·5	−29·6	East.	3	Cloudy.
21	−18·45	− 8·5	−27·2	East.	8	Cloudy. Snow drift.
22	− 6·52	− 3·0	−11·4	E.N.E.; N.W.	1	Cloudy, afterwards clear.
23	− 7·82	0·0	−12·9	East.	2—5	Cloudy.
24	+ 2·54	+11·8	− 8·6	East; West.	1	Cloudy, afterwards much snow. ○ P.M.
25	− 0·30	+ 8·9	− 9·2	East.	1	Snow.
26	−26·69	−10·3	−40·0	Calm.	....	Clear.
27	−42·97	−35·0	−47·5	Variable.	1	Clear.
28	−37·69	−31·4	−45·8	N.W.	5	Clear.
29	−27·13	−16·0	−42·0	East.	3	Clear.
30	−20·59	−15·8	−29·8	N.W.	6	Cloudy. ☾ P.M.
31	−34·84	−27·8	−41·3	Variable.	1	Clear.
Means.	−28·78	−16·17	−31·25			

ABSTRACT of METEOROLOGICAL JOURNAL for FEBRUARY 1826, kept at FORT FRANKLIN.

Day of the Month	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	−25·65	− 18·8	− 35·0	East; N.W.	3	Clear.
2	−10·23	− 3·0	− 18·4	W.N.W.	1	Snow.
3	−15·13	− 11·7	− 21·0	N.W.	4—6	Snow.
4	−21·35	− 15·8	− 23·8	N.W.; E.S.E.	1	Cloudy. Snow.
5	−27·54	− 21·4	− 39·0	W.N.W.; S.E.	1	Clear.
6	−23·56	− 14·6	− 37·2	East.	1—6	Cloudy. Solar halo. P.M.
7	−18·60	− 14·7	− 20·8	N.W.	1—7	Cloudy.
8	−28·18	− 22·4	− 36·4	N.W.	4	Clear.
9	−20·80	− 16·0	− 28·0	East.	3	Clear. Parahelia.
10	−18·66	− 17·0	− 21·0	N.W.	4	Cloudy. Parahelia.
11	−23·13	− 19·0	− 31·4	N.W.	4	Cloudy, afterwards clear. Parahelia.
12	−29·54	− 22·0	− 38·0	Variable.	2	Clear.
13	+ 5·04	+ 13·0	− 18·0	Calm.	....	Cloudy. Small snow. Parahelia. Wood thawing.
14	+ 5·71	+ 18·2	− 3·0	Calm.	....	Cloudy. Snow. ☽ P.M.
15	+22·52	+ 27·8	+ 19·2	N.W.	7	Cloudy. Much drift. Snow softening.
16	+ 3·72	+ 17·6	− 15·8	East.	2	Misty.
17	− 9·73	− 3·0	− 15·0	Calm.	....	Foggy.
18	− 7·32	− 3·0	− 15·0	N.W.	6—7	Cloudy. Drift.
19	−20·24	− 9·8	− 26·3	South; N.W.	2	Clear.
20	−19·76	− 10·2	− 25·0	West.	2	Clear. In the evening small snow.
21	−21·61	− 13·0	− 28·0	N.W.	3	Clear.
22	−19·79	− 9·2	− 34·6	East.	1	Partially cloudy. Great refraction. Much mist from the open water. ○ A.M.
23	−14·12	− 9·6	− 18·8	South.	1	Clear.
24	+ 8·01	+ 22·1	− 9·2	N.W.	6	Snow.
25	+11·69	+ 18·0	+ 5·0	N.W.	8—4	Snow. Cloudy.
26	− 3·60	+ 6·6	− 11·8	N.W.	6—10	Cloudy. Much drift.
27	−15·81	− 9·3	− 31·4	N.W.	6—3	Cloudy.
28	−17·96	− 8·5	− 30·3	S.E.	1	Clear. Hoar frost deposited in the Morning. ☾ P.M.
Means.	−12·70	− 4·95	− 21·71			

ABSTRACT of METEOROLOGICAL JOURNAL for March 1826, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	− 0°·17	+ 12°·8	− 13°·7	Calm. NW.	6	Cloudy. Snow.
2	− 8·02	+ 3·0	− 19·6	N.W.	6	Cloudy.
3	−19·24	− 11·8	− 29·3	N.W.	3—7	Cloudy.
4	−21·13	− 10·0	− 28·7	N.W.; East.	3	Clear.
5	−14·37	− 3·0	− 21·6	East.	2	Clear.
6	− 2·07	+ 9·5	− 16·0	West; East.	1	Clear.
7	+22·62	+ 31·8	+ 9·0	N.W.	3—10	Cloudy. Snow softening.
8	+ 1·53	+ 16·9	− 17·2	N.W.	5—9	Cloudy. A.M.
9	− 3·29	+ 9·5	− 18·0	N.E.	2	Cloudy. Considerable refraction.
10	+ 5·84	+ 20·8	− 10·8	N.W.	5—11	Gloomy low clouds.
11	−15·39	− 7·0	− 32·0	N.W.	4	Cloudy.
12	−30·10	− 19·8	− 39·0	S.E.	2	Clear.
13	−32·39	− 18·9	− 43·0	S.E.	2	Clear.
14	−21·62	− 3·8	− 42·5	Variable; N.W.	2	Cloudy.
15	−22·40	− 10·0	− 37·4	S.E.	1	Clear, very great refraction.
16	− 8·71	+ 6·9	− 29·0	S.E.; S.W.; N.W.	1—6	Clear, afterwards cloudy. ☽ P.M.
17	− 5·55	+ 4·5	− 26·0	N.N.W.	3—5	Cloudy.
18	−22·75	− 6·0	− 38·0	Calm.	. .	Clear.
19	− 9·42	+ 7·2	− 30·0	Calm; West.	1	Partially cloudy.
20	−11·54	− 0·4	− 25·5	N.W.	2	Clear.
21	−13·76	+ 3·4	− 31·0	S.E.	1	Clear.
22	+ 3·26	+ 20·0	− 13·2	West; N.W.	1—10	Clear.
23	−16·69	− 6·8	− 27·5	N.W.	4	Clear. ○ P.M.
24	−16·28	− 3·0	− 26·7	West; East.	1—4	Clear.
25	− 8·73	+ 0·2	− 19·0	East.	5	Clear.
26	− 4·99	+ 4·0	− 15·0	East.	6	Clear.
27	+ 0·31	+ 7·0	− 7·0	East.	5—8	Cloudy. Small snow.
28	+ 6·48	+ 14·0	− 2·0	East.	2—4	Clear. Small snow occasionally.
29	+ 3·40	+ 14·0	− 9·0	S.E.	2	Clear. Very great refraction.
30	+ 0·20	+ 14·5	− 15·5	S.E.	1	Clear. Objects inverted by refraction. ☾ P.M.
31	+ 9·09	+ 20·5	− 8·2	East.	1	Clear. Great refraction.
Means.	− 8·26	+ 3·87	−22·01			

ABSTRACT of METEOROLOGICAL JOURNAL for April 1826, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 18 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	− 2°·88	+ 10°·0	− 10°·0	S.E.	4	Clear.
2	− 1·42	+ 9·0	− 16·0	East.	5—8	Clear.
3	+ 4·51	+ 13·0	− 4·0	East.	3	Snow.
4	− 1·86	+ 7·0	− 11·0	N.W.; East.	1—4	Cloudy.
5	0·00	+ 11·0	− 9·2	N.W.	4	Cloudy.
6	− 8·42	+ 0·2	− 19·6	N.W.	7	Clear. ● A.M.
7	−11·11	+ 4·2	− 23·0	N.W.; S.W.; East.	1—3	Clear.
8	+ 1·38	+ 12·2	− 19·7	East.	4—8	Clear.
9	+19·23	+ 27·0	+ 9·5	S.E.	4	Cloudy.
10	+28·10	+ 39·5	+ 20·5	Calm. East.	2	Cloudy.
11	+28·38	+ 40·0	+ 16·9	Calm. N.W.	5	Clear.
12	+19·40	+ 30·2	+ 11·0	East.	2	Cloudy.
13	+14·12	+ 23·2	+ 7·0	East.	6	Clear.
14	+22·09	+ 32·0	+ 5·5	East.	5	Cloudy. Snow. ☽ P.M.
15	+21·45	+ 29·5	+ 4·6	East.	6	Clear.
16	+13·81	+ 25·8	− 1·0	S.E.	5	Clear.
17	+14·62	+ 26·6	+ 2·0	East.	5	Clear.
18	+29·20	+ 41·6	+ 10·1	East.	4	Clear. Smart thaw.
19	+29·87	+ 41·1	+ 19·5	N.W.	4—7	Cloudy.
20	+18·87	+ 24·0	+ 11·0	N.W.	4—6	Cloudy. ○ P.M.
21	+18·46	+ 30·3	0·0	N.W.; S.E.	3—5	Cloudy.
22	+12·65	+ 22·0	− 6·5	East.	5	Clear. Cloudy in the afternoon.
23	+24·61	+ 33·2	+ 14·0	East.	6	Clear.
24	+27·57	+ 34·0	+ 20·5	East.	6	Clear. Cloudy P.M.
25	+27·37	+ 34·0	+ 22·5	East.	5	Cloudy.
26	+27·39	+ 34·0	+ 21·5	East.	6	Cloudy.
27	+20·47	+ 27·0	+ 12·0	East.	6—9	Cloudy. ☾ P.M.
28	+16·21	+ 24·2	+ 7·0	East.	7	Snow and much drift.
29	+19·40	+ 29·5	+ 12·0	East.	8	Cloudy snow and drift.
30	+22·78	+ 29·5	+ 12·5	East.	6—4	Cloudy, afterwards clear.
Means.	+15·21	+24·83	+ 3·99			

ABSTRACT of METEOROLOGICAL JOURNAL for MAY 1826, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 20 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+24°·25	+29°·8	+15°·0	E.S.E.	5	Cloudy.
2	+23·08	+29·0	+15·6	E.S.E.	4	Cloudy.
3	+10·45	+19·0	+1·8	East.	1—6	Partially cloudy.
4	+14·00	+22·0	+1·0	E.S.E.	5	Cloudy.
5	+31·15	+37·0	+21·5	E.S.E.	2	Cloudy. Small snow.
6	+37·79	+45·0	+30·5	East.	3	Clear.
7	+36·88	+43·8	+24·2	East.	3	Clear.
8	+31·85	+36·6	+22·0	S.E.	2	Clear.
9	+30·20	+35·0	+24·5	N.W.	5—7	Cloudy.
10	+32·71	+41·3	+22·2	N.W.	5	Cloudy.
11	+34·00	+46·0	+17·5	N.W.	4	Cloudy. Showers of rain.
12	+35·62	+40·0	+30·0	East.	4	Clear.
13	+38·12	+46·0	+30·0	East.	3	Clear.
14	+39·72	+49·0	+29·8	N.W.; East.	3	Clear. Parahelia.
15	+35·87	+41·0	+29·0	S.E.	3	Cloudy. Rain.
16	+41·87	+49·5	+30·4	East.	5—7	Clear.
17	+43·50	+51·5	+36·4	N.E.	2—7	Cloudy.
18	+35·97	+40·0	+29·8	S.W.	1	Mist, small rain and snow.
19	+36·17	+44·0	+30·0	N.W.	5	Cloudy.
20	+33·59	+37·0	+29·5	N.W.	7	Snow.
21	+36·90	+41·0	+32·0	S.E.	1	Rain.
22	+39·53	+48·0	+33·4	Calm.	. .	Rain.
23	+38·64	+44·0	+28·0	East.	2	Rainy and cloudy.
24	+41·32	+50·3	+29·0	East.	4	Clear.
25	+43·43	+53·6	+32·6	East.	3—5	Clear. Showers in the night.
26	+46·91	+57·0	+38·2	East.	4—6	Clear.
27	+47·91	+60·8	+36·5	N.W.	4	Clear.
28	+44·70	+53·0	+37·2	East.	6	Clear.
29	+49·65	+57·5	+41·0	E.N.E.	7—1	Cloudy and rainy. Thunder.
30	+43·10	+52·0	+34·0	E.S.E.	2	Cloudy.
31	+47·32	+61·0	+39·1	East; S.W.	1	Cloudy.
Means.	+36·35	+43·89	+27·47			

ABSTRACT of METEOROLOGICAL JOURNAL for JULY 1826, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+43°·00	+ 58°·0	+ 50°·2			The Observations of Temperature for these eight days were made on the Mackenzie, and for the remainder of the month at Fort Franklin by Mr. Dease.
2	+57·67	+ 65·5	+ 50·0			
3	+50·01	+ 54·0	+ 47·0			
4	+57·31	+ 64·0	+ 46·0			
5	+52·56	+ 60·0	+ 47·0			
6	+43·87	+ 50·0	+ 32·0			
7	+44·00	+ 51·0	+ 36·0			
8	+46·81	+ 52·0	+ 41·0			
9	+44·87	+ 51·5	+ 35·0	W.N.W.; E.S.E.	4—1	Partially cloudy.
10	+41·81	+ 46·0	+ 30·0	N.N.W.; East.	2	Clear.
11	+51.59	+ 57·0	+ 40·5	E.N.E.	4	Cloudy.
12	+52·88	+ 80·0	+ 38·3	West; E.S.E.	1—4	Clear.
13	+53·56	+ 64·5	+ 37·0	E.S.E.; N.E.	4—6	Clear; afterwards cloudy.
14	+55·46	+ 57·0	+ 53·0	N.N.W.	4	Rain.
15	+54·10	+ 62·0	+ 42·0	E.S.E.	1	Cloudy.
16	+53·06	+ 65·5	+ 40·0	S.E.	2	Clear.
17	+54·50	+ 68·0	+ 41·0	East.	2	Clear.
18	+52·77	+ 60·0	+ 42·5	S.E.	1	Cloudy.
19	+53·00	+ 64·0	+ 40·0	S.E.	3	Clear.
20	+53·37	+ 64·0	+ 42·0	N.W.; West.	3	Cloudy; afterwards rain.
21	+51·29	+ 54·0	+ 46·0	N.W.	5	Cloudy.
22	+50·15	+ 56·0	+ 44·0	S.E.	1	Clear.
23	+51·97	+ 62·0	+ 42·5	East.	2	Clear.
24	+53·69	+ 70·0	+ 43·0	S.E.	3	Clear.
25	+56·64	+ 66·0	+ 45·3	S.S.E.	2	
26	+61·50	+ 73·0	+ 48·0	S.E.	2	
27	+60·56	+ 65·0	+ 49·0	East.	2	Cloudy.
28	+59·84	+ 64·0	+ 50·0	N.W.	6	Cloudy.
29	+50·81	+ 59·0	+ 43·5	S.E.	2	Cloudy. Rain.
30	+45·77	+ 50·5	+ 42·0	East.	4	Cloudy.
31	+45·85	+ 54·0	+ 34·0	East.	6	Cloudy.
Means.	+52·10	+60·24	+42·64			

ABSTRACT of METEOROLOGICAL JOURNAL for August 1826, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+47°·96	+ 52°·0	+ 39°·5	East.	6	Cloudy.
2	+45·37	+ 57·0	+ 34·0	S.E.	4—9	Clear.
3	+49·40	+ 58·0	+ 33·5	East.	3	Clear.
4	+51·63	+ 57·0	+ 44·0	East.	6	Clear.
5	+55·90	+ 64·5	+ 47·0	East.	6	Clear.
6	+56·44	+ 68·0	+ 45·0	E.N.E.; S.S.W.	. .	Clear.
7	+53·04	+ 64·0	+ 42·5	N.N.W.	1	Clear.
8	+56·19	+ 63·0	+ 44·0	S.E.	7	Clear.
9	+61·93	+ 69·0	+ 50·5	East.	5	Cloudy.
10	+62·29	+ 74·0	+ 49·5	S.S.E.; W.S.W.	2	Cloudy.
11	+61·47	+ 71·0	+ 50·5	E.S.E.	7	Clear.
12	+51·15	+ 55·5	+ 49·0	East.	5	Rain.
13	+50·44	+ 53·0	+ 48·5	East.	3	Cloudy.
14	+51·16	+ 57·0	+ 48·0	East.	2	Clear.
15	+51·27	+ 56·0	+ 46·5	N.W.	3	Rain.
16	+48·73	+ 53·0	+ 45·5	N.W.; N.E.	2	Misty.
17	+44·06	+ 47·0	+ 41·5	N.E.	3	Cloudy.
18	+44·37	+ 47·0	+ 42·5	E.N.E.	6	Rainy.
19	+48·40	+ 53·0	+ 43·5	East.	8	Misty.
20	+48·53	+ 51·0	+ 45·0	East; N.W.	3	Misty.
21	+45·09	+ 51·0	+ 35·0	N.W.; S.E.	4—2	Cloudy.
22	+43·16	+ 48·0	+ 35·0	East.	7	Cloudy.
23	+47·43	+ 52·0	+ 43·0	East.	3	Cloudy.
24	+49·44	+ 58·0	+ 42·0	East.	6	Clear.
25	+52·53	+ 60·0	+ 48·5	East.	4	Clear.
26	+49·81	+ 59·5	+ 39·0	N.E.; S.E.	3	Clear.
27	+49·84	+ 54·7	+ 37·5	N.W.	6	Rain.
28	+46·50	+ 56·5	+ 40·0	N.W.	3	Rain, afterwards clear.
29	+54·50	+ 67·0	+ 42·0	S.W.	4	Clear.
30	+53·54	+ 68·0	+ 40·0	West.	8	Rain.
31	+50·56	+ 60·0	+ 40·5	West.	12	Cloudy.
Means.	+51·09	+58·21	+42·98			

The Observations for Temperature in August were made by Mr. Dease every three Hours.

TABLE II.

TABLE OF DURATION AND DIRECTION OF WINDS AT FORT FRANKLIN, 1825—6.

DRAWN UP BY CAPTAIN FRANKLIN.

Months.	North to N.E.b.N.	N.E. to E.b.N.	East to S.E.b.E.	S.E. to S.b.E.	South to S.W.b.S.	S.W. to W.b.S.	West to N.W.b.W.	N.W. to N.b.W.	Calm.	Days on which Snow fell.
October . .	2	½	2	7	1	½	3¼	7½	1¾	6
November .	1	6½	8½	3	½	½	4	5	2	4
December .	1¼	3	1½	2	1½	½	8	9½	3¾	3
January . . .	½	4½	8¼	1¼	..	½	2½	11½	2	7
February . .	½	3	3	½	..	¼	5	11	4¾	6
March . . .	1¾	1½	8½	1¾	..	¾	4¾	9¼	4¾	5
April . . .	..	4	14	2½	..	¼	1	5	3¼	4

TABLE III.

TABLE OF DURATION AND DIRECTION OF WINDS AT FORT FRANKLIN, 1826—7.

Months.	North to N.E.b.N.	N.E. to E.b.N.	East to S.E.b.E.	S.E. to S.b.E.	South to S.W.b.S.	S.W. to W.b.S.	West to N.W.b.W.	N.W. to N.b.W.	Calm.	Snowy Days.
October . .	3¼	2	2½	9¼	¾	¼	2	7¾	3¼	12
November .	3	2¼	2¾	4¾	. . .	¼	7	10½	2	7
December .	. .	5¼	5½	2¾	. . .	2	2	10	3½	7
January . .	½	3	4¾	2¼	. . .	¾	3	13¾	3½	10

TABLE IV

BEING A REGISTER OF PHENOMENA CONNECTED WITH THE PROGRESS OF THE SEASONS, KEPT IN THE YEAR 1825—6, AT FORT FRANKLIN, In Lat. 65° 12′, Long. 123° 12′.

In this Table the mean temperatures for periods of ten, or eleven, days, when the months contain thirty-one, is given in the column following the date. The means were obtained in the same way with the means in the preceding meteorological tables from a register of eighteen observations each day. Next follow two columns containing the extreme temperatures for the decade. The column which succeeds is appropriated to the difference betwixt the temperature at sun-rise, which was generally the lowest in the twenty-four hours, and that at two P. M., which, on an average, was the highest. This difference may be considered as affording an approximate estimate of the effect of the sun's rays in heating the atmosphere. Of the two last columns, one contains the greatest temperature indicated by a thermometer, with a blackened ball placed in the sun's rays, and the other the greatest excess of temperature shewn by that thermometer over another hanging in the shade. The reader is referred to the tables of Radiation, for a fuller explanation of the way in which the thermometer placed in the sunshine was prepared.

The times of sun-rise given in the column of remarks, were calculated by a table of semi-diurnal arcs to the nearest minute, without allowing for the effect of the great refraction at low temperatures.

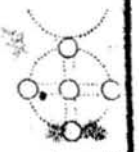
Date.	For Ten Preceding Days. Temperature of the Air in the shade. Mean.	Highest.	Lowest.	Mean difference of Tempr. in the shade at Sun-rise and 2 P.M.	Power of the Sun. Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	Calendar and Remarks.
1825 Sept. 1							On the 1st of Sept. the sun rises at Fort Franklin at 4h. 48m., and the length of the day is 14h. 23m.
1—10	+42·5	+55·0	+33·0	2·0	..	..	On the 10th the sun rises at 5h. 58m., and remains 13h. 24m. above the horizon.
							On the 11th many sand-flies were seen about noon, but the musquitoes by this time had ceased to be troublesome. The leaves were mostly faded, and dropping from the trees.
							By the 18th most of the birds which are summer visitors to these regions, had gone, a few water-fowl only remaining.
11—20	+45·2	+60·5	+36·8	8·2	..	..	On the 20th the sun rises at 5h. 51m.
21—30	+41·0	+52·6	+3·37	4·8	..	..	On the 30th the sun rises at 6h. 25m., and remains 11h. 10m. above the horizon.
October	..	..		..	..	..	On Oct. 2nd the *first ice* was observed. *Swans* passing in flights to the southward.
							On the 3rd the *first snow*.
							On the 5th the *last swans* seen this season. The brown ducks *(anas fusca)* still remained in flocks. The *soil* at this time had thawed to the depth of twenty-one inches, the subsoil remaining frozen to an unknown thickness.
							On the 7th the *last rain* this season fell. The surface of the ground not yet frozen.
							On the 9th the small lakes began to be covered with ice. The black ducks *(anas perspicillata)* had not yet gone.
1—10	+29·7	+40·3	+13·4	7·2	..	..	On the 10th the sun rises at 6h. 59m., and remains 10h. 2m. above the horizon.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Temp. in the Shade at Sunrise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of Blackened Therm. in Sunshine over one in shade.	
1825 October	..	..	..	..	..	..	On the 11th the snow was lying on the ground. A *brown duck*, the last which was noticed, was killed this day.
10—20	+19·4	+32·0	+6·8	5·1	+50·0	25·2	On the 20th the sun rises at 6h. 59m., and remains 8h. 54m. above the horizon.
							On the 21st, during a heavy fall of snow, Great Bear Lake began to freeze. At this time the smaller trees were nearly frozen through, but the larger ones were still moist in the centre. The greatest degree of cold which had hitherto been observed was + 6·8.
							On the 25th there fell a shower of hail, which melted on reaching the ground.
							On the 29th the *small lake* near the fort, which was one mile wide, was frozen over.
11—31	+13·7	+31·0	−18·0	4·5	+30·0	17·5	On the 31st the sun rises at 8h. 13m., and remains 7h. 34m. above the horizon.
Novemb.	..	..	..	..	..	..	On the 4th Nov. the ice which had formed in the bay of Great Bear Lake, on which the Fort stood, broke up in a gale of wind, and several nets which had been set beneath it were lost.
							On the 9th *Great Bear Lake* was frozen over opposite to the Fort, where it is from four to seven miles wide, and from three to five fathoms deep. The water still continued open at the head of Bear Lake River, as it did to a greater or less extent all the winter. The quantity of mist which rose from this open water varied much, according to the state of the weather. It was generally most abundant when the sky was cloudless.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Tempr. in the shade at Sun-rise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1825 Nov. 1—10	+2·9	+32·5	−20·5	4·6	+28·0	35·0	On the 10th the sun rises at 8h. 49m., and sets at 3h. 11m. It was nearly dark this day at 4h. 45m., the twilight being 1h. 34m. long. On the 19th there was a shower of small hail.
11—20	+1·1	+18·0	−22·0	3·6	+32·0	23·2	On the 20th the sun rises at 9h. 24m. by calculation. By the watch it rose this day at 9h. 5m., the refraction being unusually great. On the 26th at 4h. 10m. P. M. a beautiful meteor was seen, which had the appearance of a star of the first magnitude, descending slowly and obliquely from the sky. It retained its brightness until near the earth (the brow of a piece of rising ground distant about a quarter of a mile appearing above it) when it burst, without noise, and emitting a beautiful yellowish-green light, disappeared. The moon shone bright at the time, but the light of the meteor seemed more vivid. The twilight had not gone from the sky, for the peak of a hill forty miles distant was distinctly visible. As this peak, in the ordinary states of the atmosphere, was hid by the intervening grounds, the refraction must have been very great at this time. The sky was cloudless, except a few horizontal streaks of cloud near the horizon. On the 27th from 10h. A. M. to 2 P. M. the sun seen through a fog rising from the open water at the head of Bear Lake River, and spreading over part of the lake, exhibited parahelia, which at one time had the appearance of the annexed cut. 

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Tempr. in the shade at Sun-rise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1825 Nov.	..	..	..	..	..	..	On the 28th at 10h. 10m. the altitude of the sun was ascertained by Lieut. Kendall to be 1° 5′. The outer arch of a halo, including parahelia, had at that time a radius of 22° 50′, and an inner one a radius of 21° 58′. The refraction of the atmosphere was very great. In the evening the radius of a halo round the moon, ascertained by the same observer, was 26° 41′.
							On the 29th at sunset, a large portion of the south-west quarter of the sky was cloudless, and of a bright emerald-green colour, which soon faded into mountain-green. The few clouds visible at this time in other quarters of the sky were tinged gold-yellow by the rays of the setting sun.
21—30	+4·4	+29·4	−12·0	1·5	+40·0	17·5	On the 30th the sun rises at 9h. 53m., and sets at 2h. 7m. The twilight this afternoon did not completely disappear until 4h. 30m.
Dec.							On the 1st of Dec. the apparent altitude of the sun at noon measured by Lieut. Kendall was 2° 55′ 35″ for the lower limb, and the altitude of its centre corrected for refraction, &c., by the tables was 2° 57′ 54″.
							By the 2nd the trees were clothed with beautiful festoons of hoar-frost.
							On the night of the 3rd many *shooting stars* were seen.
							On the 5th the sun ought by calculation to have remained above the horizon only 3h. 56m., but the actual time measured by the chronometer was 4h. 5m., the refraction producing a difference of 9 minutes.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Temp. in the shade at Sun-rise and 2 P. M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1825 Dec.	..		..	..	..	..	About the 6th Great Bear Lake was completely frozen over, according to Indian report.
							On the 7th an imperfect fog-bow was seen. Much hoar-frost was deposited, and a beautiful *corona borealis* occurred in the night. The magnetic needle was much disturbed at the time. The deposition of rime or hoar-frost continued on the 8th, and the deviation of the needle remained great.
							On the 9th the sun by calculation ought to have been 3h. 14m. above the horizon, but the time measured by the chronometer was 3h. 55m., the difference being 41m.
1—10	+7·1	+27·5	−42·6	2·7	+44·5	28·0	On the 10th the sun rises at 10h. 26m., and remains 3h. 8m. above the horizon.
							On the 15th the sun by calculation ought to have been 2h. 48m. above the horizon, but the time measured by the chronometer was 3h. 15m., the refraction making a difference of 27m.
11—20	−8·3	−0·5	−29·3	2·6	+11·0	16·0	On the 20th the sun rises at 10h. 40m., and remains above the horizon 2h. 40 m.
							On the 21st the radius of a lunar halo was ascertained by Mr. Kendall to be 23° 10′.
							On the 22nd *(the shortest day)*, at 11 A. M. the radius of a solar fog-bow was found by Mr. Kendall to be 22° 8′ 30″, and the altitude of the sun at noon, corrected for refraction, &c. was 1° 20′ 23″. The length of this day by the tables, was 2h. 38m.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Temp. in the shade at Sunrise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1825 Dec.	..	..	..	..	..	..	On the 25th there was a beautiful lunar halo with paraselenæ.  Sulphuric ether exposed to a temperature of — 47·5 this night remained fluid.
21—31	—26·5	—5·0	—47·5	1·9	—4·8	25·5	On the 31st the sun rises at 10h. 30m., and sets at 1h. 29m., the length of the day being 2h. 59m.
1826 Jan.	..	..	..	..		..	On the 1st Jan. the lowest temperature observed during the winter occurred (49°). The vapour of ether took fire at this temperature on the approach of a taper.
1—10	—29·7	—8·8	—49·0	3·3	..	23·0	On the 10th the sun rises at 10h. 3m., and remains 3h. 54m. above the horizon. The temperature of our sleeping apartments could be easily kept up to 74° at this time by an open wood fire, although numerous wide cracks in the walls gave free access to the external air. The fires were allowed to go out when we went to bed, and the temperature in the morning frequently sunk to 20° or 30° below Zero, without injuring our health in any way. On the 15th a lunar halo with paraselenæ, radius 20°. On the 17th ditto ditto.
11—20	—21·9	—3·0	—38·0	0·9	..	27·0	On the 20th the sun rises at 9h. 30m., and remains 5 hours above the horizon. During the whole of this decade the sun had very little power, the blackened thermometer seldom indicating a rise above the thermometer in the shade. The sky was cloudy, with small snow, and snow drift, during the greater part of the time.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Temp. in the shade at Sunrise and 2 P.M.	Power of the Sun		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1826 Jan. 21—31	−20·0	+11·8	−47·5	5·5	+17·0	42·0	On the 31st Jan the sun rises at 8h. 50m., and remains 6h. 20m. above the horizon.
Feb. 1—10	−21·0	−3·0	−39·0	3·11	+8·8	30·0	On the 10th of Feb. the sun rises at 8h. 16m., and remains 7h. 28m. above the horizon.
							On the 14th there was thaw enough to cause the snow to stick to the shoes, and the trees on the 15th were partially thawed, the temperature being then +27·8. The refraction was as great on the 14th, as we ever saw it during our residence at Bear Lake, and many objects in the horizon were refracted in an inverted position. At midnight on the 13th, the thermometer indicated +13, but sunk to Zero at 9 A. M. on the 14th; two hours afterwards, when the refraction was at the greatest, it had risen to +4, and a mist which hung over the open water at the head of Bear Lake River was beginning to clear away. A considerable deposition of rime or hoar-frost took place on the nights of the 13th, 14th, and light breezes and calms prevailed. Two parahelia were seen when the refraction was at the greatest.
							On the 16th at noon a solar fog-bow was seen.
							On the 18th there was a lunar halo, having a radius of 18°.
11—20	−7·3	+27·8	−38·0	6·8	+39·0	57·0	On the 20th the sun rises at 7h. 39m., and remains 8h. 42m. above the horizon. On the 22nd there was a lunar halo.
21—28	−9·2	+22·1	−34·8	4·4	+38·5	50·9	On the 28th the sun rises at 7h. 10m., and remains 9h. 40m. above the horizon.

Date.	For Ten Preceding Days.						CALENDAR AND REMARKS.
	Temperature of the Air in the shade.			Mean difference of Tempr. in the shade at Sunrise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1826 March	..	..	..	..	..	..	On March 7th the first decided *thaw* produced by the *sun's rays*. Snow sticking to the shoes.
1—10	−3·8	+31·8	−29·3	10·3	+50·8	46·0	On the 10th the sun rises at 6h. 34m., and remains 10h. 52m. above the horizon. On the 16th the snow softened in the sunshine, the temperature in the shade being Zero. On the 18th small patches of earth, which had been denuded of snow by the wind, began to soften in the sunshine.
11—20	−18·0	+7·2	−43·0	22·0	+52·0	65·0	On the 20th the sun rises at 6h. 1m., and remains 12h. 2m. above the horizon. Summer-clouds (stacken-clouds, or *cumuli*) first seen this day since the beginning of winter. There was a lunar halo at midnight. On the 21st the sun by chronometer was 12½h. above the horizon. Great refraction. On the 29th a thaw in the sunshine.
21—31	−3·4	+20·5	−31·0	18·2	+62·0	55·0	On the 31st the sun rises at 5h. 24m., and remains 13h. 12m. above the horizon. The snow at this date averaged three feet in depth. It was beginning to consume in the sunshine. The willow catkins were expanding so much that some of their outer scales were dropping off. The trees thawed at this period in fine days, but froze again in the night. At 4 o'clock in the morning of the 31st, there was light enough in the open air to permit us to read the scale of the thermometer. Many halos, paraselenæ, and parahelia this month, and *mirage* with double refraction was frequent.

Date.	For Ten Preceding Days.						Calendar and Remarks.
	Temperature of the Air in the shade.			Mean difference of Temp. in the shade at Sunrise and 2 P. M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1826 April	..	..	..	..	..	..	On the 1st April, a wolf, which had been prowling round the Fort for some days, was found dead of hunger, the depth of the snow at this time being too great for wolves to succeed in the chase.
1—10	+2·8	+93·7	−19·7	16·6	+90·0	51·0	On the 10th the sun rises at 4h. 49m., and remains 14h. 22m. above the horizon. The temperature this day was nearly 40°, and it was the first in the season in which a decided thaw in the shade was perceived.
							On the 11th the melted snow was dropping from the eaves of the houses, and patches of ground, where the snow had been thin, were now bare. A house-fly very active in one of the bed-rooms. On the 17th a house-fly was seen in the open air. The thaw continued throughout this decade.
							On the 18th a lunar halo, radius 23° 48′. At 11 P.M. the stars were only faintly visible, owing to the light remaining in the sky.
11—20	+21·2	+41·6	−1·0	16.4	+82·0	42·7	On the 20th the sun rises at 4h. 15m., and remains 15h. 30m. above the horizon.
21—30	+21·7	+34·0	−6·5	14·3	+52·6	23·5	On the 30th the sun rises at 3h. 40m., and remains 16h. 20m. above the horizon. The last decade of April was cold and cloudy.
May	..	..	..	..	..	..	On the 6th of May *Swans* were first seen.
							On the 7th geese *(anas Canadensis)* appeared, and on the 8th ducks *(anas crecca, anas acuta.)* Many *flies* buzzing about.
							On the 9th *gulls* arrived. The first *hail* since the winter fairly set in fell this day.

Date.	For Ten Preceding Days.						Calendar and Remarks.
	Temperature of the Air in the shade.			Mean difference of Temper. in the shade at Sunrise and 2 P.M.	Power of the Sun:		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1826 May 1—10	+27·2	+45·0	+1·0	13·1	+71·5	32·3	On the 10th the sun rises at 3h. 5m., and remains 17h. 50m. above the horizon. At this period the southerly winds were frequent, and the blackened thermometer exposed to them did not show so high a temperature as one also blackened, but protected from the wind by glass. The latter showed an excess of 47° above one in the shade, and the highest temperature it indicated was +93°. On the 11th the first shower fell this season. On the 14th parahelia. On the 16th the mosses were observed to be sprouting; the snow melting fast. On the 17th various *singing birds* and *orioles* made their appearance. White geese *(anas hyperborea)* were also seen, and some *Swifts* arrived. Heavy rain all night. On the 18th sleet, and small snow in the night.
11—20	+37·5	+51·5	+17·5	12·0	+85·5	42·8	On the 20th the sun rises at 2h. 32m., and remains 18h. 56m. above the horizon. The greatest temperature indicated in this decade (11—20th) by a blackened thermometer exposed to the sun, but sheltered from the air, was +89·0, and its greatest excess over one in the shade was 49·8. The *little river* which flows into the lake near the Fort, burst its icy chains this day. Snow to-day, which melted as it fell. On the 22nd Stock-ducks *(anas boschas)* were seen. Snow lying only in sheltered places where it had drifted up in the winter. Quite light at midnight. The singing-birds are silent at Bear Lake in the day, and serenade their mates generally near midnight.

Date.	For Ten Preceding Days.						Calendar and Remarks.
	Temperature of the Air in the shade.			Mean difference of Temp. in the shade at Sun-rise and 2 P.M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1825 May.	..	..	..	..	..	..	On the 25th it thundered for the first time since the commencement of winter. On the 27th the Laughing-geese *(anas albifrons)* were first seen. The ice of Bear Lake breaking up from the shores, but solid in the middle. Thunder. The winter-green *(chrysosplenium altemifolium)* observed pushing out its flowers to-day. On the 28th the sky to the north appeared red at midnight from the sun's rays. On the 29th thunder.
21—31	+43·5	+61·0	+28·0	20·2	+85·0	25·0	On the 31st the sun rises at 1h. 57m., and remains 20h. 6m. above the horizon. The sheltered thermometer exposed to the sun rose to 96° in this decade, and its greatest excess over one in the shade was 49·8. The dwarf-birch *(betula glandulosa)* was now coming into leaf in sheltered situations. *Goat-suckers* were first seen, and the geese had mostly left us to go further to the northward. Thunder was frequent this decade.
June	..	..	..	..	..	..	On the 1st of June the Red-pole *(fringilla linaria)* was observed hatching on five eggs. Clark hill, distant fifty miles, could be distinctly seen at midnight. On the 3rd a flight of gulls passed to the northward. The *Dwarf-birch* was now generally in leaf, and several *willows* and the *Potentilla fruticosa* were also pushing out leaves. Some *anemones*, *tussilagos*, the *Lapland rose*, *(rhododendron lapponicum)* and several other early plants were at this time in full flower. On the 8th the small lake was clear of ice, having been frozen 240 days.

Date.	For Ten Preceding Days.						Calendar and Remarks.
	Temperature of the Air in the shade.			Mean difference of Temper. in the shade at Sunrise and 2 P. M.	Power of the Sun.		
	Mean.	Highest.	Lowest.		Greatest Temper. indicated by a blackened Therm. exposed to Sunshine.	Greatest excess of blackened Therm. in Sunshine over one in shade.	
1826 June 1—10	..	..	..	..	+97·0	..	On the 10th the sun rises at 1h. 30m., and remains 21 hours above the horizon. A navigable channel for a canoe had opened at this time along the shores of Great Bear Lake.
11—20	..	..	..	..	..	..	On the 20th the sun rises at 1h. 10m., and remains 21h. 40m. above the horizon. The ice in Great Bear Lake broke up at this time, and was carried down the river.
							From June 20th to July 9th no register was kept at Great Bear Lake.
July	..	..	..	..	..	..	On the 10th July the sun rises at 1h. 50m., and remains 20h. 20m. above the horizon.
10—20	+53·4	+80·0	+37·0	18·9	+99·0	35·0	On the 20th the sun rises at 2h. 21m., and remains 19h. 18m. above the horizon.
							On the 26th ripe whortle-berries *(vaccinium uliginosum)* were brought to the Fort.
21—31	+53·5	+73·0	+34·0	13·7	+107·0	38·5	On the 31st the sun rises at 2h. 58m., and remains 18h. 4m. above the horizon. Thunder several times in these eleven days.
August	..	..	..	..	..	..	On the 2nd Aug. the stars began to appear at midnight.
1—10	+54·0	+74·0	+33·5	13·1	+109·5	42·0	On the 10th the sun rises at 3h. 32m., and remains 16h. 56m. above the horizon.
11—21	+49·4	+71·0	+41·5	5·1	+97·5	32·0	On the 20th the sun rises at 4h. 6m., and remains 15h. 48m. above the horizon. Very hazy this decade.
							On the 23rd an aurora borealis was faintly seen. It was the first since last season. On the 25th the aurora was brilliant.
							On the 28th *white geese* were migrating southwards, after an interval of about one hundred days since the van of their flocks passed Bear Lake on their way to the breeding and moulting places.
21—31	+49·2	+64·7	+35·0	15·2	+109·0	41·5	On the 31st the sun rises at 4h. 15m., and remains 14h. 30m. above the horizon.

TABLE V.

METEOROLOGICAL JOURNAL KEPT AT FORT FRANKLIN, FROM THE BEGINNING OF SEPTEMBER 1826, TO THE MIDDLE OF MAY 1827.

The temperatures were registered every three hours, by Captain Franklin, Captain Back, and Lieut. Kendall, from their spirit thermometers, in different situations in the shade, two of them being within the observatory, and the third enclosed in the metal cylinders, as described in page lx. The temperatures shown by the latter are registered in Table III.; but as the enclosed thermometer used on this occasion was one which at low temperatures stood below the mean of the other thermometers in the possession of the Expedition, the means of the three thermometers are noted under each month, in Table V. and used in the construction of Table VI.

ABSTRACT of METEOROLOGICAL JOURNAL for SEPTEMBER 1826, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	+ 44·0	+ 54·0	+ 34·0	N.W.	3—9	Cloudy.
2	+ 34·2	+ 36·0	+ 32·5	N.W.	5	Snow and rain.
3	+ 34·5	+ 36·0	+ 33·0	N.W.; West.	2	Cloudy. Snow.
4	+ 35·0	+ 43·0	+ 27·0	N.W.	1	Clear.
5	+ 47·4	+ 54·8	+ 40·0	S.W.	3	Cloudy.
6	+ 50·4	+ 61·8	+ 39·0	N.W.	3	Partially cloudy, and clear.
7	+ 52·5	+ 66·5	+ 38·5	N.W.	2—7	Clear.
8	+ 36·5	+ 43·0	+ 30·0	N.W.	4	Partially cloudy, and clear.
9	+ 40·5	+ 47·0	+ 34·0	East.	4	Hazy and cloudy, afterw. clear.
10	+ 47·5	+ 59·0	+ 36·0	E.S.E. West.	1—5	Blue sky. Partially cloudy.
11	+ 47·1	+ 54·0	+ 40·2	N.W	5	Thunder. Rain.
12	+ 33·0	+ 35·0	+ 31·0	N.E.; N.b.W.	2	Cloudy.
13	+ 34·8	+ 41·8	+ 27·8	S.W.; N.W.	2	Clear.
14	+ 38·0	+ 51·8	+ 24·2	West.	2	Clear blue sky.
15	+ 39·2	+ 50·2	+ 28·2	E.S.E. N.W.	4	Cloudy.
16	+ 40·3	+ 48·6	+ 32·0	N.W.	7	Rain.
17	+ 31·0	+ 33·0	+ 29·0	N.W.	2	Snow.
18	+ 24·6	+ 29·0	+ 20·3	N.W.	6	Snow and sleet.
19	+ 18·0	+ 31·0	+ 5·0	East.	2	Clear.
20	+ 34·0	+ 39·0	+ 29·0	E.S.E.	7	Clear.
21	+ 30·5	+ 38·5	+ 22·5	S.E.	6	Clear.
22	+ 37·5	+ 52·0	+ 23·0	S.S.E.	1	Clear.
23	+ 42·0	+ 57·0	+ 27·0	N.E.; E.S.E.	2	Clear.
24	+ 48·0	+ 51·0	+ 45·0	E.N.E.	6	Clear.
25	+ 46·6	+ 53·2	+ 40·0	Calm.	..	Blue sky.
26	+ 49·0	+ 55·0	+ 43·0			
27						
28						
29						
30						
Means.	+ 39·08	+ 46·97	+ 31·20	Mean of 26 Days.		

ABSTRACT of METEOROLOGICAL JOURNAL for October 1826, kept at Fort Franklin.

Day of the Month	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+ 37°·6	+ 41°·0	+ 34°·2	East; S.S.E.	2—4	Cloudless, but hazy.
2	+ 38·5	+ 38·0	+ 29·0	N.N.W.; N.W.	4	Rain and snow.
3	+ 27·7	+ 30·5	+ 25·0	N.E.	1	Clear, afterwards snow.
4	+ 36·8	+ 42·5	+ 31·0	Calm. S.E.	4	Clear.
5	+ 37·5	+ 47·0	+ 28·0	Calm. Variable.	1	Very clear.
6	+ 38·2	+ 47·0	+ 29·5	North.	1	Clear.
7	+ 33·0	+ 36·0	+ 30·0	W.N.W.	1	Hazy and cloudy.
8	+ 31·8	+ 33·5	+ 30·2	N.W.	1	Cloudy.
9	+ 29·7	+ 35·0	+ 24·5	S.W.; E.N.E.	2	Cloudy. Snow.
10	+ 24·5	+ 26·5	+ 22·5	East.	7	Dark cloudy weather. Snow.
11	+ 25·5	+ 27·5	+ 23·5	E.N.E.	7	Cloudy.
12	+ 27·5	+ 29·5	+ 25·5	N.N.W.	2	Cloudy.
13	+ 28·2	+ 29·0	+ 27·5	S.E.	7	Snow.
14	+ 26·9	+ 29·8	+ 24·0	N.N.E.; N.W.	4	Snow.
15	+ 21·3	+ 23·5	+ 19·0	N.W. North.	4	Snow.
16	+ 18·8	+ 20·0	+ 17·6	S.E.	3	Clear.
17	+ 21·9	+ 23·8	+ 20·0	S.E.	6	Cloudy.
18	+ 21·5	+ 25·0	+ 18·0	N.N.W.; S.S.E.	3	Clear.
19	+ 17·7	+ 21·5	+ 14·0	N.N.E.; N.W.	2	Clear.
20	+ 19·0	+ 21·2	+ 16.5	S.S.E.	8	Hazy.
21	+ 19·5	+ 21·0	+ 18·0	S.S.E., N.W.	2	Snow.
22	+ 23·0	+ 27·0	+ 19·0	Calm.	....	Cloudy.
23	+ 25·1	+ 27·8	+ 22·5	S.E.	8	Cloudy.
24	+ 25·3	+ 26·5	+ 24·0	S.E.	4—6	Cloudy.
25	+ 28·2	+ 32·5	+ 24·0	S.E.	8	Cloudy.
26	+ 29·9	+ 31·0	+ 28·8	S.S.E.; East; N.N.W.	2	Cloudy.
27	+ 27·3	+ 29·7	+ 25·0	N.W.	4	Cloudy.
28	+ 16·8	+ 21·0	+ 12·5	N.W.	7	Cloudy, and snow.
29	+ 10·6	+ 12·8	+ 8·5	N.W.	4	Clear.
30	+ 4·8	+ 16·0	− 6·5	N.W.; S.S.E.	4	Clear.
31	+ 3·1	+ 6·2	0·0	W.b.N.	2	Foggy.
Means	+ 25·01	+ 28·36	+ 21·67	The Mean Temperature for this Month by 8 Observations each day of three Thermometers in the shade was + 24·67.		

ABSTRACT of METEOROLOGICAL JOURNAL for November 1826, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	− 4°·8	+ 0°·5	− 10°·0	West.	2	Clear.
2	− 3·0	+ 6·5	− 12·5	W.N.W.	1	Hazy, partially cloudy.
3	− 11·8	− 6·0	− 17·5	N.W.	1	Hazy.
4	− 18·4	− 8·8	− 28·0	N.W.	3	Hazy.
5	− 15·5	− 0·5	− 30·5	S.E.	8	Cloudy.
6	− 4·5	+ 1·0	− 10·0	S.E.	4	Hazy.
7	− 13·8	− 10·0	− 17·7	N.W.	4	Cloudy and hazy.
8	− 11·7	− 4·0	− 19·5	N.W.	2	Clear.
9	− 7·2	− 5·0	− 9·5	N.W.	6—9	Cloudy and hazy.
10	− 20·2	− 16·0	− 24·5	W.N.W.	5	Clear.
11	− 11·8	− 7·5	− 26·0	N.W.; S.E.	3	Cloudy; afterwards clear.
12	− 3·7	+ 0·5	− 8·0	S.E.; W.N.W.	2	Cloudy.
13	− 7·5	− 5·6	− 9·5	West.	2	Cloudy.
14	− 9·8	− 8·2	− 11·5	N.W.	2	Cloudy and hazy.
15	− 23·0	− 17·0	− 29·0	N.W.	3	Clear.
16	− 17·1	− 9·0	− 25·3	N.E.; East.	3	Cloudless, hazy.
17	− 0·8	+ 4·5	− 6·0	E.N.E.	3	Hazy.
18	− 5·0	+ 1·0	− 11·0	N.W.	6	Cloudy.
19	− 17·8	− 13·5	− 22·0	N.W.	3	Clear.
20	− 13·0	− 9·5	− 16·5	N.W.; S.E.	3	Cloudy.
21	+ 0·2	+ 5·0	− 4·5	E.S.E.	10	Hazy. Cloudy.
22	− 0·3	+ 6·3	− 7·0	W.N.W.	2	Cloudy.
23	+ 0·8	+ 10·5	− 9·0	S.E.	1—6	Cloudy.
24	− 2·0	+ 2·0	− 6·0	N.W.	1	Clear.
25	+ 4·1	+ 11·2	− 3·0	East.	2	Clear.
26	+ 4·0	+ 11·0	− 3·0	N.W.	1	Cloudy. Hazy.
27	+ 9·0	+ 12·0	+ 6·0	East.	7	
28	+ 11·1	+ 18·0	+ 4·3	S.E.	5	Cloudy. Comet seen.
29	+ 18·2	+ 20·5	+ 16·0	S.E.	8	Cloudy.
30	+ 13·3	+ 18·0	+ 8·7	S.E.	6	Cloudy.
Means.	− 5·40	+ 0·26	−11·07	The Mean Temperature for this month by 8 Observations each day of three Thermometers in the shade was − 3·01.		

ABSTRACT of METEOROLOGICAL JOURNAL for DECEMBER 1826, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+ 2°·5	+ 10°·2	— 5°·2	W.N.W.	1	Partially cloudy, clear night.
2	+ 8·5	+ 10·0	+ 7·0	E.S.E.; N.W.	..	Cloudy. Hoar frost.
3	— 1·2	+ 4·5	— 7·0	N.W.	2	Cloudy.
4	— 7·8	+ 6·0	— 9·5	East.	4—8	Clear.
5	+ 3·0	+ 8·0	— 2·0	East.	8—4	Cloudy.
6	+ 3·5	+ 7·0	0·0	N.W.	2	Clear blue sky.
7	— 1·0	+ 3·0	— 5·0	Calm.	..	Very clear.
8	+ 19·2	+ 21·3	+ 17·2	E.b.S.	7	
9	+ 15·5	+ 22·5	+ 8·7	S.W.	2	Hazy.
10	+ 13·6	+ 17·2	+ 10·0	E.N.E; N.W.	4	Cloudy.
11	+ 3·2	+ 6·5	0·0	N.W.; S.E.	2	Cloudy.
12	— 10·0	— 4·0	— 16·0	N.E.	3	Foggy.
13	— 9·2	— 6·0	— 12·5	E.N.E.; S.E.	6	Hazy and cloudy.
14	— 10·0	— 8·7	— 11·2	S.E.	3	Hazy and cloudy.
15	— 12·5	— 9·0	— 16·0	S.W.	2	Hazy and cloudy.
16	— 26·2	— 21·5	— 31·0	N.W.	2	Clear blue sky.
17	— 24·5	— 20·5	— 28·5	West.	1	Cloudy and hazy.
18	— 23·5	— 16·5	— 30·5	N.W.	3	Clear blue sky.
19	— 24·5	— 22·6	— 26·5	N.W.	3	Clear blue sky.
20	— 26·8	— 19·0	— 34·5	N.W.	2	Clear blue sky.
21	— 34·1	— 25·2	— 43·0	N.E.; S.E.	3	Clear blue sky.
22	— 29·5	— 21·0	— 38·0	East. N.W.	2	Clear blue sky.
23	— 42·6	— 38·7	— 46·5	N.W.	4	Clear blue sky.
24	— 23·5	— 15·5	— 31·5	S.E.	6	Cloudy.
25	— 12·5	— 8·6	— 16·5	S.E., N.E.	3	Cloudy and hazy.
26	— 5·3	— 1·2	— 9·5	N.E.; N.W.	3	Cloudy and hazy.
27	— 11·0	— 9·5	— 12·5	East.	3	Clear.
28	— 6·6	— 2·0	— 11·2	Variable.	1	Cloudy and hazy.
29	— 14·8	— 10·2	— 19·5	East; E.N.E.	2	Cloudy.
30	— 17·4	— 8·0	— 26·8	East; N.W.	2	Clear blue sky.
31	— 14·8	— 11·2	— 18·5	East. E.S.E.	8	Cloudy.
Means.	— 10·33	— 5·64	— 15·03	The Mean Temperature for this month by 8 Observations each day, of three spirit Thermometers in the shade was — 7·42.		

ABSTRACT of METEOROLOGICAL JOURNAL for JANUARY 1827, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	— 26·9	— 22·3	— 31·5	Variable.	2	Cloudy.
2	— 25·8	— 17·0	— 34·5	East; W.N.W.	8	Cloudy, with intervals of clear sky.
3	— 44·8	— 42 2	— 47·5	N.W.	2	Clear.
4	— 47·6	— 43·2	— 52·0	North.	2	Clear.
5	— 32·6	— 26·7	— 38·5	East; N.N.W.	3	Gloomy low clouds.
6	— 22·6	— 20·0	— 25·2	N.E.	6	Cloudy, with clear intervals.
7	— 25·5	— 14·2	— 36·8	S.E.; N.W.	6—2	Cloudy, afterwards clear.
8	— 19·0	— 12·5	— 25·4	N.E.; S.E.	7—2	Clear, afterwards hazy.
9	— 21·2	— 20·0	— 22·5	N.E.; N.W.	6	Clear.
10	— 23·0	— 20·7	— 25·3	N.W.	10	Cloudy.
11	— 28·8	— 21·5	— 36·0	W.N.W.	4—6	Clear sky, hazy near horizon.
12	— 19·2	— 15·0	— 23·5	N.W.	4—2	Hazy and cloudy.
13	— 27·2	— 24·5	— 30·0	N.W.	2	Clear.
14	— 26·9	— 24·5	— 29·3	W.N.W.	3	Clear.
15	— 3·5	+ 9·5	— 16·5	N.W.	8	Cloudy. Squally.
16	— 26·1	— 23·0	— 29·2	N.W.	8—4	Moderately clear, hazy horizon.
17	— 23·4	— 15·6	— 31·3	N.W.; W.S.W.	4	Moderately clear, hazy horizon.
18	— 30·6	— 19·7	— 41·5	N.W.; N.E.	6	
19	— 16·6	— 15·0	— 18·3	East.	4	Cloudy.
20	— 25·6	— 20·2	— 31·0	N.W.; S.E.	4	Cloudy and hazy.
21	— 15·5	— 13·5	— 17·5	East; S.E.	6	Clear sky, hazy near horizon.
22	— 6·9	— 1·5	— 12·3	E.S.E.	8	Clear.
23	— 14·4	— 9·2	— 19·7	N.W.	4	Clear.
24	— 7·8	— 5·5	— 10·0	S.E.	4	Cloudy.
25	— 11·5	— 8·0	— 15·0	N.W.	3	Cloudy, hazy.
26	— 16·8	— 15·5	— 18·0	N.W.	4	Cloudy.
27	— 28·2	— 21·0	— 35·5	N.E.	2	Clear.
28	— 34·5	— 30·0	— 39·0	E.S.E.; N.W.	2	Partially cloudy and hazy.
29	— 30·0	— 24·6	— 35·5	E.S.E.; E.N.E.	2	Clear, hazy near horizon.
30	— 31·4	— 24·0	— 38·8	N.W.	4	Clear.
31	— 40·6	— 33·5	— 47·7	N.W.; W.N.W.	4	Clear.
Means.	—24·34	—19·18	— 29·51	The Mean Temperature for January by 8 Observations each day of three Spirit Thermometers in the shade was —20·89.		

ABSTRACT of METEOROLOGICAL JOURNAL for FEBRUARY 1827, kept at FORT FRANKLIN.

Day of the Month	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
	°	°	°			
1	− 35·7	− 31·5	− 40·0	N.W.	2—5	Clear blue sky.
2	− 30·8	− 26·2	− 35·5	N.W.	2—6	Hazy afterwards cloudy. A lunar halo.
3	− 36·5	− 32·5	− 40·5	West.	2—4	Cloudy with clear intervals.
4	− 45·0	− 42·0	− 48·0	East.	2	Clear.
5	− 46·5	− 43·5	− 49·5	S.E.; N.E.	1—6	Clear, Cloudless.
6	− 52·6	− 48·0	− 57·2	N.W.	1	Clear, with haze near horizon.
7	− 50·0	− 42·0	− 58·0	N.W.	2	Clear blue sky. The lowest Temp. occurred at ¼ past 8 A.M., and was 58 by the Therm. employed, but by the Mean of three Therms. it was 52·8°.
8	− 46·1	− 40·0	− 52·2	East.	3—5	
9	− 36·5	− 34·0	− 39·1	N.W.	3	Cloudy.
10	− 26·5	− 20·5	− 32·5	East.	8	Cloudy.
11	− 22·9	− 19·8	− 26·0	West; S.E.	1	Cloudy and hazy.
12	− 26·0	− 11·0	− 41·0	East.	3—8	Cloudy and squally.
13	− 11·6	− 11·0	− 12·3	Calm. NW.	....	Cloudy.
14	− 14·6	− 8·0	− 21·3	S.E.	2	Cloudy, with clear intervals.
15	− 13·2	− 6·2	− 20·2	East; N.W.	4—1	Cloudy, afterwards cloudless.
16	− 12·8	− 1·5	− 24·2	Variable.	1	Clear.
17	− 9·3	− 4·5	− 14·2	W.S.	1	Cloudy.
18	− 1·4	+ 1·5	− 4·3	East.	3	Clear.
19	+ 11·5	+ 21·0	+ 2·0	E.N.E.	3	Cloudy.
20	+ 2·2	+ 13·5	− 9·0	N.W.	7—9	Cloudy and hazy.
21	− 8·5	− 3·0	− 14·0	N.W.	4—8	Clear.
22	− 17·0	− 12·0	− 22·0	N.W.	6—10	Cloudy and squally.
23	− 26·2	− 21·0	− 31·5	N.W.	6	Clear.
24	− 31·5	− 23·0	− 40·0	East.	3—7	Clear.
25	− 20·5	− 16·5	− 24·5	East.	5—8	Clear.
26	− 22·0	− 12·0	− 32·0	N.W.	1	Clear.
27	− 21·1	− 10·2	− 32·0	Variable.	1	Clear.
28	− 23·8	− 11·0	− 36·5	Easterly.	1	Clear.
Means.	−24·12	−17·68	− 30·56	The Mean Temperature of this month by 8 Observations each day of three Spirit Thermometers in the shade was − 20·80.		

ABSTRACT of METEOROLOGICAL JOURNAL for MARCH 1827, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	− 20°·1	− 18°·0	− 32°·2	East.	6	Clear.
2	− 18·2	− 15·2	− 21·2	East.	7	Clear.
3	− 18·8	− 16·0	− 21·5	East.	4	Clear.
4	− 15·5	− 10·0	− 21·0	East.	4—7	Clear. Parahelia.
5	− 6·4	0·0	− 12·5	East.	2—8	Clear. Cloudy and squally.
6	− 1·4	+ 6·8	− 9·5	East.	3	Clear.
7	− 2·5	+ 12·0	− 7·0	East.	4	Clear. *Icicles* forming at the eaves of the buildings which were covered with snow.
8	+ 5·1	+ 13·0	− 2·8	S.E.	1	Cloudy.
9	+ 8·0	+ 20·0	− 4·0	W.S.W.; East.	1	Clear. Cloudy. Lunar halo.
10	+ 8·1	+ 11·2	+ 5·0	W.N.W.	3	Snow.
11	+ 7·5	+ 21·0	− 6·0	N.W.; N.E.	2	Partially cloudy and hazy. Paraselena with lunar halo exhibiting prismatic colours.
12	+ 3·5	+ 17·5	− 10·5	East.	3	Clear.
13	+ 1·8	+ 8·5	− 5·0	N.W.	5	Small snow.
14	− 0·5	+ 2·8	− 3·8	East.	3	Snow.
15	+ 0·8	+ 6·5	− 5·0	East.	5—8	Cloudy.
16	+ 0·8	+ 5·0	− 3·5	East.	8	Cloudy.
17	− 1·0	+ 3·0	− 5·0	E.b.N.	7—8	Cloudy.
18	− 0·8	+ 6·5	− 8·0	. .	3—7	Clear.
19	− 4·0	+ 8·0	− 16·0	N.W.	2—6	Clear. Snow in the night.
20	+ 3·8	+ 9·5	− 2·0	North; E.S.E.	3	Cloudy.
21	+ 2·0	+ 5·5	− 1·5	East.	5—9	Snow.
22	+ 6·2	+ 8·7	+ 3·5	East.	3	Cloudy. Snow showers.
23	− 6·1	+ 1·0	− 13·2	East.	5	Cloudy.
24	− 13·1	− 3·0	− 23·2	E.b.S.	4	Cloudy.
25	− 11·2	− 7·5	− 25·0	E.S.E.	4	Clear.
26	− 3·5	+ 2·0	− 9·0	East.	5—8	Cloudy.
27	− 15·8	− 1·5	− 20·0	S.E.	6	Clear.
28	− 2·0	+ 3·0	− 7·0	E.N.E.	6	Cloudy.
29	+ 1·5	+ 11·0	− 8·0	W.N.W.	2	Snow. Cloudy.
30	− 6·5	+ 9·0	− 22·0	N.W.; E.N.E.	2	Cloudy.
31	− 20·2	− 11·5	− 29·0	E.S.E.	3	Clear.
Means.	− 3·82	+ 3·51	− 11·16	The Mean Temperature of this month by 8 Observations each day of three Spirit Thermometers in the shade was − 2·50.		

ABSTRACT of METEOROLOGICAL JOURNAL for April 1827, kept at Fort Franklin.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	− 10°·2	− 0°·5	− 20°·0	S.E.	1	Clear. Mirage.
2	− 6·5	− 5·0	− 8·0	Calm.	....	Clear.
3	+ 0·5	+ 4·0	− 3·0	East; W.N.W.	6—1	Cloudy.
4	− 2·8	+ 0·3	− 6·0	N.W.	3—7	Snow.
5	− 7·8	+ 2·5	− 18·2	W.N.W.	2—5	Partially cloudy.
6	− 12·0	− 2·0	− 26·0	East.	6	Cloudy.
7	− 7·0	− 2·0	− 16·0	S.E.	3	Clear.
8	− 9·7	+ 0·6	− 20·0	East.	4	Clear.
9	+ 2·5	+ 8·0	− 3·0	S.E.	2	Clear. Thaw in sunshine.
10	+ 5·5	+ 11·0	0·0	S.E.	3	Snow.
11	+ 6·5	+ 15·2	− 2·2	N.W.	3	Partially cloudy.
12	+ 0·8	+ 12·8	− 11·2	East.	5	Partially cloudy.
13	+ 10·1	+ 20·2	0·0	S.E.	3	Cloudy.
14	+ 10·6	+ 17·5	+ 3·8	E.S.E.	1—5	Cloudy. Summer clouds.
15	+ 8·5	+ 13·0	+ 4·0	E.S.E.	2	Cloudy. Small snow.
16	− 7·3	+ 2·8	− 17·5	N.W.	6—8	Clear.
17	− 2·0	+ 10·5	− 14·5	East.	5	Clear.
18	+ 1·2	+ 14·5	− 12·0	E.S.E.	4	Clear. *Snow birds appearing.*
19	+ 19·2	+ 26·5	+ 12·0	East.	8	Cloudy. Sleet.
20	+ 20·6	+ 26·0	+ 15·2	East; W.N.W.	4	Cloudy.
21	+ 11·5	+ 27·0	+ 6·0	East.	6	Clear.
22	+ 17·8	+ 29·5	+ 6·0	East.	5	Partially cloudy.
23	+ 21·1	+ 14·0	+ 28·2	E.b.N.	5—8	Partially cloudy.
24	+ 28·5	+ 33·0	+ 24·0	East.	6	Clear.
25	+ 32·2	+ 37·5	+ 27·0	East.	7	Cloudy. Sun eclipsed.
26	+ 31·0	+ 37·0	+ 25·0	East.	5—7	Partially cloudy.
27	+ 35·9	+ 41·8	+ 30·0	S.E.	3—6	Partially cloudy. Pools of water on the ice. *Ptarmigan changing plumage.*
28	+ 40·2	+ 49·0	+ 31·5	S.E.	1	Clear. *House-flies stirring.*
29	+ 33·2	+ 40·0	+ 26·5	E.S.E.; S.W.	1	Cloudy. *Plovers seen.*
30	+ 34·5	+ 45·0	+ 24·0	East.	2	Partially cloudy. *Canada-grouse* beginning to lay.
Means.	+10°·24	+17°·66	+ 2°·83	Mean Temperature for this month by 8 Observations each day of 3 Spirit Thermometers in the shade was + 9°·50.		

ABSTRACT of METEOROLOGICAL JOURNAL for MAY 1827, kept at FORT FRANKLIN.

Day of the Month.	Temperature of the Atmosphere registered 8 Times in the 24 Hours.			Prevailing Winds.		Prevailing Weather, and Other Remarks.
	Mean.	Highest.	Lowest.	Direction.	Force.	
1	+ 55°·1	+ 63°·0	+ 47°·2	N.W.; East.	2—7	Cloudy. *Ducks seen* and *Musquitoes*. Small lakes open. *Goose killed*.
2	+ 54·5	+ 60·0	+ 49·0	East.	8	Partially cloudy. Only patches of snow now remaining. Brooks running.
3	+ 56·0	+ 69·0	+ 43·0	Calm.	. .	Clear. *Orioles*, *bees*, and *butterflies seen* Ice covered with water.
4	+ 40·0	+ 48·0	+ 32·0	N.W.	4—8	Clear. *Peregrine Falcon seen.*
5	+ 34·4	+ 37·5	+ 31·2	E.b.S.	5	Cloudy. *Willows budding.*
6	+ 35·2	+ 37·0	+ 33·5	East.	5—7	Cloudy. Sleet.
7	+ 42·1	+ 45·0	+ 39·2	East; South; N.W.	1	Cloudy.
8	+ 12·5	+ 21·0	+ 4·0	S.E.	6	Partially cloudy, fine snow. Moon eclipsed.
9	+ 17·0	+ 26·0	+ 8·0	East.	2	Snow. Small lake refrozen.
10	+ 23·1	+ 36·2	+ 10·0	East.	7	Thick snow.
11	+ 17·4	+ 26·8	+ 8·0	E.b.S.	3	Clear. *Gulls seen.*
12	+ 23·1	+ 36·2	+ 10·0	E.S.E.	6—7	Clear.
13	+ 26·2	+ 36·6	+ 15·8	E.S.E.	5	Partially cloudy.
14	+ 27·0	+ 32·0	+ 22·0	East.	5—7	Clear.
15	+ 35·2	+ 50·5	+ 20·0	East.	8	Clear. Squally with showers.
16	+ 45·5	+ 53·0	+ 38·0	E.S.E.	2	Clear.
Means.	+34·02	+42·36	+25·68	Means of 16 days.		

TABLE VI.

ABSTRACT OF OBSERVATIONS ON THE TEMPERATURE OF THE AIR AT FORT FRANKLIN in Lat. 65° 12′ N., in the Years 1825-6, 1826-7.

Months.	Mean Temperature in the shade.		Seasons.	Mean Temperature in the shade.	
	Years 1825—1826.	Years 1826—1827.		Years 1825—1826.	Years 1826—1827.
September..	+ 42·92	+ 39.08	*Six Summer months.*	+ 40·94	
October	+ 20·28	+ 24·67	April—September.		
November ..	+ 2·79	− 3·01	*Six Winter months.*	− 5·94	− 4·99
December ..	− 13·96	− 7·42	October—March.		
January	− 23·78	− 20·89	*Spring.* March,	+ 14·43	+ 13·67
February ...	− 12·70	− 20·80	April, May.		
March	− 8·26	− 2·50	*Summer.* June,	+ 50·40	
April	+ 15·21	+ 9·50	July, August.		
May	+ 36·35	+ 34.02	*Autumn.* Sept.,	+ 22·00	+ 20·25
June.....	+ 48·00		October, November.		
July	+ 52·10		*Winter.* December,	− 16·81	− 16·40
August	+ 51·09		January, February.		
Annual Means	+ 17·50		Annual Means.	+ 17·50	

TABLE VII.

ABSTRACT OF A METEOROLOGICAL JOURNAL KEPT IN NOVEMBER AND DECEMBER 1826, AT FORT RESOLUTION, ON GREAT SLAVE LAKE,

In Lat. 61° 10′ N., and Lon. 113¾° W.

BY DR. RICHARDSON.

The temperatures were ascertained by the same coloured spirit Thermometer made by Newman, which was used at Fort Franklin in 1825—6.

The height of Great Slave Lake above the sea is supposed to be betwixt 300 and 400 feet.

Date.	Mean Temperature in the shade, for ten days.	REMARKS.
1826 November.		
1—10	+ 18·35	Much of the lake was frozen on the 1st, but it broke up during a heavy gale on the 9th. Deep snow.
11—20	+ 15·30	Snow near the lake upwards of two feet deep. There was much less snow in other parts of the country.
21—30	+ 17·50	On the 24th a temporary thaw occurred.
	+ 17·05	*Mean temperature for November.* The highest temperature in the month was + 36, the lowest + 3. North east winds prevailed.
December.		
1—10	+ 17·42	Great Slave Lake was open in the centre on the 1st of December, which is very unusual so late in the season. Rain fell on the 6th, and there was a thaw in the sunshine on the 9th.
11—20	+ 1·30	The Thermometer fell below zero on the 14th, being the first time this season.
21—23	− 20·08	
	− 0·59	*Mean for 23 days in December.* The highest temperature observed this month was + 32°, and the lowest −25°.

TABLE VIII.

ABSTRACT OF A METEOROLOGICAL JOURNAL KEPT IN 1825—26, AT FORT CHEPEWYAN, in Lat. 58° 43′ N.; Long. 111° 18′ W.

Months.	Mean Temperature in the shade.	Extreme Temperatures.		Prevalent Winds.	REMARKS.
		Highest.	Lowest.		
1825					
October . .	+ 32·02	+ 58	+ 10	N.W.	
November .	+ 26·70	+ 37	+ 2	N.W.; N.E.	
December .	+ 2·82	+ 39	− 25	N.W.; N.E.	The Thermometer was placed in a shady spot inclosed by wooden buildings about 35 feet above the surface of the lake. The radiation from the surrounding buildings perhaps caused the Mean Temperatures to be rather too high. The Mean Temperature is the Mean of the daily extremes for the month.
1826					
January . .	− 9·56	+ 10	− 31	N.W.; N.E.	
February. .	− 4·26	+ 15	− 26	N.W.; N.E.	
March. . .	− 0·55	+ 33	− 26	N.E.; S.W.	
April . . .	+ 25·86	+ 48	− 9	N.E.	
May. . . .	+ 46·50	+ 70	+ 30	N.E.	
June	+ 65·70	+ 97	+ 45	East; West.	
July	+ 63·42	+ 78	+ 44	N.E.; S.W.	
August . . .	+ 58·10	+ 72	+ 41	N.E.	
September .	+ 43·53	+ 65	+ 24	N.; N.W.	
Annual Means	+ 31·59	+ 51·83	+ 6·59		

The above Table is an Abstract of a Journal furnished to us by Messrs. James Keith and Alexander Stewart, Chief Factors of the Hudson's Bay Company.

TABLE IX.

ABSTRACT OF A JOURNAL OF TEMPERATURE OF THE ATMOSPHERE, KEPT BY MR. DRUMMOND AT EDMONTON HOUSE,

In Lat. 54° 00 N., Lon. 113° 00 W.

The supposed altitude of Edmonton House above the sea is 1100 *feet.*

Month.	Means			Extreme Temperatures.	
	Temperature of the Month.	of Maxima.	of Minima.	Highest.	Lowest.
1827					
January . . .	+ 11·05	+ 18·68	+ 3·42	+ 42·0	− 27·0
February	+ 14·32	+ 29·96	+ 3·68	+ 47·0	− 25·0

TABLE X.

ABSTRACT OF A JOURNAL OF TEMPERATURE OF THE ATMOSPHERE, KEPT BY DR. RICHARDSON AT CARLTON HOUSE,

In Lat. 52° 51′ N., Lon. 106° 13′ W.

The supposed altitude of Carlton House above the sea is 1000 *feet.*

Month.	Means			Extreme Temperature.	
	Temperature of the Month.	of Maxima.	of Minima.	Highest.	Lowest.
1827					
February, 10 last days	+ 5·65	+ 12·50	− 1·20	+ 31·0	− 29·0
March	+ 11·92	+ 23·10	+ 0·74	+ 42·0	− 26·0
April	+ 29·75	+ 40·97	+ 18·53	+ 59·0	+ 2·0
May, 20 first days . .	+ 47·92	+ 61·90	+ 33·95	+ 75·0	+ 22·0

TABLE XI.

PROGRESS OF THE SPRING AT CARLTON HOUSE.

Date.	Temperature of the Air in the shade for 10 days.			REMARKS.
	Mean.	Highest.	Lowest.	
1827				
February	....	....	....	On Feb. 15th the snow was thawing in the sunshine, and on the 17th many sandy hummocks on the plains were becoming bare. The snow-birds *(emberiza nivalis)* made their appearance this day at Carlton for the first time since winter set in. The thaw continued
18—28	+ 5.65	+ 31·0	− 29·0	in the sunshine till the 24th.
March	....	....	....	About the 6th of March the trees were thawed in fine days, and on the 8th the black earth on the river bank was softened to the depth of two inches by the power of the sun's rays. The westerly winds generally bring mild weather at Carlton, and the east winds are attended by fog and snow. On the 8th the nest of a Cinereous
1—10	+ 9·50	+ 36·2	− 20·0	crow was found, with four eggs in it.
11—20	+ 9·80	+ 36·0	− 26·0	On the 13th, sparrow-hawks *(falco sparverius)* arrived from the southward, and several small birds which are summer visiters, were seen by the Indians on the 19th.
21—31	+20·36	+ 42·0	− 1·0	On the 21st, a young grizly bear which had newly issued from his winter den was killed. On the 23rd one foot of snow fell, but two days afterwards it began to thaw. Large flocks of snow-birds came about the Fort on the 29th, and by the end of the month steep banks which had a southern aspect were clear of snow.
April	....	....	....	On the 1st of April many birds of the sparrow tribe were seen in the neighbourhood of the Fort. On the 2nd swans arrived, and by the 3rd much of the snow had disappeared from the plains. On the 4th it was thawing in the shade, and the sap now began to flow in the maple trees *(negundo fraxinifolium)*. On the
1—10	+25·85	+ 47·5	+ 2·0	6th geese arrived.
11—20	+28·65	+ 47·0	+ 7·0	Stormy weather about the middle of the month retarded the arrival of summer birds; the plants, however, were growing fast. On the 20th the tell-tale plover, and several small birds arrived.

PROGRESS OF THE SPRING AT CARLTON HOUSE.

Date.	Temperature of the Air in the shade for 10 days.			REMARKS.
	Mean.	Highest.	Lowest.	
April	....	....	....	On the 22nd, the *turdus migratorius*, *pyrrhula ludoviciana*, and *lanius excubitor* were seen. On the 25th, the flowers of the *anemone Nutallii* were expanding, and seedling plants of a *chenopodium* had appeared. On the 27th, the frogs began to croak, and the ice in the river gave way. On the 28th, Canada cranes arrived. On the 29th, an umbelliferous plant of a new genus flowered.
21—30	+34·75	+59·0	+7·0	
May	....	....	....	On May 1st, the *sturnus ludovicianus* arrived, and the last snow-birds took their departure for the north. The *icterus phœniceus* and *ferrugineus* were seen on the 2nd, and most of the water-fowl had now arrived. On the 4th, *phlox Hoodii* flowered. On the 5th, *ranunculus rhomboideus*, *viola debilis*, *tussilago palmata*, and several *carices* flowered. The *hirundo viridis* and many gulls arrived on the 6th. On the 7th, the sap of the sugar-maple, which for ten days past flowed scantily, ceased altogether. *Avocetta Americana* arrived. *Populus trepida* in flower, and several willows. On the 9th, purple grakles were first seen, and the root leaves of *anemone dichotoma* unfolded. On the 10th, *corydalis aurea*, *corylus Americana*, *hippophä Canadensis*, *thermopsis rhombifolia*, *vesicaria arenosa*, and *alnus glutinosa* flowered.
1—10	+48·65	+75·0	+22·0	
				On the 12th, *potentilla concinna*, *aster excapus*, and a salix flowered.
				Gooseberry bushes began to push forth leaves. On the 14th, *negundo fraxinifolium* and *androsace elongata* flowered. The *picus varius* arrived in considerable numbers on the 16th. On the 19th, the *viola Nutalliana* flowered.
11—20	+47·20	+71·0	+28·0	

On the 21st, I left Carlton and went down the Saskatchewan to Cumberland-House in latitude 53·57 N., and longitude 102·17 W. The elm flowered at the latter place on the 24th of May, and the leaves of the aspen began to expand; being about ten days later than at Carlton. On the 12th of June almost all the forest trees were in leaf.

The following Table and remarks on the climate of Penetanguishene, furnished by Mr. C. C. Todd, Medical Officer of the Naval Depôt there, are inserted for comparison with the Meteorological Tables constructed at Fort Franklin, and to give a view of the change of climate which is produced by a difference of upwards of twenty degrees of latitude.

TABLE XII.

ABSTRACT OF A METEOROLOGICAL JOURNAL KEPT IN THE YEAR 1825-6, AT PENETANGUISHENE ON LAKE HURON, Lat. 44° 48′ N., Lon. 80° 40′ W.

by C. C. TODD, Esq., Surgeon, R. N.

Months.	Means of			Winds and Weather.		REMARKS.
	Temper. for the Month.	Maxima.	Minima.	Prevalent Winds.	Number of days of rain.	
1825						
May. .	+55·09	+63·96	+46·23	East and N.W.	8	May 17, all the forest trees in leaf.
June .	+67·85	+74·30	+61·40	N.W.	2 showery days	June 15, barley and oats sown.
July. .	+73·15	+77·40	+68·90	N.W. and S.W.	5	July 2, melons and cucumbers in blossom.
August	+68·72	+74·20	+63·25	East.	3	Aug. 13, ripe melons produced without artificial heat. 17, Barley and oats ripe.
Sept. .	+54·93	+58·45	+51·41	N.W. and S.E.	9	Sep. 1. maize ripe. 10. Forest trees began to change their hue.
October	+48·83	+54·06	+43·61	. .	8 days rain & 2 days snow	Oct. 14, leaves dropping. 16, Geese flying to the southward. 25, First snow.
Nov. .	+37·85	+42·71	+33·00	N.E. and South.	5 days rain & 7 days snow	
Dec. .	+24·38	+27·61	+21·16	E.N.E. and S.E.	11 days snow & 3 days rain	On the 8th Dec. bays in Lake Huron frozen over.
1826						
Jan. . .	+22·50	+27·87	+17·12	E.S.E. and N.E.	11 days snow & 2 days rain	On the 18th Jan. snow 3 feet deep, ice 10 inches thick.
Feb. . .	+21·23	+26·80	+15·67	E.S.E. and N.E.	8 days snow & 2 days rain	On the 17th Feb. depth of snow 5 ft. Ice 16 ins. thick.
March	+30·82	+35·74	+25·90	N.; N.W. & N.E.	4 days snow & 4 days rain	On the 8th and 24th March, thunder. On the 31st, ice still sound and strong, 2 ft. thick.
April .	+37·48	+41·83	+33·06	N.W.; N.E.	2 days snow & 3 days rain	April 2. Geese flying northwards. 29th ice disappeared.
Annual Means.	+45·28	+50·41	+40·06	N.W.	99	

The above Table requires little explanation. In the column headed Means of Maxima are recorded the monthly means of the highest temperatures of each

day; the next column contains the means of the lowest temperatures; and the mean for the month is obtained by taking the mean of these two columns. The temperatures were recorded regularly at eight in the morning, at noon, and at five and eight in the afternoon. When the highest or lowest temperatures for the day occurred at other periods, they were registered.

In the month of May 1826, the mean of the highest temperatures recorded each day was 70·06, of the lowest 54·83, and the mean temperature for the month was 62·44. The mean temperature at eight o'clock in the morning for the entire year 1820, was 45·42.

GENERAL REMARKS ON THE CLIMATE OF PENETANGUISHENE, BY MR. TODD.

Penetanguishene is situated on a sheltered bay of Lake Huron, about one degree of latitude to the north of York, the seat of Government of Upper Canada. The height of Lake Huron is estimated at five hundred and ninety feet above the tide-waters of the River Hudson, and the thermometer with which the observations were made was placed about thirty feet above the lake. Between York and Penetanguishene, and thirty two miles from the latter, lies Lake Simcoe, a sheet of water forty miles long, thirty broad, and one hundred and twenty in circumference. Its surface is about one hundred and thirty feet above Lake Huron. Settlers are beginning to locate themselves between the two lakes, but the cleared places are but specks in the woody wilderness. Cultivation to a small extent is carried on in the neighbourhood of Penetanguishene, and the wood has been cut down for firing, for about a mile round the establishment. The village stands on the lower part of a sloping bank, which rises from the harbour to the height of one hundred and eighty feet. It faces the west, and is sheltered from the winds which sweep Lake Huron by a stripe of land which forms the west bank of the harbour, rises to the height of two hundred feet above it, and is from seven to fourteen miles wide.

The spring sets in very suddenly. The snow continues until the latter end of April, but in this respect the progress of cultivation makes a material difference, the snow remaining a month longer in the woods than it does in cultivated places. The changes of temperature are very abrupt, a variation of forty degrees in twenty-four hours being no uncommon occurrence, and I never observed that these sudden vicissitudes produced any ill effects upon the health of the inha-